REPORT

FINAL REPORT - CHRONIC TOXICITY

AND ONCOGENICITY

VOLUME II

AN ASSESSMENT OF THE

CHRONIC TOXICITY AND

ONCOGENICITY OF

AROCLOR-1016, AROCLOR-1242,

AROCLOR-1254, AND

AROCLOR-1260 ADMINISTERED

IN DIET TO RATS

То

Environmental Research Center

General Electric Company



February, 1997

VOLUME II

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Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
BONE											-	
Discoloration	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
KIDNEY												
Deformity	Ö	0	0	0	0	0	0	1	0	0	0	0
Discoloration	1	0	0	0	2	- 1	0	0	0	0	0	1
Hydronephrosis	0	0	0	0	0	0	0	0	0	1	0	0
Total	1	0	0	0	2	1	0	1	0	1	0	1
LIVER												
Discoloration	0	0	0	0	0	0	0.	1	2	0	0	0
Enlarged	0	0	0	0	1	0	0	1	1	0	.0	0
Total	0	0	0	0	1	0	0	2	3	0	0	0
LYMPH NODE-O	THER											
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
SPLEEN												
Adhesion	0	0	0	0	1	0	0	0	0	0	- 0	0
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	0	0	0	0	0	0

Table 60. Incidence Summary of Gross Necropsy Observations at the 26-WeekInterim Termination for Male Rats

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Test Substance	Control	Are	oclor-1	016	Arocle	or-1242	Ar	oclor-12	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
ADRENAL GLAN	ID							·				
Enlarged	1	0	0	0	0	0	0	0	0	0	0	0
Small	0	0	0	0	0	0	0	0	1	0	0	0
Total	1	0	0	0	0	0	0	0	1	0	0	0
BONE												
Enlarged	0	0	1	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	0	0	0	0
EPIDIDYMIS	•	•••••••••••••••••••••••••••••••••••••••	.									
Nodule	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0
JOINT												
False Joint	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
KIDNEY	······································	-										
Cyst	0	0	0	0	0	0	0	0	0	1	0	0
Discoloration	0	0	1	0	0	0	1	0	0	0	0	0
Enlarged	0	0	0	0	0	0	0	0	0	0	0	1
Focus	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	1	0	0	0	2	0	0	1	0	1
LIVER		•	•									
Discoloration	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	1

Table 61. Incidence Summary of Gross Necropsy Observations at the 52-WeekInterim Termination for Male Rats

*

Test Substance	Control	Are	xlor-1	016	Aroclo	or-1242	Ar	oclor-12	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
MAMMARY GLA	MAMMARY GLAND											
Mass	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
PITUITARY GLA	ND											
Enlarged	1	. 0	0	1	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0
SKIN							·					
Crust	0	0	0	0	0	0	0	- 1	0	0	0	0
Enlarged	1	0	0	0	0	0	0	0	0	0	0	0
Mass	1	0	0	1	0	0	0	0	0	0	1	0
Total	2	0	0	1	0	0	0	1	0	0	1	0
SPLEEN	SPLEEN											
Cyst	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0

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Table 61.	Incidence	Summary	of Gross	Necropsy	Observations	at the	52-Week
Interim Te	ermination	for Male	Rats				

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Test Substance	Control	Are	oclor-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-12	60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
ADRENAL GLAND)											
Enlarged	1	1	0	1	0	0	0	0	0	0	0	0
Total	1	1	0	1	0	0	0	0	0	0	0	0
BONE												
Ankylosis	. 0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
EYE	-	· .										
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	Ó	0	0	0	1	0	0	0	0	0
KIDNEY												
Cyst	0	0	0	0	0	1	0	0	0	0	0	1
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	1	1	0	0	0	0	1
LACRIMAL GLAN	D											
Focus	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0
LIVER					-							
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Focus	0	0	0	0	1	0	0	1	3	0	2	1
Nodule	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	1	0	1	1	3	1	2	1
LUNG												
Nodule	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0
LYMPH NODE-OT	HER											
Enlarged	0	1	0	1	0	0	0	0	0	0	1	0
Total	0	1	0	1	0	0	0	0	0	0	1	0

Table 62. Incidence Summary of Gross Necropsy Observations at the 78-WeekInterim Termination for Male Rats

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Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-12	,60
Conc. (ppm)	. 0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
MAMMARY GLAN	۱D											
Enlarged	0	0	1	0	0	0	0	0	0	0	0	0
Mass	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	0	0	0
PITUITARY GLAN	D											
Enlarged	1	0	1	0	2	0	0	0	0	2	0	0
Focus	0	0	Ó	1	0	1	. 1	0	1	0	0	0
Nodule	· 0	0	0	0	0	0	1	0	0	1	2	0
Total	1	0	1	1	2	1	2	0	1	3	2	0
PREPUTIAL GLAN	ID											
Enlarged	1	0	0	1	0	0	0	0	0	1	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	0
PROSTATE												
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Nodule	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	0	0	0
SEMINAL VESICL	E											
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Nodule	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	0	0	0
SKIN						ÿ						
Abscess	1	0	0	0	0	0	0	0	0	0	0	0
Crust	1	0	0	1	1	0	0	0	0	1	1	1
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Mass	0	0	0	0	0	0	1	0	0	Ó	0	1
Total	2	0	0	1	1	0	1	0	1	1	1	2

Table 62. Incidence Summary of Gross Necropsy Observations at the 78-WeekInterim Termination for Male Rats

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Test Substance	Control	Are	oclor-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-12	60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
SPLEEN					-							
Cyst	0	0	1	0	0	0	0	0	0	0	0	0
Enlarged	0	1	0	0	0	0.	0	0	0	0	1	0
Total	0	1	1	0	0	0	0	0	0	0	1	0
STOMACH												
Discoloration	0	0	0	0	0	0	0	0	0	0	Ö	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
TESTIS			÷									
Small	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
THYROID GLAND	·											
Focus	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	.1	0	0	0	0	0	0	0	0	0	0

Table 62. Incidence Summary of Gross Necropsy Observations at the 78-WeekInterim Termination for Male Rats

Table 63. Incidence Summary of Gross Necropsy Observations at the 105-Week Termination for Male Rats

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Test Substance	Control	Аг	oclor-1	016	Aroclo	or-1242	Ar	oclor-12	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
ADRENAL GLAND							· .					
Enlarged	5	2	2	2	0	0	1	0	1	0	1	0
Total	5	2	2	2	0	0	1	0	1	0	1	0
BLOOD VESSEL												
Enlarged	1	0	0	0	0	0	0	0	. 1	0	0	0
Thick	0	0	0	0	0	1	0	1	0	1	0	0
Total	1	0	0	0	0	1	0	1	1	1	0	0
BONE												
Enlarged	0	0	0	0	0	0	0	0	0	1	0	0
Swollen	1	0	0	0	4	1	1	0	2	0	0	1
Total	1	0	0.	0	4	1	1	0	2	1	0	1
BRAIN	· · · ·										~	
Mass	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
DUODENUM												
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
EPIDIDYMIS												
Enlarged	1	0	0	0	1	0	0	0	0	0	0	0
Nodule	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	0	0	0	0	1
EYE												
Discoloration	1	0	0	1	2	1	1	1	1	1	0	0
Small	0	0	0	0	0	0	0	0	0	1	0	0
Total	1	0	0	1	2	1	1	1	1	2	0	0
HEART						· · · · · · · · · · · · · · · · · · ·		·······	• • • • • • • • • • • • • • • • • • •			
Discoloration	0	0	1	0	0	0	0	0	0	0	0	0
Enlarged	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	1	0	0	0	1	0	0	0	0	0

Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-L	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
KIDNEY	·····				2							
Cyst	0	1	1	3	0	1	2	0	0	1	0	0
Dilatation	0	0	1	0	0	0	0	0	0	0	0	0
Discoloration	8	3	5	3	2	5	4	1	4	4	2	3
Enlarged	0	0	1	0	1	0	0	0	0	0	0	0
Focus	0	0	0	0	0	0	1	0	0	0	0	0
Mass	1	0	0	0	0	0	0	0	0	0	0	0
Nodule	0	0	0	0	0	0	1	0	0	0	0	0
Total	9	4	8	6	3	6	8	1	4	5	2	3
LACRIMAL GLAND	• <u>••••••••</u> ••••											
Discoloration	10	1	4	1	5	1	6	2	5	4	4	1
Total	10	- 1	4	1	5	1	6	2	5	4	4	1
LIVER	······································		.			•••••			4			
Cyst	2	0	0	0	0	0	0	1	0	1	0	1
Deformity	0	0	0	0	0	0	0	0	0	0	1	0
Discoloration	1	0.	0	0	0	0	1	0	2	1	0	0
Focus	8	1	2	4	7	6	12	6	15	8	9	7
Mass	7	1	2	2	0	3	1	1	3	1	2	5
Nodule	1	1	1	1	0	2	0	0	0	2	1	0
Total	19	3	5	7	7	11	14	. 8	20	13	13	13
LUNG									•			
Adhesion	0	0	0	0	0	0	0	1	0	0	0	0
Discoloration	1	0	0	0	0	0	0	0	0	0	0	0
Focus	2	0	0	-0	0	0	0	0	1	0	0	1
Nodule	1	1	Ó	0	0	0	0	0	0	0	0	0
Total	4	- 1	0	0	0	0	0	1	1	0	0	1
LYMPH NODE-MANDI	BULAR											
Enlarged	0	1	0	0	0	0	0	0	1	0	0	2
Total	0	1	0	0	0	0	0	0	1	0	0	2

Table 63. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Male Rats

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Test Substance	Control	Ar	oclor-1	016	Arocle	or-1242	Ar	oclor-12	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
LYMPH NODE-MEDIA	STINAL			-								
Enlarged	1	0	0	0	0	0	0	0	0	1	0	1
Total	1	0	0	0	0	0	0	0	0	1	0	1
LYMPH NODE-MESEN	TERIC				ъ							
Enlarged	. 1	0	0	0	0	1	1	0	0	0	0	1
Total	1	0	0 l	0	0	1	1	0	0	0	0	1
LYMPH NODE-OTHER												
Enlarged	1	1	0	1	1	1	1	1	1	0	1	3
Total	1	1	0	1	1	1	1	1	1	0	1	3
MAMMARY GLAND												
Enlarged	1	0	0	0	0	0	0	0	1	0	0	0
Mass	5	1	0	3	0	0	1	1	0	0	2	2
Total	6	1	0	3	0	0	1	1	1	0	2	2
MESENTERY								÷				
Nodule	0	0	0	0	0	1	0	0	0	1	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	0
NOSE/TURBINATES												
Swelling	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0
PANCREAS	· · · · · · · · · · · · · · · · · · ·											
Mass	1	0	0	0	1	0	0	0	0	0	1	0
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	1	0	. 0	0	0	0	1	0
PARATHYROID		-										
Enlarged	2	0	1	1	2	4	3	2	1	2	1	1
Total	2	0	1	1	2	4	3	2	1	2	1	1
PENIS		·										
Mass	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0

Table 63. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Male Rats

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Test Substance	Control	Ar	oclor-1	016	Arocle	or-1242	Ar	oclor-12	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
PITUITARY GLAND											-	
Cyst	0	1	0	0	0	1	1	0	0	0	0	0
Enlarged	13	5	6	9	10	1	7	2	6	8	7	7
Focus	0	0	0	1	0	2	1	0	2	2	0	1
Nodule	1	0	1	2	0	2	0	0	0	0	3	0
Total	14	6	7	12	10	6	9	2	8	10	10	8
PREPUTIAL GLAND						•						
Enlarged	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	1	0	0	0	1	0	0	0	0	0	- 1
PROSTATE												
Enlarged	0	0	1	0	1	0	0	0	0	0	0	0
Nodule	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	1	0	2	0	0	0	0	0	0	0
SKELETAL MUSCLE												
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Swollen	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	1
SKIN		1.										
Abrasion	1	0	0	0	1	0	1	0	1	0	0	0
Abscess	0	1	0	0	0	0	0	0	0	0	0	0
Crust	2	1	0	0	0	0	0	0	0	0	0	0
Laceration	0	1	0	0	0	0	0	0	0	0	0	0
Mass	4	2	2	0	1	4	2	1	2	5	1	3
Nodule	6	2	3	1	2	2	1	0	2	4	0	3
Swollen	9	3	1	3	2	4	2	1	0	4	4	1
Thick	0	0	0	0	1	0	0	0	0	0	0	0
Total	22	10	6	4	7	10	6	2	5	13	5	7

Table 63. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Male Rats

Test Substance	Control	År	oclor-1	016	Arocle	or-1242	Ar	oclor-12	54	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
SPLEEN											-	
Adhesion	0	0	0	0	0	0	1	0	0	0	0	0
Cyst	0	0	0	0	0	2	0	0	0	0	0	0
Deformity	0	0	0	0	0	0	1	0	0	0	0	0
Enlarged	3	2	0	0	0	1	0	0	1	0	0	0
Focus	0	1	0	0	0	0	0	0	ст О –	0	0	0.
Mass	1	1	0	0	0	0	0	1	0	0	0	0
Nodule	0	0	0	0	0	0	1	0	0	0	1	0
Total	4	4	0	0	0	3	3	1	1	0	1	0
STOMACH - FORE					-							
Mass	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	0	0	0	0	0	0	0	1
TESTIS												
Discoloration	1	0	1	1	2	. 0	0	1	2	2	2	0
Small	1	1	1	1 .	1	0	0	0	0	2	1	0
Total	2	1	2	2	3	0	0	1	2	4	3	0
THYROID GLAND						-						
Enlarged	3	0	2	0	6	3	2	5	2	1	2	0
Focus	1	0	0	0	0	. 0	0	0	0	0	0	0
Total	4	0	2	0	6	3	2	5	2	1	2	0
URINARY BLADDER												
Calculus	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0

Table 63. Incidence Summary of Gross Necropsy Observations at the 105-Week **Termination for Male Rats**

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Test Substance	Control	Ar	oclor-1	016	Arocle	ог-1242	Ar	oclor-12	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	- 4	2	2	0	5	3	1	4	1	2	3
BONE	L					•						•
Fracture	0	0	0	0	0	0	0	0	1	0	0	0
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	1	0	1	0
BRAIN			.				.		.			
Adhesion	0	0	0	0	0	0	0	0	0	0	1	0
Cyst	0	0	- 1	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	.0	0	0	0	1	0
CAVITY, ABDOMINA	L	••••						 .	<u>لي بين بين من المناسب</u>			
Fluid	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	+ 1	0	0	0	0	0	0
CAVITY, THORACIC		•							<u>ني</u>		•	
Fluid	. 0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
CECUM		•						• • • •	<u></u>		.	
Dilatation	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0
COLON							6		£			
Dilatation	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	1	.0	0	0	0
EYE									•	.	.	
Discoloration	0	1	0	0	0	0	0	0	0	0	0	0
Small	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	1	0	1	. 0	0	0	0	0	0	0	0
HEART				••••••				•		•		
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
ILEUM				;								·
Dilatation	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0
KIDNEY												
Discoloration	1	0	0	0	0	0	1	0	1	0	0	1
Enlarged	0	0	0	0	0	1	0	0	0	0	0	0
Mass	0	0	0	0	0	0	0	0	1	0	0	0
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	1	0	0	0	0	1	1	0	3	0	0	1

Table 64. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (0-12 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	Ar	oclor-1	016	Arocle	or-1242	Ar	oclor-12	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
LIVER	1					I			L			
Discoloration	0	0	0	1	0	1	0	0	1	0	0	0
Enlarged	2	0	1	0	· 0	0	0	0	1	0	0	0
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Nodule	0	1	0	0	0	0	0	0	0	0	0	0
Total	2	1	1	1	0	1	0	0	2	0	0	1
LYMPH NODE-BRON	CHIAL	£,			L	.		L				<u> </u>
Enlarged	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MAND	DIBULAR					L	.		.		L	
Enlarged	0	0	0	0	0	1	0	0	2	0	0	0
Total	0	0	0	0	0	1	0	0	2 <	0	0	0
LYMPH NODE-MEDL	ASTINAL			•		.					.	L
Enlarged	0	1	0	0	0	0	0	0	2	0	0	0
Total	0	1	0	0	0	0	0	0	2	0	0	0
LYMPH NODE-MESE	NTERIC		L				<u></u>	L				L
Discoloration	0	1	0	0	0	0	0	0	0	0	0	0
Enlarged	0	0	0	0	0	0	0	0	2	1	0	0
Total	0	1	0	0.	0	0	0	0	2	1	0	0
LYMPH NODE-OTHE	R								L			L
Enlarged	0	0	0	0	0	0	0	0	2	0	0	0
Total	0	0	0	0	0	0	0	0	2	0	0	0
MAMMARY GLAND	L	L				1	L		1		L	L
Mass	0	1	0	0	0	0	0	0	1	0	0	0
Total	0	1	0	0	0	0	0	0	1	0	0	0
NOSE/TURBINATES		L	L	L			<u></u>		1	<u> </u>		L
Hemorrhage, Acute	0.	0	. 0	0	0	0	0	0	1	0	0	0
Total	· · 0	0	0	0	0	0	0	0	1	0	0	0
PITUITARY GLAND									L		سنب مستحد	
Enlarged	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
PROSTATE	• • • •											
Enlarged	1	0	0	0	0	1	0	0	0	0	0	0
Total	1	0	0	0	0	1	0	0	0	0	0	0
RECTUM	<u></u>						,		•			1
Dilatation	0	0	0	0	0	0	0	1	0	0	0	0
Obstruction	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	-0	0	0	0	2	0	0	0	0

Table 64. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (0-12 Months) for Core and Interim Subgroup Male Rats

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Control Aroclor-1242 Aroclor-1260 Aroclor-1016 Arocior-1254 Test Substance Conc. (ppm) (N) SKELETAL MUSCLE Mass Total SKIN Mass Swollen Total SPLEEN Enlarged Total TESTIS Missing Total THYMUS Enlarged Total TONGUE Mass Total URINARY BLADDER Calculus Discoloration Dilatation Distended Total

Table 64. Incidence Summary of Gross Necropsy Observations at Unscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

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 $\mathcal{N}^{(1)} = \frac{1}{2} \left[\frac{1}{2} \left[\frac{1}{2} \right]_{ij} - \frac{1}{2} \left[\frac{1}{2} \left[\frac{1}{2} \left[\frac{1}{2} \right]_{ij} - \frac{1}{2} \left[\frac{1}{2} \left[\frac{1}{2} \left[\frac{1}{2} \right]_{ij} - \frac{1}{2} \left[\frac{1}$

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-1	016	Aroch	or-1242	Ar	oclor-12	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
ADRENAL GLAND	· ·	L						.				•
Discoloration	0	1	0	0	0	0	0	0	0	0	0	0
Enlarged	0	0	1	0	1	0	0	1	0	0	0	0
Nodule	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	0	1	0	0	1	0	0	0	0
BONE	· · · ·						•					
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
BRAIN			A	· .	· ·	A		.			*	
Discoloration	1 °	0	0	0	0	1	0	0	0	0	0	0
Mass	- 1	1	0	0	0	0	0	0	0	0	0	0
Total	2	1	0	0	0	1	0	0	0	0	0	0
CAVITY, ABDOMINA	L			A								.
Fluid	0	2	0	1	0	0	0	1	0	2	0	0
Total	0	2	0	1	0	0	0	1	0	2	0	0
CAVITY, THORACIC												
Fluid	0	1	0	0	1	0	1	1	1	1	0	0
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	1	0	1	1.	1	1	0	0
COLON			·	••••••								
Obstruction	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
EYE												
Discoloration	0	0	1	0	0	0	0	2	1	1	0	1
Total	0	0	1	0	0	0	0	2	1	1	0	1
HARDERIAN GLAND			• • • • • • • • • • • • • • • • • • •									
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0
HEART	······											
Discoloration	1	0	0	0	0	0	0	0	0	1	1	0
Enlarged	0	2	0	0	1	0	0	0	0	0	0	0
Nodule	0	0	0	0	0	0	1	0	1	0	0	0
Total	1	2	0	0	1	0	1	0	1	1	1	0
KIDNEY								•		•••••••••••••••••••••••••••••••••••••••		
Cyst	0	0	0	0	0	1	1	0	0	0	0	0
Deformity	1	1	1	0	0	0	0	0	0	0	0	1

Table 65. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Male Rats

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Test Substance	Control	rol Aroclor-1016				or-1242	Ar	oclor-12	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
KIDNEY												
Discoloration	0	1	2	0	1	0	1	0	0	0	1	0
Enlarged	0	1	1	1	0	1	2	3	0	0	2	1
Mass	0	0	0	0	0	0	0	1	0	0	0	0
Nodule	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	3	4	1	1	2	4	4	0	0	3	3
LACRIMAL GLAND												
Discoloration	0	0	0	0	1	0	0	1	0	0	1	0
Focus	Q	1	0	1	0	0	0	0	0	0	0	1
Total	0	1	0	1	1	0	0	1	0	0	1	1
LIVER									Χ.			
Deformity	0	1	0	2	0	1	0	0	2	0	0	0
Discoloration	0	1	0	1	1	0	1	3	2	2	2	1
Enlarged	0	0	0	1	0	0	2	1	0	0	0	0
Focus	0	0	0	1	0	1	0	2	1	1	2	0
Mass	0	0	0	0	2	0	0	0	0	0	0	0
Nodule	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	2	0	5	3	2	3	6	5	4	5	2
LUNG					· · · · · · · · · · · · · · · · · · ·	· · ·						-
Focus	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	. 1	0	0	0	0
LYMPH NODE-MAND	BULAR											
Enlarged	0	2	0	0	1	0	1	1	1	1	1	1
Total	0	2	0	0	1	0	1	1	1	1	1	1
LYMPH NODE-MEDL	STINAL									·		
Enlarged	0	0	0	0	0	0	1	3	0	1	1	0
Total	0	0	0	0	0	0	1	- 3	0	1	1	0
LYMPH NODE-MESE	NTERIC				•••••••							
Enlarged	0	0	0	0	0	0	1	0	0	1	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	.0
LYMPH NODE-OTHE	R											
Enlarged	0	1	0	1	0	0	1	2	0	1	0	2
Total	0	1	0	1	0	0	1	2	0	1	0	2

Table 65. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	trol Aroclor-1016 Aroclor-1242 Arocle					roclor-1254 Aroclor-1260					
Conc. (ppm)	0	50	100	200	50	100	- 25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
MAMMARY GLAND				· ·	<i>,</i>		*****			•••••••••••		•
Cyst	0	1	0	0	0	0	0	0	0	0	0	0
Mass	0	0	0	0	0	1	0	0	· 0.	0	0	1
Total	0	1	0	0	0	1	0	0	0	0	0	1
MESENTERY	A											
Mass	0	0	0	0	0	0	1	. 1	0	0	0	0
Adhesion	0	0	0	0	0	0	0	1	0	0	0	0
Nodule	0	0	0	1	0	0	0	1	0	0	0	0
Total	0	0	0	1	0	0	1	3	0	0	0	0
NOSE/TURBINATES												
Mass	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	0	0	0	0	0	1
PARATHYROID												
Enlarged	2	1	1	0	0	1	1	1	0	0	0	1
Total	2.	1	1	0	0	1	1	1	0	0	0	1
PENIS			-									
Enlarged	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
PITUITARY GLAND												
Cyst	0	0	0	0	0	0	0	0	1	0	0	0
Enlarged	9	5	3	5	6	5	3	9	1	7	7	7
Focus	0	0	2	0	0	0	0	0	1	1	0	1
Nodule	0	0	0	1	0	0	0	0	0	0	1	0
Total	9	5	5	6	6	5	3	9	3	8	8	8
PREPUTIAL GLAND												
Enlarged	0	0	0	1	1	0	0	0	0	1	0	1
Total	0	0	0	1	1	0	0	0	0	1	0	1
PROSTATE	-			•				•				
Enlarged	0	0	1	0	0	0	0	0	0	2	0	0
Total	0	0	1	0	0	0	0	0	0	2	0	0
SEMINAL VESICLE												
Enlarged	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0

Table 65. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Male Rats

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Test Substance	Control	rol Aroclor-1016 /			Arocle	or-1242	Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
SKIN		.	.	•		• ·			.	A	•	
Alopecia	0	0	0	0	0	0	0	0	0	0	0	1
Crust	1	4	0	1	0	0	0	0	0.	1	2	1
Focus	0	0	0	0	1	0	0	0	0	0	0	0
Mass	1	2	3	0	0	0	1	1	0	0	1	1 -
Nodule	0	1	0	0	0	0	. 0	0	0	0	0	1
Swollen/Enlarged	0	1	0	0	- 0	0	0	0	0	0	0	0
Total	2	8	3	1	1	0	1.	1	0	1	3	4
SPLEEN											•	
Enlarged	0	0	0	1	0	1	1	0	0	2	2	1
Total	0	0	0	1	0	1	1	0	0	2	2	1
STOMACH - FORE			••••••••••••••••••••••••••••••••••••••									
Focus	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	- 0	0	0	0	0	0	0	0
STOMACH												
Focus	1	0	0	0	0	1	0	1	0	1	1	2
Mass	1	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	1	0	1	0	1	1	2
TESTIS												
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Small	0	0	0	0	1	0	0	1	0	1	1	0
Total	0	0	0	0	1	0	1	1	0	1	1	0
THYROID GLAND									-			
Discoloration	0	0	0	0	0	0	0	0	0	0	1	0
Enlarged	1	0	0	0	0	0	1	0	0	0	0	2
Total	1	0	0	0	0	0	. 1	0	0	0	1	2
URINARY BLADDER		·										
Dilatation	0	0	0	0	0	1	0	0	0	0	0	0
Enlarged	0	0	0	0	0	0	1	0	0	0	0	0
Thick	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	1	2	0	0	0	0	0
ZYMBAL'S GLAND							•					
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0

Table 65. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	Arc	oclor-1	016	Arock	or-1242	Ar	oclor-12	254	Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
ADRENAL GLAND	•								••••••			
Cyst	0	0	0	0	0	0	0	0	1	0	0 -	0
Discoloration	0	0	0	0	0	0	.0	0	1	0	0	0
Enlarged	3	0	2	0	2	1	1	0	0	0	1	. 1
Total	3	0	2	0	2	1	1	0	2	0	1	1
AORTA				· ·								
Enlarged	0	0	0	0	0	0	0	0	0	0	1	0
Thick	3	1	3	1	3	1	2	0	2	1	3	2
Firm	0	0	0	0	0	1	0	0	0	1	0	1
Total	3	1	3	1	3	2	2	0	2	2	4	3
BLOOD VESSEL					-							
Nodule	0	0	0	0	0	0	1	0	0	0	0	9
Thick	0	0	0	0	1	0	2	0	1	2	1	0
Enlarged	.0	0	0	0	0	1	1	0	0	0	0	0
Total	0	0	0	0	1	1	4	0	1	2	1	″ 0 [.]
BONE												
Enlarged	1	2	0	0	0	0	0	1	1	0	1	0
Swollen	0	0	0	0	0	0	0	1	0	0	0	0
Total	1	3	0	0	0	0	0	2	1	0	1	0
CAVITY, ABDOMINA	AL .											
Fluid	2	0	0	0	0	1	0	0	1	0	0	0
Total	2	0	0	0	0	1	0	0	1	0	0	0
CAVITY, THORACIC												
Fluid	1	0	1	0	0	1	3	0	1	0	1	0
Total	1	0	1	0	0	1	3	0	1	0	1	0
CECUM												
Focus	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
COLON												
Dilatation	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
EYE												
Discoloration	2	0	0	0	1	1	0	1	1	0	1	2
Enlarged	0	0	0	0	.0	0	0	0	1	1	. 0	0
Small	0	0	0	0	0	2	0	0	0	0	0	0
Total	2	0	0	0	1	3	0	1	2	1	1	2

Table 66. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Male Rats

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Test Substance	Control	ontrol Aroclor-1016 Aroclor-1242					242 Aroclor-1254 Aroclor-1260					
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
HARDERIAN GLAND)	• • • • • •	•	•			•		••••••••••••••••••••••••••••••••••••••		••••••	
Discoloration	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
HEART									•			
Discoloration	1	0	0	0	1	3	2	0	0	0	0	2
Enlarged	1	0	2	1	1	0	. 3	0	2	0	3	0
Focus	0	0	0	0	0	1 .	0	0	0	0	0	0
Rupture	0	0	0	0	0	0	1	0	0	0	0	0
Total	2	0	2	1	2	4	6	0	2	0	3	2
JEJUNUM												
Obstruction	1	0	0	0	0	0	0	0	0	0	0	0
Total	. 1	0	0	0	0	0	0	0	0	0	0	0
KIDNEY	- 											
Cyst	1	1	0	0	1	0	1	1	0	0	1	0
Deformity	1	0	0	1	3	1	0	3	1	1	1	2
Dilatation	0	1	0	0	0	0	0	0	0	0	0	0
Discoloration	3	3	5	4	5	2	3	4	4	2	4	1
Enlarged	6	3	5	3	0	4	4	2	1	6	7	2
Focus	4	0	0	0	0	1	1	0	0	0	0	0
Hemorrhage	1	0	0	0	0	0	0	0	0	0	0	0
Hydronephrosis	1	- 0	1	0	0	0	0	0	0	0	0	0
Mass	1	0	0	0	0	0	0	1	0	0	0	0
Nodule	1	0	0	1	0	0	1	0	0	0	0	0
Total	19	8	11	9	9	8	10	11	6	9	13	5
LACRIMAL GLAND												
Discoloration	6	4	6	2	4	1	2	4	2	3	3	8
Total	6	4	6	2	4	1	2	4	2	3	3	8
LIVER				A				•				•
Adhesion	0	0	. 1	0	0	0	0	0	0	0	0	0
Cyst	0	1	0	0	0	1	0	0	0	0	0	1
Deformity	0	1	1	2	0	0	0	2	1	0	0	0
Discoloration	4	0	3	1	1	6	4	4	7	4	8	3
Enlarged	3	0	1	2	0	0	3	3	3	2	4	4
Focus	7	2	5	4	5	5	4	7	7	2	5	11
Mass	2	0	1	1	1	1	2	2	2	1	2	4
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	16	5	14	10	7	13	13	18	21	9	19	23

Table 66. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Male Rats

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Table 66.	Incidence Summary of Gross Necropsy Observations at Unscheduled	
Terminatio	on (18-24 Months) for Core Subgroup Male Rats	

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1 Professional Profession

Test Substance	Control	Aro	oclor-1	016	Aroclo	or-1242	Are	oclor-12	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
LUNG												
Discoloration	3	1	1	0	2	0	0	1	1	0	0	0
Focus	1	1	1	0	0	0	0	0	1	0	0	2
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Nodule	2	0	0	0	0	0	0	0	0	0	0	0
Total	6	2	2	0	2	0	0	1	2	0	0	3
LYMPH NODE-MANI	DIBULAR											
Enlarged	3	- 1	2	2	1	0	1	0	2	2	0	0
Total	3	1	2	2	1	0	1	0	2	2	0	0
LYMPH NODE-MEDI	ASTINAL								:			
Enlarged	1	0	2	0	0	0	0	0	0	0	0	0
Total	1	0	2	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESE	NTERIC						· .					
Enlarged	1	0	1	0	1	0	0	0	1	0	0	2
Mass	0	0	0	0	0	0	0	0	0	1	0	0
Total	1	0	1	0	1	0	0	0	1	1	0	2
LYMPH NODE-OTHE	R											·
Enlarged	. 4	1	2	0	1	1	1	1	0	0	2	0
Total	4	1	2	0	1	.1	1	1	0	0	2	0
MAMMARY GLAND					1.							
Mass	1	2	2	3	3	0	1	0	3	0	1	0
Total	1	2	2	3	3	0	1	0	3	0	1	0
MESENTERY												
Mass	1	1	0	0	0	0	0	0	0	0	0	1
Adhesion	0	0	0	0	0	0	0	0	1	0	0	0
Nodule	1	0	0	0	1	1	0	1	1	0	0	0
Total	2	1	0	0	1	1	0	1	2	0	0	1
ORAL MUCOSA												
Mass	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0
PANCREAS							•					
Discoloration	0	0	0	0	0	0	0	0	0	1	0	0
Mass	0	0	0	0	0	0	1	0	0	0	0	2
Nodule	2	0	0	0	0	0	0	1	0	0	0	0
Total	2	0	0	0	0	0	1	1	0	1	0	2

Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	10
(N)	43	23	27	17	19	21	20	25	23	17	21	22
PARATHYROID												
Enlarged	5	3	5	3	-5	5	5	2	2	4	4	7
Total	5	3	5	3	5	5	5	2	2	4	4	7
PITUITARY GLAND												
Cyst	1	0	0	0	0	0	0	0	0	0	0	0
Discoloration	0	-0	0	0	0	0	1	0	0	0	0	0
Enlarged	25	12	19	7	12	12	11	14	11	5	9	10
Focus	2	2	0	1	0	1	1	1	0	2	0	3
Nodule	1	0	0	0	0	0	1	0	2	0	1	0
Total	29	14	19	8	12	13	14	15	13	. 7	10	13
PROSTATE				A	•	•	•••••••		•			
Discoloration	0	0	1	0	0	0	0	0	0	0	0	0
Enlarged	0	1	2	0	2	0	1	0	1	0	0	0
Total	0	1	3	0	2	0	1	0	1	0	0	0
RECTUM						·	· ·		*			
Dilatation	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
SALIVARY GLAND S	UBMAXII	LARY	ζ.		•••••••••••	••••••••••						
Discoloration	1.	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
SEMINAL VESICLE												
Enlarged	0	. 1	0	0	0	0	0	0	0	0	0	0
Mass	0	0	:0	1	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0
SKELETAL MUSCLE				•,						A		
Discoloration	0	0	1	0	0	0	0	0	0	0	0	0
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	0	0	0	0	0	1
SKIN				4			· · · · · · · · · · · · · · · · · · ·					
Abrasion	0	0	0	0	1	0	0	0	1	0	0	1
Alopecia	0	1	0	0	0	0	0	0	0	0	0	0
Crust	11	3	8	2	3	0	4	.4	0	6	2	1
Enlarged	1	0	0	0	0	0	0	1	0	1	0	0
Lesion	2	0	0	0	0	0	0	0	0	0	0	0
Mass	4	2	3	0	1	0	0	3	2	3	3	1
Nodule	4	1	7	5	1	1	5	2	0	3	5	2

Scab

Table 66. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Male Rats

 $\frac{1}{2} \left[\left[\left[\left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \right] \left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \right] \right] + \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \right] \right] + \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] \right] + \left[\left[\frac{1}{2} \right] \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\left[\frac{1}{2} \right] + \left[\frac{1}{2}$

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Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Ar	oclor-12	254	4 Aroclor-12		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
SKIN						.						
Swollen	2	0	0	0	0	0	1	0	0	1	0	0
Thick	0	0	0	1	0	1	0	0	1	0	0	0
Ulcer	1	0	0	0	0	0	0	0	0	0	0	0
Total	25	8	18	9	6	2	10	10	4	14	10	5
SPLEEN						·····			A			
Deformity	1	0	0	0	0	0	0	0	0	0	0	0
Enlarged	3	0	4	1	1	0	0	0	2	1	0	2
Focus	1	0	0	0	1	1	0	0	0	1	0	0
Mass	0	0	0	0	0	0	0	1	0	0	1	0
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Total	6	0	4	1	2	1	0	1	2	2	1	2
STOMACH - FORE				.	A	*					A	A
Focus	1	1	0	0	1	0	0	1	0	0	0	1
Mass	0	1	0	0	0	0	0	0	0	0	1	0
Nodule	0	0	0	0	1.	0	0	0	0	0	0	0
Total	1	2	0	0	2	0	0	1	0	0	1	1
STOMACH	· · · · ·	·			· .							.
Focus	4	2	1	0	0	3	1	5	0	1	1	2
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Nodule	4	0	1	2	0	1	0	- 1	0	1	0	2
Perforation	0	0	1	0	0	1	0	0	0	0	1	0
Thick	1	0	0	0	2	0	1	0	0	0	0	0
Deformity	1	0	0	0	0	0	0	0	0	0	0	0
Total	10	2	3	2	2	5	2	6	0	2	2	5
TESTIS					•					•		K
Discoloration	1	0	0	1	0	2	0	0	0	0	0	1
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Small	2	0	1	2	5	2	2	2	3	2	2	1
Total	4	0	1	3	5	4	2	2	3	2	2	2
THYROID GLAND			••••••			•	••••••	.				
Cyst	0	1	0	0	0	0	0	0	0	0	0	0
Enlarged	1	0	0	1	0	2	2	6	3	4	3	2
Total	1	1	0	1	0	2	2	6	3	4	3	2

Table 66. Incidence Summary of Gross Necropsy Observations at Unscheduled Termination (18-24 Months) for Core Subgroup Male Rats

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Test Substance	Control	Arocior-1016			Arock	or-1242	2 Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
TONGUE												
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
TRACHEA												
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
URINARY BLADDER												
Calculus	0	0	0	0	0	0	0	1	0	0	0	0
Dilatation	0	0	2	0	1	0	3	0	0	0	0	0
Distended	0	1	0	0	0	0	0	0	1	0	0	0
Total	0	1	2	0	1	0	3	1	1	0	0	0
ZYMBAL'S GLAND						÷						
Enlarged	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0

Table 66. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Male Rats

Table 67.	Incidence	Summary	of Gross	Necropsy	Observations	at the 26-Week
Interim Te	rmination	for Femal	e Rats ^a			

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	.6	6	6	6	6	6	6	6	6
KIDNEY						•		-				
Hydronephrosis	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
LIVER												
Deformity	0	0	0	0	0	0	0	1	0	0	0	0
Discoloration	0	0	0	0	0	1	6	6	6	0	0	1
Nodule	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	6	7	6	0	0	2
LYMPH NODE-MAN	NDIBULAI	ξ							<u>.</u>			
Discoloration	0	1	0	0	0	0	0	0	0	0	0	0
Enlarged	1	0	0	0	0	0	1	0	0	0	0	0
Total	1	1	0	0	0	0	1	0	0	0	0	0
MAMMARY GLANI)	•				. *						
Cyst	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	. 0	0	0	0	0	0	0	0	0	0	1
OVARY				:								
Cyst	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0

a. No lesions were observed at the 13-Week Interim termination for female rats.

Test Substance	Control	Aroclor-1016			Aroclor-1242		2 Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
ADRENAL GLAND								-				
Enlarged	0	0	0	0	0	0	0	1	1	0	1	0
Total	0	0	0	0	0	0	0	1	1	0	1	0
LIVER					·							
Deformity	0	0	0	0	0	0	0	1	0	0	1	0
Discoloration	0	0	0	0	3	3	3	5	6	2	3	3
Focus	1	1	0	0	0	. 0	0	0	0	0	0	1
Nodule	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	0	3	3	3	6	6	2	4	5
LYMPH NODE-MAN	IDIBULAR											
Enlarged	0	1	0	0	0	0	0	0	0	0	1	0
Total	U	1	0	0	0	0	0	0	0	0	1	0
MAMMARY GLAND)	•			· · · · ·		•••••••••••••••	4. 				
Cyst	1	1	0	0	0	2	0	1	- 1	3	1	1
Mass	0	0	1	0	1	0	0	0	0	0	0	0
Total	1	1	1	0	. 1	2	0	1	1	3	1	1
OVARY							······································					
Cyst	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0
PITUITARY GLAND)									• "		
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Focus	1	0	0	1	0	´ 0	0	0	0	0	. 0	0
Total	1	0	0	1	1	0	0	0	0	0	0	0
SKIN				i. Z								
Mass	0	0	0	0	0	1	0	0	.0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0
SPLEEN				Ť	×							
Small	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0

Table 68. Incidence Summary of Gross Necropsy Observations at the 39-WeekInterim Termination for Female Rats

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Test Substance	Control	Aroclor-1016			Aroclor-1242		Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	5	6
ADRENAL GLAND												
Aplasia	Ó	0	0	0	0	0	0	1	0	0	0	0
Enlarged	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	1	.0	0	1	1
BONE			·			•			•			
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
KIDNEY												
Cyst	0	1	1	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	0	0	0
LIVER												
Discoloration	0	0	0	0	0	1	0	3	3	0	1	3
Focus	0	0	0	0	C	0	0	0	2	0	0	1
Mass	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	3	5	0	1	4
LYMPH NODE-MAN	NDIBULAR											
Enlarged	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0
MAMMARY GLANI)											
Cyst	0	3	3	2	1	1	2	2	0	0	1	1
Enlarged	4	0	0	1	0	0	0	0	1	0	1	2
Mass	0	1	1	0	0	0	0	1	0	2	0	0
Total	4	4	4	3	1 .	1	2	3	1	2	2	3
OVARY												
Cyst	0	0	0	2	0	. 0	0	0	1	0	0	0
Total	0	0	0	2	0	0	0	0	1	0	0	0
PITUITARY GLAND)											
Enlarged	2	3	2	0	0	0	0	0	1	0	0	0
Focus	0	0	0	2	1	1	0	1	0	0	0	1
Total	2	3	2	2	1	1	0	1	1	0	0	1
UTERUS												
Dilatation	0	0	0	0	0	0	0	0	0	0	0	1
Discoloration	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	1

Table 69. Incidence Summary of Gross Necropsy Observations at the 52-WeekInterim Termination for Female Rats

Test Substance	Control	Aroclor-1016			Aroclor-1242		Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
ADRENAL GLAND												
Discoloration	0	0	1	0	0	1	. 0	0	1	1	0	0
Enlarged	1	0	2	0	1	0	0	1	0	1	0	0
Focus	0	1	0	0	0	0	0	0	0	0	1	0
Total	1	1	3	0	1	1	0	1	1	2	1	0
BONE				-								
Deformity	0	Ċ	0	0	0	• 0	0	0	0	1	0	0
Total	0	Ū.	0	0	0	0	0	0	0	1	0	0
EYE												
Discoloration	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	. 0	0	0
HEART												
Discoloration	0	0	0	0.	Ð	0	0	0	0	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0
KIDNEY												
Discoloration	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	0	0	. 0	0	0	0	0	0	1	0	0
LIVER												
Enlarged	0	0	0	0	0	1 .	.0	0	0	0	0	0
Focus	0	2	0	1	1	4	3	6	4	1	2	3
Hepatodiaphragmatic Nodule	0	1	1	0	0	0	0	0	0	0	0	0
Mass	0	0	1	0	0	3	0	0	6	0	1	1
Nodule	0	0	0	0	0	1	0	1	1	0	2	0
Total	0	3	2	1	1	9	3	7	11	1	5	4
LUNG										- -		
Nodule	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
LYMPH NODE-MANDIBULAR												
Enlarged	0	0	. 0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	1
LYMPH NODE-MESENTERIC												
Enlarged	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0

Table 70. Incidence Summary of Gross Necropsy Observations at the 78-WeekInterim Termination for Female Rats

Test Substance	Control	Aroclor-1016			Aroclor-1242		Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	-3	5	6	6	5	5	4	6	5	5	6	6
MAMMARY GLAND												
Cyst	0	3	3	1	1	0	0	1	1	1	1	0
Discoloration	0	0	0	0	1	1	0	0	0	0	0	0
Mass	3	2	1	3	. 1	0	1	2	0	3	2	1
Nodule	1	0	0	1	0	0	0	2	0	0	0	0
Total	4	5	4	-5	-3	1	1	5	1	4	3	1
MESENTERY												
Nodule	0	0	0	1	0	0	0	0	Ŭ.	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
OVARY							÷.,					
Cyst	0	0	0	0	1	0	0	2	1	0	0	0
Total	0	0	0	0	1	0	0	2	1	0	Ó	0
PITUITARY GLAND												
Enlarged	2	4	4	1	1	4	3	5	2	2	3	2
Focus	1	1	1	1	1	0	1	0	1	0	0	3.
Total	3	5	5	2	2	4	4	5	3	2	3	5
SKIN												
Crust	1	0	0	0	0	0	0	1	0	0	0	0
Mass	0	0	0	0	0	0	0	0	1	0	0	0
Total	1	0	0	0	0	0	0	1	1	0	0	0
SPLEEN										<u>.</u>		
Cyst	0	0	1	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	-0	0	0	0	0
STOMACH												
Focus	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
UTERUS	••••••••••••••••••••••••••••••••••••••		A.,						-		•••••	
Dilatation	0	0	. 0	0	0	0	0	1	3	0	1	1
Total	0	0	0	0	0	0	0	1	3	0	1	1

Table 70. Incidence Summary of Gross Necropsy Observations at the 78-WeekInterim Termination for Female Rats
Test Substance	Control	Are	Aroclor-1016			or-1242	Arc	oclor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
ADRENAL GLAND												
Enlarged	7	1	.4	1	5	0	3	1	1	0	3	1
Small	0	0	0	0	0	1	1	0	1	0	0	0
Mass	0	1	0	0	0	0	0	0	0	0	Q	0
Total	. 7	2	4	1	5	1	4	1	2	ັ໐	3	1
AORTA											• •	
Nodule	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0
BONE												
Abscess	0	1	0	0	0	0	0	0	0	0	0	0
Deformity	0	0	0	0	0	0	0	0	0	, O	0	1
Nodule	1	Q	0	0	0	0	0	0	0	0	0	0
Swollen	0	0	0	0	0	0	0	0	0	1	0	0
Total	. 1	1	0	0	0	0	0	0	0	1	0	1
CECUM					·		•					
Mass	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	: 0	0
CLITORAL GLAND												
Enlarged	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	. 0	0	0	0	0	0
COLON						-		1				
Mass	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	×0 (0
EYE										ŝ		
Discoloration	0	0	1	0	3	1	0	0	2	0	0	Ó
Small	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	1	0	3	1	1	0	2	0	0	0
JEJUNUM												
Enlarged	0	0	0	0	0	0	0	0	ò,	1	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0
										{		

Table 71. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Female Rats

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Test Substance	Control	Are	oclor-1	016	Aroclo	r-1242	Ar	clor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
KIDNEY												
Cyst	0	0	0	0	1	0	1	0	1	0	0	1
Deformity	1	2	1	1	1	1	2	1	0	0	1	1
Discoloration	0	1	0	1	0	0	0	0	1	0	0	2
Focus	0	0	0	0	0	0	0	0	1	0	0	0
Hydronephrosis	0	0	0	0	0	0	1	0	0	0	0	0
Mass	0	0	0	0	0	1	0	- 0	0	0	0	0
Nodule	0	0	1	0	0	1	.0.	0	0	0	0	0
Total	1	3	2	2	2	3	4	1	3	0	1	4
LIVER												
Cyst	2	0	0	0	0	0	0	0	0	0	0	0
Deformity	0	0	0	0	0	0	0	0	1	0	2	0
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Enlarged	0	0	0	0	0	0	0	0	0	0	0	1
Focus	3	6	4	6	11	20	27	12	19	6	7	14
Mass	1	1	1.	1	4	5	- 15	8	11	3	5	16
Nodule	0	1	1	2	0	1	4	1	2	3	2	1
Total	6	8	6	9	15	26	47	21	33	12	16	32
LUNG												
Focus	0	1	0	0	0	0	0	0	0	0	0	0
Infiltration	1	0	0	0	0	0	0	1	0	0	0	0
Mass	1	1	0	0	0	1	1	0	1	0	0	0
Nodule	1	0	0	0	0	0	0	0	0	1	0	0
Total	3	2	0	0	0	1	1	1	1	1	0	0
LYMPH NODE-MAN	DIBULAR							· · · ·				
Discoloration	1	0	0	0	0	1	0	0	0	0	0	0
Enlarged	2	0	0	0	0	0	0	0	1	0	1	3
Total	3	0	0	0	0	1	0	0	1	0	1	3

Table 71. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Female Rats

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Test Substance	Control	Ar	oclor-1	016	Aroclo	ır-1242	Arc	xlor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
LYMPH NODE-MED	IASTINAI											
Enlarged	0	0	0	0	0	0	0	0	1	1	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0
LYMPH NODE-MES	ENTERIC		÷									
Enlarged	0	0	0	0	0	0	1	0	0	0	1	0
Total	0	0	0	0	0	0	1	0	0	0	1	0
LYMPH NODE-OTH	ER											
Enlarged	0	0	3	0	0	0	1	0	1	2	0	0
Total	0	0	3	0	0	0	1	0	1	2	0	0
MAMMARY GLAND)											
Cyst	2	0	1	1	1	3	1	0	1	1	0	0
Mass	15	7	12	14	5	8	21	11	3	8	8	12
Nodule	0	0	0	0	0	1	0	0	0	0	- 1	1
Total	17	7	13	15	6	12	22	11	4	9	9	13
MESENTERY												
Nodule	0	0	0	0	0	1	1	1	0	0	1	0
Thick	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	1	1	1	1	0	1	0
ORAL MUCOSA												
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
OVARY												
Cyst	6	2	2	2	3	2	3	1	2	2	2	2
Enlarged	0	0	0	0	0	0	1	0	0	0	0	1
Mass	0	0	1	1	0	0	0	0	0	0	0	0
Nodule	0	0	1	0	0	0	0	0	0	0	0	0
Total	6	2	4	3	3	2	4	1	2	2	2	3

Table 71. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Female Rats

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Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Ar	oclor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
PANCREAS												
Enlarged	0	0	0	0	0	0	1	0	0	0	0	0
Mass	0	0	0	1	1	0	0	0	0	1	0	0
Total	0	0	0	1	1	0	1	0	0	1	0	0
PARATHYROID										•		
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
PITUITARY GLAND	· · · · · · · · · · · ·											
Cyst	0	0	0	0	0	0	0	0	1	0	0	0
Enlarged	20	14	16	18	15	21	21	11	12	16	17	13
Focus	4	0	1	1	0	1	3	0	5	1	0	2
Nodule	0	0	0	0	0	0	1	0	0	0	0	0
Total	24	14	17	19	15	22	25	11	18	17	17	15
SKELETAL MUSCLE	3											A
Mass	0	0	0	0	0	Ó	0	0	0	1	0	0
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0
SKIN	·					•						·
Abrasion	0	0	0	0	1	0	0	0	0	0	0	0
Crust	4	0	2	0	0	0	2	0	2	0	1	0
Cyst	1	0	0	0	0	0	0	0	0	0	0	0
Mass	1	0	1	1	0	2	1	0	0	2	2	0
Nodule	0	0	0	1	1	1	1	1	0	1	0	0
Swollen	3	1	2	1	0	1	0	2	0	1	1	0
Total	9	1	5	3	2	4	4	3	2	4	4	0
SPLEEN	.		•				-				-	•••••••
Cyst	1	0	0	0	Ö	0	0	0	0	0	0	0
Enlarged	1	0	0	0	0	1	1	0	0	0	0	0
Nodule	0	0	0	1	0	0	0	0	0	1	0	0
Total	2	0	0	1	0	1	1	0	0	1	0	0

Table 71. Incidence Summary of Gross Necropsy Observations at the 105-Week **Termination for Female Rats**

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Test Substance	Control	Aroclor-1016			Aroclo	r-1242	Arc	volor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
N)	31	20	21	24	23	26	33	17	20	20	21	22
STOMACH												
Focus	0	0	0	1	0	1	° 0.	0	0	0	0	0
Nodule	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	1	0	0	0	0	0	0
THYMUS		ļ					<u> </u>		L			L
Enlarged	1	1	0	0	0	0	1 1 1	0	0	0	0	6
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	1	1	0	0	0	0	1	0	1	0	0	0
THYROID GLAND							_	_				
Enlarged	0	0	0	0	0	1	1	0	0	1	0	1
Total	0	0	0	0	0	1	1	0	0	1	0	1
URINARY BLADDE	L {		L	l	<u>.</u>	L	1	L				L
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
UTERUS			I		I							
Dilatation	3	0	2	2	1	- 3 -	3	0	0	2	5	1
Enlarged	0	0	0	0	0	1	2	0	1	0	0	0
Mass	0	0	0	1	0	0	0	0	0	0	0	0
Nodule	1	1	0	1	0	1	0	0	0	1	0	0
Prolapse	0	0	0	1	0	0	0	0	0	0	0	0
Total	4	1	2	5	1	5	5	0	1	3	5	. 1
VAGINA					· · · · · · · · · · · · · · · · · · ·							
Dilatation	0	0	0	1	0	0	1	0	0	0	0	0
Enlarged	0	0	0	0	0	0	1	0	0	0	0	0
Mass	0	0	0	1	0	0	0	0	0	0	0	0
Prolapse	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	2	0	0	3	0	0	0	0	0

Table 71. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Female Rats

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ¹	Are	oclor-1	016	Arocle	or-1242	Ar	oclor-12	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	6	6	4	5
ADRENAL GLAND										-		
Discoloration	0	0	0	0	0	0	0	0	0	0	0	1
Enlarged	1	0	1	0	1	- 1	2	0	0	0	0	0
Total	1	0	1	0	1	1	2	0	0	0	0	1
BONE												
Enlarged	0	0	0	0	0	0	0	0	0	0	. 1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
CLITORAL GLAND												
Discoloration	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
LIVER												
Cyst	0	1	0	0	0	0	0	0	0	0	0	0
Focus	0	0	0	0	1	3	1	3	5	0	0	2
Hepatodiaphragmatic Nodule	0	1	0	0	0	0	0	0	0	0	0	0
Mass	0	0	1	0	0	0	0	0	1	0	0	1
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	2	1	0	1	3	1	3	7	0	0	3
LUNG												
Nodule	0	0	0	0	0	. 0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0
LYMPH NODE-MAND	IBULAR											
Enlarged	0	0	1	0	0	0	0	0	0	1	1	0
Total	0	0	1	0	0	0	0	0	0	1	1	0
MAMMARY GLAND												
Cyst	0	1	1	1	2	0	0	0	0	0	1	0
Mass	3	3	2	2	1	0	2	1	1	2	0	1
Nodule	1	0	0	0	0	0	1	0	0	0	1	0
Total	4	4	3	3	3	0	3	1	1	2	2	1
MESENTERY												
Discoloration	0	0	0	0	1	0	0	0	1	0	0	0
Total	0	0	0	0	1	0	0	0	1	0	0	0

Table 72. Incidence Summary of Gross Necropsy Observations at the 78-WeekTermination for Stop Study B Female Rats

1. 78-Week Interim Termination control group findings reported for comparison.

Test Substance	Control ¹	Aro	clor-1	016	Aroclo	or-1242	Ar	oclor-12	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	- 6	5	5	5	5	6	6	6	4	5
OVARY												
Cyst	0	0	0	1	0	0	0	2	1	1	0	1
Total	0	0	0	1	0	0	0	2	1	1	0	1
PANCREAS												
Nodule	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0
PITUITARY GLAND	1 1							-				
Enlarged	2	4	2	3	2	1	2	3	1	4	1	1
Focus	1	0	1	1	2	1	0	0	1	1	2	3
Total	3	4	3	4	4	2	2	3	2	5	3	4
UTERUS												
Dilatation	0	0	0	0	0	1	1	1	1	2	0	1
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	- 1	1	1	2	0	1

Table 72. Incidence Summary of Gross Necropsy Observations at the 78-WeekTermination for Stop Study B Female Rats

1. 78-Week Interim Termination control group findings reported for comparison.

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Test Substance	Control ¹	Are	oclor-1	016	Arock	or-1242	Ar	oclor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
ADRENAL GLAND			·									
Enlarged	7	0	0	0	1	4	0	2	1	1	0	2
Total	7	0	0	0	1	4	0	2	1	1	0	2
BONE												
Swollen	0	1	0.	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND												
Discoloration	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
EYE												
Discoloration	0	1	0	0	0	0	1	0	0	0	0	0
Total	0	1	0	0	0	0	1	0	0	0	0	0
KIDNEY	•											
Cyst	0	0	0	0	0	0	0	0	0	0	0	1
Deformity	1	0	0	0	0	1	0	0	0	0	0	0
Discoloration	0	0	0	0	0	0	0	. 0	0	1	0	0
Total	1	0	0	0	0	1	0	0	0	1	0	1
LIVER												
Cyst	2	0	0	2	1	1	1	2	1	0	0	0
Deformity	0	0	0	0	0	0	0	0	0	1	0	0
Discoloration	0	0	1	0	0	0	0	0	0	0	0	0
Focus	3	0	0	. 1	0	1	6	6	6	0	1	3
Mass	1	0	0	0	2	3	4	7	1	2	3	7
Nodule	0	0	0	1	1	1	0	2	0	0	1	4
Total	6	0	- 1	4	4	6	11	17	8	3	5	14
LUNG						•				A		
Focus	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0
LYMPH NODE-MAN	DIBULAR	•••••••••							••••••••••••••••••••••••••••••••••••••		••	••••••••••••••••••••••••••••••••••••••
Enlarged	2	0	0	1	0	0	0	1	-0	0	0	0
Total	2	0	0	1	-0	0	0	1	0	0	0	0

Table 73. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Stop Study A Female Rats

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1. 105-Week Core control group findings reported for comparison.

Test Substance	Control ¹	Are	oclor-1	016	Arock	or-1242	Ar	oclor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
LYMPH NODE-MED	IASTINAL											
Cyst	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0
LYMPH NODE-OTH	ER											
Enlarged	0	0	0	1	0	1	0	0	0	0	0	0
Total	0	.0	0	1	-0	1	0	0	0	0	0	0
MAMMARY GLAND)	·		•								
Cyst	2	0	0	0	0	0	1	1	1	0	0	0
Enlarged	0	0	0	0	0	0	0	1	0	0	0	0
Mass	26	5	5	4	7	6	8	10	10	12	4	7
Nodule	0	1	0	0	0	0	0	0	0	1	0	0
Total	28	6	5	4	7	6	9	12	11	13	4	7
MESENTERY							·					
Nodule	. 0	0	0	0	0	.0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
OVARY							-					
Cyst	6	1	1	2	2	1	1	1	3	1	0	1
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Total	6	2	1	2	2	1	1	1	3	1	0	1
PITUITARY GLAND									-			
Enlarged	20	7	5	6	10	8	10	8	7	12	6	10
Focus	4	0	0	0	0	1	0	1	0	1	0	0
Total	24	7	5	6	10	9	10	9	7	13	6	10
SKELETAL MUSCLI	B					<u>.</u>						
Mass	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
SKIN		1										
Crust	5	0	0	0	0	0	0	0	0	0	0	1
Mass	1	1	0	0	1	0	2	1	1	1	0	1
Nodule	0	1	0	0	0	0	0	0	0	1	0	0
Swollen	3	2	0	1	0	0	0	0	0	0	2	0
Ulcer	0	0	0	0	0	0	0	0	1	0	0	0
Total	9	4	0	1	1	0	2	1	2	2	2	2

Table 73. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Stop Study A Female Rats

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1. 105-Week Core control group findings reported for comparison.

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Test Substance	Control ¹	Arc	oclor-1	016	Arock	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
SPLEEN												
Enlarged	1	0	0	1	0	0	0	0	1	0	0	0
Total	1	0.	0	1	0	0	0	0	1	0	0	0
STOMACH												
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Laceration	0	0	0	0	0	0	0	1	0		0	0
Total	0	0	9	0	0	0	0	· 1 ···	1 -	0	_0	0
THYROID GLAND										in Ann Annthe	·	
Enlarged	0	0	0	0	1	0	0	0	0	. 1	0	1
Mass	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	1	0	1
UTERUS												
Cyst	0	0	0	0	0	0	0	0	0	1	0	0
Dilatation	3	. 1	0	2	3	2	1	0	3	2	1	4
Enlarged	0	0	0	0	0	1.	0	0	0	0	0	0
Mass	0	1	0	0	1	0	0	0	0	0	0	0
Thick	0	0	0	0	0	0	1	0	0	0	0	0
Total	3	2	0	2	4	3	2	0	3	3	1	4
VAGINA	· ·											
Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Dilatation	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	1

Table 73. Incidence Summary of Gross Necropsy Observations at the 105-WeekTermination for Stop Study A Female Rats

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1. 105-Week Core control group findings reported for comparison.

Test Substance	Control	trol Aroclor-1016			Aroclo	r-1242	Ar	oclor-1	254	Аго	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
ADRENAL GLAND												
Enlarged	0	0	1	0	1	0	0	0	0	1	0	0
Total	0	0	1	0	1	0	0	0	0	1	0	0
BRAIN												
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	U	0	0	0	0	0	0	1	0
CAVITY, ABDOMIN	AL				-							
Fluid	0	0	0	2	1	0	0	0	0	0	1	0
Total	0	0	0	0	1	0	0	0	0	0	1	0
CAVITY, THORACIC												
Fluid	0	0	.0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
CECUM							· · ·				•	
Dilatation	1	0	0	0	0	0	0	0	0	0	0	0
Perforation	0	0	0	0	0	0	0	0	0	0	1	0
Total	1 -	0	0	0	0	0	0	0	0	0	1	0
COLON		iu										
Dilatation	1	0	0	0	0	0	0	0	0	0	0	0
Foreign Material	1	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	0	0	0	0	0	0	0
DUODENUM	•							.				
Foreign Material	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
EYE		· · ·										
Discoloration	0	0	0	1	0 .	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
ILEUM		••••••	•••••				•••••••		•	• <u>••••</u> •••••••••••••••••••••••••••••••		<u> </u>
Dilatation	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM		•	<u></u>		•							4
Intussusception	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0

Table 74. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (0-12 Months) for Core, Interim and Stop Study SubgroupFemale Rats

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Table 74. Incidence Summary of Gross Necropsy Observations at Unscheduled Termination (0-12 Months) for Core, Interim and Stop Study Subgroup **Female Rats**

Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-1	254	Arc	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
KIDNEY					1			÷				
Accumulation	0	0	0	0	1	0	0	0	0	0	0	0
Discoloration	0	0	0	0	1	0	0	0	0	0	0	0
Nodule	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	2	0	0	0	0	0	0	0
LIVER												
Enlarged	0	0	0	0	1	0	0	0		0	0	0
Focus	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	1	0	0	0	1	0	0	0
LUNG							-					
Discoloration	0	0	0	0	0	0	0	0	1	0	, 0	0
Focus	0	0	0	0	0	0	0	0	0	0	1	0
Nodule	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	1	0	1	0
LYMPH NODE-MAN	DIBULAR											
Enlarged	0	0	0	0	1	0	0	0	1	0	. 1	0
Total	0	0	0	0	1	0	0	0	1	0	1	0
LYMPH NODE-MEDI	ASTINAL											
Enlarged	0	0	0	0	1	0	0	0	0	0	1	0
Total	0	0	0	0	1	0	0	0	0	0	1	0
LYMPH NODE-MESH	ENTERIC											
Enlarged	0	0	0	0	1	0	0	0	0	0	1	0
Total	0	0	0	0	1	0	0	0	0	0	1	0
LYMPH NODE-OTHE	ER											
Enlarged	0	0	0	0	1	0	0	0	1	0	1	0
Total	0	0	0	0	1	0	0	0	1	0	1	0
MAMMARY GLAND						·						
Enlarged	1	0	0	0	0	0	0	1	1	0	1	0
Mass	1	0	0	0	0	1	1	1	1	0	1	0
Total	2	0	0	0	0	1	1	2	2	0	2	0
MESENTERY												
Discoloration	0	0	0	0	0	0	0	0	0	0	1	0
Nodule	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	1	0

Test Substance	Control	Ar	oclor-1	016	Arocle	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
OVARY												
Cyst	0	0	0	0	0	0	0	1	1	0	0	0
Total	0	0	0	0	- 0	0	0	1	1	0	0	0
PITUITARY GLAND												
Enlarged	2	0	2	0	0	1	_ 1	1	1	1	2	0
Total	2	0	2	0	0	1	1	1	1	1	2	0
RECTUM												
Dilatation	1	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	0	0	0	0	0	0	0	1	0
SALIVARY GLAND	SUBMAXI	LLAR	ľ									
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	v	0	0	0	0	1	0	0	0
SKELETAL MUSCLE	}	-										
Mass	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0
SKIN												
Discoloration	0	0	0	0	0	0	0	.0	1	0	0	0
Total	0	0	0	0	0	0	0	0 ·	1	0	0	0
SPLEEN												
Enlarged	0	0	0	0	1	0	0	1	1	0	2	0
Small	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	0	1	1	0	2	0
STOMACH												
Foreign Material	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
THYMUS												
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
URINARY BLADDER	٤											
Calculus	0	0	1	1	0	0	0	0	0	0	0	0
Dilatation	0	0	0	0	1	0	0	0	1	0	0	0
Thick	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	1	1	2	0	0	0	1	0	0	0

Table 74. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (0-12 Months) for Core, Interim and Stop Study SubgroupFemale Rats

Test Substance	Control	Ar	oclor-1	016	Aroclo	er-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
ADRENAL GLAND	· .		A	•					-			
Discoloration	2	0	0	0	0	0	0	. 1	0	0	0	0
Enlarged	4	0	1	0	0	0	0	1	1	1	0	1
Focus	2	0	0	0	0	1	1	0	0	0	0	1
Nodules	1	0	0	0	0	0	0	0	0	0	0	0
Nodule	1	0	0	0	0	0	0	0	0	0	.0	0
Total	10	0	1	0	0	1	1	2	1	1	0	2
BRAIN												
Focus	1	0	0	0	0	0	0	0	0	0	0	0
Fluid	0	0	0	0	0	0	0	0	1	0	0	0
Total	1	0	0	0	0	0	0	0	1	0	0	0
CAVITY, THORACIC												
Fluid	0	0	1	0	0	0	0	1	1	1	0	1
Total	0	0	1	0	0	0	0	1	1	1	. 0	1
CLITORAL GLAND		••••••••••••••••••••••••••••••••••••••										
Focus	0	0	0	0	1	0	0	0	0	0	0	0
Total	.0	0	0	0	1	0	0	0	0	0	0	0
EYE												
Discoloration	1	1	0	0.	0	0	0	0	0	0	0	0
Total	1	1	0	0	0	0	0	0	0	0	0	0
KIDNEY										- 1		
Calculus	1	0	0	0	0	0	0	0	0	0	0	0
Dilatation	0	0	0	0	0	0	0	0	0	0	1	0
Deformity	0	0	0	1	1	0	0	0	0	0	0	0
Discoloration	5	0	0	0	1	0	0	1	0	0	0	0
Enlarged	1	0	0	0	0	0	0	0	0	0	0	1
Focus	0	0	0	0	0	0	0	1	0	0	0	0
Nodule	0	0	0	0	0	. 0	0	0	0	0	0	1
Accumulation	1	0	0	0	0	0	0	0	0	0	0	0
Total	8	0	0	1	2	0	0	2	0	0	1	2
LIVER										· · · · · · · · · · · · · · · · · · ·		
Deformity	1	0	0	0	0	0	0	0	0	0	0	2
Discoloration	2	0	0	1	0	0	0	0	0	0	0	0
Enlarged	0	0	1	0	0	0	0	1	1	0	0	1
Focus	2	0	0	0	1	0	2	3	3	1	0	1
Mass	0	0	0	0	1	0	0	1	0	0	0	2
Nodule	0	0	0	1	0	0	0	0	0	0	0	0
Total	5	0	. 1 .	2	2	0	2	5	4	1	0	6

Table 75. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Female Rats

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
LUNG												
Discoloration	0	0	1	0	0	0	0	1	0	1	0	0
Nodule	0	0	1	0	0	1	0	0	0	0	0	0
Total	0	0	2	0	0	1	0	1	0	1	Ó	0
LYMPH NODE-MEDL	ASTINAL											
Enlarged	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
LYMPH NODE-MESE	NTERIC											· · ·
Enlarged	1	0	0	0	1	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	. 0	0
LYMPH NODE-MANE	DIBULAR											
Enlarged	1	0	0	0	- 1	- 0	1	0	0	0	2	0
Total	1	0	0	0	1	0	1	0	0	0	2	0
LYMPH NODE-OTHE	R				•••••••••••••••••••••••••••••••••••••••		· · ·		•			
Enlarged	1	0	0	0	1	0	0	0	1	0	0	0
Total	1	0	0	0	1	0	0	0	1	0	Ő	0
MAMMARY GLAND								• <u>•••</u> •••••••••				
Cyst	3	0	2	0	1	1	1	0	1	1	2	1
Enlarged	4	0	1	0	0	0	0	1	1	0	0	0
Mass	15	1	2	2	2	0	0	2	0	3	1	4
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Total	23	1	5	2	3	1	1	3	2	4	3	5
MESENTERY							·					
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Enlarged	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	0	0	0	0	0	0	0	1	0
OVARY	.	.		-	• • • • • • • • • • • • • • • • • • •			.		•	· ,	A
Cyst	1	0	0	0	0	1	0	0	0	0	0	0
Focus	0	0	0	0	0	0	0	1	0	0	0	0
Total	1	0	0	0	0	1	0	1	0	0	0	0
PANCREAS	•			••••••••••••••••••••••••••••••••••••••			•	••••••	•			
Discoloration	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
PARATHYROID	••••••••••••••••••••••••••••••••••••••	· · · · · · · · · · · · · · · · · · ·	4		•						· · · · · ·	
Enlarged	2	0	0	1	1	0	0	0	0	0	0	0
Total	2	0	0	1	1	0	0	0	0	0	0	0

Table 75. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Female Rats

Test Substance	Control	Ar	clor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	- 4	5	6	7	10
PITUITARY GLAND	5. S.						••••••					·
Cyst	0	0	0	0	0	0	0	0	1	0	0	0
Enlarged	26	9	5	4	5	5	4	2	0	5	5	7
Focus	0	0	0	0	0	0	0	0	0	0	0	1
Total	26	9	5	4	5	5	4	2	1	5	5	8
SKELETAL MUSCLE	•											
Mass	0	1	0	0	0	1	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	0
SKIN												
Alopecia	1	0	0	0	0	0	0	0	0	0	0	0
Discoloration	0	0	0	0	0	1	0	0	0	0	. 0	0
Mass	2	0	0	1	0	1	1	0	0	0	1	2
Ulcer	0	0	0	0	0	0	0	1	0	0	0	0
Total	3	0	0	1	0	2	1	1	0	0	1	2
SPLEEN												
Deformity	0	0	0	0	0	0	0	0	0	0	0	1
Enlarged	3	- 1	2	1	1	0	1	0	1	1	0	0
Nodule	0	0	0	0	0	0	0	0	0	0	1	0
Adhesion	Ο.	0	1	0	0	0	0	0	0	0	0	0
Total	3	1	3	1	1	0	1	0	1	1	1	1
STOMACH												
Discoloration	0	1	0	0	0	0	0	0	0	0	0	1
Focus	1	0	0	0	0	0	1	0	0	0	0	0
Nodule	0	0	0	0	0	0	0	0	1	1	0	0
Total	1	1	0	0	0	0	1	0	1	1	0	1
THYMUS												
Enlarged	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Enlarged	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												
Dilated	1	0	0	0	0	0	0	0	1	0	1	0
Total	1	0	0	0	0	0	0	0	1	0	1	0

Table 75. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Female Rats

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
UTERUS												
Dilatation	1	0	0	0	0	0	0	0	0	0	0	0
Mass	1	0	0	0	0	0	1	0	0	0	0	0
Cyst	0	0	0	0	0	0	1	0	0	0	0	0
Total	2	0	0	0	0	0	2	0	0	0	0	0
VAGINA	•											
Enlarged	0	0	0	0	0	0	1	0	0	0	0	0
Prolapse	0	0	0	1	0	0	0	0	· 0 ·	0	0	0
Fluid	0	0	0	0	0	0	0	0	0	1	0	0
Dilatation	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	1	0	0	1	0	0

Table 75. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Core and Interim Subgroup Female Rats

Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
ADRENAL GLAND	•				·		L		•			•
Cyst	0	0	0	0	0	1	0	0	0	0	0	0
Discoloration	1	2	0	0	1	0	0	0	0	2	0	0
Enlarged	7	2	6	5	6	3	1	4	6	6	3	3
Focus	0	0	1	0	0	0	0	1	0	0	0	0
Small	0	0	0	0	0	0	0	0	2	0	0	0
Nodules	0	0	0	0	0	1	0	0	0	0	0	0
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	8	4	7	5	7	5	1	5	8	8	4	3
AORTA						· .						
Enlarged	0	0	0	0	0	0	0	0	0	1	0	0
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Thick	0	0	0	0	1	0	0	0	0	0	1	0
Firm	1	. 0	0	0	0	0	0	0	0	1	0	0
Total	1	0	0	0	1	0	0	0	0	2	2	0
BLOOD VESSEL						· · · · · ·				A	.	
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Thick	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0
BONE			•									
Mass	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	0	0	0	0	0	0	0	0	2	0
BRAIN												
Fluid	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0
CAVITY, ABDOMINA	L					· · · · · · · · · · · · · · · · · · ·						•
Fluid	1	1	0	0	0	0	0	2	1	2	0	1
Total	1	1	0	0	0	0	0	2	1	2	0	1
CAVITY, PERICARDI	AL											•
Fluid	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
CAVITY, THORACIC												
Fluid	0	2	1	1	1	1	0	2	1	1	0	2
Adhesion	0	1	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	1	1	1	0	2	1	- 1	0	2

Table 76. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Female Rats

599

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
CLITORAL GLAND	•											
Enlarged	1	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	0	. 0	0
COLON			L					<u></u> ,	L		••••••••••••••••••••••••••••••••••••••	
Dilatation	0	1	0	1	0	0	0	0	0	0	0	0
Total	0	1	0	. 1	0	0	0	0	0	0	0	0
EYE			.	;							•	
Discoloration	0	0	0	0	1	1	1	2	0	1	0	0
Nodule	1	0	0	0	0	0	0	0	0	0	1	0
Small	0	1	0	0	0	0	0	0	0	0	1	0
Crust	0	0	0	0	0	0	0	1	0	0	0	0
Total	1	1	0	0	1	1	1	3	0	1	2	0
HARDERIAN GLAND												
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
HEART												
Discoloration	0	1	0	0	0	1	0	1	0	0	0	1
Enlarged	1	0	0	0	3	0	0	0	0	0	0	0
Focus	0	0	0	0	0	1	0	0	0	0	0	0
Nodule	1	0	0	0	0	0	0	0	0	0	0	0
Thick	0	0	0	0	0	0	0	1	0	0	0	0
Fluid	0	0	0	0	0	0	0	1	0	0	0	0
Total	2	1 %	0	0	3	2	0	3	0	0	0	1
JEJUNUM												
Discoloration	0	0	- 0	0	1	0	0	0	0	0	0	0
Intussusception	0	0	0	0	0	0	0	1	0	0	0	0
Thick	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	1	0	0	2	0	0	0	0
KIDNEY												
Adhesion	1	0	0	0	0	0	0	0	0	0	0	0
Deformity	0	0	0	0	0	3	0	2	1	2	1	1
Dilatation	0	0	0	0	0	0	0	0	1	0	0	0
Discoloration	1	5	1	1	2	1	0	2	3	3	2	3
Enlarged	1	2	2	1	3	0	0	2	2	0	0	0
Focus	1	0	1	1	0	0	0	0	0	1	0	1
Cyst	0	0	0	1	0	0	0	1	1	1	0	0

Table 76. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Female Rats

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> Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Аг	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Aro	clor-12	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
KIDNEY												
Accumulation	0	0	1	0	0	0	0	Q	0	0	0 -	0
Total	4	7	5	4	5	4	0	7	8	7	3	5
LIVER												
Adhesion	1	0	0	0	0	0	0	0	0	0	0	0
Cyst	1	1	1	0	0	0	1	1	1	2	1	0
Deformity	1	0	2	0	0	2	0	0	0	0	0	2
Discoloration	3	7	2	2	4	3	2	11	4	5	3	7
Enlarged	0	0	0	0	0	0	2	2	5	1	3	4
Focus	- 3	7	4	4	4	9	- 5	16	19	7	7	3
Mass	1	0	3	0	2	6	2	12	13	1	3	4
Nodule	0	0	0	- 1	0	1	0	1	3	0	0	1
Total	10	15	12	7	10	21	12	43	45	16	17	21
LUNG										•		
Adhesion	0	1	0	0	0	0	0	0	0	0	0	0
Discoloration	1	0	1	0	0	0	0	0	3	0	0	0
Fluid	0	0	0	0	0	0	0	0	0	1	0	0
Focus	2	0	1	1	1	0	0	2	3	0	0	0
Mass	1	1	1	0	0	0	0	1	0	0	0	1
Nodule	2	1	0	0	0	0	1	0	3	0	0	1
Total	6	3	3	1	1	0	1	3	9	1	0	2
LYMPH NODE-MEDL	STINAL		· .							•	•	
Enlarged	2	1	0	0	0	0	0	0	2	. 0.	0	0
Total	2	1	0	0	0	0	0	0	2	0	0	0
LYMPH NODE-MESE	NTERIC											
Enlarged	0	0	0	1	0	1	0	1	1	0	0	0
Total	0	0	0	1	0	1	0	1	1	0	0	0
LYMPH NODE-MAND	IBULAR							•				
Enlarged	1	1	4	2	0	0	1	4	3	0	0	1
Total	1	1	4	2	0	0	1	4	3	0	0	1
LYMPH NODE-OTHER	ર									· · · · ·	· ·	
Enlarged	1	1	0	2	0	0	0	0	0	1	0	0
Total	1	1	0	2	0	0	0	0	0	1	0	0

Table 76. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Female Rats

 ${\mathfrak B}^{(n)}_{i_1,\ldots,i_n} = {\mathfrak B}^{(n)}_{i_1,\ldots,i_n} = {\mathfrak B}^{(n)}_{i_1,\ldots,i_n}$

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-12	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
MAMMARY GLAND												
Cyst	0	1	1	0	4	1	0	0	0	4	0	0
Enlarged	1.	0	0	0	0	0	0	0	0	0	0	0
Mass	20	10	12	14	11	9	4	18	9	8	9	6
Total	21	11	13	14	15	10	4	18	9	12	.9	6
MESENTERY												
Nodule	1	0	0	0	0	0	0	1	0	0	0	1
Enlarged	0	0	0	0	0	0	1	0	1	0	0	0
Mass	1	0	0	0	0	0	0	0	0	0	0	0
Thick	0	0	0	0	0	0	0	1	1	0	0	0
Adhesions	0	0	0	0	0	0	0	0	0	1	0	0
Total	2	0	0	0	. 0	0	1	2	2	1	0	1
ORAL MUCOSA												
Mass	0	0	0	0	0	0	0	1	2	0	1	0
Total	0	0	0	0	0	0	0	1	2	0	1	0
OVARY												
Cyst	1	3	0	4	4 .	1	1	3	2	3	1	3
Enlarged	0	0	0	0	0	1	0	0	0	0	0	0
Mass	1	1	0	0	0	0	0	1	0	0	0	0
Total	2	4	0	4	4	2	1	4	2	3	1	3
PANCREAS												
Mass	0	0	0	0	0	0	0	0	0	0	0	1
Dilatation	0	0	0	0	0	0	0	0	1	0	0	0
Thick	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	2
PARATHYROID												
Enlarged	1	1	0	1	3	1	0	2	1	3	0	2
Total	1	1	0	1	3	1	0	2	1	3	0	2
PITUITARY GLAND												
Cyst	1	0	0	0	0	0	0	0	2	0	0	1
Discoloration	0	0	0	0	0	0	0	0	1	0	0	1
Enlarged	28	22	18	18	19	15	8	16	8	22	18	13
Focus	2	0	0	1	1	0	1	2	3	0	1	1
Nodule	1	0	1	0	0	0	2	0	1	1	0	0
Total	32	22	19	19	20	15	11	18	15	23	19	16

Table 76. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Female Rats

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Reality of Branchard Reality of Branchard

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control Aroclor-1016 Aroclor-1242 A						Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
RECTUM												
Dilatation	0	1	0	0	0	0	0	0	0	0	0	0
Mass	0	1	0	0	0	0	0	-0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND, S	SUBMAXI	LLAR	Y	:								
Mass	0	1	0	0	0	0	0	0	0	0	0	0
Small	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	0	0	0	0	0	0	1	0
SKELETAL MUSCLE												a digeneration of the second sec
Mass	0	1	1	0	0	0	0	1	1	0	0	1
Hemorrhage	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	0	0	0	0	1	1	0	0	2
SKIN												
Crust	1	4	2	1	2	0	1	0	0	1	1	2
Discoloration	1	0	0	0	0	0	0	0	0	0	0	0
Focus	0	0	0	1	0	0	0	0	0	0	0	0
Mass	1	1	2	2	0	2	1	1	2	3	1	0
Nodule	2	1	1	4	2	0	0	1	1	0	0	1
Swollen	. 1	0	1	1	0	0	1	0	0	1	0	0
Ulcer	0	0	0	0	0	0	0	0	0	1	0	0
Deformity	0	0	0	0	0	1	0	0	0	0	0	0
Abrasion	0	0	0	1	0	0	0	0	0	1	0	0
Cyst	0	0	0	0	. 0	0	0	0	1	0	0	0
Lesion	0	0	1	0	0	0	0	0	0	0	0	0
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Total	6	6	7	10	4	3	3	2	5	7	2	3
SPLEEN						· ·						
Deformity	0	0	0	0	0	0	0	0	0	1	0	0
Enlarged	6	2	3	3	0	0	0	2	1	4	1	5
Mass	0	1	0	0	0	1	0	1	0	0	0	2
Small	0	0	0	0	0	0	1	0	0	0	0	0
Cyst	0	0	0	. 0	0	0	0	1	0	0	0	0
Total	6	3	3	3	0	1	1	4	1	5	1	7

Table 76. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Female Rats

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Test Substance	Control	Аг	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Aro	cior-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
STOMACH						<u></u>						•
Adhesion	0	° 0'	0	0	0	0	0	0	0	.0	0	1
Discoloration	0	0	- 1	0	0	0	0	0	0	0	0	0
Focus	2	2	0	2	0	1	2	2	2	2	2	2
Mass	0	0	0	0	0	0	0	0	0	1	0	0
Nodule	0	1	0	0	0	0	2	2	0	0	1	0
Perforation	0	G	0	0	0	0	0	0	0	0	1	0
Thick	0	0	0	0	0	0	0	0	0	1	0	0
Total	2	3	1	2	0	1	4	4	2	4	4	3
THYMUS	.		• <u>•••••</u> •••••••••									
Enlarged	1	0	0	0	0	0	0	0	0	0	1	0
Mass	1	0	0	1	0	0	0	0	0	0	0	0
Total	2	0	0	1	0	0	0	0	0	0	. 1 .	0
THYROID GLAND												
Cyst	1	0	0	0	0	0	0	0	0	0	0	0
Enlarged	1	1	0	2	0	1	0	1	0	1	0	0
Nodule	0	1	0	0	0	0	0	0	0	0	0	0
Mass	1	0	0	0	0	0	0	0	0	0	0	0
Total	3	2	0	2	0	1	0	1	0	1	0	0
TONGUE												
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
URINARY BLADDER		-										
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	-0	0	0	0	0	0	0	1	0
UTERUS											•	
Dilatation	2	0	1	1	1	0	- 1	0	0	. 1	3	1
Enlarged	0	0	0	0	0	0	0	0	1	0	0	0
Focus	0	0	0	0	0	0	0	0	0	0	0	1
Mass	0	1	0	1	0	1	1.1	2	2	2	1	2
Nodule	0	0	0	0	0	1	0	0	0	0	0	0
Small	0	1	0	0	0	0	0	0	0	0	0	0
Cyst	1	0	0	0	0	1	0	0	0	0	0	0
Total	3	2	1	2	1	3	2	2	3	3	4	4

Table 76. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Core Subgroup Female Rats

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Аг	oclor-1	016	Arocio	r-1242	Ar	oclor-1	254	Aro	clor-12	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
VAGINA												
Enlarged	0	1	0	0	0	0	0	0	0	1	0	0
Mass	0	0	0	1	0	0	0	1	0	0	0	1
Prolapse	0	0	0	0	0	0	0	0	0	1	0	0
Fluid	2	1	2	0	1	0	0	2	0	2	2	2
Total	2	2	2	1	1	0 -	0	3	. 0	4	2	3
ZYMBAL GLAND												
Mass	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	1

Table 76. Incidence Summary of Gross Necropsy Observations at Unscheduled Termination (18-24 Months) for Core Subgroup Female Rats

Test Substance	Control ¹	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-12	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
ADRENAL GLAND												
Discoloration	0	0	0	1	0	0	0	0	1	0	0	0
Enlarged	0	0	1	1 -	0	1	0	. 1	1	1 .	1	1
Total	0	0	1.	2	0	1	0	1	2	1	1	1
CAVITY, ABDOMINAL												
Fluid	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
CAVITY, THORACIC	·											
Fluid	0	0	0	0	0	C	0	0	0	0	1	0
Total	0	0	0	0	0	. 0	0	0	0	0	1	0
KIDNEY			,									
Deformity	0	1	0	0	0	1	0	0	1	0	0	0
Discoloration	0	0	0	0	1	0	1	1	0	0	0	0
Enlarged	0	0	1	1	0	0	0	0	0	0	0	0
Mass	0	0	0	0	0	Ò	0	0	1	0	0	0
Cyst	0	0	0	0	0	0	0	0	0	1	0	0
Dilatation	0	0	0	0	0	0	0	0	0	1	0	0
Total	0	1	1	1	1	1	1	1	2	2	0	0
LIVER											- -	
Discoloration	0	1	0	1	0	1	0	0	0	1	1	1
Focus	0	0	0	1	1	1	1	1	3	1	1	0
Mass	0	0	0	0	1	. 1	0	0	0	0	1	0
Total	0	1	Ó	2	2	3	1	1	3	2	3	1
LYMPH NODE-MESENTER	IC											
Enlarged	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
LYMPH NODE-MANDIBUL	AR											
Enlarged	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	. 0	0
MAMMARY GLAND												
Cyst	0	0	0	1	0	0	0	1	0	1	0	0
Enlarged	0	0	0	1	0	0	0	0	0	0	0	0
Mass	0	0	1	1	1.	2	1	0	3	2	3	0
Total	0	0	1	3	1	2	1	1	3	3	3	0

Table 77. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim subgroup unscheduled termination (12-18 months) control findings reported for comparison.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

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Test Substance	Control ¹	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
MESENTERY												
Nodule	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	1
OVARY												
Cyst	0	0	0	2	0	0	1	0	2	0	0	0
Total	0	0	0	2	0	0	1	0	2	0	0	0
PANCREAS		-1							ζ			
Mass	0	0	0	0	0	0	0 3	0	1	0	0	0
Nodule	0	0	0	0	0	0	0	. 0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	0	0	1
PARATHYROID												
Enlarged	0	0	0	0	1	0	0	1	0	0	0	0
Total	0	0	0	0	1	C	0	1	0	0	0	0
PITUITARY GLAND												
Cyst	0	0	0	0	0	0	0	0	1	0	0	0
Discoloration	0	0	0	0	0	0	0	0	0	1	0	0
Enlarged	0	2	4	8	2	2	1	1	2	1	5	1
Focus	0	0	0	0	2	0	0	0	0	2	0	0
Total	0	2	4	8	4	2	1	1	3	4	5	1
SKIN			÷.,									
Discoloration	0	0	0	0	0	1	0	0	0	0	0	0
Swollen	0	0	0	0	0	0	0	0	1	0	0	0
Deformity	0	0	0	0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	1	0	0	2	0	0	0
SPLEEN		·					,					
Enlarged	0	0	0	0	0	1	0	0	0	1	2	0
Total	Q	0	0	0	0	1	0	0	0	1	2	0
STOMACH		:									· .	
Discoloration	0	0	1	0	0	0	0	0	0	0	0	0
Focus	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	1	1	0	1	0	0	0	0	0	1	0
THYROID GLAND												
Enlarged	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	: O	0	0	0	0	0

Table 77. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim subgroup unscheduled termination (12-18 months) control findings reported for comparison.

Test Substance	Control ¹	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	xlor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2 :
UTERUS												,
Dilatation	0	0	0	0	0	0	0	0	2	0	2	0
Mass	0	0	0	0	0	1	0	0	1	0	0	1
Total	0	0	0	-0	0	1	0	0	3	0	2	1
VAGINA												
Fluid	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0

Table 77. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim subgroup unscheduled termination (12-18 months) control findings reported for comparison.

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Test Substance	Control ¹	Ar	oclor-1	016	Arocle	or-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
ADRENAL GLAND												
Discoloration	0	0	0	0	1	0	0	0	0	0	0	0
Enlarged	0	5	4 ·	1	1	7	1	2	1	2	3	1
Focus	0	0	0	0	2	1	0	0	0	0	0	0
Total	0	5	4	1	4	8	1	2	1	2	3	1
BLOOD VESSEL												
Thick	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1
CAVITY, ABDOMINA	L								·			
Fluid	0	1	0	0	0	2	0	1	0	1	0	1
Total	0	1	0	0	0	2	0	1	0	1	0	1
CAVITY, THORACIC			·									
Fluid	0	0	0	- 0	0	0	0	0	1	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	0	0
HEART												
Discoloration	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0
JEJUNUM							· · · · ·					
Adhesion	0	0	0	0	0	0	0	0	0	0	0	1
Dilatation	0	0	0	1	0	0	0	0	0	- 0	1	0
Enlarged	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	0	0	0	1	1
KIDNEY												
Dilation	0	0	0	1	0	0	0	0	0	0	0	0
Deformity	0	1	0	0	1	1	1	0	0	0	0	0
Discoloration	0	0	1	0	1	1	2	0	0	0	1	3
Enlarged	0	0	0	0	0	0	0	2	0	0	0	0
Mass	0	0	0	0	0	1	0	0	0	0	0	0
Nodule	0	0	0	0	0	1	0	0	0	0	0	0
Cyst	0	0	0	0	0	0	0	1	0	0	0	0
Depression	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	1	1	1	2	4	4	3	0	0	1	3

Table 78. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Stop Study A Subgroup Female Rats

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1. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

Test Substance	Control ¹	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
LIVER	• • • • • • • • • • • • • • • • • • •											
Cyst	0	1	0	0	0	1	0	0	0	0	1	0
Deformity	0	0	0	0	0	1	0	0	0	0	0	0
Discoloration	0	0	1	0	2	0	3	3	0	0	3	1
Enlarged	0	1	0	0	1	- 1	2	1	0	1	0	1
Focus	0	3	0	0	2	3	3	1	2	2	5	5
Mass	0	0	0	0	0	3	1 .	0	3	1	0	6
Nodule	0	0	0	0	0	1	0	0	0	0	0	0
Total	0	5	. 1	0	5	10	9	5	5	4	9	13
LUNG						•						
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Fluid	0	0	0	0	0	0	0	0	1	0	0	0
Focus	0	1	1	0	0	0	0	0	0	0	0	2
Mass	· 0	1	0	0	0	0	0	0	0	0	0	0
Total	0	2	-1	0	0	0	1	0	1	0	0	2
LYMPH NODE-MEDL	ASTINAL											
Enlarged	0	0	0	0	0	1	2	0	0	0	0	0
Total	0	0	0	0	0	1	2	0	0	0	0	0
LYMPH NODE-MESE	NTERIC											
Enlarged	0	0	0	0	0	1	1	0	0	0	0	0
Total	0	0	0	0	0	1	1	0	0	0	0	0
LYMPH NODE-MAND	DIBULAR											
Enlarged	0	1	0	0	3	0	1	0	0	0	0	0
Total	0	1	0	0	3	0	1	0	0	0	0	0
LYMPH NODE-OTHE	R											
Enlarged	0	0	. 0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0
MAMMARY GLAND												
Cyst	0	1	0	0	0	0	3	0	0	0	0	1
Mass	0	6	7	3	4	7	7	8	1	2	5	5
Total	0	7	7	3	4	7	10	8	1	2	5	6

Table 78. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

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Test Substance	Control ¹	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-1	254	Arc	xlor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
MESENTERY			.	.	L	<u> </u>	L	1		.	.	.
Nodule	0	0	0	0	0	1	0	1	0	0	0	1
Mass	0	0	0	0	0	0	0	1	0	0	0	0
Thick	0	0	0	0	0	0	0	1	0	0	0	0
Total	0	0	0	0	0	1	0	3	0	0	0	1
ORAL MUCOSA		. •	.	۲	,			•	•			
Mass	0	0	1	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	0	0	0	0
OVARY												
Cyst	0	2	2	0	0	0	0	0	0	2	0	3
Total	0	2	2	0	0	0	0	0	0	2	0	3
PARATHYROID												
Enlarged	0	0	1	0	1	0	0	1	0	0	1	2
Total	0	0	1	0	1	0	0	1	0	0	1	2
PITUITARY GLAND												
Cyst	0	0	1	0	0	0	0	0	0	0	0	0
Enlarged	0	11	8	7	7	11	8	4	3	5	9	9
Focus	0	0	0	0	0	0	0	1	0	1	2	0
Total	0	11	9	7	7	11	8	5	3	6	11	9
RECTUM												
Dilatation	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
SKELETAL MUSCLE												
Mass	0	0	1	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	0	0	0	0
SKIN												
Crust	0	0	1	1	0	0	0	1	0	0	1	0
Mass	0	0	0	0	2	0	0	1	0	1	0	0
Nodule	0	0	1	0	0	0	0	0	0	0	0	0
Swollen	0	2	0	0	0	0	0	0	0	0	0	0
Edema	0	0	0	0	0	0	0	0	0	1	0	0
Thick	0	0	0	0	0	0	1	0	0	0	0	0
Total	0	2	2	1	2	0	1	2	0	2	1	0

Table 78. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Stop Study A Subgroup Female Rats

 $\mathbb{E}_{\mathcal{O}} = \mathbb{E}_{\mathcal{O}} \left\{ \mathbf{e}_{\mathcal{O}} : \mathcal{O} = \mathbb{E}_{\mathcal{O}} \left\{ \mathbf{e}_{\mathcal{O}} : \mathcal{O} = \mathbb{E}_{\mathcal{O}} \left\{ \mathbf{e}_{\mathcal{O}} : \mathcal{O} = \mathbb{E}_{\mathcal{O}} \left\{ \mathbf{e}_{\mathcal{O}} : \mathbf{e}_{\mathcal{O}} \right\} \right\}$

1. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

Test Substance	Control ¹	Ar	clor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
SPLEEN	•				· ·							
Deformity	0	0	0	1	0	0	0	0	0	0	0	1
Discoloration	0	0	0	0	0	1	0	0	0	0	0	0
Enlarged	0	0	0	0	1	1	2	0	0	0	0	0
Focus	0	0	0	0	0	0	0	1	0	0	0	0
Mass	0	0	0	0	1	1	0	0	0	0	0	0
Total	0	0	0	1	2	3	2	1	0	0	0	1
STOMACH												
Focus	0	1	1	2	0	1	0	1	0	0	0	0
Nodule	0	0	0	. 0	0	0	0	1	0	0	0	1
Total	0	1	1	2	0	1	0	2	0	0	0	1
THYMUS	•			1								
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	1	0
THYROID GLAND												
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Enlarged	0	0	1	0	0	0	0	0	0	1	1	1
Mass	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	. 1	· 1	0	0	1	0	0	1	1	1
URINARY BLADDER												
Dilated	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0
UTERUS												
Dilatation	0	0	2	0	0	1	0	0	0	1	1	0
Discoloration	0	0	0	0	0	0	1	0	0	0	0	0
Mass	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	2	0	0	1	1	0	0	1	2	0
VAGINA					. :							
Enlarged	0	1	0	0	0	0	0	0	0	0	0	0
Fluid	0	1	0	0	1	0	0	0	1	0	1	1
Total	0	2	0	0	1	0	0	0	1	0	1	1
ZYMBAL GLAND												
Mass	0	0	0	0	1	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	Ö	0	0

Table 78. Incidence Summary of Gross Necropsy Observations at UnscheduledTermination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

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Test Substance Control Aroclor-1016 Aroclor-1242 Aroclor-1254 Aroclor-1260 Conc. (ppm) 0 50 100 200 50 100 25 50 100 30
Conc. (ppm) 0 50 100 20 50 100 25 50 100 100
(N) 5 6 6 6 6 5 6
ADRENAL GLAND Number Examined: 0 <
Number Examined: 0
AORTA Number Examined: 0
Number Examined: 0
BLOOD VESSEL Number Examined: 0
Number Examined: 0
BONE ² Number Examined: 0 0 0 0 0 0 0 0 0 0 0 0 1 BONE MARROW Number Examined: 0
Number Examined: 0 0 0 0 0 0 0 0 0 0 0 1 BONE MARROW Number Examined: 0
BONE MARROW Number Examined: 0
Number Examined: 0
BRAIN ² Number Examined: 5 6 6 6 5 6<
Number Examined: 5 6
THORACIC CAVITY Number Examined: 0
Number Examined: 0
CECUM Number Examined: 0
Number Examined: 0
COAGULATING GLAND ²
Number Examined: I I U U U U U U U U U U U U U U U U U
COLON
Number Examined: 0
DUODENUM
Number Examined: 0
EPIDIDYMIS
Number Examined: 0
ESOPHAGUS
Number Examined: 0
EYE ²
Number Examined: 0 1 0
HARDERIAN GLAND
Number Examined: 0
HEART
Number Examined: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ILEUM
Number Examined: 0

Table 79. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the26-Week Interim Necropsy for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control	Ar	oclor-	1016	Arocio	r-1242	Аг	clor-	1254	Aro	clor-12	60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
JEJUNUM					· · ·							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
JOINT	•											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY												
Number Examined:	1	0	0	0	2	1	0	1	0	1	0	1
Cyst ¹	0	0	0	0	0	0	0	1	0	0	0	0
Hydronephrosis	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Infarct ¹	0	0	0	0	0	0	0	1	0	0	0	0
Nephropathy, Chronic	0	0	0	0	2	1	0	0	0	1	0	1
Average Severity:	0.0	0.0	0.0	0.0	1.5	1.0	0.0	0.0	0.0	2.0	0.0	2.0
Regeneration, Renal Tubule	1	0	0	0	0	0	0	0	0	0 ·	0	0
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LACRIMAL GLAND	•					-						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LIVER												
Number Examined:	5	6	6	6	6	6	5	6	6	6	6	6
Hypertrophy, Hepatocyte, Centrilobular	0	2	2	3	3	5	3	5	6	6	6	6
Average Severity:	0.0	0.3	0.3	0.5	0.5	1.0	0.8	1.7	2.7	2.0	2.0	2.7
Hyperplasia, Bile Duct	0	0	2	0	0	0	1	1	0	0	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	0	0	0	1	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Microgranuloma	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis	0	1	0	0	0	1	0	0	0	0	1	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0
Vacuolization, Hepatocyte	0	0	0	2	3	4	2	2	6	2	2	0
Average Severity:	0.0	0.0	0.0	0.7	1.0	1.2	0.6	0.8	1.3	0.7	0.5	0.0
LUNG							•••••					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-BRONCHIAL										·····		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL		• • • • • • • • •										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²					•••••••••							
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0

Table 79. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the26-Week Interim Necropsy for Male Rats

Lesions not graded for severity.
No lesions present.

· " "要 " 1994、小麦小白编队和黄小省机量的路上集中一个地狱

615 Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-	1016	Aroclo	r-1242	Ar	oclor-	1254	Aro	clor-12	60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
LYMPH NODE-MANDIBULAR		1			· · · · · ·							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER		.	.			:						
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
Hyperplasia, Lymphoplasmacytic	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAMMARY GLAND ²								.			£	
Number Examined:	4	6	6	6	6	6	5	6	6	6	6	6
MESENTERY							L				L	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES		•				.	•					
Number Examined:	Ð	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²		i	L					L				
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
ORAL MUCOSA		ł		L	· · · · · ·			L			I	<u> </u>
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS					L	L	L			,	L	
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
Inflammation, Chronic-Active	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PARATHYROID		L	.					laine and	استيت متعادية		L	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PENIS		.	1			L				.		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND ²		L	لي الم								.	
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	0
PREPUTIAL GLAND	h											
Number Examined:	0	0	0	0	0	0	0	0	0	.0	0	0
PROSTATE										· ·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
RECTUM			. ·								.	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLINGUAL	· · ·										•••••••••	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBMAXILLA	RY						L				.	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE						••••••••••••••••••••••••••••••••••••••					••••••••••••••••••••••••••••••••••••••	
Number Examined:	0	0	0	0	0	0	0	0 -	0	0	0	0

Table 79. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the26-Week Interim Necropsy for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Ar	oclor-	1016	Arock	or-1242	Ar	clor-	1254	Aro	lor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
SEMINAL VESICLE				-								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKIN												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD										·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPLEEN												
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
Adhesion ¹	0	0	0	0	1	0	0	0	0	0	0	0
Necrosis	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STERNUM					1. 1.							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STOMACH												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TESTIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYMUS					1.1							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND			-									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE			-				-					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TRACHEA		·						_				1
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												
Number Examined:	Ō	0	0	0	0	0	0	0	0	0	0	0
SYSTEMIC LESIONS					· · · ·							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 79. Incidence Su	immary of Microscopi	c Observations	(Non-Neoplastic)	at the
26-Week Interim Necro	opsy for Male Rats			

Lesions not graded for severity.
No lesions present.

Table 80. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Male Rats

14. 6 80

1. Lesions not graded for severity.

2. No lesions present.

Escel[†]

Marker II

to Maria

8-16-18-30-3

1. A.S.

Grades for Defining Severity (Degree) or Amount of Change												
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance											
2 = Mild degree of change	4 = Marked severity, change is essentially maximal											
Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Aro	clor-J	254	Aro	clor-17	260
------------------------------------	---	----------	--	--------------	---------	---------	-----	--------	-----	-------	---------	-----
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
DUODENUM ²												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
EPIDIDYMIS ²									·			
Number Examined:	6	0	0	6	0	5	0	0	6	1	0	6
ESOPHAGUS ²										Laura		
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
EYE ²			······································	3 / -								
Number Examined:	6	0	0	6	· 0	5	0	0	6	0	0	6
HARDERIAN GLAND ²			:									
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
HEART		<u> </u>										
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Cardiomyopathy	(2	0	0	3	0	0	0	0	5	0	0	4
Average Severity:	0.5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
ILEUM ²				<u>h</u>	<u></u>		h				<u></u>	
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
JEJUNUM ²												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
JOINT												
Number Examined:	0	0	0	0	0	0	0	0	1	0	0	0
Fibrosis, Right Hip, (False Joint)	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
KIDNEY	August 24 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -			h								
Number Examined:	6	0	1	6	0	5	1	0	6	1	0	6
Hyaline Droplets	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Nephropathy, Chronic	4	0	1	6	0	5	1	0	6	1	0	6
Average Severity:	0.7	0.0	3.0	1.7	0.0	1.6	3.0	0.0	1.5	2.0	0.0	1.8
Regeneration, Renal Tubule	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 80. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Male Rats

Lesions not graded for severity.
 No lesions present.

Test Substance	Control	Ar	oclor-l	1016	Aroclo	r-1242	Aro	clor-)	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
LACRIMAL GLAND												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Alteration, Harderian Gland	2	0	0	4	0	4	0	0	2	0	0	5
Average Severity:	0.3	0.0	0.0	1.3	0.0	1.6	0.0	0.0	0.7	0.0	0.0	1.8
LIVER	·											
Number Examined:	6	6	5	6	6 -	5	6	6	6	6	6	6
Hypertrophy, Centrilobular, Hepatocyte	0	5	5	5	5	5	6	6	6	6	6	6
Average Severity:	0.0	1.2	2.0	1.3	1.7	1.6	1.3	3.0	3.0	2.0	2.8	3.0
Basophilic Cell Focus ¹	1	0	0	1	0	0	0	0	0	0	0	0
Clear Cell Focus ¹	0	2	2	0	0	1	0	. 0	0	0	0	0
Mixed Cell Focus ¹	0	- 0	1	0	0	0	0	0	0	0	0	0
Degeneration, Cystic	0	0	1	0	0	0	0	0	.0	° 1	0	2
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.0	0.0	Û.Û	0.0	0.2	0.0	0.3
Hyperplasia, Bile Duct	3	5	2	2	3	3	4	6	4	6	2	1
Average Severity:	0.5	1.0	0.8	0.3	0.7	0.8	0.7	1.0	0.8	1.2	0.3	0.2
Inflammation, Chronic-Active	3	3	5	2	5	3	5	6	4	4	4	4
Average Severity:	0.5	0.5	1.0	0.3	1.0	0.6	0.8	1.2	0.7	0.7	1.0	0.7
Necrosis	1	2	1	0	0	0	0	0	0	2	0	0
Average Severity:	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Vacuolization, Hepatocyte	0	2	2	1	3	3	5	6	5	2	1	1
Average Severity:	0.0	0.3	0.4	0.2	1.2	1.6	1.2	1.3	1.2	0.5	0.3	0.3
LUNG												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Alveolar Histiocytosis	0	0	0	0	0	0	0	0	1	0	0	2
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3
Hyperplasia, Alveolar Epithelium, Focal	0	0	0	0	0	0	0	0	2	0	0	2
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.3
Inflammation, Chronic-Active	0	0	0	1	0	1	0	0	3	0	0	1
Average Severity:	0.0	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.7	0.0	0.0	0.2
Metaplasia, Osseous	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

Table 80. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 52-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Ar	oclor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-12	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
LYMPH NODE-BRONCHIAL ²												
Number Examined:	0	0	0	0	0	0	0	0	1	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
LYMPH NODE-MANDIBULAR												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER								~	•	· · ·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND ²	· · · · ·											
Number Examined:	5	6	5	6	6	5	6	6	6	6	6	6
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²												
Number Examined:	5	0	0	6	0	4	0	0	4	0	0	6
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Atrophy, Acinar Epithelium	1	0	0	0	0	1	0	0	2	0	0	1
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.5	0.0	0.0	0.3
PARATHYROID ²												÷
Number Examined:	5	0	0	6	0	5	0	0	6	0	0	6
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND		÷								-		
Number Examined:	6	0	0	6	0	5	0	0	6	0	Ó	6
Cyst	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Table 80. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

Test Substance	Control	A	oclor-1	1016	Aroclo	r-1242	Aro	clor-	1254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
PITUITARY GLAND												
Hyperplasia, Pars Distalis	2	0	0	1	0	0	0	0	3	0	0	3
Average Severity:	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.7
PREPUTIAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PROSTATE												. 1
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Inflammation, Chronic-Active	4	0	0	3	0	4	0	0	0	0	0	2 :
Average Severity:	0.8	0.0	0.0	0.7	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.3
RECTUM							-					
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Metazoan Parasite ¹	0	0	0	1	0	0	0	0	0	0	0	1
SALIVARY GLAND-SUBLINGUAL									•			
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Inflammation, Chronic-Active	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBMAXILLA	RY ²										·	
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SCIATIC NERVE ²			· ·									
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SEMINAL VESICLE ²										÷.,		•
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SKELETAL MUSCLE ²												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SKIN												
Number Examined:	6	0	0	6	0	5	0	1	6	0	0	6
Inflammation, Pyogranulomatous	. 1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Scab ¹	0	0	0	0	0	0	0	1	0	0	0	0
anness anna?												
SPINAL CORD ²												

Table 80. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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克莱斯 黄嘴鱼 的复数动物动物

Test Substance	Control	Ar	oclor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
SPLEEN												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
Cyst, Capsule	0	0	0	0	0	. 0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
STERNUM ²												
Number Examined:	6	0	0	6	0	5	0	0.1	6	0	0	6
STOMACH ²							·					
Number Examined:	6	0	0 .	6	0	5	0	0	6	ე	0	6
TESTIS ²												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
THYMUS ²							·					
Number Examined:	6	0	0	5	0	4	0	0	5	0	0	6
THYROID GLAND ²						·						
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
TONGUE ²			-									
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
TRACHEA ²												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
URINARY BLADDER ²												
Number Examined:	6	0	.0	6	0	5	0	0	6	0	0	6
SYSTEMIC LESIONS ²												
Number Examined:	0	0	0.	0	1	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 80. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Male Rats

Lesions not graded for severity.
 No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control Aroclor-1016 An 0 50 100 200 5			6 Aroclor-1242 Aroclor-1254				1254	Aroclor-1260			
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
ADRENAL GLAND												
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
Congestion	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst, Cortex	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Degeneration, Fatty, Cortex	0	1	0	1	0	3	0	0	2	0	0	1
Average Severity:	0.0	1.0	0.0	0.3	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.3
Hematopoietic Cell Proliferation	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	1.0	0.0	0.0	- 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia/Hypertrophy, Cortex	0	1	0	0	0	3	0	0.	2	0	0	2
Average Severity:	0.0	1.0	0.0	0.0	0.0	1.5	0.0	0.0	0.8	0.0	0.0	1.0
Hyperplasia, Medulla	2	1	0	1	0	0	0	0	0	0	0	1
Average Severity:	1.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
AORTA ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
BLOOD VESSEL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	0	0	1	2	0	0	0	0	0	1	0
Osteodysplasia	0	0	0	1	2	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	3.0	0.0
BONE MARROW ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
BRAIN ²												
Number Examined:	4	5	3	4	5	4	4	3	4	4	5	3
THORACIC CAVITY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3

Table 81.	Incidence Sum	mary of Micro	scopic Observation	ons (Non-Neoplastic)	at the
78-Week I	nterim Termina	ation for Male	Rats		

Lesions not graded for severity.
 No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Ar	oclor-1	1254	Aro	clor-12	60
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
COAGULATING GLAND	· · · · · · · · · ·										Non-Inde	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Metazoan Parasite ¹	0	0	0	1	0	0	0	0	0	0	0	0
DUODENUM ²	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
EPIDIDYMIS					· ·							
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Aspermia	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESOPHAGUS ²					· ·	<u> </u>						
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
EYE												
Number Examined:	4	0	0	4	0	4	1	0	4	0	0	3
Inflammation, Suppurative, Cornea	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
HARDERIAN GLAND ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
HEART				·								
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Cardiomyopathy	2	0	0	4	0	1	0	0	3	0	0	1
Average Severity:	0.5	0.0	0.0	1.3	0.0	0.3	0.0	0.0	1.3	0.0	0.0	0.3
ILEUM ²		-						·				
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
JEJUNUM ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
JOINT												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY												
Number Examined:	4	0	0	4	0	4	1	0	4	0	0	3
Cyst ¹	0	0	0	0	0	1	0	0	0	0	0	1
Nephropathy, Chronic	4	0	0	4	0	4	1	0	4	0	0	2
Average Severity:	1.5	0.0	0.0	1.8	0.0	1.5	4.0	0.0	2.0	0.0	0.0	1.7

Table 81. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

Test Substance	Control	Ar	oclor-1	1016	Aroci	or-1242	Ar	oclor-	1254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
LACRIMAL GLAND	A			L			•					A
Number Examined:	3	0	0	4	0	4	0	0	4	0	0	3
Alteration, Harderian Gland	2	0	0	4	0	4	0	0	4	0	0	2
Average Severity:	1.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	2.5	0.0	0.0	1.3
LIVER		•			A	•			1			
Number Examined:	4	5	3	4	5	4	5	3	4	4	5	3
Hypertrophy, Hepatocyte, Centrilobular	0	2	3	4	4	4	5	3	4	4	5	3
Average Severity:	0.0	0.6	2.0	2.0	2.0	3.0	2.4	3.0	2.8	2.3	3.0	3.0
Basophilic Cell Focus ¹	0	0	0	0	1	0	0	0	0	0	1	0
Clear Cell Focus ¹	0	2	1	0	1	3	1	1	0	0	2	0
Eosinophilic Cell Focus ¹	0	0	0	0	2	0	2	1	1	0	0	1
Mixed Cell Focus ¹	0	0	1	0	0	0	2	2	1	0	1	0
Angiectasis	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Degeneration, Cystic	0	0	1	. 0	1	0	1.	1	1	2	2	3
Average Severity:	0.0	0.0	0.7	0.0	0.4	0.0	0.2	0.3	0.5	0.8	0.8	1.7
Ectasia, Bile Duct	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Bile Duct	3	4	1	3	5	4	5	3	4	4	5	3
Average Severity:	1.0	1.0	0.7	1.0	1.4	1.3	1.6	.1.7	1.8	1.5	1.6	1.3
Inflammation, Chronic-Active	3	2	0	3	2	2	1	0	3	1	2	0
Average Severity:	0.8	0.6	0.0	0.8	0.4	0.5	0.2	0.0	0.8	0.3	0.4	0.0
Microgranuloma	0	2	1	2	2	- 1	1	0	1	1	1	1
Average Severity:	0.0	0.4	0.3	0.5	0.4	0.3	0.2	0.0	0.3	0.3	0.2	0.3
Necrosis	0	1	. 0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vacuolization, Cytoplasm, Hepatocyte	0	2	1	1	2	2	4	2	3	3	3	2
Average Severity:	0.0	0.6	0.7	0.3	0.8	0.8	1.2	1.7	1.5	0.8	0.6	1.0
LUNG												
Number Examined:	4	0	0	4	0	4	0	1	4	0	0	3
Inflammation, Chronic-Active	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Inflammation, Pyogranulomatous	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0

Table 81. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 78-Week Interim Termination for Male Rats

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Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Ar	oclor-1	254	Aro	clor-12	60
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
LYMPH NODE-BRONCHIAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL							-					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
LYMPH NODE-MANDIBULAR			·									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER				:								
Number Examined:	0	1.	0	1	0	0	0	0	0	0	1	0
Ectasia, Sinusoidal	0	1	0	1	0	0	0	0	0	0	1	0
Hyperplasia,	0	1	0	1	0	0	0	0	0	0	0	0
Lymphoplasmacytic												
Average Severity:	0.0	4.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAMMARY GLAND				- 								
Number Examined:	3	5	3	4	4	3	5	3	4	4	5	3
Hyperplasia, Cystic	1	0	1	0	0	0	0	0	0	1	2	0
Average Severity:	0.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	0.0
MESENTERY		·										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²									·			
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
ORAL MUCOSA									·			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS	-											
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Atrophy, Acinar Epithelium	1	0	0	1	0	0	0	. 0	3	0	0	1
Average Severity:	0.5	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.3
PARATHYROID ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND												
Number Examined:	4	0	1	4	2	4	1	0	4	3	2	3

 Table 81. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the

 78-Week Interim Termination for Male Rats

Lesions not graded for severity.
 No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-1	1016	Aroci	or-1242	Ar	oclor-	1254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
PITUITARY GLAND	.		.				f asionisisionini					
Cyst	2	0	0	0	0	2	0	0	1	0	0	1
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.5	0.0	0.0	0.7
Hyperplasia, Pars Distalis	2	0	0	2	1	4	0	0	3	0	0	3
Average Severity:	0.5	0.0	0.0	1.0	0.5	2.3	0.0	0.0	1.3	0.0	0.0	2.0
PREPUTIAL GLAND							.					
Number Examined:	1	0	0	1	0	0.	0	0	0	1	0	0
Abscess	0	0	0	0	. 0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
Ectasia, Duct/Inspissated Secretion	1	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	3.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	1	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PROSTATE							• • • • •					
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
Hyperplasia, Epithelium	1	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Inflammation, Chronic-Active	4	1	0	2	0	3	0	0	0	0	0	2
Average Severity:	1.8	4.0	0.0	0.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.7
RECTUM ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SALIVARY GLAND-SUBLINGUA	L^2					.			-			
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SALIVARY GLAND-SUBMAXILI	ARY ²								L			
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SCIATIC NERVE ²					A				A.,			
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SEMINAL VESICLE					•	.	.	<u> </u>			L	.
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
Inflammation, Chronic-Active	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKELETAL MUSCLE	•••••											
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Degeneration	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 81. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 78-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Ar	oclor-1	1016	Arock	or-1242	Ar	oclor-	1254	Аго	clor-12	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
SKIN												
Number Examined:	4	0	0	- 4	1	4	1	1	4	1	1	3
Abscess ¹	1	0	0	0	0	0	0	0	0	0	0	0
Epidermal Inclusion Cyst ¹	0	0	0	0	0	1	0	0	0	0	0	0
Hyperkeratosis/Acanthosis	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intiammation, Pyogranulomatous	0	0	0	1	1	0	0	0	1	1	1	1
Average Severity:	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.0	0.8	1.0	0.8	1.0
Inflammation, Suppurative	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	0	0	0	1	0	0	0	0	1	1	0	1
Average Severity:	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.3
SPINAL CORD												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Demyelination	3	0	0	1	0	1	0	0	1	0	0	2
Average Severity:	0.8	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.7
SPLEEN												
Number Examined:	4	1	1	4	0	4	0	0	4	0	1	3
Cyst, Capsule	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hematopoietic Cell Proliferation	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STERNUM ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
STOMACH												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
Acanthosis/Hyperkeratosis Forestomach	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Inflammation, Chronic-Active, Glandular Stomach	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
TESTIS			-									
Number Examined:	4	0	0	4	0	4	0	0	4	0	1	3

Table 81. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-1	016	Aroci	or-1242	Ar	oclor-	254	Aro	clor-12	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
TESTIS									·			
Degeneration, Germinal Epithelium	0	0	0	1	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Polyarteritis Nodosa	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THYMUS ²	3											с. . м.
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
THYROID GLAND												
Number Examined:	4	1	0	4	0	4	0	. 0	4	0	0	3
- Hyperplasia, C-Cell	0	0	0	-0	0	1	0	0	1	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.3	0.0	0.0	0.3
Hyperplasia, Follicular cell	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
TONGUE ²												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
TRACHEA ²									· · · · · · · · · · · · · · · · · · ·			•
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
URINARY BLADDER ²												
Number Examined:	4	.0	0	4	0	4	0	0	4	0	0	3
SYSTEMIC LESIONS				·· .								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND			····		• • • • • • • • • • • • • • • • • • •							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 81. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

X

Test Substance	Control	Ar	oclor-1	D16	Aroclo	r-12 42	Ar	oclor-	1254	An	clor-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
ADRENAL GLAND												
Number Examined:	43	2	2	25	0	17	1	0	20	0	1	15
Atrophy, Cortex	0	Ö	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Cyst, Cortex	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Degeneration, Cystic, Cortex	3	1	0	2	0	5	0	0	3	0	1	0
Average Severity:	0.1	0.5	0.0	0.1	0.0	0.5	0.0	0.0	0.4	0.0	2.0	0.0
Degeneration, Fatty, Cortex	29	1	1	12	0	6	0	0	15	0	1	10
Average Severity:	1.0	0.5	0.5	0.8	0.0	0.5	0.0	0.0	1.1	0.0	1.0	1.1
Hematopoietic Cell Proliferation	1	0	0	0	0	0	0.	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hemorrhage, Cortex	3	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.2	0	0	0.2	0	0	0	0	0	0	0	0
Hyperplasia/Hypertrophy, Cortex	40	1	1	14	0	8	0	0	18	0	1	10
Average Severity:	1.7	1.0	1.0	1.0	0.0	0.8	0.0	0.0	1.6	0.0	2.0	1.2
Hyperplasia, Medulla	21	2	1	7	0	6	0	0	6	0	0	5
Average Severity:	0.8	2.0	1.5	0.5	0.0	0.6	0.0	0.0	0.7	0.0	0.0	0.7
Pigment, Cortex	0	0	-0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
AORTA ²		•				¹						
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
BLOOD VESSEL		-										
Number Examined:	2	0	0	0	0	1	0	1	1	1	0	0
Polyarteritis Nodosa	2	0	0	0	0	1	0	1	1	1	0	0
Average Severity:	4.0	0.0	0.0	0.0	0.0	4.0	0.0	4.0	3.0	4.0	0.0	0.0
BONE	-											
Number Examined:	8	2	1	3	5	4	3	1	2	4	2	2
Callus ¹	0	0	0	0	0	0	0	0	0	1	0	0
Osteodysplasia	8	2	1	3	4	4	3	1	2	4	2	2
Average Severity:	3.5	2.5	3.0	2.3	2.8	2.3	2.3	4.0	4.0	3.8	3.5	2.5
BONE MARROW ²			,									
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

Lesions not graded for severity.
 No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Sector Sec.

Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-	1254	Ar	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
BRAIN												
Number Examined:	43	13	14	25	24	17	21	11	20	24	16	15
Compression ¹	1	1	0	0	0	0	0	0	0	1	2	1
Hydrocephalus	1	1	0	2	2	0	0	0	0	2	1	1
Average Severity:	0.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Thrombosis	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORACIC CAVITY												
Number Examined:	0	0	0	0	- 10	0	0	0	0	0	0	0
CECUM												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Metazoan Parasite ¹	0	0	0	1	0	0	0	0	0	0	-0	0
COAGULATING GLAND								·				
Number Examined:	0	0	0	2	0	0	0	0	0	0	0	1
Inflammation, Chronic-Active	0 -	0	0	2	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLON				·								
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Metazoan Parasite ¹	1	0	0	2	0	1	0	0	0	0	0	0
DUODENUM ²												
Number Examined:	43	0	0	25	0	17	0	0	20	0	1	15
EPIDIDYMIS									· · ·			
Number Examined:	43	0	0	25	1	17	0	0	20	0	0	15
Aspermia	0	0	0	1	0	. 1	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
Atrophy	0	0	0	. 0	0	1 .	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Granuloma, Sperm	1	0	0	0	1	0	0	0	0	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Polyarteritis Nodosa	0	0	0	0	0	1.	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
ESOPHAGUS ²			-									
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
EYE	· · · · · · · · · · · · · · · · · · ·		••••••••••••••••••••••••••••••••••••••				•					
Number Examined:	43	0	0	25	2	17	1	1	20	2	0	15
Assarbas Basing												-
Altophy, Reuna	0	0	0	0	1	1	0	1	1	0	0	0

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

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1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-	1254	Are	ocior-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
EYE		r		1		•	.		L	•		
Cataract	1	0	0	1	2	1	0	1	1	1	0	0
Average Severity:	0.1	0.0	0.0	0.1	4.0	0.2	0.0	4.0	0.2	1.5	0.0	0.0
Inflammation, Suppurative, Cornea	0	0	0	0	0	0	1	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.0	0.0	0.0
Phthisis bulbi ¹	0	0	0	0	0	0	0	0	0	1	0	0
HARDERIAN GLAND ²	1	.		<u></u>								
Number Examined:	43 -	0	0	25	: <u>₹</u> 0	17	0	0	20	0	0	15
HEART		•										
Number Examined:	43	0	1	25	0	- 7	1	0	20	0	0	15
Cardiomyopathy	42	0.	1	20	0	17	1	0	20	0	0	13
Average Severity:	1.9	0.0	2.0	1.5	0.0	2.1	2.0	0.0	2.0	0.0	0.0	1.7
Mineralization ¹	0	0	0	1	0	0	0	0	0	0	0	0
Thrombosis, Atrial ¹	U	0	1	0	0	0	1	0	1	0	0	0
ILEUM	·	L	• • • •		.	:	.					
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Metazoan Parasite ¹	1	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM		•	.		•					•		
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Inflammation, Granulomatous	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
JOINT	•				•		<u> </u>				.	
Number Examined:	0	0	0	0	2	0	0	0	0	0	0	1
Inflammation, Chronic-Active	0	0	0	0	2	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
KIDNEY		4 ,,	1	A		••••••••••••••••••••••••••••••••••••••	.			.		
Number Examined:	43	3	7	25	3	17	6	1	20	4	2	15
Cyst ¹	4	1	3	4	3	4	4	1	2	1	1	4
Hyaline Droplets	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydronephrosis	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

1. Lesions not graded for severity.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-1	016	Arocle	or-1242	Ar	oclor-	1254	Ar	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
KIDNEY	<u> </u>				L _{ad} i ang				<u></u>			
Nephropathy, Chronic	43	3	7	24	3	17	5	1	20	4	2	15
Average Severity:	2.3	3.0	3.4	2.4	4.0	2.4	2.7	4.0	2.3	4.0	3.0	2.2
Pyelonephritis	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
LACRIMAL GLAND								•	•	•		
Number Examined:	43	1	4	24	5	17	6	2	20	4	A	15
Alteration, Harderian Gland	32	1	4	15	5	10	6	2	17	4	4	8
Average Severity:	1.6	3.0	3.8	1.3	3.2	1.2	2.2	3.0	1.8	2,3	3.3	0.9
Ectasia, Duct	0	0	0	0	0	0	0	0	2	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
LIVER	.											<u> </u>
Number Examined:	43	14	14	25	24	17	21	11	20	24	16	15
Hypertrophy, Centrilobular, Hepatocyte	0	7	13	25	24	17	21	11	20	24	16	15
Average Severity:	0.0	0.8	1.8	2.8	1.9	2.5	2.7	3.7	3.5	2,8	2.9	2.8
Basophilic Cell Focus ¹	4	0	2	1	1	0	î	2	1	⁷ 2	1	0
Clear Cell Focus ¹	15	. 1	3	6	6	3	9	6	12	5	2	3
Eosinophilic Cell Focus ¹	2	2	2	2	4	6	13	7	7	8	11	7
Mixed Cell Focus ¹	5	0	3	2	11	7	17	4	4	11	8	11
Angiectasis	3	2	0	1	0	1	0	0	0	0	0	0
Average Severity:	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Degeneration, Cystic	11	6	6	11	11	9	8	4	5	16	11	11
Average Severity:	0.4	0.5	0.6	0.8	0.7	1.0	0.7	0.7	0.5	1.4	1.6	1.3
Ectasia, Bile Duct	0	1	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Fibrosis	1	0	0	0	1	0	1	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Hematopoietic Cell Proliferation	0	1	. 0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatodiaphragmatic Nodule ¹	0	0	0	0	0	0	0	0	0	0	1	0
Hyperplasia, Bile Duct	33	14	13	21	24	16	20	11	20	24	15	15
Average Severity:	1.1	1.4	1.2	1.5	1.9	1.6	1.9	1.7	2.0	1.8	2.0	2.0
Inflammation, Chronic-Active	15	7	6	10	17	6	6	4	5	17	3	2
Average Severity:	0.5	0.6	0.5	0.5	1.0	0.4	0.3	0.5	0.5	0.9	0.3	0.2
Lymphangiectasis	3	0	1	0	0	0	0	0	0	1	0	0
Average Severity:	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

Table 82.	Incidence Summary of Microscopic Observations	(Non-Neoplastic) at the
105-Week	Termination for Male Rats	

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Аг	oclor-	1254	Are	clor-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
LIVER												
Microgranuloma	4	0	4	2	7	5	13	9	5	6	9	5
Average Severity:	0.1	0.0	0.3	0.1	0.4	0.5	0.8	0.9	0.4	0.3	0.6	0.5
Necrosis	2	0	1	0	1	1	4	0	1	2	0	0
Average Severity:	0.1	0.0	0.1	0.0	0.1	0.1	0.3	0.0	0.2	0.1	0.0	0.0
Vacuolization, Hepatocyte	12	4	6	14	12	14	17	11	19	17	9	9
Average Severity:	0.4	0.3	0.7	1.0	0.9	1.6	2.0	2.3	2.6	1.2	1.3	1.3
LUNG												
Number Examined:	43	1	0	25	0	17	0	1	20	0	0 ;	15
Alveolar Histiocytosis	_ 1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Alveolar Epithelium, Focal	6	1	0	2	0	5	0	0	14	0	0	2
Average Severity:	0.3	3.0	0.0	0.2	0.0	0.4	0.0	0.0	1.4	0.0	0.0	0.1
Inflammation, Chronic-Active	5	0	0	2	0	0	0	0	4	0	0	4
Average Severity:	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3
Inflammation, Granulomatous	2	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Metaplasia, Osseous	5	0	0	0	0	0	0	1	0	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.1
Polyarteritis Nodosa, Mediastinum	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-BRONCHIAL									· ·			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	1	0	0	0	0	0	0	0	0	1	0	1
Ectasia, Sinudoidal	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
LYMPH NODE-MESENTERIC		·										
Number Examined:	42	0	0	25	0	17	1	0	20	0	0	15
Ectasia, Sinusoid	0	0	0	0	0	1	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3
Inflammation, Chronic-Active	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Inflammation, Granulomatous	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

1. Lesions not graded for severity.

Test Substance	Control	Ar	oclor-1	016	Arocio	r-1242	Ar	oclor-	1254	Art	clor-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
LYMPH NODE-MANDIBULAR	L							ليتبينا			لمستبعا	
Number Examined:	1	1	0	0	0	0	0	0	1	0	0	3
Hyperplasia, Lymphoplasmacytic	0	1	0	0	0	0	0	0	1	0	0	2
Average Severity:	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	1.7
LYMPH NODE-OTHER					L					L	لمستعما	
Number Examined:	1	1	0	1	1	2	2	1	1	0	1	3
Ectasia, Sinudoidal	0	1	0	1	1	1	- 1	1	. 1	0	1	2
Average Severity:	0.0	3.0	0.0	3.0	3.0	1.5	1.0	3.0	4.0	0.0	3.0	2.0
Hyperplasia, Lymphoplasmacytic	1	1	0	0	.1	1 .	1	0	0	0	1	1
Average Severity:	3.0	4.0	0.0	0.0	3.0	1.5	1.0	0.0	0.0	0.0	2.0	0.7
Necrosis	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
MAMMARY GLAND		'				· · · ·				L		
Number Examined:	40	13	12	23	18	16	19	11	20	23	15	15
Cyst	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Hyperplasia, Cystic	15	7	6	6	5	0	4	1	4	6	4	7
Average Severity:	0.7	1.0	0.8	0.5	0.5	0.0	0.4	0.2	0.4	0.6	0.7	1.1
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MESENTERY			· · · ·									
Number Examined:	1	0	0	0	0	1	0	0	0	1	0	1
Inflammation, Chronic-Active, Fat	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Polyarteritis Nodosa	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis, Fat	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
NOSE/TURBINATES	- 											
Number Examined:	1	0	0	0	0	0	0	0	0	1	0	0
Inflammation, Suppurative, Naso- Lacrimal Duct	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
OPTIC NERVE												
Number Examined:	41	0	0	18	1	17	1	1	20	0	0	14
Demyelination	1	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

1. Lesions not graded for severity.

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2. No lesions present.

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Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-	1254	An	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
ORAL MUCOSA				· ·		· ·						
Number Examined:	0	0.	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	43	0	0	25	1	17	0	0	20	0	1	15
Atrophy, Acinar Epithelium	11	0	0	10	0	4	0	0	9	0	0	1
Average Severity:	0.4	0.0	0.0	0.8	0.0	0.4	0.0	0.0	1.0	0.0	0.0	0.1
Hyperplasia, Acinar Epithelium	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	2	0	0	2	0	2	0	0	2	0	0	0
Average Severity:	0.2	0.0	0.0	0.3	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0
PARATHYROID												
Number Examined:	40	14	10	22	12	15	19	11	19	22	16	15
Hyperplasia	6	7	5	6	3	4	6	5	3	10	11	11
Average Severity:	0.3	1.2	1.1	0.5	0.7	0.6	0.7	1.0	0.3	1.0	1.6	0.1
PENIS ²		.								h		
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND	· · · · · · · · · · · · · · · · · · ·					.	d					
Number Examined:	43	6	7	24	10	17	9	2	19	10	10	15
Cyst	5	1	0	2	1	4	2	0	6	0	0	1
Average Severity:	0.3	0.5	0.0	0.2	0.3	0.6	0.7	0.0	0.7	0.0	0.0	0.1
Hyperplasia, Pars Distalis	16	0	0	9	1	9	2	0	10	1	2	6
Average Severity:	0.8	0.0	0.0	0.8	0.3	1.0	0.6	0.0	1.1	0.1	0.5	1.0
Necrosis	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
PREPUTIAL GLAND		•										
Number Examined:	0	1	0	0	0	1	0	0	0	0	0	1
Ectasia, Duct/Inspissated	0	1	0	0	0	0	0	0	0	0	0	1
Secretion				L								
Average Severity:	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Inflammation, Chronic-Active	0	1	0	0	0	1	0	0	0	0	0	1
Average Severity:	0.0	3.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	2.0
PROSTATE												
Number Examined:	43	0	1	25	2	17	0	0	20	0	0	15
Atrophy	0	0	0	0	0	1	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Inflammation, Chronic-Active	29	0	1	19	2	10	0	0	16	0	0	12
Average Severity:	1.1	0.0	4.0	1.2	3.0	1.1	0.0	0.0	1.5	0.0	0.0	1.4

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-	1254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
PROSTATE												
Polyarteritis Nodosa	0	0	0	0	0	1	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
RECTUM												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Metazoan Parasite ¹	3	0	0	3	0	1	0	0	1	0	0	1
SALIVARY GLAND-SUBLINGUAL	2	· .										· ·
Number Examined:	41	0	0	24	0	16	0	0	20	0	0	15
SALIVARY GLAND-SUBMAXILLA	RY ²		A	<u>.</u>								
Number Examined:	42	0	0	25	0	17	0	0	20	0	0	15
SCIATIC NERVE												
Number Examined:	42	0	0	25	0	15	0	0	20	0	0	14
Radiculoneuropathy	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
SEMINAL VESICLE												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Atrophy	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	3	0	0	2	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKELETAL MUSCLE				••••••								·
Number Examined:	43	0	0	25	0	16	0	0	20	0	1	15
Degeneration	15	0	0	11	0	10	0	0	4	0	0	2
Average Severity:	0.5	0.0	0.0	0.6	0.0	1.1	0.0	0.0	0.4	0.0	0.0	0.3
Inflammation, Chronic-Active	2	0	0	3	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
SKIN		••••••	<u>.</u>									
Number Examined:	43	8	6	25	7	17	7	3	20	10	9	15
Epidermal Inclusion Cyst ¹	3	3	3	0	1	1	0	0	1	2	0	0
Abscess ¹	4	4	2	2	3	3	1	0	0	- 3	0	2
Inflammation, Pyogranulomatous	9	3	2	3	3	4	3	1	0	4	4	.1
Average Severity:	0.8	0.9	0.4	0.5	0.4	0.9	0.5	0.4	0.0	0.7	1.0	0.3
Scab ¹	0	1	0	0	0	0	0	0	0	0	0	0
Ulcer	0	0	0	0	1	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Inflammation, Suppurative	0	1	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Male Rats

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	Ar	oclor-1	D16	Aroclo	r-1242	Ar	oclor-	1254	Ar	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	-43	14	14	25	24	17	21	11	20	24	16	15
SKIN												
Cellulitis, Subcutaneous Tissue	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hyperkeratosis/Acanthosis	3	1	2	0	1	0	1	0	1	3	0	2
Average Severity:	0.2	0.2	0.4	0.0	0.2	0.0	0.1	0.0	0.2	0.3	0.0	0.5
Inflammation, Chronic-Active	0	0	0	0	1	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hematoma, Organizing	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parakeratosis	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Edema	1	0	0	0	1	0	1	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
SPINAL CORD	(L .						
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Demyelination	38	0	0	25	0	17	0	0	18	0	0	15
Average Severity:	1.5	0.0	0.0	1.6	0.0	1.6	0.0	0.0	1.5	0.0	0.0	1.7
SPLEEN				L								
Number Examined:	43	3	0	25	0	17	2	1	20	0	1	15
Hematopoietic Cell Proliferation	5	2	0	0	0	1	0	0	1	0	0	0
Average Severity:	0.3	2.3	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0
Adhesion ¹	0	0	0	0	0	0	1	0	0	0	0	0
Cyst, Capsule	0	0	0	0	0	2	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Lymphoid	1	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fibrosis	0	0	0	0	0	0	1	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0	0.0	0.0
STERNUM ²	·····							·				
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
STOMACH				· · · · · ·		·			· · ·			
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Acanthosis/Hyperkeratosis, Forestomach	1	0	0	0	0	0	0	0	1	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2
Adhesion, Forestomach	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Аг	oclor-	1254	An	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
STOMACH										•		
Inflammation, Chronic-Active, Forestomach	0	0	0	0	0	0	0	0	1	0	0	1
Average Severity:	0	0	0	0	0	-0	0	0	0.1	0	0	0.2
Necrosis, Glandular Stomach	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer, Forestomach	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
TESTIS												
Number Examined:	43	1	2	25	3	17	0	1	20	4	3	15
Degeneration, Germinal Epithelium	3	• 1	2	3	3	4	0	0	3	2	1	2
Average Severity:	0.2	4.0	4.0	0.4	3.7	0.9	0.0	0.0	0.6	1.6	1.3	0.5
Mineralization	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	4	0	0	5	1	2	0	0	4	2	0	3
Average Severity:	0.2	0.0	0.0	0.4	1.0	0.4	0.0	0.0	0.4	1.0	0.0	0.4
Hyperplasia, Interstitial Cell	2	0	0	0	0	0	0	1	- 1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.1	0.0	0.0	0.0
THYMUS ²	-				· · · · · · · · · · · · · · · · · · ·			· · · ·				
Number Examined:	41	0	0	21	0	13	0	0	16	1	0	14
THYROID GLAND												
Number Examined:	43	14	14	25	24	17	21	11	20	24	16	15
Cyst, Follicular	1	0	1	0	1	3 .	0	2	0	1	2	3
Average Severity:	0.0	0.0	0.1	0.0	0.1	0.4	0.0	0.4	0.0	0.1	0.3	0.4
Cyst, Ultimobranchial	6	1	1	1	7	3	. 5	1	7	6	1	1
Average Severity:	0.2	0.1	0.1	0.0	0.5	0.4	0.5	0.2	0.8	0.4	0.1	0.1
Hyperplasia, C-Cell	11	1	5	6	- 4	4	6	2	4	6	4	4
Average Severity:	0.5	0.1	0.6	0.5	0.3	0.6	0.4	0.3	0.3	0.4	0.6	0.5
Hyperplasia, Follicular Cell	0	0	0	1	3	1	10	1	4	6	4	1
Average Severity:	0.0	0.0	0.0	0.1	0.3	0.1	1.8	0.2	0.6	0.5	0.3	0.1
Necrosis	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
TONGUE												_
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Polyarteritis Nodosa	3	0	0	0	0	2	0	0	1	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0
TRACHEA ²												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Male Rats

1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	ol Aroclor-1016 A		Aroclo	x-1242	Ar	oclor-	1254	Are	clor-	1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
URINARY BLADDER												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
Calculus ¹	1	0	0	0	0	0	0	0	0	0	0	0
Hyperplasia, Urothelium	. 1	0	0	2	0	1	0	0	0	0	0	2
Average Severity:	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3
Inflammation, Chronic-Active	0	0	0	2	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
SYSTEMIC LESIONS ²												
Number Examined:	1	0	0	0	1	1	1	0	0	1	0	0
ZYMBALS GLAND ²						·						R
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1

Table 82. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Male Rats

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	ol Aroclor-1016		Arocio	r-1242	Aro	clor-1	254	Aro	clor-1	1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
ADRENAL GLAND												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
Degeneration, Fatty, Cortex	1	1	0	0	0	1	1	1	0	1	0	1
Average Severity:	0.7	0.5	0.0	0.0	0.0	0.3	0.3	2.0	0.0	1.0	0.0	0.3
Hyperplasia/Hypertrophy, Cortex	1	0	1	0	0	1	0	0	0	1	0	2
Average Severity:	0.7	0.0	1.5	0.0	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.7
Necrosis, Cortex	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
AORTÁ ²												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
BLOOD VESSEL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	1	0	0	0	0	0	0	2	0	0	0
Fracture ¹	0	0	0	0	0	0	0	0	1	0	0	0
BONE MARROW ²												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
BRAIN											2	
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Hemorrhage	0	0	1	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Hyperplasia, Endothelial Cell	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
THORACIC CAVITY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM ²						· .	:					
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
COAGULATING GLAND						• • • • • • • • • • • • • • • • • • •						···· · · · · ·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

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Total Sub-source	Control	rol Aroclor-1016			Amonto	- 1142			054			1260
	Control	ATO	100-1	010	Arocio	100	Aro	CIOT-)	100	Aro	-101	100
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
COLON												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
DUODENUM ²												
Number Examined:	3	4	2	2	0	4	3	1	4	1	1	3
EPIDIDYMIS	·											
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Aspermia	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESCPHAGUS ²					L		·	<u> </u>				
Number Examined:	- 3	4	2	2	0	5	3	1	4	1	2	3
EYE ²				·	,							
Number Examined:	3	3	1	2	0	4	3	1	4	1	2	3
HARDERIAN GLAND ²	•	L				L						
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
HEART												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Cardiomyopathy	0	2	1	0	0	3	2	0	2	1	1	2
Average Severity:	0.0	0.5	0.5	0.0	0.0	1.0	1.0	0.0	0.8	2.0	1.0	2.0
Inflammation, Chronic-Active	0	1	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization	0	0	1	0	0	0	0	0	0	0	.0	2
Average Severity:	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
ILEUM ²						نحنيب مها				نى <u>ب نى</u> بى		
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
JEJUNUM ²				- 1 - cr		L	.					
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
JOINT					1	L						· · ·
Number Examined:	0	0	0	0	0	0	0	0	0	0	Ó	0
KIDNEY					L				L	لىرىپىك ر	ليستعد	L
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Cyst ¹	0	0	0	0	0	0	0	0	1	0	0	0
Hydronephrosis	0	0	0	-0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

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Test Substance	Control	Aro	clor-l	1016	Aroclo	r-1242	Aro	clor-l	1254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	- 4	2	2	0	5	3	1	4	1	2	3
KIDNEY				•••••••••••••••••								
Inflammation, Chronic-Active	0	0	0	0	0	1	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	1.3	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	0	1	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis	0	0	0	0	0	0	0	⁶ 0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ²	0.0	0.0	0.0	0.0	1.3
Nephropathy, Chronic	1	2	1	0	0	3	1	1	- 1	0	1	2
Average Severity:	0.7	1.0	1.0	0.0	0.0	1.2	0.7	1.0	0.3	0.0	1.0	1.3
Regeneration, Renal Tubule	0	1	0	1	0	1	0	0	0	0	1	1
Average Severity:	0.0	0.3	0.0	1.0	0.0	0.2	0.0	0.0	0.0	0.0	0.5	0.7
LACRIMAL GLAND												
Number Examined:	3	4	2	2	0	5	2	1	4	1	2	3
Alteration, Harderian Gland	2	2	1	0	0	2	0	1	1	0	1	2
Average Severity:	0.7	0.5	0.5	0.0	0.0	0.6	0.0	1.0	0.5	0.0	1.5	0.7
LIVER												
Number Examined:	3	4	2	2	0	- 4	3	1	4	1	2	3
Hypertrophy, Hepatocyte, Centrilobular	0	2	1	1	0	2	0	1	3	0	2	3
Average Severity:	0.0	0.5	1.0	0.5	0.0	1.3	0.0	3.0	1.3	0.0	2.0	2.0
Clear Cell Focus ¹	0	1	0	0	0	0	0	0	0	0	0	0
Degeneration, Cystic	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Hyperplasia, Bile Duct	0	1	0	0	0	1	0	1	0	0	0	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.3	0.0	1.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	1	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis	0	1	0	0	0	0	1	0	2	0	0	1
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.0	1.0
LUNG					2							
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Inflammation, Chronic-Active	1	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Alveolar Histiocytosis	0	1	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Аго	clor-l	016	Aroclo	г-1242	Aro	clor-)	254	Aro	lor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
LUNG						·						
Pigment, Hemosiderin	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Alveolar Epithelium, Focal	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
LYMPH NODE-BRONCHIAL ²												
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL ²												
Number Examined:	1	1	1	1	0	0	0	0	2	1	0	1
LYMPH NODE-MESENTERIC ²												
Number Examined:	- 3	4	3	2	0	4	3	1	4	1	2	3
LYMPH NODE-MANDIBULAR				ا ف من الله الله الله								
Number Examined:	0	1	0	1	0	1	0	0	2	1	0	0
Hyperplasia, Lymphoplasmacytic	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-OTHER ²												
Number Examined:	2	1	0	0	0	1	0	0	2	0	0	0
MAMMARY GLAND ²												
Number Examined:	3	3	1	1	0	4	3	1	2	1	1	3
MESENTERY			-									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	1	0	0	0	0	0	0	1	0	0	0
Hemorrhage	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
OPTIC NERVE ²												
Number Examined:	3	4	1	2	0	5	3	1	3	0	1	3
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	3	4	2	2	0	4	.3	1	4	1	2	3
Atrophy, Acinar Epithelium	1	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	ontrol Aroclor-1016 Aroclor-		r-1242	Aro	clor-1	254	Aro	clor-	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
PARATHYROID ²												
Number Examined:	3	3	2	1	0	5	3	1	3	1	2	2
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND		2										
Number Examined:	3	4	2	2	0	5	2	1	- 4	1	2	3
Cyst	· 0 · .	0	0	1	0	1	0	0	Ū	0	0	0
Average Severity:	0.0	0.0	0.0	2.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Pars Distalis	1	0	2	0	0	0	1	0	ž	0	1	0
Average Severity:	0.7	0.0	1.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	1.0	0.0
PREPUTIAL GLAND			•									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PROSTATE				10 ^{- 2}			Anti-territoria					
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Inflammation, Chronic-Active	1	1	2	1	0	2	1	1	1	0	0	0
Average Severity:	0.7	0.3	1.0	0.5	0.0	1.0	1.0	2.0	0.3	0.0	0.0	0.0
RECTUM			L							<u></u>		
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Ulcer	0	0	0	0	0	0	0	1	. 0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBLINGUAL ²												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
SALIVARY GLAND-SUBMAXILLARY ²												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
SCIATIC NERVE ²	· · · · ·			.							نب جي ا	
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
SEMINAL VESICLE ²												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
SKELETAL MUSCLE	•••											
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Degeneration	1	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7

1. Lesions not graded for severity.

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Test Substance	Control	Aro	clor-]	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	lor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	- 1	2	3
SKELETAL MUSCLE												
Mineralization	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
SKIN												
Number Examined:	3	4	2	2	0	5	3	1	- 4	1	2	3
Epidermal Inclusion Cyst ¹	0	0	0	0	0	0	0	0	0	0	1	0
Abscess ¹	0	0	0	0	0	0	0	0	0	0	1	0
Inflammation, Pyogranulomatous	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPINAL CORD ²									:		·	
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
SPLEEN												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Depletion, Lymphoid	0	0	0	0	0	0	1	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.8	0.0	0.0	0.0
Hematopoietic Cell Proliferation	1	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
STERNUM							2					
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
Hyperostosis	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STOMACH ²												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
TESTIS		•										
Number Examined:	3	4	1	2	0	5	3	1	4	1	2	3
Degeneration, Germinal Epithelium	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THYMUS												
Number Examined:	3	4	- 2	2	0	5	3	0	4	1	1	3
Depletion, Lymphoid	1	1	0	0	0	1	1	0	1	0	0	0
Average Severity:	1.3	0.8	0.0	0.0	0.0	0.6	1.3	0.0	0.8	0.0	0.0	0.0

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

Test Substance	Control	ol Aroclor-1016			Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
THYROID GLAND			•									
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Cyst, Ultimobranchial	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Follicular Cell	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
TONGUE												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
Cyst	0	0	0	0	0	0	0	0	1	U	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Hyperkeratosis	0	0	0	0	0	0	0	0	1	Ó	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
TRACHEA ²												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
URINARY BLADDER												
Number Examined:	3	4	2	2	0	.5	3	1	4	1	2	3
Calculus ¹	0	0	0	0	0	1	0	0	0	0	0	0
Hemorrhage	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	• 0 .	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEMIC LESIONS ²	· · · · · ·											
Number Examined:	3	0	1	1	0	1	1	0	2	1	0	1
ZYMBALS GLAND								-				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 83. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	ntrol Aroclor-1016 Aroclor-1242			Aro	clor-]	254	Aro	clor-	260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
ADRENAL GLAND			•	•							hauseneer	
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Degeneration, Cystic, Cortex	0	0	0	- 1	0	0	1	1	2	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.1	0.8	0.0	0.0	0.0
Degeneration, Fatty, Cortex	3	4	6	1	0	2	2	5	1	0	5	2
Average Severity:	0.4	0.7	0.7	0.3	0.0	0.4	0.4	0.5	0.2	0.0	0.7	0.2
Hemorrhage, Cortex	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Hyperplasia/Hypertrophy, Cortex	1	0	3	0	1	4	1	2	1	0	-3	4
Average Severity:	0.1	0.0	0.5	0.0	0.1	0.6	0.3	0.2	0.2	0.0	0.4	0.5
Hyperplasia, Medulla	2	3	3	1	2	2	3	1	0	2	2	3
Average Severity:	0.2	0.4	0.5	0.3	0.4	0.3	0.5	0.1	0.0	0.3	0.4	0.4
Necrosis, Cortex	0	0	0	0	0	0	1	0	0	0	0	-1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2
Thrombus ¹	0	0	0	0	0	0	1	1	0	0	0	0
AORTA												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Mineralization	2	2	2	0	0	0	1	1	0	0	0	1
Average Severity:	0.3	0.4	0.6	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.3
BLOOD VESSELS			·									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	1	0	0	2	. 0	0	0	0	0	2	0
Osteodysplasia	0	1	0	0	0	0	0	0	0	0	2	0
Average Severity:	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0
BONE MARROW												
Number Examined:	14	10	11	8	8	10	8	16	- 5	10	12	13
Hyperplasia, Myeloid Cell	0	1	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity (Degree) or Amount of Change										
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance									
2 = Mild degree of change	4 = Marked severity, change is essentially maximal									

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
BRAIN												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Compression ¹	2	1	1	0	2	2	1	7	1	5	2	2
Hemorrhage	1	0	0	0	0	1	0	0	0.	0	0	1
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.2
Hydrocephalus	7	2	1	3	3	4	3	7	1	7	5	3
Average Severity:	1.2	0.4	0.2	0.9	0.8	0.9	0.9	0.9	0.4	1.4	1.1	0.5
Malacia	2	0	1	1	0	0	0	0	0	0	1	- 1
Average Severity:	0.2	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
Mineralization -	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THORACIC CAVITY												
Number Examined:	0	1	0	0	0	0	0	0	0	0	0	1
Inflammation, Chronic-Active, Mediastinum	. 0	1	0	0	0	0	0	0	-0	0	0	0
Average Severity:	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CECUM ²												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
COAGULATING GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Fecalith ¹	0	0	0	0	1	0	0	0	0	0	0	0
Metazoan Parasite ¹	0	0	0	0	0	0	0	0	0	0	1	0
DUODENUM ²												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
EPIDIDYMIS												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Aspermia	1	0	0	1	1	0	0	2	0	2	2	0
Average Severity:	0.3	0.0	0.0	0.5	0.4	0.0	0.0	0.5	0.0	0.7	0.7	0.0
Atrophy	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Granuloma Sperm	0	0	0	0	- 1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Arocior-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
ESOPHAGUS ²												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
EYE												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Atrophy, Retina	0	0	0	0	0	1	0	0	1	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.8	0.4	0.0	0.0
Cataract	0	0	0	0	0	0	0	0	1	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2	0.0	0.0
Inflammation, Suppurative	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative, Anterior Chamber	2	0	1	0	1	0	0	0	0	0	0	0
Average Severity:	0.3	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative, Cornea	3	1	1	0	0	0	1	0	0	0	0	0
Average Severity:	0.4	0.2	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
HARDERIAN GLAND												
Number Examined:	14	10	11	7	8	10	8	16	5	10	12	13
Inflammation, Chronic	1	0	0	1	0	0	-1	2	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0
Inflammation, Suppurative	0	0	0	0	0	0	0	0	0	1	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0
HEART												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Cardiomyopathy	10	8	7	3	4	6	2	8	4	2	4	6
Average Severity:	1.4	1.6	1.5	0.8	1.0	1.1	0.4	0.9	1.8	0.3	0.5	0.8
Inflammation, Chronic-Active	0	1	1	1	1	0	1	0	0	0	0	0
Average Severity:	0.0	0.4	0.1	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Mineralization	1	3	2	0	0	0	1	0	0	0	0	1
Average Severity:	0.1	0.5	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2
Thrombosis, Atrial ¹	0	1	0	0	0	0	1	1	0	1	1	0
ILEUM												
Number Examined:	14	10	11	8	8	10	8	15	5	10	12	13
Metazoan Parasite ¹	0	0	0	0	0	0	0	1	0	0	0	0
JEJUNUM ²												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	. 10	8	16	5	10	12	13
JOINT												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Cyst ¹	1	1	0	0	0	1	0	0	0	0	0	0
Hyaline Droplets	0	0	0	0	0	0	0	1	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2
Hydronephrosis	0	0	0	. 0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Infarct ¹	0	0	0	0	0	0	1	0	0	0	0	0
Inflammation, Suppurative	0	- 0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Necrosis	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Nephropathy, Chronic	11	9	9	6	8	10	7	16	5	8	11	13
Average Severity:	1.9	2.3	2.3	1.4	2.1	1.9	2.4	2.4	1.8	1.5	1.8	2.2
Pyelonephritis	0	0	0	0	0	0	1	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0
Regeneration, Renal Tubule	2	0	1	1	. 0	0	0	0	0	1	0	0
Average Severity:	0.1	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
LACRIMAL GLAND												
Number Examined:	14	10	11	8	8	10	8	15	5	9	12	11
Alteration, Harderian Gland	10	5	8	5	4	9	5	9	4	6	9	7
Average Severity:	1.2	1.2	1.8	1.4	1.0	1.6	1.1	1.3	1.4	1.2	1.5	1.1
Inflammation, Chronic-Active	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIVER												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Hypertrophy, Hepatocyte, Centrilobular	0	1	9	6	5	7	5	14	5	7	10	8
Average Severity:	0.0	0.2	1.4	1.5	0.9	1.2	1.1	1.9	3.0	1.4	1.9	1.5
Basophilic Focus ¹	0	. 1	0	0	0	0	0	0	0	0	1	0
Eosinophilic Focus ¹	0	0	1	1	1	1	0	0	1	0	2	2
Mixed Cell Focus ¹	0	0	0	0	0	0	0	0	0	1	0	0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aro	260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
LIVER												
Degeneration, Cystic	1	2	3	2	2	. 1	0	0	0	3	6	3
Average Severity:	0.1	0.2	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.3	0.9	0.3
Hepatodiaphragmatic Nodule ¹	0	1	0	1	0	0	0	0	0	0	0	0
Hyperplasia, Bile Duct	9	4	7	6	5	8	5	13	5	9	12	10
Average Severity:	1.1	0.4	0.6	1.4	0.8	1.4	1.1	1.3	2.2	1.7	1.8	1.2
Inflammation, Chronic-Active	2	1	2	0	2	3	0	2	0	0	0	4
Average Severity:	0.2	0.1	0.2	0.0	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.5
Microgranuloma	1	1	1	1	3	1	0	3	0	1	1	0
Average Severity:	0.1	0.1	0.1	0.1	0.5	0.1	0.0	0.2	0.0	0.1	0.1	0.0
Necrosis	1	1	0	0	1	0	1	2	0	0	2	1
Average Severity:	0.1	0.3	0.0	0.0	0.3	0.0	0.1	0.2	0.0	0.0	0.2	0.1
Necrosis, Hepatocyte, Centrilobular	0	0	0	1	0	0	0	1	0	0	1	3
Average Severity:	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.8
Pigment, Hemosiderin	0	0	0	0	1	1	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Thrombosis ¹	0	1	0	0	0	0	0	0	0	0	0	0
Vacuolization, Hepatocyte	4	2	3	2	2	. 7	5	11	4	6	5	8
Average Severity:	0.6	0.5	0.5	0.5	0.6	0.9	1.6	1.4	1.6	1.3	0.5	1.1
LUNG												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Hemorrhage	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Hyperplasia, Alveolar Epithelium, Focal	0	0	0	0	0	0	0	0	1	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0
Inflammation, Chronic-Active	1	1	0	0	2	1	0	0	1	0	0	0
Average Severity:	0.1	0.4	0.0	0.0	0.4	0.1	0.0	0	0.6	0.0	0.0	0.0
Inflammation, Necropurulent	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	1	0	0	1	0	1	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Metaplasia, Osseous	1	1	0	0	0	0	1	0	0	0	1	0
Average Severity:	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aro	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
LUNG												
Mineralization, Interstitum	0	1	1	0	0	1	1	0	0	0	0	1
Average Severity:	0.0	0.2	0.3	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.2
Pigment, Hemosiderin	0	0	0	0	0	1	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Thrombosis	1	0	0	0	1	0	0	0	Ó	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2
LYMPH NODE-BRONCHIAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	1	0	1	1	0	1	3	1	1	1	0
Ectasia, Sinudoidal	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Hyperplasia, Lymphoplasmacytic	0	1	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
LYMPH NODE-MESENTERIC ²												
Number Examined:	12	10	11	8	8	10	8	16	5	10	12	13
LYMPH NODE-MANDIBULAR												
Number Examined:	0	2	0	0	1	0	1	1	1	1	1	2
Hyperplasia, Lymphoplasmacytic	0	2	0	0	0	0	0	1	1	0	0	2
Average Severity:	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.0	4.0	0.0	0.0	2.5
LYMPH NODE-OTHER												
Number Examined:	0	1	0	2	0	0	1	2	0	1	0	2
Hyperplasia, Lymphoplasmacytic	0	1	0	1	0	0	1	0	0	0	0	1
Average Severity:	0.0	4.0	0.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0
MAMMARY GLAND		:										
Number Examined:	14	10	11	8	8	10	8	16	5	10	10	13
Hyperplasia, Cystic	6	2	-1	4	1	2	3	7	0	6	3	4
Average Severity:	0.8	0.6	0.3	1.0	0.3	0.4	0.6	0.8	0.0	1.1	0.4	0.5
MESENTERY												
Number Examined:	0	0	0	1	0	1	1	2	0	1	1	0
Inflammation, Necrotizing, Fat	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-]	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
MESENTERY												
Polyarteritis Nodosa	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Thrombosis, Mesenteric Artery ¹	0	0	0	0	0	0	0	1	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	1	0	0	0	0	0	0	0	0	0	1
Inflammation, Suppurative, Naso-Lacrimal Duct	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
OPTIC NERVE ²												
Number Examined:	12	10	11	8	7	9	7	16	5	10	11	12
ORAL MUCOSA ²												
Number Examined:	0	0	0	0	1	1	0	0	0	0	0	0
PANCREAS												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	12
Atrophy, Acinar Epithelium	0	3	1	0	2	3	1	2	0	5	2	1
Average Severity:	0.0	0.5	0.1	0.0	0.3	0.4	0.1	0.2	0.0	0.6	0.2	0.2
Hyperplasia, Acinar Epithelium	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	.0.0	0.0	0.0	0.1	0.0	0.0
Inflammation, Chronic-Active	0	0	0	0	0	0	1	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0
Polyarteritis Nodosa	0	1	0	0	0	1	0	1	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0
PARATHYROID												
Number Examined:	14	9	11	8	6	9	8	14	5.	10	11	9
Hyperplasia	2	2	2	0	1	1	2	1	0	0	1	1
Average Severity:	0.4	0.7	0.5	0.0	0.3	0.2	0.8	0.2	0.0	0.0	0.2	0.3
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	0
Prepuce, Inflammation, Chronic-Active	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Prepuce, Ulcer	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-)	1254	Aro	lor-)	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
PITUITARY GLAND												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	12
Cyst	1	0	1	1	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Pars Distalis	2	3	3	3	0	1	0	2	1	0	2	4
Average Severity:	0.1	0.5	0.5	0.6	0.0	0.2	0.0	0.3	0.2	0.0	0.2	0.4
PREPUTIAL GLAND												
Number Examined:	0	0	0	1	1	0	0	0	0	2	0	1
Abscess	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0,0	0.0
Ectasia, Duct/Inspissated Secretion	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
Inflammation, Chronic-Active	0	0	0	0	1	0	0	0	0	1	0	1
Average Severity:	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	1.0	0.0	2.0
PROSTATE				•								
Number Examined:	14	10	. 11	8	8	10	8	16	5	10	12	13
Abscess	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Inflammation, Chronic-Active	9	6	7	6	5	7	6	10	3	8	6	9
Average Severity:	1.3	1.0	1.2	1.0	1.3	1.2	1.4	1.5	0.8	1.9	1.0	1.2
RECTUM												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Metazoan Parasite ¹	0	0	1	0	0	0	0	0	0	0	Ö	0
SALIVARY GLAND-SUBLINGUAL ²												
Number Examined:	14	9	11	8	8	10	7	16	5	10	12	13
SALIVARY GLAND SUBMAXILLARY	2											
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
SCIATIC NERVE ²												
Number Examined:	14	9	11	8	7	10	8	16	5	10	12	12
SEMINAL VESICLE					FF F 1016				· .			
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Atrophy	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
SEMINAL VESICLE												
Inflammation, Chronic-Active	0	0	0	0	0	1	1	1	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.2	0.0	0.0
Inflammation, Suppurative	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
SKELETAL MUSCLE												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Degeneration	4	2	2	2	0	2	0	3	0	1	1	5
Average Severity:	0.3	0.3	0.2	0.3	0.0	0.2	0.0	0.3	0.0	0.1	0.1	0.5
Inflammation, Chronic-Active	0	1	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
SKIN												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Abscess ¹		1	0	0	0	0	0	0	0	0	0	0
Alopecia	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Inflammation, Necrotizing	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Inflammation, Pyogranulomatous	2	3	1	1	1	0	0	0	0	0	2	2
Average Severity:	0.5	1.0	0.4	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.7	0.6
Inflammation, Suppurative	0	1	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	2	2	0	1	2	0	0	0	0	0	3	1
Average Severity:	0.6	0.8	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3
Epithelial Inclusion Cyst ¹	3	0	3	0	1	-0	0	1	0	1	3	0
Scab ¹	1	0	0	0	0	0	0	1	0	0	0	0
SPINAL CORD												
Number Examined:	14	10	11	8	8	10	8	16	. 5	10	12	13
Demyelination	4	5	4	2	1	5	2	7	2	2	8	4
Average Severity:	0.4	0.7	0.5	0.3	0.3	0.7	0.3	0.5	0.4	0.3	0.7	0.4
Hemorrhage	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-1	1016	Aroch	or-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
SPINAL CORD												
Inflammation, Chronic-Active	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPLEEN												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Hematopoietic Cell Proliferation	0	0	0	0	0	0	1	0	0	1	0	2
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.5
STERNUM												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Fibrous Osteodystrophy	1	C	1	0	0	0	1	0	0	0	0	0
Average Severity:	0.2	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Hyperostosis	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Osteoclast	1	0	0	0	0	0	0	0	0	0	· 0	0
Average Severity:	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STOMACH												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Acanthosis/Hyperkeratosis, Forestomach	3	0	0	2	2	2	1	3	1	1	0	3
Average Severity:	0.5	0.0	0.0	0.5	0.5	0.5	0.3	0.4	0.4	0.2	0.0	0.5
Inflammation, Chronic-Active, Forestomach	2	0	0	2	0	1	1	2	0	1	0	3
Average Severity:	0.5	0.0	0.0	0.8	0.0	0.2	0.3	0.3	0.0	0.2	0.0	0.8
Inflammation, Chronic-Active, Glandular Stomach	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization, Forestomach	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization, Glandular Stomach	2	2	2	0	0	0	0	1	0	0	0	1
Average Severity:	0.3	0.4	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Necrosis, Forestomach	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Necrosis, Glandular Stomach	0	0	0	0	0	0	0	0	0	1	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Aro	clor-)	1016	Arocle	or-1242	Aro	clor-1	254	Aro	lor-)	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
STOMACH												
Ulcer, Forestomach	2	0	0	0	0	0	0	1	0	0	0	3
Average Severity:	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.9
Ulcer, Glandular Stomach ¹	1	0	0	0	0	0	0	0	0	0	0	0
TESTIS												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Degeneration, Germinal Epithelium	1	0	0	1	3	1	1	2	0	4	2	0
Average Severity:	9.3	0.0	0.0	0.5	1.3	0.2	0.3	0.4	0.0	1.6	0.5	0.0
Inflammation, Suppurative	0	с. С	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	6.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Necrosis	0	0	0	0	1	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	2	4	1	0	0	1	1	2	0	0	0	0
Average Severity:	0.^	0.7	0.3	0.0	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.0
THYMUS		1										
Number Examined:	14	10	11	7	8	9	8	16	5	9	12	13
Cyst	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
THYROID GLAND												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Cyst, Follicular	0	0	0	2	1	2	0	1	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.6	0.3	0.4	0.0	0.2	0.0	0.0	0.0	0.2
Hyperplasia, C-Cell	0	1	2	0	1	0	1	2	0	0	1	0
Average Severity:	0.0	0.2	0.4	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.1	0.0
Hyperplasia, Follicular Cell	1	0	2	0	0	0	0	1	0	0	1	0
Average Severity:	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
TONGUE												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Polyarteritis Nodosa	0	0	- 0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
TRACHEA ²												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

1. Lesions not graded for severity.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-	1016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
URINARY BLADDER					·							
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
Dilatation	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Hemorrhage	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Urothelium	0	0	0	0	0	0	G.	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Inflammation, Chronic-Active	1	0	0	0	0	• 1	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Necrotizing	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
SYSTEMIC LESIONS ²										. 17 Na		
Number Examined:	0	0	0	1	- 1	1	1	2	0	1	1	0
ZYMBALS GLAND ²												
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	.0

Table 84. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Male Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-)	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
ADRENAL GLAND												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Cyst, Cortex	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Degeneration, Cystic, Cortex	4	1	0	1	4	5	1	3	1	2	2	2
Average Severity:	0.2	0.1	0.0	0.1	0.5	0.5	0.2	0.2	0.1	0.2	0.1	0.2
Degeneration, Fatty, Cortex	22	13	12	11	11	14	8	13	16	12	9	13
Average Severity:	0.9	0.8	0.7	0.8	0.9	1.1	0.6	0.8	1.3	0.9	0.8	0.9
Degeneration, Fatty, Medulla	0	.1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fibrosis	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	00	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hematopoietic Cell Proliferation	0	0	0	0	1	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Hemorrhage, Cortex	1	0	0	1	2	0	0	2	2	0	0	0
Average Severity:	0.1	0.0	0.0	0.1	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0
Hyperplasia/Hypertrophy, Cortex	15	13	9	8	10	9	6	10	14	7	11	13
Average Severity:	0.7	0.9	0.6	0.9	0.9	0.8	0.6	0.7	1.3	0.8	1.0	1.0
Hyperplasia, Medulla	12	7	10	5	7	4	7	2	1	8	4	2
Average Severity:	0.5	0.6	0.7	0.5	0.6	0.5	0.5	0.1	0.1	0.9	0.3	0.2
Mineralization	2	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis, Cortex	0	0	1	1	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis, Entire Gland	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thrombus ¹	0	0	0	0	0	1	0	0	0	1	1	0

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

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Test Substance	Control	Aro	clor-]	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
AORTA												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Mineralization	4	2	4	1	3	4	4	1	0	1	5	5
Average Severity:	0.2	0.3	0.3	0.2	0.4	0.6	0.7	0.2	0.0	0.2	0.7	0.5
BLOOD VESSELS												
Number Examined:	3	1	3	1	2	2	6	2	2	2	4	1
Mineralization	2	1	3	1	1	2	1	1	3	1	3	1
Average Severity:	1.3	4.0	2.3	4.0	2.0	3.0	0.7	2.0	0.0	1.5	2.5	2.0
Polyarteritis Nodosa	1	0	0	0	0	0	5	1	2	1	1	0
Average Severity:	1.3	0.0	0.0	0.0	0.0	0.0	3.3	2.0	3.5	2.0	1.0	0.0
Thrombosis	1	0	0	0	0	0	1	0	0	1	1	0
Average Severity:	1.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	2.0	1.0	0.0
BONE												
Number Examined:	14	5	5	3	3	1	5	3	2	3	6	1
Fibrous Osteodystrophy	1	0	0	0	1	1	3	0	0	0	3	0
Average Severity:	0.1	0.0	0.0	0.0	1.0	2.0	1.4	0.0	0.0	0.0	1.2	0.0
Osteodysplasia	13	5	5	3	2	0	3	3	1	3	2	1
Average Severity:	2.6	3.7	3.6	2.7	2.0	0.0	2.0	3.7	2.0	2.7	0.8	2.0
BONE MARROW												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Atrophy	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Hyperplasia, Myeloid Cell	0	0	0	- 1	2	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BRAIN			·····									
Number Examined:	43	22	27	17	19	21	20	25	23	17	21	22
Compression ¹	12	4	8	2	3	3	4	4	4	0	4	3
Hemorrhage	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrocephalus	12	4	9	4	7	6	6	8	8	1	4	3
Average Severity:	0.6	0.4	0.8	0.5	0.8	0.6	0.8	0.7	0.8	0.1	0.4	0.3
THORACIC CAVITY											·	
Number Examined:	0	0	0	0	0	0	0	0	0	-0	0	0

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence	e Summary of Microso	copic Observations (N	on-Neoplastic) at
Unscheduled Termin	nation (18-24 Months)	for Core and Interin	n Subgroup
Male Rats			

Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-J	254	Aro	lor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
CECUM												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Inflammation, Chronic-Active	2	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis	0	1	0	0	0	0	0	.0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	1	0	0	0	0	0	0	0	0	0	0	Û
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COAGULATING GLAND												
Number Examined:	1	0	0	0	0	1	0	1	1	1	0	0
Inflammation, Chronic-Active	1	0	0	0	0	1	0	1	1	1	0	0
Average Severity:	4.0	0.0	0.0	0.0	0.0	3.0	0.0	2.0	2.0	3.0	0.0	0.0
COLON											-	
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Metazoan Parasite ¹	3	1	0	0	0	0	0	0	0	0	4	1
DUODENUM												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Ulcer	0	0	0	0	1	0	0	0	2	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0
EPIDIDYMIS												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Aspermia	1	0	1	2	3	0	1	0	1	0	2	4
Average Severity:	0.1	0.0	0.1	0.5	0.6	0.0	0.2	0.0	0.2	0.0	0.4	0.7
Atrophy	1	0	1	0	3	1	2	0	1	0	3	0
Average Severity:	0.1	0.0	0.1	0.0	0.5	0.1	0.3	0.0	0.1	0.0	0.4	0.0
Inflammation, Chronic-Active	0	0	0	2	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	0	0	0	1	0	0	1	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
ESOPHAGUS ²										1.1		
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	21

Lesions not graded for severity.
 No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-]	1016	Arocio	r-1242	Aro	clor-1	1254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
EYE					-							
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Atrophy, Retina	0	1	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Cataract	0	0	0	0	0	.0	0	0	1	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Inflammation, Suppurative, Anterior Chamber	3	3	2	1	3	0	3	1	1	0	1	3
Average Severity:	0.2	0.3	0.2	0.2	0.4	0.0	0.4	0.1	0.1	0.0	0.0	0.4
Inflammation, Suppurative, Cornea	5	3	4	0	3	1	2	1	3	2	3	2
Average Severity:	0.3	0.3	0.4	0.0	0.4	0.1	0.3	0.1	0.3	0.2	0.3	0.2
Perforation, Cornea ¹	0	0	0	0	0	0	0	0	1	0	0	1
Phthisis Bulbi ¹	0	0	0	0	0	1	0	0	0	1	0	0
Ulcer, Cornea	0	1	2	1	2	0	1	0	0	1	2	0
Average Severity:	0.0	0.2	0.3	0.2	0.4	0.0	0.2	0.0	0.0	0.2	0.4	0.0
HARDERIAN GLAND												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Hemorrhage	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Inflammation, Chronic	0	0	0	0	0	1	0	0	0	0	1	2
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Inflammation, Suppurative	0	0	0	0	0	0	0	0	1	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
Pigment - Porphyrin ¹	1	0	0	0	0	0	0	0	0	0	0	0
HEART	-	•										
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Cardiomyopathy	33	20	20	14	14	16	17	20	19	13	17	20
Average Severity:	1.5	1.9	1.5	1.6	1.4	1.5	1.9	1.4	1.5	1.6	1.8	2.0
Metaplasia, Osseous	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization	2	4	5	2	2	3	2	0	1	0	5	2
Average Severity:	0.0	0.4	0.4	0.2	0.3	0.3	0.2	0.0	0.0	0.0	0.5	0.2

1. Lesions not graded for severity.

2. No lesions present.

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Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
HEART												
Thrombosis, Atrial ¹	2	1	2	0	1	3	1	1	1	0	2	1
ILEUM												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metazoan Parasite ¹	0	0	0	0	0	0	1	0	0	0	0	0
JEJUNUM ²												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
JOINT												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Cyst ¹	1	1	3,	0	2	3	3	2	3	1	3	3
Hemorrhage	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyaline Droplets	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Hydronephrosis	2	. 1	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Infarct ¹	1	1	0	0	0	1	0	0	0	0	0	0
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	3	1	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.2	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis, Papillary	0	1	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nephropathy, Chronic	37	23	27	16	17	21	19	25	22	17	21	22
Average Severity:	1.9	2.3	2.6	2.3	2.3	2.5	2.6	2.4	2.2	2.3	2.9	2.5

1. Lesions not graded for severity.

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

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Test Substance	Control	Aro	clor-)	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
KIDNEY												
Pyelonephritis	1	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Thrombosis	1	1	0	0	0	0	1	0	0	0	0	1
Average Severity:	0.1	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
LACRIMAL GLAND												
Number Examined:	43	22	27	16	19	20	20	23	23	17	21	22
Alteration, Harderian Gland	34	19	20	11	17	15	16	20	18	13	13	20
Average Severity:	1.7	1.8	1.6	1.3	2.0	1.6	1.5	1.6	1.6	1.8	1.5	2.2
Inflammation, Chronic-Active	0	0	Ó	0	0	0	2	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
LIVER			·						• •			
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Hypertrophy, Hepatocyte, Centrilobular	0	8	13	14	13	20	16	25	21	14	18	18
Average Severity:	0.0	0.6	1.0	2.1	1.3	2.3	2.0	2.9	3.1	1.9	2.1	2.3
Hypertrophy, Portal, Hepatocyte	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Basophilic Focus ¹	3	2	3	1	1	2	2	0	1	1	1	1
Clear Cell Focus ¹	2	0	0	3	1	1	2	5	5	3	2	2
Eosinophilic Focus ¹	0	3	0	3	5	2	1	5	5	3	5	3
Mixed Cell Focus ¹	0	1	1	0	0	0	1	2	1	1	2	2
Angiectasis	1	0	0	0	0	0	- 0 -	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Bacterial Colonies	1	0	0	0	0	0	0	0	0	0.	0	0
Congestion, Focal/Multifocal	2	1	. 1	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst, Bile Duct ¹	0	1	0	0	0	0	0	0	0	0	0	0
Degeneration, Cystic	13	12	9	10	8	7	8	6	7	10	12	9
Average Severity:	0.4	0.7	0.4	0.8	0.6	0.6	0.7	0.3	0.5	0.9	1.2	0.9
Degeneration, Hepatocyte, Centrilobular	0	2	0	0	1	0	0	0	0	0	1	0
Average Severity:	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Arocio	r-1242	Aro	clor-1	254	Аго	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
LIVER												
Fibrosis	0	1	1	1	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Hepatodiaphragmatic Nodule ¹	0	1	1	2	0	0	0	1	0	0	0	1
Hyperplasia, Bile Duct	30	19	18	11	17	17	19	24	22	13	17	17
Average Severity:	1.3	1.5	1.2	1.4	1.3	1.6	2.0	1.9	2.2	1.6	1.5	1.3
Inflammation, Chronic-Active	13	6	6	6	6	6	4	10	5	7	4	9
Average Severity:	0.5	0.3	0.3	0.5	0.3	0.3	0.3	0.5	0.3	0.6	0.4	0.6
Microgranuloma	3	3	2	1	1	3	1	6	2	0	0	0
Average Severity:	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.0
Necrosis	3	-1	2	4	1	1	3	4	2	2	6	2
Average Severity:	0.1	0.0	0.1	0.4	0.1	0.1	0.4	0.3	0.2	0.2	0.7	0.2
Necrosis, Hepatocyte, Centrilobular	0	1	1	0	1	1	0	1	0	0	1	1
Average Severity:	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1
Pigment, Hemosiderin	1	1	0	- 1	0	3	1	2	0	0	2	0
Average Severity:	0.0	0.1	0.0	0.1	0.0	0.3	0.1	0.2	0.0	0.0	0.2	0.0
Thrombosis ¹	0	0	1	0	0	0	1	0	0	0	0	0
Vacuolization, Hepatocyte	17	12	11	6	12	17	16	22	22	13	11	17
Average Severity:	0.7	0.9	0.7	0.6	1.5	1.8	1.9	2.0	2.3	1.5	1.1	1.8
LUNG	•											
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Alveolar, Histiocytosis	1	0	0	0	2	1	0	0	2	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Fibrosis	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Alveolar Epithelium, Focal	1	1	0	1	1	0	0	3	1	1	1	1
Average Severity:	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1
Inflammation, Chronic-Active	5	0	2	4	2	1	3	0	1	4	4	2
Average Severity:	0.2	0.0	0.2	0.5	0.2	0.2	0.4	0.0	0.2	0.5	0.3	0.2
Inflammation, Suppurative	5	1	0	0	0	0	0	0	0	2	0	0
Average Severity:	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Аго	clor-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
LUNG												
Metaplasia, Osseous	1	0	2	1	2	1	2	0	0	1	2	0
Average Severity:	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Mineralization, Interstitum	2	2	2	2	2	1	3	1	0	0	2	3
Average Severity:	0.1	0.2	0.2	0.4	0.3	0.1	0.4	0.1	0.0	0.0	0.2	0.3
inrombosis	1	0	0	0	0	0	0	0	1	1	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1
Neutrophilia	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-BRONCHIAL	-											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	2	1	3	0	0	0	0	1	1	0	0	2
Ectasia, Sinudoidal	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Lymphoplasmacytic	0	0	1	0	0	0	0	0	0	Ö	0	0
Average Severity:	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pigment, Hemosiderin	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-MESENTERIC								·				
Number Examined:	43	22	26	17	19	21	20	25	23	16	20	22
Ectasia, Sinusoid	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Lymphoplasmacytic	0	0	0	0	1	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Inflammation, Chronic-Active	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
LYMPH NODE-MANDIBULAR									_			
Number Examined:	3	1	2	2	1	0	1	0	2	2	0	0
Hyperplasia, Lymphoplasmacytic	2	1	2	2	1	0	1	0	2	2	0	0
Average Severity:	2.7	4.0	3.5	3.0	3.0	0.0	3.0	0.0	3.5	3.5	0.0	0.0
LYMPH NODE-OTHER												
Number Examined:	4	1	3	0	1	1	1	1	0.	0	2	0
Ectasia, Sinudoidal	1	0	0	0	0	1	0	0	0	0	1	0
Average Severity:	0.5	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	2.0	0.0
Hemorrhage, Sinudoidal	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Hyperplasia, Lymphoplasmacytic	3	1	2	0	1	0	1	1	0	0	0	0
Average Severity:	2.0	4.0	2.3	0.0	4.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAMMARY GLAND												
Number Examined:	38	22	25	15	18	21	20	23	22	14	19	19
Cellulitis, Subcutaneous Tissue	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst	0	0	1	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Hyperplasia, Cystic	12	6	9	5	8	5	9	7	2	1	4	1
Average Severity:	0.7	0.5	0.7	0.6	0.9	0.4	0.9	0.4	0.2	0.2	0.5	0.1
Inflammation, Chronic-Active	0	0	0	0	0	0	1	0	0	. 0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
MESENTERY												
Number Examined:	5	1	2	1	2	1	1	1	2	0	0	. 4
Inflammation, Chronic-Active, Fat	3	0	1	0	1	0	0	0	0	0	0	1
Average Severity:	2.0	0.0	1.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Inflammation, Necrotizing, Fat	0	0	0	0	1	1	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	2.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity	0.0	0.0	0.0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-	1016	Aroclo	r-1242	Aro	clor-	[254	Аго	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
MESENTERY												
Thrombosis, Mesenteric Artery ¹	0	0	0	0	0	0	0	0	1	0	0	0
NOSE/TURBINATES ²												
Number Examined:	0	0	0	0	1	0	0	0	1	2	0	0
OPTIC NERVE				:								¢.
Number Examined:	41	21	25	16	18	18	19	25	23	16	21	21
Demyelination	0	0	0	0	0	0	0	2	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
Inflammation, Suppurative	0	0	Ó	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
ORAL MUCOSA ²												
Number Examined:	0	0	0	0	1	0	0	0	0	1	0	0
PANCREAS												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Atrophy, Acinar Epithelium	4	4	2	6	3	2	8	6	7	1	2	6
Average Severity:	0.1	0.3	0.2	0.5	0.4	0.2	0.8	0.3	0.7	0.1	0.2	0.3
Ectasia, Duct	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Acinar Epithelium	0	2	0	1	0	0	0	0	1	0	0	1
Average Severity:	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Polyarteritis Nodosa	2	1	1	1	0	1	1	0	1	0	0	3
Average Severity:	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.5
Thrombosis	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
PARATHYROID				-							, , ,	
Number Examined:	41	22	26	17	18	19	20	20	18	16	17	22
Hyperplasia	5	3	7	4	3	3	7	3	2	3	9	6
Average Severity:	0.3	0.4	0.7	0.5	0.4	0.5	0.9	0.3	0.2	0.4	1.4	0.7
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

1. Lesions not graded for severity.

2. No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
PITUITARY GLAND												
Number Examined:	43	23	27	16	19	21	19	25	23	17	21	22
Cyst	2	1	1	3	1	1	1	1	2	1	3	0
Average Severity:	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.0
Hyperplasia, Pars Distalis	13	7	5	2	3	7	3	10	5	5	6	9
Average Severity:	0.5	0.6	0.3	0.3	0.3	0.7	0.3	0.8	0.4	0.5	0.4	0.9
PREPUTIAL GLAND												
Number Examined	0	0	0	Ö.	0	0	0	0	0	0	0	0
PROSTATE	Ń				· .							
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Atrophy	0	0	1	0	3	2	0	0	1	0	2	1
Average Severity:	0.0	0.0	0.1	0.0	0.5	0.3	0.0	0.0	0.1	0.0	0.2	0.1
Hyperplasia, Epithelium	1	0	1	0	0	0	0	0	2	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Inflammation, Chronic-Active	37	19	19	11	13	14	14	13	13	12	14	16
Average Severity:	1.6	1.5	1.5	1.2	1.4	1.2	1.6	1.0	1.3	1.5	1.1	1.4
Necrosis	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metaplasia, Epithelium, Transitional Cell	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
RECTUM												
Number Examined:	43	23	27	17	19	20	20	25	23	17	21	22
Metazoan Parasite ¹	0	0	0	1	0	0	0	0	0	2	0	0
Necrosis	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBLINGUAL	2					1						
Number Examined:	42	22	27	17	19	20	19	23	23	17	21	21
SALIVARY GLAND-SUBMAXILLA	RY							1.1.1				
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-)	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
SCIATIC NERVE												
Number Examined:	42	22	26	15	19	21	20	20	23	17	20	21
Demyelination	0	1	0	0	0	0	0	1	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
SEMINAL VESICLE						19 B						
Number Examined:	43	23	27	<u>- 17</u> ∿	19	21	20	25	23	17	21	22
Atrophy	0	0	0	0	3	1	2 ·	0	1.	0	3	0
Average Severity:	0.0	0.0	0.0	0.0	0.5	0.1	0.3	0.0	0.1	0.0	0.4	0.0
Inflammation, Chronic-Active	2 .	0	0	1	1	0	1	0	0	2	0	1
Average Severity:	0.2	0.0	0.0	0.2	0.2	0.0	0.2	0.0	0.0	0.4	0.0	0.1
Inflammation, Suppurative	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Necrosis	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKELETAL MUSCLE												
Number Examined:	43	23	27	17	19	21	20	25	23	17	20	22
Degeneration	4	6	7	2	5	8	3	4	3	5	5	4
Average Severity:	0.1	0.5	0.4	0.3	0.4	0.7	0.3	0.3	0.3	0.6	0.5	0.5
Inflammation, Chronic-Active	1	1	1	3	0	0	1	0	0	1	1	0
Average Severity:	0.0	0.1	0.1	0.5	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Mineralization	0	1	2	1	3	0	2	3	1	2	0	2
Average Severity:	0.0	0.1	0.1	0.1	0.3	0.0	0.1	0.2	0.1	0.1	0.0	0.1
SKIN												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Abscess ¹	2	1	3	1	1	0	6	4	0	1	4	1
Alopecia	0	1	0	0	0	. 0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Edema	0	0	0	0	0	0	0	0	0	2	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Epithelial Inclusion Cyst ¹	3	0	3	0	1	0	0	1	0	1	2	0
Hyperkeratosis/Acanthosis	3	2	1	1	0	0	4	3	0	0	2	0
Average Severity:	0.2	0.3	0.1	0.2	0.0	0.0	0.6	0.4	0.0	0.0	0.3	0.0

1. Lesions not graded for severity.

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Table 85. 1	ncidence Sum	nary of Micros	copic Observa	tions (Non	-Neoplastic) at
Unschedule	d Termination	(18-24 Months)	for Core and	l Interim S	ubgroup
Male Rats					

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
SKIN												
Inflammation, Chronic-Active	0	0	0	1	1	0	1	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.0
Inflammation, Chronic, Subcutaneous Fat	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Necrotizing	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Inflammation, Pyogranulomatous	16	4	11	5	3	0	3	2	0	6	3	2
Average Severity:	1.4	0.6	0.6	1.1	0.6	0.0	0.6	0.3	0.0	1.4	0.6	0.3
Inflammation, Suppurative	0	2	1	1	0	0	1	1	0	2	1	1
Average Severity:	0.0	0.3	0.1	0.2	0.0	0.0	0.1	0.2	0.0	0.4	0.1	0.2
Mineralization	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	00	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Scab ¹	1	0	0	0	0	0	0	0	1	0	0	0
Ulcer	0	1	1	1	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.2	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
SPINAL CORD												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Cyst, Epithelium Inclusion	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Demyelination	31	17	21	14	14	16	16	16	19	17	18	17
Average Severity:	1.2	1.3	1.3	1.6	1.3	1.2	1.3	1.0	1.4	1.7	1.4	1.2
SPLEEN	· ·											
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Angiectasis	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst, Capsule	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depletion, Lymphoid	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fibrosis	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Lesions not graded for severity.
 No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-]	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	10
(N)	43	23	27	17	19	21	20	25	23	17	21	22
SPLEEN			_		•	*				<u> </u>	•	
Hematopoietic Cell Proliferation	2	2	5	2	2	2	3	0	3	2	1	3
Average Severity:	0.1	0.2	0.5	0.4	0.3	0.2	0.3	0.0	0.4	0.3	0.2	0.:
Hyperplasia, Lymphoid	1	0	1	0	0	0	0	0	0	1	0	0
Average Severity:	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Necrosis	2	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
STERNUM												
Number Examined:	43	23	27	17	19	21 .	20	25	22	16	21	22
Fibrous Osteodystrophy	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STOMACH							1997 1997					
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Acanthosis/Hyperkeratosis, Forestomach	8	6	2	1	5	6	1	4	0	2	2	5
Average Severity:	0.5	0.7	0.2	0.2	0.7	0.9	0.1	0.5	0.0	0.3	0.3	0.7
Hyperplasia, Epithelium, Glandular	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active, Forestomach	9	3	2	0	4	1	1	4	0	1	2	5
Average Severity:	0.6	0.4	0.2	0.0	0.5	0.1	0.2	0.4	0.0	0.2	0.3	0.:
Inflammation, Chronic-Active, Glandular Stomach	1	0	0	1	0	1	0	1	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
Mineralization, Forestomach	0	0	0	0	2	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Mineralization, Glandular Stomach	3	4	4	1	2	3	4	1	0	0	6	1
Average Severity:	0.2	0.3	0.3	0.1	0.2	0.3	0.5	0.1	0.0	0.0	0.5	0.
Necrosis, Glandular Stomach	0	0	0	0	0	1	0	3	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.0
Perforation ¹	1	0	1	0	0	1	0	0	0	0	1	0

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

1. Lesions not graded for severity.

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

Test Substance	Control	Aro	clor-	1016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
STOMACH												
Ulcer, Forestomach	8	3	1	0	3	0	1	3	0	1	2	3
Average Severity:	0.7	0.5	0.1	0.0	0.6	0.0	0.2	0.5	0.0	0.2	0.4	0.5
Ulcer, Glandular Stomach	0	0	0	1	0	0	0	0	0	0	0	0
TESTIS									•	·		
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Degeneration, Germinal Epithelium	7	1	4	6	8	4	4	6	6	4	6	6
Average Severity:	0.6	0.1	0.4	1.1	1.3	0.7	0.5	0.7	0.7	0.8	0.7	0.9
Hyperplasia, Interstitial Cell	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	5	1	3	4	5	8	7	2	2	4	8	7
Average Severity:	0.2	0.1	0.2	0.6	0.5	0.9	0.9	0.2	0.2	0.5	0.8	0.6
THYMUS		_										
Number Examined:	39	19	25	16	18	16	17	22	20	17	20	22
Ectopic Parathyroid ¹	0	0	0	1	0	0	0	0	0	1	0	0
THYROID GLAND	•											
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Cyst, Follicular	0	1	0	0	0	1	1	2	4	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.4	0.0	0.0	0.0
Cyst, Ultimobranchial	1	0	0	0	0	0	0	0	7	1	0	2
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.0	0.2
Hyperplasia, C-Cell	5	3	4	4	0	4	2	3	2	2	2	1
Average Severity:	0.2	0.2	0.3	0.4	0.0	0.3	0.2	0.3	0.1	0.2	0.1	0.1
Hyperplasia, Follicular Cell	1	1	1	0	1	1	2	4	2	0	4	4
Average Severity:	0.0	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.2	0.0	0.3	0.3
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

1. Lesions not graded for severity.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

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Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
TONGUE				·								
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Degeneration, Skeletal Muscle	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Ulcer	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRACHEA ²												
Number Examined:	43	23	27	17	19	21	20	25	23	17	20	21
URINARY BLADDER	· · · ·											
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
Calculus ¹	1	0	0	0	0	0	0	1	0	0	0	0
Dilatation	0	0	1	0	0	0	3	0	1	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.2	0.0	0.0	0.0
Hemorrhage	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Urothelium	0	0	1	0	1	0	. 0	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	2	0	0	0	1	0	1	0	0	1	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Mineralization	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEMIC LESIONS ²												
Number Examined:	2	0	3	0	0	0	0	1	0	0	0	3
ZYMBALS GLAND ²			•									
Number Examined:	0	0	0	0	0	0	0	0	0	1	0	0

Table 85. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Core and Interim SubgroupMale Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Are	oclor-1	016	Aroclo	r-1242	Arc	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
ADRENAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
AORTA									·			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE MARROW						·.						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN ²												
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
CECUM												j,
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	~0
CLITORAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON						1.			·			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
DUODENUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
EYE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HEART				•								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ILEUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 86. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the13-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control	Are	oclor-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
KIDNEY			<u> </u>	.				·				·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LACRIMAL GLAND		•	A									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LIVER					•							
Number Examined:	6	-6	6	6	6	6	6	6	6	6	6	6
Hypertrophy, Hepatocyte Centrilobular	0	0	2	5	3	6	3	- 5	6	5	5	6
Average Severity:	0.0	0.0	0.3	0.8	0.5	1.2	0.5	1.2	2.0	0.8	0.8	1.0
Pigment	1	0	0	0.	0	0	1	0	1	0	0	0
Average Severity:	0.2	0.0	0.0	0.0 -	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0
Vacuolization, Hepatocyte	0	0	0	0	1	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
LUNG												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTIN	NAL											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTER	UC											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBUI	.AR											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND ²												
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE			•		•							
Number Examined:	0	0	0	-0	0	0	0	0	0	0	0	0
ORAL MUCOSA	•		•••••••									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY			· .		· · · ·			••••••••••••••••				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 86. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the13-Week Interim Termination for Female Rats

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1. Lesions not graded for severity.

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Are	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
OVIDUCT		.	5		· · ·				4		•	
Number Examined:	0	0	0	0	0	0	0	-0	0	0	0	0
PANCREAS					.				````		.	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PARATHYROID	•••••••••		A	•••••••••••			·	.	A			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND			.			A.,			4		.	-
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
RECTUM			L						L			·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLI	NGUAL			•								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBM	AXILLAI	RY	<u>,</u>				L		L			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE	•											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE							.		.			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKIN	••••••••••••••••••••••••••••••••••••••		4				·····		L			-
Number Examined:	-0	0	0	.0	0	0	0	0	0	0	0	0
SPINAL CORD					-				.			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPLEEN	•		.								.	·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STERNUM									.		•	
Number Examined:	0	0	0	0	0	0	0	0	0	. 0	0	0
STOMACH					•••••••••••••••••			••••••		.		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYMUS	••••••••••••••••••••••••••••••••••••••											·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND	······						•••••					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE		••••			••••••••••••••••••••••••••••••••••••••	•						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 86. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the13-Week Interim Termination for Female Rats

Lesions not graded for severity.
 No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Arc	oclor-1	016	Aroclo	r-1242	Arc	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
TRACHEA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER							•					
Number Examined:	0	0	0	0	0	0	0	0	0	0	.0	0
UTERUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA	·											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SYSTEMIC LESIONS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 86. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 13-Week Interim Termination for Female Rats

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	Arc	oclor-1	016	Aroclo	r-1242	Aro	clor-1	254	Arc	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
ADRENAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
AORTA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE MARROW												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN ²												
Number Examined:	6	6	6	6	6	6	6	6	- 6	6	6	6
CECUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	. 0	0
CLITORAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
DUODENUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS											-	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
EYE												
Number Examined:	0	0	0	0	- 0	0	0	0	0	0	0	0
HARDERIAN GLAND												
Number Examined:	0	0	0	0	0	0	0	-0	: 0	0	0	0
HEART										· .		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ILEUM			-									
Number Examined:	0	-0	0	0	0	0	0	0	0	0	0	0
JEJUNUM									,	· · · ·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 87. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the26-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Are	oclor-1	016	Aroclo	or-1242	Arc	oclor-1	254	Arc	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
KIDNEY			-		•	-						
Number Examined:	0	0	0	1	0	0	0	0	0	0	0	0
Hydronephrosis ¹	0	0	0	1	0	0	0	0	0	0	0	0
LACRIMAL GLAND	• •		••••••••••••••••••••••••••••••••••••••	A	A	•						-
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LIVER						A		A				
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
Hypertrophy, Hepatocyte, Centrilobular	0	0	5	6	6	6	6	6	6	6	6	6
Average Severity:	0.0	0.0	0.8	1.2	1.5	1.7	1.8	2.0	2.8	1.3	1.7	2.0
Clear Cell Focus ¹	0	0	2	0	0	0	0	0	0	0	0	0
Eosinophilic Cell Focus ¹	0	0	0	0	0	0	0	0	0	0	0	2
Hepatodiaphragmatic Nodule ¹	0	0	0	0	0	0	0	1	0	0	0	0
Hyperplasia, Bile Duct	0	0	3	2	1	0	0	0	3	2	0	0
Average Severity:	0.0	0.0	0.5	0.3	0.2	0.0	0.0	0.0	1.0	0.5	0.0	0.0
Pigment	0	0	0	0	1	5	4	5	6	1	1	2
Average Severity:	0.0	0.0	0.0	0.0	0.2	1.2	0.8	0.8	1.3	0.2	0.2	0.7
LUNG						· · · · ·						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTIN	NAL											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTER	NC				1				· .	·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBUI	AR											
Number Examined:	1	1	0	0	0	0	1	0	0	0	0	0
Hyperplasia, Lymphoplasmacytic	1	1	0	0	0	0	1	0	0	0	0	0
Average Severity:	3.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-OTHER						· .		.				· .
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND												
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
Hyperplasia, Cystic	0	1	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Table 87. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the26-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-1	016	Arock	or-1242	Arc	clor-1	254	Arc	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	- 6	6	6	6	6	6	6	6
MAMMARY GLAND			4		•	.				•		•
Hyperplasia, Nodular, Glandular Tissue ¹	0	0	0	0	0	0	0	0	0	0	1	0
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE	,			· · ·								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ORAL MUCOSA								• · · · · · · · · · · · · · · · · · · ·	f - 1 - 1 - 1		•	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ²		· .						•			•	
Number Examined:	6	0	0	6	0	6	0	0	6	0	0	6
OVIDUCT	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS						• • • • •	• • • • • • • •	•			•	L
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PARATHYROID												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND		······	B				1					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
RECTUM				•				•	•			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLI	NGUAL		•				.					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBM	AXILLAI	RY	d	<u></u>								
Number Examined:	0	0	0	0	0	0	0	0	0	-0	0	0
SCIATIC NERVE	.				L.,				• •			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE	•		A									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKIN	•		.	la and	· · · · · · · · ·	.			•			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD	•					.	•••••					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 87. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the26-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

Test Substance	Control	ol Aroclor-1016 A		Aroclo	r-1242	42 Aroclor-1254				Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
SPLEEN												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STERNUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STOMACH												
Number Examined:	0	0	0	0	0	· 0	0	0	0	0	0	0
THYMUS					• •				:			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND				*	1							4
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	•											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TRACHEA	с.,											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URETHRA										•		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER								1				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
UTERUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA ²												
Number Examined:	6	0	0	6	0	6	0	0	6	0	0	6
SYSTEMIC LESIONS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND					· · ·					•		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 87. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 26-Week Interim Termination for Female Rats

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Lesions not graded for severity.
 No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Ar	oclor-1	016	Aroclo	ог-1242	Arc	clor-1	254	Arc	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
ADRENAL GLAND ²				• · · · · · · · · · · · · · · · · · · ·								
Number Examined:	0	0	0	0	0	0	0	1	1	0	1	0
AORTA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE MARROW						5					-	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN ²				<u>, </u>								
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
CECUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND	· · · ·							· · · · ·				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
DUODENUM							•	•••••		•	••••••••••••••••••••••••••••••••••••••	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS		· · ·								•	.	
Number Examined:	0	0	0	0	0	0	0	0	0	. 0	0	0
EYE				.		A.			•	•	•	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND		•		-								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HEART			••••	••••••		•••••		••••••	••••••••••••••••••••••••••••••••••••••			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ILEUM			·			•						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM	••••••	•				•••••••••••••••		e e de				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 88. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the39-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity (Degree) or Amount of Change										
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance									
2 = Mild degree of change	4 = Marked severity, change is essentially maximal									

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Test Substance	Control	Control Aroclor-1016			Aroclo	or-1242	Ar	oclor-1	254	Ar	260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100	
(N)	6	6	6	6	6	6	6	6	6	6	6	6	
KIDNEY			.	<u></u>	A	•	<u></u>	A					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LACRIMAL GLAND	LACRIMAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LIVER						.	<u>.</u>	A			A	•	
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6	
Hypertrophy, Hepatocyte Centrilobular	0	2	6	6	6	6	6	6	6	6	6	6	
Average Severity:	0.0	0.3	1.3	1.5	2.0	3.0	2.2	3.0	3.3	1.5	2.2	2.3	
Basophilic Cell Focus ¹	0	0	1	0	0	3	1	0	1	0.	0	0	
Clear Cell Focus ¹	0	0	1	0	0	0	0	0	e	2	0	. 0	
Eosinophilic Cell Focus ¹	0	0	0	1	0	2	1	2	0	0	1	2	
Mixed Cell Focus ¹	0	0	0	1	0	2	0	0	1	0	1	1	
Hepatodiaphragmatic Nodule ¹	0	0	0	0	0	0	0	1	0	0	1	0	
Hyperplasia, Bile Duct	1	0	1	1	3	5	6	5	6	1	2	3	
Average Severity:	0.2	0.0	0.2	0.2	0.7	1.5	1.3	1.7	2.2	0.2	0.5	1.0	
Necrosis	1	0	0	0	0	0	0	0	0	0	0	0	
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pigment	0	0	0	1	0	5	5	5	6	0	0	1	
Average Severity:	0.0	0.0	0.0	0.2	0.0	1.2	0.8	1.3	1.3	0.0	0.0	0.2	
Vacuolization, Hepatocyte	0	0	0	2	6	5	5	4	5	0	5	5	
Average Severity:	0.0	0.0	0.0	0.3	1.0	0.8	1.0	0.7	0.8	0.0	0.8	0.8	
LUNG									· .				
Number Examined:	0	- 0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-MEDIASTINA	AL.												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-MESENTERI	C					-			•		.		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-MANDIBULA	R												
Number Examined:	0	1	0	0	0	0	0	0	0	0	1	0	
Hyperplasia, Lymphoplasmacytic	0	1	0	0	0	0	0	0	0	0	1	0	
Average Severity:	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	
LYMPH NODE-OTHER					· .								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	

Table 88. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the39-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Aroclor-1016			Aroclo	or-1242	Arocior-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
MAMMARY GLAND	· · · ·											
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
Hyperplasia, Cystic	1	4	0	3	1	2	0	1	1	3	1	2
Average Severity:	0.3	0.8	0.0	0.7	0.5	0.3	0.0	0.5	0.2	1.2	0.3	0.7
Hyperplasia, Nodular, Glandular Tissue	1	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE								,				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ORAL MUCOSA					· · · ·							
Number Examined:	0	0	0	0	0	0	0	2	0	0	0	0
OVARY												
Number Examined:	0	0	0	0	0	0	1	0	0	0	0	0
Dilatation, Bursa ¹	0	0	0	0	0	0	1	0	0	0	• 0	0
OVIDUCT								• • •				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	0	0	0	0	0	0	0	.0	0	0	0	0
PARATHYROID		·										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND ²												
Number Examined:	1	0	0	. 1	1	0	0	0	0	0	0	0
RECTUM										. ·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLIN	GUAL					·····	• •					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBMA	XILLARY											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE				•								
Number Examined:	0	0	0	0	0	0	0	Ò.	0	0	0	0
SKELETAL MUSCLE	• • • • • • • • • • • • • • • • • • •					· · · ·						
Number Examined:	0	0	-0	0	0	0	0	0	0	0	0	0

Table 88. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the39-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

Test Substance	Control	itrol Aroclor-1016 Aroclor-1242 Aroclor-1254 Aroc		xlor-1260								
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
SKIN ²	·				·		A	· · · ·	A	·	<u>Lauren (</u>	
Number Examined:	0	0	0	0	0	1	0	0	0	0	0	0
SPINAL CORD												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPLEEN ²					-							
Number Examined:	0	0	0	0	0	0	1	0	0	0	0	0
STERNUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STOMACH										A		
Number Examined:	0	0	0	0	0	0	0	0	0	(je	0	0
THYMUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE	,:											
Number Examined:	0	0	0	0	0	0	0	0	0	~0	0	0
TRACHEA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URETHRA	-											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER										÷		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
UTERUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SYSTEMIC LESIONS					. 4	-						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND				here and her	h			A			L	h
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 88. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the39-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Arc	clor-1	016	Aroclo	r-1242	Arc	clor-1	254	Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	5	6
ADRENAL GLAND												
Number Examined:	6	0	0	6	0	5	0	0	5	0	1	6
Degeneration, Fattý, Cortex	0	0	0	4	0	1	0	0	1	0	0	3
Average Severity:	0.0	0.0	0.0	1.5	0.0	0.2	0.0	0.0	0.6	0.0	0.0	1.5
Hyperplasia/Hypertrophy, Cortex	0	0	0	1	0	0	0	0	0	0	1	1
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.3
Hyperplasia, Medulla	0	0	0	0	0	1	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.2
AORTA ²	· · ·											
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
BONE												
Number Examined:	6	0	0	6	0	5	0	C	5	0	0	6
Arthritis, Chronic	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
BONE MARROW ²												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
BRAIN							·					
Number Examined:	6	6	6	6	6	5	6	6	5	6	5	6
Inflammation, Chronic- Active, Meninges	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
CECUM ²						•••••••••••••••••						
Number Examined:	6	. 0	0	6	0	5	0	0	5	0	0	6
CLITORAL GLAND	····							÷.,				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ²									· · · · · · · · ·			
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
DUODENUM ²											· · ·	
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6

Table 89. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

Grades for Defining Severity (Degree) or Amount of Change									
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance								
2 = Mild degree of change	4 = Marked severity, change is essentially maximal								

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Are	oclor-1	016	Aroclo	or-1242 Aroclor-1254			Arocior-1260				
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100	
(N)	6	6	6	6	6	5	6	6	5	6	- 5	6	
ESOPHAGUS ²	.					A	4						
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6	
EYE ²				· · · · ·		.	.						
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6	
HARDERIAN GLAND ²	· · · ·	-				· ·							
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6	
HEART													
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6	
Cardiomyopathy	4	0	0	3	0	3	ð	0	1	0	0	4	
Average Severity:	0.7	0.0	0.0	0.7	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.7	
ILEUM ²													
	6	0	0	6	0	5	0	0	5	0	0	6	
JEJUNUM ²	·					· · · · · · · · · · · · · · · · · · ·							
	6	0	0	6	0	5	0	0	5	0	0	6	
KIDNEY	KIDNEY												
Number Examined:	6	1	1	6	0	5	0	0	5	0	0	6	
Hydronephrosis ¹	0	0	0	1	0	0	0	0	0	0	0	0	
Mineralization	0	0	0	0	0	5	0	0	0	0	0	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
Nephropathy, Chronic	2	. 1 .	0	4	0	1	0	0	0	0	0	3	
Average Severity:	0.3	1.0	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.5	
LACRIMAL GLAND ²	-												
	6	0	0	6	0	5	0	0	5	0	0	6	
LIVER													
Number Examined:	6	6	6	6	6	5	6	6	5	6	5	6	
Hypertrophy, Hepatocyte, Centrilobular	0	6	6	6	5	5	6	6	5	6	5	6	
Average Severity:	0.0	1.0	1.3	1.7	1.8	2.8	3.0	3.0	3.2	2.5	3.0	3.0	
Basophilic Cell Focus ¹	0	2	0	1	<u>1</u>	1	0	0	0	0	0	1	
Clear Cell Focus ¹	0	0	0	0	2	1	0	0	2	2	0	0	
Eosinophilic Cell Focus ¹	0	0	0	0	1	1	1	1	3	0	0	4	
Mixed Cell Focus ¹	0	1	0	0	1	0	2	3	1	2	0	2	
Hepatodiaphragmatic Nodule ¹	0	1	0	0	0	0	0	0	0	0	0	0	
Hyperplasia, Bile Duct	0	4	5	1	6	5	6	6	5	6	5	6	
Average Severity:	0.0	0.8	0.8	0.5	1.8	1.0	2.2	2.2	2.4	1.3	2.0	1.7	

Table 89. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Female Rats

1. Lesions not graded for severity.
| Test Substance | Control | Ar | oclor-1 | 016 | Aroclo | r-1242 | Aro | clor-1 | 254 | Aro | clor-1 | 260 |
|---|---------------------------------------|---------------------------------------|----------|-----|--------|--------|-----|-------------|--|-----|--------|-----|
| Conc. (ppm) | 0 | 50 | 100 | 200 | 50 | 100 | 25 | 50 | 100 | 25 | 50 | 100 |
| (N) | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 5 | 6 | 5 | 6 |
| LIVER | | | | | | | | | A | | | · |
| Pigment | 0 | 1 | 1 | 2 | 4 | 3 | 4 | 5 | 5 | 1 | 2 | 5 |
| Average Severity: | 0.0 | 0.2 | 0.2 | 0.3 | 0.7 | 0.6 | 0.7 | 0.8 | 1.0 | 0.2 | 0.4 | 0.8 |
| Vacuolization, Cytoplasm,
Hepatocyte | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 3 | 5 | 2 | 2 | 3 |
| Average Severity: | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 1.2 | 0.5 | 1.2 | 0.5 | 0.4 | 0.7 |
| LUNG ² | | | | | | | | | | | | |
| Number Examined: | 6 | 0 | 0 | 6 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 6 |
| LYMPH NODE-MEDIASTINA | L | | | | • | | | | | | | - |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LYMPH NODE-MESENTERIC | 2 | · · · · · · · · · · · · · · · · · · · | | | | • | | | 4 | | | · |
| Number Examined: | 6 | 0 | 0 | 6 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 6 |
| LYMPH NODE-MANDIBULA | R | . | •••••• | | | | | | · | • | | |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Hyperplasia,
Lymphoplasmacytic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Average Severity: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 |
| LYMPH NODE-OTHER | • | | . | | | | | | . | | | |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAMMARY GLAND | · . | | | • | | | • | • | | | | |
| Number Examined: | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 5 | 6 | 5 | 6 |
| Hyperplasia, Cystic | 4 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 2 | 1 | 2 | 3 |
| Average Severity: | 1.7 | 0.7 | 0.8 | 1.5 | 0.3 | 0.4 | 0.8 | 0.8 | 0.4 | 0.2 | 0.8 | 1.0 |
| Hyperplasia, Nodular,
Glandular Tissue | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Average Severity: | 0.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| MESENTERY | | | | | • | | | | | | | |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NOSE/TURBINATES | | | | | | | | | •••••••••••••••••••••••••••••••••••••• | | | |
| Number Examined: | 0 | 0 | 0 | 0 | . 0 . | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OPTIC NERVE | | | | | | | | | | | | |
| Number Examined: | 6 | 0 | 0 | 6 | 0 | -5 | 0 | 0 | 5 | 0 | 0 | 6 |
| ORAL MUCOSA | · · · · · · · · · · · · · · · · · · · | | | | • | | | • • • • • • | | | | |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 89. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	clor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	5	6
OVARY												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
Dilatation, Bursa ¹	0	0	0	2	0	0	0	0	1	0	0	0
OVIDUCT ²					- -		•		-			
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
PANCREAS	-											
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
Atrophy, Acinar Epithelium	1	0	0	0	0	2	0	0	2	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.0
Hyperplasia, Islets	1	0	0	3	0	0	0	0	1	0	0	0
Average Severity:	0.2	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Inflammation, Granulomatous	0	0	0	1.	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PARATHYROID ²					•	.	•	L	•		h	
Number Examined:	6	0	0	5	0	4	0	0	4	0	0	6
PITUITARY GLAND											•	A
Number Examined:	6	3	2	6	1	5	0	1	5	0	0	6
Hyperplasia, Pars Distalis	0	1	1	3	0	3	0	1	0	0	0	4
Average Severity:	0.0	0.7	1.5	1.3	0.0	1.0	0.0	3.0	0.0	0.0	0.0	1.2
RECTUM		•								· · · · · ·		
Number Examined:	6	0	0	5	0	5	0	0	5	0	0	6
Metazoan Parasite ¹	1	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLIM	IINAL ²		· · · ·							·		
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SALIVARY GLAND-SUBMA	XILLARY	2	·									
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SCIATIC NERVE ²			·					-	• •			
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SKELETAL MUSCLE ²	· · · · · · · · · · · · · · · · · · ·								·			
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SKIN ²			••••••	· · · · · ·				,,#¥		••••••••••••••••••••••••••••••••••••••		
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SPINAL CORD ²						•			· · · · ·			
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6

Table 89. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Are	clor-1	016	Aroclo	r-1242	Arc	clor-1	254	Аго	clor-12	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	5	6
SPLEEN ²												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
STERNUM ²												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
STOMACH ²												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
THYMUS ²										hanna		
Number Examined:	5	0	0	5	0	3	0	0	5	0	0	6
THYROID GLAND												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
Hyperplasia, C-Cell	6	0	0	6	0	5	0	0	4	0	0	4
Average Severity:	1.5	0.0	0.0	2.0	0.0	1.8	0.0	0.0	1.2	0.0	0.0	1.8
TONGUE ²							·					
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
TRACHEA ²							·					
Number Examined:	6	0	0	6	0	5	0	0	.5	0	0	6
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ²												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
UTERUS												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
Dilatation	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
VAGINA ²												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SYSTEMIC LESIONS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND								÷.,				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 89. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the52-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-1	1016	Aroclo	г-1242	Aro	clor-1	1254	Aro	clor-]	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
ADRENAL GLAND												
Number Examined:	3	1	3	6	1	5	0	1	5	2	1	6
Degeneration, Fatty, Cortex	2	1	1	1	1	4	0	1	0	1	1	3
Average Severity:	2.3	3.0	1.0	0.5	4.0	2.2	0.0	4.0	0.0	2.0	2.0	1.2
Hypeplasia/Hypertrophy, Cortex	2	0	2	0	0	0	0	0	1	0	0	2
Average Severity:	1.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5
Hyperplasia, Medulla	0	1	1	1	0	2	0	0	4	0	1	1
Average Severity:	0.0	1.0	0.3	0.2	0.0	0.8	0.0	0.0	1.4	0.0	1.0	0.2
AORTA ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
BONE												
Number Examined:	3	0	0	6	. 0	5	0	0	5	1	0	6
Arthritis, Chronic	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
BONE MARROW ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
BRAIN ²												
Number Examined:	3	5	6	6	5	5	4	6	5	5	6	6
CECUM ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
CLITORAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	Q	6
DUODENUM ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
ESOPHAGUS ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6

 Table 90. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the

 78-Week Interim Termination for Female Rats

693

1. Lesions not graded for severity.

2. No lesions present.

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Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control	Aro	clor-l	1016	Aroclo	r-1242	Aro	clor-]	254	Aro	clor-1	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	-6	6
EYE ²	•											
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
HARDERIAN GLAND ²							•					
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
HEART		•			•							
Number Examined:	3	0	0	6	0	5	0	0	5	1	0	6
Cardiomyopathy	1	0	0	2	0	1	0	0	1	0	0	2
Average Severity:	0.7	0.0	0.0	0.5	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.3
Inflammation, Subacute, Focal/ Multifocal	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
ILEUM ²								•				·
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
JEJUNUM ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
KIDNEY					•							
Number Examined:	3	0	0	6	0	5	0	0	5	1	0	6
Nephropathy, Chronic	1	0	0	4	0	3	0	0	4	1	0	1
Average Severity:	1.0	0.0	0.0	0.7	0.0	0.6	0.0	0.0	1.0	3.0	0.0	0.3
LACRIMAL GLAND ²		•			•		L	 i			•	
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
LIVER		<u>.</u>		•	•	.						
Number Examined:	3	5	6	6	5	5	4	6	5	5	6	6
Hypertrophy, Hepatocyte, Centrilobular	0	5	6	6	5	5	4	6	5	5	6	6
Average Severity:	0.0	1.0	1.5	2.3	2.0	3.0	3.0	3.2	4.0	2.4	3.0	3.7
Basophilic Cell Focus ¹	1	0	1	2	1	1	2	1	1	3	2	2
Clear Cell Focus ¹	1	0	0	3	1	0	1	4	2	0	0	1
Eosinophilic Cell Focus ¹	.0	3	2	2	5	5	4	5	5	1	5	4
Mixed Cell Focus ¹	0	0	1	3	2	4	4	6	3	3	3	2
Congestion, Focal/Multifocal	0	1	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Hepatodiaphragmatic Nodule ¹	0	0	1	0	0	0	0	0	0	0	0	0

Table 90. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-	1254	Aro	clor-)	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
LIVER												
Hyperplasia, Bile Duct	2	4	5	4	5	5	4	6	5	4	5	6
Average Severity:	0.7	0.8	0.8	1.0	2.2	2.4	1.8	2.8	3.0	1.8	1.8	1.7
Pigment	0	0	0	2	2	4	3	6	4	0	4	0
Average Severity:	ົງ.0	0.0	0.0	0.3	0.4	1.0	1.0	1.8	0.8	0.0	0.7	0.0
Vacuolization, Hepatocyte	0	0	3	4	2	4	3	5	5	2	. 5	3
Average Severity:	0.0	0.0	0.5	0.7	0.8	1.0	0.8	1.2	1.0	0.4	0.8	0.5
LUNG	•••••			•							*	
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
Congestion	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Fibrosis, Focal/Multifocal	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
LYMPH NODE-MEDIASTINAL								·				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²	-					A						
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
LYMPH NODE-MANDIBULAR												
Number Examined:	0	0	0	0	0	- 0	0	0	0	0	1	1
Hyperplasia, Lymphoplasmacytic	0	0	0	0	0	0	0	0	0	0	1	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	3.0
LYMPH NODE-OTHER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND	·											
Number Examined:	3	5	6	6	5	4	3	6	5	5	6	6
Hyperplasia, Cystic	0	4	5	5	3	1	2	2	1	1	3	3
Average Severity:	0.0	1.6	1.7	2.0	0.6	0.8	1.0	0.8	0.8	0.8	0.8	0.5
Hyperplasia, Nodular, Glandular Tissue	0	0	0	0	2	0	0	1	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0	0.3

Table 90. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocio	г-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	- 5	4	6	5	5	6	6
MESENTERY												
Number Examined:	0	0	0	1	0	0	0	0	0	0	0	0
Necrosis, Fat	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²	· .											
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
ORAL MUCOSA												
Number Examined:	U	0	0	0	0	0	0	0	0	0	0	0
OVARY												
Number Examined:	3	0	0	6	1	5	0	2	5	0	0	6
Cyst ¹	0	0	0	0	0	0	0	0	1	0	0	0
Dilatation, Bursa ¹	0	0	0	0	0	0	0	2	1	0	0	0
OVIDUCT ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
PANCREAS												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
Atrophy, Acinar Epithelium	1	0	0	0	0	1	0	0	1	0	0	0
Average Severity:	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.0
Hyperplasia, Acinar Epithelium	0	0	0	0	0	1	0	0	2	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.6	0.0	0.0	0.0
Hyperplasia, Artery	0	0	0	0	0	1	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.8	0.0	0.0	0.0
PARATHYROID ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
PITUITARY GLAND												
Number Examined:	3	5	5	6	2	5	4	5	5	2	3	6
Angiectasis ¹	0	0	1	0	0	0	1	1	0	0	0	0
Cyst ¹	0	0	0	0	0	0	0	0	1	0	0	0
Hyperplasia, Pars Distalis	1	3	2	3	1	3	2	0	1	2	0	4
Average Severity:	1.3	2.0	1.0	1.5	1.5	1.2	1.0	0.0	0.4	3.5	0.0	1.5

Table 90. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	- 5	4	6	5	5	6	6
RECTUM		••••••	•	• <u>•</u> ••••••								
Number Examined:	3	0	0	6	0	5	0.	0	5	0	0	6
Metazoan Parasite ¹	0	0	0	1	0	0	0	0	2	0	0	0
SALIVARY GLAND-SUBLINGUAL ²	:											
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SALIVARY GLAND-SUBMAXILLAR	Y ²					•						
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SCIATIC NERVE ²				5	Children of the second					-		
Number Examined:	3	0	0	6	0	3	0	0	5	0	0	6
SKELETAL MUSCLE ²												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SKIN							in de prime de la constante de					
Number Examined:	3	0	0	6	0	5	0	1	5	0	0	6
Ulcer	1	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	1.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
SPINAL CORD ²			~							ferer, manares		
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SPLEEN				A nti-uni-ni-								
Number Examined:	3	0	1	6	0	5	0	0	5	0	0	6
Capsular Cyst ¹	0	0	1	0	0	0	0	0	0	0	0	0
Hematopoietic Cell Proliferation	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STERNUM ²				.								
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
STOMACH												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
Acanthosis/Hyperkeratosis, Forestomach	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
THYMUS ²					• • • • • • • • • • • • • • •							
Number Examined:	3	0	0	6	0	4	0	0	5	0	0	6

Table 90. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Female Rats

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-l	254	Aro	clor-J	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
THYROID GLAND												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
Hyperplasia, C-Cell	2	0	0	0	0	1	0	0	1	0	0	4
Average Severity:	1.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	1.2
TONGUE ²						•						
Number Examined:	3	.0	0	6	0	. *	0	0	5	0	0	6
TRACHEA ²												
Number Examined:	3	. Ű	0	6	0	5	0	0	5	0	0	6
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ²												
Number Examined:	2	0	0	6	0	5	0	0	5	0	0	5
UTERUS												
Number Examined:	3	0	0	6	0	5	0	1	5	0	1	6
Dilatation	1	0	0	2	0	1	0	1	1	0	1	1
Average Severity:	0.7	0.0	0.0	0.5	0.0	0.2	0.0	1.0	0.8	0.0	4.0	0.5
Hyperplasia, Endometrium	Ó	0	0	0	Ö	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
VAGINA ²						· · ·						
Number Examined:	2	0	0	6	0	5	0	0	5	0	0	6
SYSTEMIC LESIONS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 90. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Interim Termination for Female Rats

Lesions not graded for severity.
 No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Аго	clor-1	016	Aroclo	or-1242	Arc	clor-1	254	Aro	clor	-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100	
(N)	31	20	21	24	23	26	33	17	20	20	21	22	
ADRENAL GLAND													
Number Examined:	31	2	4	24	5	26	4	1	20	0	3	22	
Atrophy, Cortex	0	0	0	0	0	1	1	0	1	0	0	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.2	0.0	0.0	0.0	
Degeneration, Fatty, Cortex	20	1	2	12	4	14	3	1	12	0	3	13	
Average Severity:	1.4	1.5	1.8	0.9	3.0	0.9	2.3	3.0	1.0	0.0	2.7	1.2	
Fibrosis	0 🥣	0	0	0	0	1	0	0	0	0	0	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0 ,	
Hyperplasia/Hypertrophy, Cortex	9	0	0	6	0	3	0	0	9	0	1	9	i i i Ci
Average Severity:	0.5	0.0	0.0	0.5	0.0	0.1	0.0	0.0	0.6	0.0	0.3	0.5	
Hyperplasia, Medulla	12	1	1	9	1	14	0	0	7	0	1	9	
Average Severity:	0.5	1.0	0.5	0.5	0.4	0.6	0.0	0.0	0.4	0.0	1.0	0.6	
Infarct	0	0	1	0	1	0	0	Ö	0	0	0	0	
Average Severity:	0.0	0.0	1.0	0.0	0.6	0.0	0,0	0.0	0.0	0.0	0.0	0.0	
Mineralization	0	0	0	0	0	0	0	0	0	0	1	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	
AORTA	• • • • • • • • • • • • • • • • • • •				•	•		•	.		.		
Number Examined:	31	0	0	24	0	26	1	0	20	0	0	22	
Aneurysm, Microscopic ¹	0	0	0	0	0	1	0	0	0	0	0	0	
BONE	.				<u></u>								
Number Examined:	31	2	4	24	0	26	0	1	20	1	1	22	
Arthritis, Chronic	0	0	0	0	0	0	0	0	0	0	0	1	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
Osteodysplasia ¹	6	1	4	0	0	1	0	1	0	1	1	0	
Tooth Cyst ¹	1	1	0	0	0	0	0	0	0	0	0	0	
BONE MARROW ²										•			
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22	

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control	ol Aroclor-1016 A		Aroclo	r-1242	Aro	clor-1	254	Arc	clor	-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
BRAIN								•				
Number Examined:	31	20	21	24	23	26	33	17	20	20	21	22
Epithelial Inclusion Cyst ¹	0	0	0	0	0	1	0	0	0	0	0	0
CECUM												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Inflammation, Chronic-Active	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	Ņ.0	0.0
CLITORAL GLAND												
Number Examined:	0	0	0	1	0	0	0	0	0	0	0	0
Dilatation, Duct	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLON ²						· · ·						
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
DUODENUM												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Ulcer	0	0	0	0	0	0	0	0	2	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
ESOPHAGUS ²					•						<u></u>	
Number Examined:	30	0	0	24	0	26	0	0	20	0	0	21
EYE												
Number Examined:	31	0	1	24	3	26	1	0	20	0	0	22
Atrophy, Retina	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cataract ¹	0	0	1	0	1	0	0	0	1	0	0	0
Inflammation, Suppurative, Cornea	0	0	0	0	2	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phthisis Bulbi ¹	0	0	1	0	0	0	1	0	0	0	0	0
Ulcer, Cornea	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
HARDERIAN GLAND												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	ol Aroclor-1016 A		Aroclo	r-1242	Аго	clor-1	254	Arc	clor	-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
HARDERIAN GLAND												
Hyperplasia	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic	2	0	0	Ö	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEART				:								
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Cardiomyopathy	21	0	0	15	0	10	Ó	0	13	0	0	13
Average Severity:	0.7	0.0	0.0	0.7	0.0	0.4	0.0	0.0	0.7	0.0	0.0	0.7
Thrombus, Aortic Valve ¹	0	0	0	0	0	0	0	0	1	0	0	0
ILEUM ²												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
JEJUNUM												
Number Examined:	31	0	0	24	0	26	0	0	20	. 1	0	22
Ulcer	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
KIDNEY		·										
Number Examined:	31	3	2	24	2	26	4	1	20	0	1	22
Hydronephrosis ¹	0	0	0	0	0	2	1	0	0	0	0	0
Nephropathy, Chronic	18	3	1	16	2	19	2	1	17	0	1	17
Average Severity:	0.8	3.7	2.0	1.1	3.5	0.9	1.5	2.0	1.4	0.0	3.0	1.2
Cyst ¹	0	0	0	0	1	0	1	0	1	0	0	1
Inflammation, Chronic-Active	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
LACRIMAL GLAND							-					
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Atrophy, Acinar Epithelium	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Female Rats

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	l Aroclor-1016		Aroclo	r-1242	Aro	clor-J	254	Aro	clor	1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
LIVER	-											
Number Examined:	31	20	21	24	23	26	33	17	20	20	21	22
Hypertrophy, Centrilobular, Hepatocyte	0	8	14	21	22	26	33	17	20	19	21	22
Average Severity:	0.0	0.5	1.0	1.8	1.8	2.9	3.2	3.7	3.9	1.6	2.0	2.9
Basophilic Cell Focus ¹	4	10	10	11	12	6	8	- 4	4	3	6	4
Clear Cell Focus ¹	1	3	0	2	7	8	3	3	0	1	0	0
Eosinophilic Cell Focus ¹	2	6	10	. 16	19	21	31	17	19	16	19	20
Mixed Cell Focus ¹	6	4	8	5	16	14	17	11	12	3	7	13
Cholangiofibrosis ¹	0	0	0	0	0	0	1	0	2	0	0	0
Congestion, Focal/Multifocal	0	2	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	.0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst, Bile Duct ¹	2	0	0	0	0	0	0	0	1	0	0	C
Degeneration, Cystic ¹	0	0	1	1	0	0	0	0	0	0	0	. 1
Fatty Change, Periportal	1	0	2	0	2	4	3	0	0	2	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.1	0.3	0.2	0.0	0.0	0.2	0.0	0.0
Hepatodiaphragmatic Nodule ¹	Ó	0	0	0	0	0	0	0	0	0	1	0
Hyperplasia, Bile Duct	14	12	17	23	19	26	30	17	20	16	21	21
Average Severity:	0.7	0.8	1.5	1.5	1.4	2.3	2.3	2.8	3.3	1.1	1.7	2.4
Necrosis	.0	1	0	2	1	0	0	0	0	0	0	2
Average Severity:	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Pigment	0	1	0	1	6	7	5	3	4	1	1	0
Average Severity:	0.0	0.1	0.0	0.1	0.3	0.3	0.2	0.2	0.3	0.1	0.0	0.0
Vacuolization, Hepatocyte	7	6	11	11	20	21	26	15	19	10	11	14
Average Severity:	0.3	0.4	0.7	0.7	1.2	1.3	1.5	1.7	2.0	0.7	0.7	0.9
LUNG			••••••••••••••••									
Number Examined:	31	2	0	24	0	26	1	1	20	1	0	22
Edema	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Fibrosis, Focal/Multifocal	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Female Rats

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aroclor-1016		Aroclor-1242		2 Aroclor-1254			Aroclor-120			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
LUNG												
Hyperplasia, Alveolar Epithelium, Focal	2	0	0	1	0	0	0	0	2	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Infarct ¹	0	0	0	0	0	1	0	0	0	0	0	0
Inflammation, Granulomatous	1	- 0	0	1	0	0	0	0	3	0	0	1
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Inflammation, Suppurative, Bronchus	1	0	0	0	0	0	Ó	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Mineralization, Interstitium	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-MEDIASTINAL		•	:									
Number Examined:	0	0	0	0	0	0	0	0	- 1	1	0	0
Hyperplasia, Lymphoplasmacytic	0	0	0	0	0	0	0	0	1	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0
LYMPH NODE-MESENTERIC		·										
Number Examined:	30	0	0	24	0	26	1	0	19	0	1	22
Hyperplasia, Lymphoplasmacytic	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
Infiltration, Sinuses, Erythrocytic	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
LYMPH NODE-MANDIBULAR			•									
Number Examined:	3	0	0	0	0	1	0	0	1	0	1	3
Abscess	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Hyperplasia, Lymphoplasmacytic	3	0	0	0	0	1	0	0	1	0	1	2
Average Severity:	3.3	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	4.0	2.7
LYMPH NODE-OTHER												
Number Examined:	0	0	3	0	0	0	1	0	1	1	0	0
Dilatation, Sinuses	0	0	1	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	1.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Female Rats

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1. Lesions not graded for severity.

Test Substance	Control	rol Aroclor-1016 A		Aroclo	r-1242	Aro	clor-1	254	Arc	clor	-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
LYMPH NODE-OTHER				•				•		•		
Hyperplasia, Lymphoplasmacytic	0	0	2	0	0	0	1	0	1	0	0	0
Average Severity:	0.0	0.0	2.3	0.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0
MAMMARY GLAND												
Number Examined:	31	20	21	24	23	25	33	17	20	19	21	22
Abscess	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Cystic	4	5	3	7	8	4	12	1	4	6	8	8
Average Severity:	0.2	0.5	0.2	0.6	0.4	0.4	0.6	0.1	0.3	0.6	0.5	0.7
Hyperplasia, Nodular, Glandular Tissue	2	0	0	0	1	0	0	0	2	0	2	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0
MESENTERY	· .											
Number Examined:	0	0	0	0	0	2	1	1	-1	0	1	0
Arteritis, Chronic	0	0	0	0	0	0	0	0	.1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Necrosis, Fat	0	0	0	0	0	1	1	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	1.5	2.0	0.0	0.0	0.0	3.0	0.0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²							-				<u> </u>	halandalar
Number Examined:	31	0	0	22	0	25	0	0	19	0	0	21
ORAL MUCOSA ²			· · · ·									
Number Examined:	0	0	0	0	0	. 0	0	0	0	0	0	1
OVARY												
Number Examined:	31	2	4	24	3	26	4	1	20	2	2	22
Cyst ¹	5	2	0	1	3	3	2	0	0	2	2	2
Dilatation, Bursa ¹	2	0	2	1	0	0	1	1	1	0	0	1
Hyperplasia, Stromal Epithelium	0	0	0	1	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Infarct	0	0	0	1	0	0	Ó	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 91.	Incidence Summary	of Microscopic	Observations	(Non-Neoplastic)	at the
105-Week	Termination for Fen	nale Rats			

Lesions not graded for severity.
 No lesions present.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	ol Aroclor-1016 A		Aroclor-1242		2 Aroclor-1254		254	Aroclor-126		-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
OVIDUCT ²						••••••••••••••••••••••••••••••••••••••						
Number Examined:	31	0	0	24	0	26	0	Ó	20	0	0	22
PANCREAS	••••••		· · · · · ·		A n <u>u</u>							
Number Examined:	31	0	0	24	1	26	1	0	20	1	0	22
Atrophy, Acinar Epithelium	2	0	0	1	0	4	0	0	9	0	0	_1
Average Severity:	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.0	1.0	0.0	0.0	0.0
Hyperplasia, Acinar Epithelium	0	.0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hyperplasia, Artery	2	0	0	2	0	1	0	0	4	0	0	1
Average Severity:	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.5	0.0	0.0	0.0
Hyperplasia, Islets	3	0	0	1	0	3	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
PARATHYROID												
Number Examined:	19	0	0	22	1	26	0	0	17	0	0	20
Hyperplasia	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PITUITARY GLAND												
Number Examined:	31	14	17	24	15	26	25	11	20	17	17	22
Angiectasis ¹	0	0	0	0	0	1	0	1	1	0	0	0
Cyst ¹	0	0	0	1	0	1	0	1	2	0	0	0
Hyperplasia, Pars Distalis	7	0	0	3	1	4	4	3	5	1	4	7
Average Severity:	0.6	0.0	0.0	0.2	0.1	0.2	0.3	0.4	0.4	0.1	0.5	0.4
RECTUM	•			·								
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Metazoan Parasite ¹	2	0	0	2	0	0	0	0	0	0	0	1
Necrosis, Arterioles	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBLINGUAL	2		.						· · · · · ·			
Number Examined:	30	0	0	24	0	26	0	0	20	0	0	22
SALIVARY GLAND-SUBMAXILLA	RY ²			••••	· · · · · ·					•		
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
SCIATIC NERVE ²	• • • • • • • • • •	<u></u>	;	•	· · · ·							
Number Examined:	31	. 0	0	23	0	26	0	0	20	0	0	22

Table 91.	Incidence Summary	of Microscopic	Observations	(Non-Neoplastic)	at the
105-Week	Termination for Fen	nale Rats			

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	I Aroclor-1016		Aroclo	r-1242	Aro	clor-l	254	Arc	clor	-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
SKELETAL MUSCLE												
Number Examined:	31	0	0	24	0	26	0	0	20	1	0	22
Degeneration	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
SKIN												
Number Examined:	31	1	5	24	2	26	4	3	20	3	4	22
Abscess	0	0	0	1	0	1	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.1	0.8	0.0	0.0	0.0	0.0	0.0
Epidermal Inclusion Cyst ¹	0	0	0	0	0	0	0	1	0	0	0	0
Hyperkeratosis/Acanthosis	0	0	0	0	0	0	1	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.7	0.0	0.0
Inflammation, Chronic, Dermis	0	0	0	0	1	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Inflammation, Pyogranulomatous	7	1	5	1	0	1	0	2	0	1	2	0
Average Severity:	0.7	3.0	3.0	0.1	0.0	0.1	0.0	2.3	0.0	1.0	1.8	0.0
Ulcer	1	0	0	0	0	0	0	0	1	1	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.0	0.0
SPINAL CORD ²												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
SPLEEN										•••••		
Number Examined:	31	0	0	24	0	26	1	0	20	1	0	22
Capsular Cyst ¹	1	0	0	0	0	0	0	0	0	0	0	0
Fibrosis	0	0	0	. 1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hematopoietic Cell Proliferation	2	0	0	2	0	2	0	0	0	0	0	1
Average Severity:	0.2	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Inflammation, Pyogranulomatous	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Pigment, Hemosiderin	9	0	0	3	0	9	1	0	1	0	0	2
Average Severity:	0.3	0.0	0.0	0.1	0.0	0.3	4.0	0.0	0.1	0.0	0.0	0.1
STERNUM ²												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aroclor-1016		Aroclo	r-1242	Аго	clor-1	254	Aro	clor	-1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
STOMACH	-											
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Ulcer, Forestomach	1	0	0	2	0	1	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer, Glandular Stomach	0	0	0	-1	0	0	0	0	1	0	0	0
Average Searcrity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Acanthosis/Hyperkeratosis, Forestomach	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THYMUS												
Number Examined:	28	1	0	23	0	26	1	0	18	0	0	19
Cyst ¹	0	0	0	0	0	0	0	0	1	0	0	0
Ectopic Tissue, Thyroid ¹	4	0.	0	1	0	2	0	0	0	0	0	2
Hyperplasia, Medulla	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
THYROID GLAND												
Number Examined:	31	0	0	24	0	26	1	-0	20	1	0	22
Hyperplasia, C-Cell	26	0	0	19	0	17	0	0	16	0	0	16
Average Severity:	1.8	0.0	0.0	1.6	0.0	1.1	0.0	0.0	1.5	0.0	0.0	1.1
Hyperplasia, Follicular Cell	0	0	0	0	0	1	0	0	1	0	0	2
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1
TONGUE ²												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
TRACHEA ²												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
URETHRA												
Number Examined:	0	0	0	2	0	0	0	0	1	1	0	2
Inflammation, Necrotizing	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
URINARY BLADDER												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
Inflammation, Necrotizing	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Female Rats

Lesions not graded for severity.
 No lesions present.

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Test Substance	Control	Aroclor-1016		Arocla	r-1242	Aro	clor-1	254	Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
UTERUS												
Number Examined:	31	1	2	24	1	26	5	0	20	3	5	22
Dilatation	4	0	1	2	0	3	0	0	0	1	1	0
Average Severity:	0.2	0.0	0.5	0.2	0.0	0.2	0.0	0.0	0.0	0.7	0.4	0.0
Hyperplasia, Endometrium	0	0	0	1	1	0	1	0	2	1	2	2
Average Soverity:	0.0	0.0	0.0	0.2	2.0	0.0	0.2	0.0	0.1	0.7	0.6	0.1
Hyperplasia, Epith⊙lium, Cervix, Focal	0	0	0	0	0	0	0	0	0	.0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Hyperplasia, Myometrium	0	0	0	0	0	1	3	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	1.6	0.0	0.0	0.0	0.4	0.0
VAGINA									·			
Number Examined:	31	0	0	24	0	26	2	0	20	0	0	22
Hyperplasia, Smooth Muscle, Wall	0	0	0	1	. 0	0	2	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
Thrombosis, Vein	0	0	0	1	0	.0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEMIC LESIONS ²												
Number Examined:	2	1	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 91. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Female Rats

Lesions not graded for severity.
 No lesions present.

Test Substance	Control ³	Aroclor-1016			Arocle	or-1242	Аго	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	- 5	5	5	6	6	6	4	5
ADRENAL GLAND					·					<u>.</u>		
Number Examined:	3	0	1	0	1	1	2	0	0	0	0	1
Degeneration, Fatty, Cortex	2	0	1	0	1	1	1	0	0	0	0	1
Average Severity:	2.3	0.0	4.0	0.0	4.0	4.0	2.0	0.0	0.0	0.0	0.0	4.0
Hyperplasia, Medulla	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
AORTA ²							3,4					1.
Number Examined:	3	0	Ú	Ő	0	0	0	0	0	0	0	0
BONE	*	.		¥-				<i>7</i> •				
Number Examined:	3	0	0	0	0	0	0	0	0	0	1	0
Arthritis, Chronic	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
BONE MARROW ²		h										
Number Examined:	3	0	0	0	Ō	0	0	0	0	0	0	0
BRAIN ²			h									
Number Examined:	3	0	0	0	0	0	· · · 0 ·	0	0	0	0	0
CECUM ²		·										
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND		.										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ²				•								
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
DUODENUM ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0

Table 92.	Incidence Summary	of Microscopic Observations	(Non-Neoplastic) at the
78-Week I	ermination for Stor	Study B Female Rats	

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Lesions not graded for severity.
 No lesions present
 78-Week Interim Termination control findings reported for comparison.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control ³	Aro	clor-1	016	Arocl	or-1242	Aro	clor-J	254	Aro	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	. 3	6	6	5	5	5	5	6	6	6	4	5
EYE ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
HEART ²	· .			•								
Number Examined:	3	0	0	0	0	0	0	0	0	. 0	0	0
ILEUM ²											••••••••••••••••••••••••••••••••••••••	
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM ²											•	
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
KIDNEY ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
LACRIMAL GLAND ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
LIVER		L										
Number Examined:	3	6	6	5	5	5	5	6	. 6	6	4	5
Hypertrophy, Hepatocyte, Cytoplasm	0	3	5	3	5	5	5	6	6	6	4	5
Average Severity:	0.0	0.5	0.8	0.8	1.0	2.0	1.8	2.8	2.7	1.5	2.0	2.0
Basophilic Cell Focus ¹	1	1	2	1	3	3	4	2	2	4	3	0
Clear Cell Focus ¹	1	0	1	0	2	2	0	2	1	2	1	0
Eosinophilic Cell Focus ¹	0	3	2	3	1	4	4	6	4	2	3	5
Mixed Cell Focus ¹	0	0	2	1	3	5	5	5	6	3	2	4
Hepatodiaphragmatic Nodule ¹	0	1	0	0	0	0	0	0	0	0	0	0
Hyperplasia, Bile Duct	2	6	6	5	5	5	5	6	6	5	4	5
Average Severity:	0.7	1.7	1.7	2.6	2.2	1.8	2.2	2.7	2.7	1.5	2.0	2.0
Pigment	0	0	0	0	1	1	0	2	1	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.3	0.3	0.0	0.3	0.0
Vacuolization, Hepatocyte	0	1	1	1	0	1	2	3	5	2	2	2
Average Severity:	0.0	0.2	0.2	0.2	0.0	0.2	0.4	0.5	1.0	0.3	0.5	0.4

Table 92. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 78-Week Termination for Stop Study B Female Rats

1. Lesions not graded for severity.

No lesions present
 78-Week Interim Termination control findings reported for comparison.

Test Substance	Control ³	Aro	clor-1	016	Arocl	or-1242	Aro	clor-1	254	Aro	Aroclor-1	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	-6	6	6	4	5
LUNG												
Number Examined:	3	Ó	0	0	0	0	0	1	0	0	0	0
Inflammation, Suppurative, Bronchus	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
LYMPH NODE-MEDIASTINAL									<u>د اور</u> م	à		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR												
Number Examined:	0	0	1	0	0	0	0	0	0	1	1	0
Hyperplasia, Lymphoplasmacytic	0	0	1	0	0	0	0	0	0	1	1	0
Average Severity:	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0
LYMPH NODE-OTHER			-	•								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND	•		<u> </u>									
Number Examined:	3	3	2	3	3	0	3	1	1	2	2	1
Hyperplasia, Cystic	0	0	1	1	1	0	1	0	0	0	1	0
Average Severity:	0.0	0.0	0.5	0.7	0.3	0.0	1.3	0.0	0.0	0.0	1.5	0.0
Hyperplasia, Nodular, Glandular Tissue	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
MESENTERY							14. -					
Number Examined:	0	0	0	0	1	0	0	0	1	0	0	0
Arteritis, Chronic	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
Necrosis, Fat	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOSE/TURBINATES	••••••••••••••••••••••••••••••••••••••											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²				•.•				<u></u>				
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0

Table 92. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Termination for Stop Study B Female Rats

医马克氏管 医鼻腔 医鼻腔 医鼻子

1. Lesions not graded for severity.

2. No lesions present

3. 78-Week Interim Termination control findings reported for comparison.

Test Substance	Control ³	Aro	clor-1	016	Arocle	or-1242	Aroclor-1254		Aroclor-1		260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	. 6	6	4	5
ORAL MUCOSA	••••••••••••••••••••••••••••••••••••••							•				
Number Examined:	0	0	0	0	0	0	0	0.	0	0	0	0
OVARY											•	
Number Examined:	3	0	0	1	0	0	0	2	1	1	0	1
Cyst ¹	0	0	0	1	0	0	0	0	0	1	0	1
Dilatation, Bursa ¹	0	0	0	0	0	0	0	2	1	0	0	0
OVIDUCT ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
PANCREAS ²								·	÷			
Number Examined:	3	0	0	0	0	0	1	0	0	0	0	0
PARATHYROID ²												
Number Examined:	3	0	Ö	0	0	0	0	0	0	0	0	0
PITUITARY GLAND	• • • •											
Number Examined:	3	4	3	4	4.	2	2	3	2	5	3	4
Hyperplasia, Pars Distalis	1	2	2	1	3	1	0	0	1	4	2	2
Average Severity:	1.3	1.5	2.0	0.8	1.8	1.0	0.0	0.0	0.5	2.4	2.0	1.3
RECTUM ²				1					e's			
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND SUBLINGUAL ²	2											
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND SUBMAXILLA	RY ²							· · .				
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE ²												
Number Examined:	3	0	0	0	0	0	0	. 0	0	0	0	0
SKELETAL MUSCLE ²				1.							·	
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SKIN ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SPLEEN ²	·····		· · · · · · · · · · · · · · · · · · ·									
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0

Table 92. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Termination for Stop Study B Female Rats

1. Lesions not graded for severity.

2. No lesions present

3. 78-Week Interim Termination control findings reported for comparison.

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ³	Aro	clor-	016	Arocl	or-1242	Aro	clor-1	254	Aroclor-1		260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	6	6	4	5
STERNUM ²			A		••••••••••••••••••••••••••••••••••••••							den
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
STOMACH ²		.										
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
THYMUS ²			-		.							
Number Examined:	3	0	0	0	0	Ő	0	0	0	0	0	0
THYROID GLAND ²	· .	•	••••••••									
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
TONGUE ²		A	<u>.</u>					••••••••••••••••••••••••••••••••••••••				
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
TRACHEA ²			:		•					•		
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
URETHRA				•								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ²												
Number Examined:	2	0	0	0	0	0	0	0	0	0	0	0
UTERUS												
Number Examined:	3	1	0	0	0	1	1	1	1	2	0	1
Dilatation	1	0	0	0	0	1	1	1	0	2	0	1
Average Severity:	0.7	0.0	0.0	0.0	0.0	3.0	2.0	4.0	0.0	3.0	0.0	2.0
Hyperplasia, Endometrium	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Hyperplasia, Myometrium	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VAGINA ²			.									
Number Examined:	2	0	0	0	0	0	0	0	0	0	0	0
SYSTEMIC LESIONS						· · · · · · · · · · · · · · · · · · ·						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 92. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the78-Week Termination for Stop Study B Female Rats

1. Lesions not graded for severity.

2. No lesions present

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3. 78-Week Interim Termination control findings reported for comparison.

Test Substance	Control ³	Aro	clor-1	1016	Arocio	r-1242	Aroclor-1254		Aroclor-126			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
ADRENAL GLAND												· .
Number Examined:	31	0	0	7	1	11	0	2	13	1	0	13
Degeneration, Fatty, Cortex	20	0	0	6	1	8	0	2	9	1	0	11
Average Severity:	1.4	0.0	0.0	2.0	4.0	1.8	0.0	3.5	1.8	3.0	0.0	1.3
Fibrosis	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hyperplasia/Hypertrophy, Cortex	9	0	0	1	0	4	0	1	8	0	0	5
Average Severity:	0.5	0.0	0.0	0.1	0.0	0.5	0.0	0.5	1.0	0.0	0.0	0.5
Hyperplasia, Medulla	12	0	0	1	0	3	0	1	8	0	0	3
Average Severity:	0.5	0.0	0.0	0.1	0.0	0.3	0.0	0.5	0.8	0.0	0.0	0.3
Infarct	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis, Cortex	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
AORTA ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
BONE												
Number Examined:	31	2	0	7	0	11	0	0	13	0	2	13
Osteodysplasia ¹	6	2	0	1	0	0	0	0	0	0	2	0
BONE MARROW ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
BRAIN												
Number Examined:	31	10	10	7	10	11	11	14	13	14	6	13
Inflammation, Meninges, Chronic	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
CECUM												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Inflammation, Necrotizing	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2

Table 93. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Stop Study A Female Rats

1. Lesions not graded for severity.

2. No comparative lesions present.

Grades for Defining Severity	Grades for Defining Severity (Degree) or Amount of Change m change, barely exceeds normal limits 3 = Moderate severity and significance gree of change 4 = Marked severity, change is essentially maximal			
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance			
2 = Mild degree of change	4 = Marked severity, change is essentially maximal			

Table 93.	Incidence Summary of Microscopic Observations (Non-Neoplast	ic) at the
105-Week	Termination for Stop Study A Female Rats	

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Test Substance	Control ³	Aro	clor-	1016	Arocio	r-1242	Aroclor-1254		Aroclor-1		1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
CLITORAL GLAND					*****				•			
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
Dilatation, Duct	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLON ²												
Number Examined:	31	0	- 0	7	0	11	0	0	13	0	0	13
DUODENUM ²		-										
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
ESOPHAGUS ²	_											
- Number Examined:	30	0	0	7	0	11	0	0	13	0	0	13
EYE	· ·											
Number Examined:	31	1	0	7	0	11	1	0	13	0	0	13
Cataract ¹	0	0	0	0	0	0	1	0	0	0	0	0
HARDERIAN GLAND												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Atrophy ¹	0	0	0	0	0	0	0	0	0	0	0	1
Hyperplasia	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
HEART												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Cardiomyopathy	21	0	0	7	0	10	0	0	11	0	0	5
Average Severity:	0.7	0.0	0.0	1.0	0.0	1.2	0.0	0.0	1.0	0.0	0.0	0.5
ILEUM ²												
Number Examined:	31	0	0	7	0	11	0	. 0	13	0	0	13
JEJUNUM ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
KIDNEY												
Number Examined:	31	0	0	7	0	11	0	0	13	1	0	13
Hydronephrosis ¹	0	0	0	0	0	0	0	0	0	0	0	1
Nephropathy, Chronic	18	0	0	5	0	11	0	0	10	1	0	9
Average Severity:	0.8	0.0	0.0	1.1	0.0	1.5	0.0	0.0	1.4	3.0	0.0	0.9
LACRIMAL GLAND ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13

- Strategy

Lesions not graded for severity.
 No lesions present.
 105-Week Core control findings reported for comparison.

Test Substance	Control ³	Aro	clor-1	1016	Arocio	r-1242	Aroclor-1254		Aroclor-1		1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
LIVER												
Number Examined:	31	10	10	7	10	11	11	14	13	14	6	13
Hypertrophy, Centrilobular, Hepatocyte	0	5	3	3	7	9	10	12	11	10	5	13
Average Severity:	0.0	0.5	0.5	0.4	1.0	1.6	2.1	1.5	2.3	1.2	2.0	2.2
Basophilic Cell Focus ¹	4	6	3	2	6	7	2	9	3	5	1	2
Clear Cell Focus ¹	1	1	4	0	0	0	1	. 3 .	0 -	0	0	1
Eosinophilic Cell Focus ¹	2	7	3	2	5	9	.9	9	12	8	5	11
Mixed Cell Focus ¹	6	2	0	2	2	5	3	8	. 9	5	4	5
Cyst, Bile Duct ¹	2	0	0	1	0	0	1	2	2	0	0	0
Subcapsular Cyst ¹	0	0	0	1	0	0	0	0	-0	0	0	0
Fatty Change, Periportal	1	0	1	0	0	1	2	1	0	1	0	0
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.2	0.3	0.1	0.0	0.1	0.0	0.0
Hyperplasia, Bile Duct	14	8	4	5	7	10	8	12	12	5	4	11
Average Severity:	0.7	1.2	0.6	1.3	0.7	1.5	1.0	1.6	1.5	0.8	1.0	1.2
Necrosis	0	0	1	0	0	1	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Pigment	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Vacuolization, Hepatocyte	7	0	1	1	2	4	1	3	8	2	2	6
Average Severity:	0.3	0.0	0.1	0.1	0.2	0.4	0.1	0.2	0.6	0.1	0.3	0.5
LUNG												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Inflammation, Granulomatous	1	0	0	0	0	0	0	0	1	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
LYMPH NODE-MEDIASTINAL				·								
Number Examined:	0	0	0	0	0	0	1	0	0	0	. 0	0
Lymphatic Cyst ¹	0	0	0	0	0	0	1	0	0	0	0	0
LYMPH NODE-MESENTERIC												
Number Examined:	30	0	0	. 7	0	11	0	0	13	0	0	12
LYMPH NODE-MANDIBULAR												
Number Examined:	3	0	0	1	0	0	0	1	0	0	0	0
Hyperplasia, Lymphoplasmacytic	3	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0

Table 93. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Stop Study A Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control ³	Aro	clor-	1016	Arocio	r-1242	Aroclor-1254		Aroclor-		1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
LYMPH NODE-OTHER			L	L		•				.		
Number Examined:	0	0	0	1	0	1	0	0	0	0	0	0
Dilatation, Sinuses	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
MAMMARY GLAND										A		
Number Examined:	31	10	10	7	10	11	11	14	13	14	5	13
Abscess	0	0	0	1	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hyperplasia, Cystic	4 -	3	1	1	2	1	3	3	4	1	1	1
Average Severity:	0.2	0.7	0.2	0.6	0.5	0.1	0.8	0.2	0.8	0.1	0.8	0.1
Hyperplasia, Nodular, Glandular Tissue	2	0	0	1	3	0	0	0	0	0	0	1
Average Severity:	0.2	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	1	0	0	0
Necrosis, Fat	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²			 ,				•					
Number Examined:	31	0	0	5	0	11	0	0	12	0	0	13
ORAL MUCOSA				A								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY				.		· · ·						
Number Examined:	31	2	1	7	2	11	1	1	13	1	0	13
Cyst ¹	5	1	0	1	2	1	1	1	0	1	0	1
Dilatation, Bursa ¹	2	1	1	1	0	0	0	0	3	0	0	1
OVIDUCT ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
PANCREAS												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Atrophy, Acinar Epithelium	2	0	0	2	0	6	0	0	5	0	0	1
Average Severity:	0.1	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.1

Table 93. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Stop Study A Female Rats

1. Lesions not graded for severity.

2. No lesions present.

2

Test Substance	Control ³	Aroclor-1016			Aroclor-1242		Aroclor-1254			Are	1260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
PANCREAS												
Hyperplasia, Acinar Epithelium	0	0	0	1	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Hyperplasia, Artery	2	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Islets	3	0	0	1	0	2	0	0	0	0	0	.0
Average Severity:	0.2	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
PARATHYROID												
Number Examined:	19	0	0	7	0	10	0	0	10	0.	0	10
Fibrosis	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
PITUITARY GLAND												
Number Examined:	31	7	5	7	10	10	10	9	13	13	6	13
Angiectasis ¹	0	0	0	0	0	1	0	2	0	1	0	0
Hyperplasia, Pars Distalis	7	1	0	0	0	-3	1	2	2	2	1	0
Average Severity:	0.6	0.3	0.0	0.0	0.0	0.4	0.1	0.3	0.2	0.2	0.2	0.0
RECTUM	· · · ·											
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Metazoan parasite ¹	2	0	0	0	0	1	0	0	2	0	0	0
SALIVARY GLAND-SUBLINGUAL	2											
Number Examined:	30	0	0	7	0	11	0	0	13	0	0	13
SALIVARY GLAND-SUBMAXILLA	RY ²				:			•				
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
SCIATIC NERVE ²		A			-							
Number Examined:	31	Ó	0	7	0	11	0	0	13	0	0	13
SKELETAL MUSCLE						•						
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Fibrosis	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 93. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Stop Study A Female Rats

Lesions not graded for severity.
 No lesions present.

1. 1997 · 1997年 - 1997年

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ³	Aroclor-1016		Aroclor-1242		Aroclor-1254			Ar	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
SKIN		.			L							
Number Examined:	31	4	0	7	1	11	2	1	13	2	2	13
Ulcer	1	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Abscess	0	1	0	0	0	0	0	.0	0	0	0	0
Average Severity:	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Epidermal Inclusion Cyst ¹	0	0	0	0	0	0	0	0	0	1	0	0
Inflammation, Pyogranulomatous	7	2	0	1	0	0	0	<u> </u>	0	0	2	0
Average Severity:	0.7	1.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
SPINAL CORD ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	Ó	13
SPLEEN	•									••••••••••••••••••••••••••••••••••••••		
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Hematopoietic Cell Proliferation	2	0	0	2	0	1	0	0	3	0	0	1
Average Severity:	0.2	0.0	0.0	0.7	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.2
Pigment, Hemosiderin	9	0	0	0	0	2	0	0	1	0	0	1
Average Severity:	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.1
STERNUM ²			••••••									
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
STOMACH			· · · ·									
Number Examined:	31	0	0.	7	0	11	0	1	13	0	0	13
Ulcer, Forestomach	1	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Ulcer, Glandular Stomach ¹	0	0	0	0	0	0	0	0	0	0	0	1
THYMUS			·		<u></u>							
Number Examined:	28	0	0	7	0	8	0	0	12	0	0	12
Ectopic Tissue, Thyroid ¹	4	0	0	0	0	0	0	0	2	0	0	0
Hyperplasia, Medulla	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THYROID GLAND												
Number Examined:	31	0	0	7.	1	11	0	1	13	1	0	13
Hyperplasia, C-Cell	26	0	0	4	0	6	0	0	8	0	0	7
Average Severity:	1.8	0.0	0.0	1.3	0.0	0.8	0.0	0.0	1.2	0.0	0.0	0.9

Table 93. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the 105-Week Termination for Stop Study A Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control ³	Aroclor-1016		Aroclor-1242		Aroclor-1254			Are	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
THYROID GLAND					•							
Hyperplasia, Follicular Cell	0	0	0	0	0	0	0	0	3	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Inflammation, Granulomatous	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
TONGUE ²	•					•						
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
TRACHEA ²												-
Number Examined:	31	. 0	0	7	0	11	0	0	13	0	0	13
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
UTERUS												
Number Examined:	31	1.	0	7	4	11	1	0	13	3	1	13
Dilatation	4	1	0	0	· 1	2	0	0	1	2	1	3
Average Severity:	0.2	1.0	0.0	0.0	0.3	0.3	0.0	0.0	0.2	1.0	2.0	0.4
Hyperplasia, Endometrium	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Pyometra	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
VAGINA												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Cyst ¹	0	0	0	0	0	0	0	0	1	0	0	0
Hyperplasia, Smooth Muscle, Wall	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
SYSTEMIC LESIONS ²	<u></u>									·		
Number Examined:	2	0	0	1	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 93. Incidence Summary of Microscopic Observations (Non-Neoplastic) at the105-Week Termination for Stop Study A Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 94. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core, Interim, and Stop StudySubgroup Female Rats

Test Substance	Control	Aroclor-1016			Arocior-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100	
(N)	- 5	0	2	2	2	3	4	1	3	1	6	0	
ADRENAL GLAND													
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0	
Degeneration, Fatty, Cortex	0	0	0	0	0	0	1	0	0	0	1	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3	0.0	
Hyperplasia/Hypertrophy, Cortex	0	0	0	0	0	1	0	0	0	1	0	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.0	0.0	0.0	
Hyperplasia, Medulla	0	0	0	0	0	0	0	1	0	0	.40	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	
AORTA ²													
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0	
BONE													
Number Examined:	5	0	1	2	2	3	4	1	3	1	6	0	
Osteodysplasia ¹	0	0	0	0	0	0	0	0	1	0	0	0	
BONE MARROW ²													
Number Examined:	5	0	1	2	2	3	4	1	3	1	6	0	
BRAIN ²							• •						
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0	
CECUM													
Number Examined:	4	0	2	1.	2	3	4	1	3	1	6	0	
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0	
Average Severity:	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Inflammation, Suppurative, Serosa	0	0	0	0	0	0	0	0	0	0	1	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	
CLITORAL GLAND													
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
COLON													
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0	
Inflammation, Chronic-Active	. 1	0	0	0	0	0	0	0	0	0	0	0	
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

1. Lesions not graded for severity.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Table 94. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core, Interim, and Stop StudySubgroup Female Rats

Test Substance	Control	Aroclor-1016			Arocl	or-1242	Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
DUODENUM ²			·									
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
ESOPHAGUS ²												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
EYE												
Number Examined:	5	j,	2	2	2	3	4	1	3	1	6	0
Inflammation, Chronic-Active, Anterior Chamber	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0,0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HARDERIAN GLAND ²											-	
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
HEART												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Cardiomyopathy	0	0	0	_1	1	0	2	1	1	0	2	0
Average Severity:	0.0	0.0	0.0	0.5	0.5	0.0	1.0	1.0	0.3	0.0	0.7	0.0
ILEUM	· .											
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Inflammation, Chronic-Active	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JEJUNUM												
Number Examined:	4	0	2	2	2	3	4	1	3	.1	6	0
Necrosis, Transmural	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0,0	0.0	0.0	0.0	0.0	0.7	0.0
KIDNEY			•			·						
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Nephropathy, Chronic	1	0	1	1	1	1	2	1	1	0	2	0
Average Severity:	0.2	0.0	0.5	0.5	0.5	0.7	1.0	1.0	0.3	0.0	0.8	0.0
Pyelonephritis	0	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LACRIMAL GLAND ²												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 94. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (0-12 Months) for Core, Interim, and Stop Study **Subgroup Female Rats**

Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Аго	260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
LIVER	••••••••••••••••••••••••••••••••••••••											
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Hypertrophy, Hepatocyte, Centrilobular	0	0	1	2	1	3	4	1	2	0	4	0
Average Severity:	0.0	0.0	1.0	1.5	1.0	2.3	2.3	1.0	1.3	0.0	0.8	0.0
Basophilic Cell Focus ¹	0	0	0	0	1.	0	0	0	0	0	0	0
Eosinophilic Cell Focus ¹	0	0	0	0	0	1	0	0	0	0	1	0
Mixed Cell Focus ¹	0	0	0	0	0	1	0	0	1	0	0	0
Fibrosis	0	0	0	0	0	0	0	0	0	0	. 1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Hyperplasia, Bile Duct	0	0	0	0	1	1	1	1	1	0	2	0
Average Severity:	0.0	0.0	0.0	0.0	0.5	0.3	0.3	1.0	0.7	0.0	0.5	0.0
Pigment	0	0	0	0	0	1	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0
Vacuolization, Hepatocyte	0	0	0	0	0	0	1	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0
LUNG												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Congestion	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-MEDIASTINAL ²		•	· · ·									
Number Examined:	0	0	0	0	1	0	0	0	0	0	1	0
LYMPH NODE-MESENTERIC ²		••••••••••••••••••••••••••••••••••••••										
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
LYMPH NODE-MANDIBULAR ²												
Number Examined:	0	0	0	0	1	0	0	0	1	0	1	0
LYMPH NODE-OTHER ²		•										
Number Examined:	0	0	0	0	1	0	0	0	1	0	1	0
MAMMARY GLAND												
Number Examined:	5	0	2	2	2	3	4	1	3	1	5	0
Hyperplasia, Cystic	1	0	0	0	0	1	0	0	0	0	1	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.4	0.0
Hyperplasia, Nodular, Glandular Tissue	0	0	0	0	0	0	Ò	1	. 1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.7	0.0	0.0	0.0

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-	254	Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
MESENTERY												
Number Examined:	0	0	0	0	0	0	-1	0	0	0	1	0
Inflammation, Suppurative	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Necrosis, Fat	0	0	0	0	0	0	- 1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
NOSE/TURBINATES		,										
Number Examined:	0	0	υ	0	0	0	6	0	0	0	0	0
OPTIC NERVE ²												
Number Examined:	5	0	2	2	2	3	4	1	2	1	6	0
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Dilatation, Bursa ¹	0	0	0	0	0	0	0	1	1	0	0	3
OVIDUCT ²												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
PANCREAS	• • • • • • • • • • • • • • • • • • •											
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Atrophy, Acinar Epithelium	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PARATHYROID ²		L	L	L						لينبخا		
Number Examined:	- 4	0	2	2	2	2	4	1	3	0	3	0
PITUITARY GLAND ²		<u></u>									in	
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
RECTUM			.									
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Inflammation, Chronic-Active	1	.0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBLINGUAL ²			••••••	•••••								
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SALIVARY GLAND-SUBMAXILLAR	Y ²				·······							
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0

Table 94. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (0-12 Months) for Core, Interim, and Stop Study Subgroup Female Rats

1. Lesions not graded for severity.

Table 94. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (0-12 Months) for Core, Interim, and Stop StudySubgroup Female Rats

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Аго	Aroclor-12		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
SCIATIC NERVE ²	· · · · ·	A			<u></u>							
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SKELETAL MUSCLE ²	h				hairman							
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SKIN						http://www.analysis.org	hanna tana ta				hannen	
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Inflammation, Pyogranulomatous	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
SPINAL CORD ²	<u> </u>	*	L		have a second of the		<u></u>					
Number Examined:	5	0	1	2	2	3	4	1	3	1	6	0
SPLEEN		·			h							
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Depletion, Lymphoid	0	0	0	0	1	0	Ë~	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hematopoietic Cell Proliferation	1	0	0	0	0	1	0	1	0	0	2	0
Average Severity:	0.6	0.0	0.0	0.0	0.0	1.0	0.0	4.0	0.0	0.0	1.2	0.0
Pigment, Hemosiderin	1	0	0	1	0	0	0	0	0	0	1	0
Average Severity:	0.6	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
STERNUM ²					<u></u>	<u> </u>	<u>,</u>					·
Number Examined:	5	0	1	2	1	3	3	0	3	1	4	0
STOMACH ²	· ·	.									·	
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
THYMUS				·		h					A-10-00-00-00	
Number Examined:	5	0	1	2	2	3	4	1	2	1	6	0
Depletion, Lymphoid	1	0	0	1	0	0	0	0	0	1	0	0
Average Severity:	0.6	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0
Hyperplasia, Medulla	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
THYROID GLAND		In								• •	have been a second	
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Ectopic Tissue, Ganglion ¹	0	0	0	0	0	1	0	0	0	0	0	0
Hyperplasia, C-Cell	2	0	1	0	1	1	1	1	0	0	0	0
Average Severity:	0.6	0.0	1.0	0.0	1.5	0.3	1.0	2.0	0.0	0.0	0.0	0.0

1. Lesions not graded for severity.

2. No lesions present.
| Table 94. | Incidence Summary of Microscopic Observations (Non-Neoplastic) at |
|-----------|---|
| Unschedul | ed Termination (0-12 Months) for Core, Interim, and Stop Study |
| Subgroup | Female Rats |

Test Substance	Control	rol Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
TONGUE ²												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
URETHRA	•	•										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Inflammation, Chronic-Active	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Necrotizing	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Hyperplasia, Urothelium	0	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	1.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UTERUS												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
Inflammation, Suppurative, Serosa	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
VAGINA ²												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SYSTEMIC LESIONS ²												
Number Examined:	0	0	0	0	1	0	0	0	1	0	0	0
ZYMBAL'S GLAND ²						•						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Lesions not graded for severity.
No lesions present.

Table 95. Incidence Summary of Microscopic Observations (Non-Neopla	astic) at
Unscheduled Termination (12-18 Months) for Core and Interim Subgrou	р
Female Rats	

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
ADRENAL GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6 -	7	10
Bacterial Emboli ¹	0	0	0	0	1	0	0	0	0	0	0	0
Degeneration, Fatty, Cortex	17	5	1	2	1	1	3	2	4	2	4	4
Average Severity:	1.4	1.2	0.5	0.8	0.3	0.5	1.8	2.0	2.6	1.0	1.3	1.2
Hyperplasia, Cortex Diffuse	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia/Hypertrophy, Cortex	5	1	1	0	1	0	0	1	0	1	2	0
Average Severity:	0.3	0.1	0.2	0.0	0.2	0.0	0.0	1.0	0.0	0.2	0.4	0.0
Hyperplasia, Medulla	2	0	0	1	2	. 0	0	1	0	2	1	0
Average Severity:	0.1	0.0	0.0	0.6	1.0	0.0	0.0	1.0	0.0	0.5	0.0	0.0
AORTA												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	.10
Mineralization	5	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.5	0.0	0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BONE											·	
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Fibrous Osteodystrophy	0	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0
BONE MARROW												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Hematopoietic Cell Proliferation	1	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BRAIN ²												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10

Lesions not graded for severity.
No lesions present.

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Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Table 95. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim SubgroupFemale Rats

Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Аго	260		
Conc. (ppm)	0	50	100	200	50	100	25	.50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
CECUM						·						
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Inflammation, Necrotizing	0	0	0	0	1 ~	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0,0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CLITORAL GLAND			hert,									
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
Dilatation, Duct	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLON ²					<u></u>						L	
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
DUODENUM				<u></u>								
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Ulcer	1	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
ESOPHAGUS	<u></u>	Lunnan	<u></u>		<u></u>	h		·				
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Ulcer	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
EYE		·			<u></u>	**************************************						
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Cataract ¹	1	1	0	0	0	0	0	0	0	0	0	0
Ulcer, Cornea	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HARDERIAN GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
HEART	·									· · · · · · · · · · · · · · · · · · ·		
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Bacterial Emboli ¹	0	0	0	0	0	0	0	1	0	0	0	0
Cardiomyopathy	21	4	4	3	3	2	3	2	3	3	4	2
Average Severity:	1.0	0.9	1.0	0.8	0.8	0.5	0.7	1.0	0.6	0.5	0.7	0.2
Inflammation, Subacute Focal/ Multifocal	0	0	0	0	1	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0

1. Lesions not graded for severity.

2. No lesions present.

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Table 95. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim SubgroupFemale Rats

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Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
HEART												
Mineralization	1	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Valvular Malformation/Myocardial Hypertrophy ¹	0	0	0	0	0	0	0	1	0	0	0	0
ILEUM ²					·							
Number Examined:	34	9	6	5	6	6	6	4	- 5	6	7	10
JEJUNUM												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Mineralization, Lymphoid Nodule	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
KIDNEY		:										
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Embolic Nephritis	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Hydronephrosis ¹	2	0	0	0	0	0	0	0	0	0	1	0
Inflammation, Suppurative	0	0	0	0	1	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Nephropathy, Chronic	12	6	3	3	5	3	2	1	2	5	3	9
Average Severity:	0.7	0.8	0.5	1.4	1.5	0.5	0.3	0.8	0.4	1.0	0.6	1.6
Pyelonephritis	4	0	0	0	0	0	0	0	0	0	0	Ó
Average Severity:	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LACRIMAL GLAND												
Number Examined:	33	9	6	5	4	6	4	4	5	6	7	10
Ectopic Tissue, Harder's Gland Origin ¹	0	0	0	0	1	0	0	0	0	0	0	0
LIVER	<u> </u>	-										
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Hypertrophy, Hepatocyte, Centrilobular	0	4	3	4	5	4	5	3	4	5	6	7
Average Severity:	0.0	0.8	1.0	1.8	2.0	2.0	2.7	2.5	3.0	1.7	2.3	2.0

1. Lesions not graded for severity.

Test Substance	Control	Aroclor-1016			Aroci	or-1242	Aroclor-1254			Aroclor-126		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
LIVER			•					•		•		
Basophilic Cell Focus ¹	0	0	0	0	1	. 2	0	0	1	0	1	0
Clear Cell Focus ¹	0	0	0	0	0	0	0	0	0	1	0	1
Eosinophilic Cell Focus ¹	0	0	0	1	4	5	4	2	3	4	2	7
Mixed Cell Focus ¹	1	0	0	0	2	1	0	0	1	0	0	2
Bacterial Colonies ¹	. 0	0	0	0	0	0	0	1	0	1	0	0
Fibrosis	0	0	0	0	0	0	•1	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	0.0	0.0	0.0	0.0
Hepatodiaphragmatic Nodule ¹	1	0	0	0	0	0	0	0	0	0	0	1
Hyperplasia, Bile Duct	15	5	1	3	6	5	5	3	4	6	6	8
Average Severity:	0.8	0.6	0.2	1.6	1.8	2.2	2.3	2.0	2.2	2.0	1.7	2.0
Inflammation, Focal/Multifocal	0	0	0	0	0	0	0	1	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0
Necrosis	3	1	2	0	1	1	0	0	0	1	0	0
Average Severity:	0.2	0.2	0.5	0.0	0.3	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Pigment	0	0	0	0	0	0	0	1	2	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.1	0.0
Vacuolization, Hepatocyte	4	3	1	3	3	3	3	3	3	4	3	6
Average Severity:	0.2	0.5	0.2	0.2	0.7	0.3	0.7	1.1	0,9	0.4	0.7	0.5
LUNG						•						
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Congestion	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Granulomatous	1	0	1	0	0	0	0	1	1	0	0	0
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.8	0.2	0.0	0.0	0.0
Inflammation, Subacute	1	0	1	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Mineralization, Interstitium	1	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thrombosis	0	0	0	0	0	0	1	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	0.0	0.0	0.0

Table 95. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim SubgroupFemale Rats

1. Lesions not graded for severity.

"我们感到这些话,就能自己不能要问。" 新闻 人名

731 (1997)

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 95. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim SubgroupFemale Rats

Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aro	260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1
Hyperplasia, Lymphoplasmacytic	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
LYMPH NODE-MESENTERIC					1.							
Number Examined:	33	9	6	5	6	6	6	4	5.	6	7	10
Necrosis, Focal/Multifocal	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0	0	0	0	0.5	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR												
Number Examined:	1	0	0	0	1	0	1	0	0	0	2	0
Hyperplasia, Lymphoplasmacytic	1	0	0	0	0	0	1	0	0	0	2	0
Average Severity:	3.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0	0.0
LYMPH NODE-OTHER												
Number Examined:	1	0	0	0	1	0	0	0	1	0	0	0
Hyperplasia, Lymphoplasmacytic	1	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
MAMMARY GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Abscess	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Cystic	16	5	3	3	2	4	4	1	1	1	6	5
Average Severity:	1.1	0.9	1.7	0.8	0.5	1.0	1.5	0.8	0.4	0.3	2.0	1.3
Hyperplasia, Nodular, Glandular Tissue	3	1	0	0	1	1	0	0	0	0	0	0
Average Severity:	0.2	0.2	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
MESENTERY												
Number Examined:	1	0	0	0	0	0	2	7	2	0	1	3
Necrosis, Fat	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²												
Number Examined:	30	7	6	5	6	5	6	4	4	5	6	10

1. Lesions not graded for severity.

Test Substance	Control	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aro	260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	. 6	6	6	4	5	6	7	10
ORAL MUCOSA												
Number Examined:	0	0	0	- 0	0	0	0	0	0	0	0	0
OVARY						·						
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Dilatation, Bursa ¹	1	0	0	0	0	1	0	1	0	0	0	0
OVIDUCT ²	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -											
Number Examined:	34	9.	6	5	6	6	6	4	5	6	7	10
PANCREAS				.*								
Number Examined:	- 34	9	6	5	6	6	6	4	5	6	7	10
Atrophy, Acinar Epithelium	4	0	1	0	1	1	0	1	0	0	1	1
Average Severity:	0.1	0.0	0.2	0.0	0.2	0.2	0.0	0.5	0.0	0.0	0.3	0.1
Hyperplasia, Acinar Epithelium	0	1	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Hyperplasia, Artery	1	0	0	0	0	1	0	0	1	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0	0.0
Hyperplasia, Duct	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Hyperplasia, Islets	3	0	0	0	1	0	0	1	0	1	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.2	0.3	0.0
Inflammation, Chronic-Active	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PARATHYROID								-				·
Number Examined:	33	7	5	5	5	4	6	4	4	4	7	10
Hyperplasia	3	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.3	0.0	0.0	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PITUITARY GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Cyst ¹	0	0	• 0	0	0	0	0	0	1	0	0	0
Hyperplasia, Pars Distalis	7	1	1	2	1	1	1	0	1	0	3	1
Average Severity:	0.4	0.4	0.3	1.0	0.2	0.2	0.2	0.0	0.2	0.0	0.9	0.4
RECTUM												
Number Examined:	34	9	6	5	6	6	6	4	-5.	6	7	10
Metazoan Parasite ¹	2	0	0	0	0	0	0	0	0	0	0	0

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 95. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup **Female Rats**

Test Substance	Control	Aro	clor-1	1016	6 Aroclor-1242		2 Aroclor-1254			Aro	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
SALIVARY GLAND-SUBLINGUAL		2	1.1									
Number Examined:	34	9	6	5	5	6	6	4	5	6	7	10
Bacterial Emboli ¹	0	0	0	0	1	0	0	0	0	0	0	0
Atrophy, Acinus	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBMAXILLAR	Ŷ			. #		·						19. s. s.
Number Examined:	34	9	6	5	5	6	6	4	5	6	7	10
Bacterial Emboli ¹	0	0	0	0	1	0	0	0	0	0	0	0
SCIATIC NERVE ²												× .
Number Examined:	34	9	6	4	6	6	6	4	5	6	7	10
SKELETAL MUSCLE												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
SKIN												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Hyperkeratosis/Acanthosis	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
SPINAL CORD ²												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
SPLEEN									·			
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Adhesion ¹	0	0	1	0	0	0	0	0	0	0	0	0
Bacterial Emboli ¹	0	0	0	0	0	0	0	1	0	0	0	0
Hematoma, Subcapsular ¹	0	0	0	0	0	0	0	0	0	0	0	1
Pigment, Hemosiderin	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Hematopoietic Cell Proliferation	9	1	2	2	0	1	2	0	1	1	1	2
Average Severity:	0.9	0.4	1.2	1.4	0.0	0.5	1.2	0.0	0.8	0.5	0.4	0.6
STERNUM ²												
Number Examined:	34	9	6	3	6	6	3	2	5	6	7	10

Lesions not graded for severity.
No lesions present.

									-			
Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-	1254	Aro	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
STOMACH												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Acanthosis/Hyperkeratosis, Forestomach	1	1	0	0	0	0	0	0	1	1	0	0
Average Severing:	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0
Mineralization, Glandular Stomac!	3	0	0	1	1	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer, Forestomach	1	1	0	0	0	0	1	0	0	0	1	0
Average Severity:	0.1	0.3	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.3	0.0
Ulcer, Glandular Stomach	1	0	1	0	2	0	0	1	0	0	0	2
Average Severity:	0.1	0.0	0.3	0.0	0.8	0.0	0.0	0.5	0.0	0.0	0.0	0.4
THYMUS												
Number Examined:	32	9	6	5	6	6	6	4	5	6	7	10
Depletion, Lymphoid	2	0	1	0	0	0	-0	0	0	0	0	0
Average Severity:	0.3	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ectopic Tissue, Thyroid ¹	1	1	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Hyperplasia, C-Cell	9	6	0	0	0	1	2	0	0	1	2	2
Average Severity:	0.6	1.2	0.0	0.0	0.0	0.7	1.0	0.0	0.0	0.2	0.4	0.3
Hyperplasia, Follicular Cell	1	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TONGUE												
Number Examined:	34	9	6	5	6	6	- 6	4	5	6	7	10
Fibrosis	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRACHEA ²											- -	
Number Examined:	34	9	6	5	. 6	6	6	4	5	6	7	10
URETHRA ²												
Number Examined:	1	0	0	1	0	0	0	1	0	0	0	0

1. Lesions not graded for severity.

2. No lesions present.

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Table 95. Incidence Summary of Microscopic Observat	ions (No	on-Neoplastic) at	
Unscheduled Termination (12-18 Months) for Core and	Interim	Subgroup	
Female Rats			

Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-J	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
URINARY BLADDER												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Congestion	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Inflammation, Chronic-Active	1	0	0	0	ູ0 ເ	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Necrotizing	1	0	0	0.	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UTERUS												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
Dilatation	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Suppurative, Serosa	0	0	0	0	0	0	1	0	0	0	0	:0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
VAGINA												
Number Examined:	34	9	6	5	6	6	6	4	5	5	7	10
Hyperplasia, Smooth Muscle, Wall	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
SYSTEMIC LESIONS												
Number Examined:	1	0	1	0	1	0	.0	0	1	0	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

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Lesions not graded for severity.
No lesions present.

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Test Substance	Control	Аго	clor-	1016	Aroclo	r-1242	Аго	clor-l	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
ADRENAL GLAND												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Atrophy, Cortex	0	0	0	0	0	0	0	0	2	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Degeneration, Fatty, Cortex	20	14	11	13	16	10	7	15	15	16	12	12
Average Severity:	1.4	1.5	1.4	1.7	2.1	1.5	1.6	1.3	1.8	1.6	1.9	1.6
Hyperplasia, Cortex, Diffuse	1	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia/Hypertrophy, Cortex	5	8	2	4	3	2	4	5	2	6	6	1
Average Severity:	0.3	0.7	0.1	0,4	0.2	0.2	0.7	0.3	0.2	0.5	0.6	0.1
Hyperplasia, Medulla	5	5	2	4	6	4	3	9	3	2	1	3
Average Severity:	0.2	0.6	0.1	0.3	0.4	0.5	0.5	0.4	0.2	0.2	0.1	0.3
Mineralization	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thrombus ¹	0	0	0	0	- 0	0	0	0	0	1	0	1
AORTA												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Mineralization	2	0	0	1	2	1	0	0	0	2	1	0
Average Severity:	0.2	0.0	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.3	0.1	0.0
BONE				ġ								
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Arthritis, Chronic	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0,1	0.0
Fibrous Osteodystrophy	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Osteodysplasia ¹	1	2	1	1	0	0	0	0	1	1	0	0

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

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Test Substance	Control	Aro	clor-	1016	Aroclo	r-1242	Aro	clor-)	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
BONE MARROW ²				· .								
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
BRAIN												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Infarct	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inflammation, Meninges, Chronic	0	0	1	0	0	0	0	0	0	0	Ö	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CECUM ²						~						
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
CLITORAL GLAND ²												
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
COLON										•	4	
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Dilatation	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metazoan Parasite ¹	1	2	0	0	1	0	2	1	0	1	1	0
DUODENUM												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Hyperplasia, Nodular, Brunner's Gland	0	0	1	0	0	0	0	0	0	0	0	Ö
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	1	0	1	1	1	0	0	3	3	0	0	1
Average Severity:	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.3	0.3	0.0	0.0	0.2
ESOPHAGUS ²		•			•		•			•	-	
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
EYE												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Cataract ¹	0	0	0	0	1	0	0	. 1	0	0	1	0
Inflammation, Chronic-Active, Anterior Chamber	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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1. Lesions not graded for severity.

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Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
EYE							·					
Phthisis Bulbi ¹	⁰ 0	1	0	0	0	1	0	1	0	0	0	0
Ulcer, Cornea	1	0	0	0	0	0	0	- 1	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
HARDERIAN GLAND										•	1	
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Abscess	0	0	0	0	0	0	0	0	1 ·	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Hyperplasia	1	0	0	0	0	0	0	0	2	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
HEART		•										
Number Examined:	33	22	21	21	. 21	17	11	28	25	25	19	18
Bacterial Emboli ¹	0	0	0	0 -	0	0	0	0	1	Q -	0	0
Cardiomyopathy	9	13	13	15	14	11	5	18	14	12	11	9
Average Severity:	0.3	0.7	0.8	0.9	1.0	0.9	0.5	0.8	0.7	0.6	0.8	0.6
Endocarditis	0	0	2	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Inflammation, Focal/Multifocal, Subacute	0	0	0	0	0	0	0	2	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Mineralization	2	1	0	1	2	1	1	0	0	1	1	0
Average Severity:	0.2	0.1	0.0	0.1	0.1	0.3	0.0	0.0	0.0	0.1	0.1	0.0
Thrombus, Atrial ¹	. 1	1	0	1	0	2	0	4	2	1	0	0
ILEUM ²									÷			
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
JEJUNUM ²												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Intussusception ¹	0	0	0	0	0	0	0	1	0	0	0	0
KIDNEY												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Cyst ¹	0	0	0	0	0	0	0	1	0	0	0	0

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
KIDNEY							<u> </u>				•	
Embolic Nephritis	0	0	2	1	0	0	0	0	1	1	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Glomerulonephritis	0	1	0	0	0	0	0	1	1	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Hyaline Droplets	0	1	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Hydronephrosis ¹	0	0	0	1	0	0	0	0	3	0	0	1
Infarct ¹	0	0	0	0	0	0	0	0	0	0	0	1
Nephropathy, Chronic	10	14	10	15	14	12	6	21	16	18	14	12
Average Severity:	0.5	1.3	1.0	1.1	1.5	1.1	0.6	1.3	1.0	1.4	1.2	1.1
Pyelonephritis	1	1	1	0	0	0	0	0	1	Q., .	0	0
Average Severity:	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
LACRIMAL GLAND								·				
Number Examined:	33	22	21	21	21	17	11	. 27	24	25	19	18
Atrophy, Acinar Epithelium	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ectopic Tissue, Harder's Gland Origin ¹	0	1	0	0	0	0	0	0	0	0	0	0
LIVER												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Hypertrophy, Hepatocyte, Centrilobular	0	9.	12	17	17	13	10	25	25	18	13	13
Average Severity:	0.0	0.6	1.1	1.8	1.7	2.1	3.2	3.2	3.9	1.6	1.7	2.1
Necrosis	2	4	3.	4	0	3	2	4	7	4	2	5
Average Severity:	0.1	0.3	0.3	0.3	0.0	0.4	0.5	0.2	0.8	0.4	0.2	0.7
Congestion, Focal/Multifocal	2	3	0	0	0	0	Ø	0	0	-1	- 1	1
Average Severity:	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Hepatodiaphragmatic Nodule ¹	0	0	1	0	0	0	0	0	0	0	0	1
Vacuolization, Hepatocyte	3	6	5	3	11	4	7	23	21	5	9	8
Average Severity:	0.1	0.4	0.3	0.1	0.7	0.5	1.0	1.3	1.1	0.3	0.9	0.6

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor+	016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
LIVER												
Hyperplasia, Bile Duct	13	11	13	17	17	14	11	25	24	19	16	15
Average Severity:	0.7	0.9	1.0	1.4	1.6	2.4	2.8	2.3	2.7	1.6	1.9	2.1
Fibrosis	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Inflammation, Focal/Multifocal	1	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Clear Cell Focus ¹	1	0	1	0	0	0	0	0	4	0	0	1
Eosinophilic Cell Focus ¹	2	6	3	7	. 16	14	9	21	24	12	14	9
Mixed Cell Focus ¹	1	1	1	1	3	4	2	9	11	6	5	3
Basophilic Cell Focus ¹	1	2	1	1	2	2	1	1	0	3	4	1
Pigment	7	1	3	6	8	6	4	12	15	11	6	3
Average Severity:	0.2	0.0	0.2	0.3	0.5	0.6	0.5	0.5	0.8	0.5	0.4	0.2
Bacterial Emboli ¹	0	0	1	0	0	0	0	0	1	0	0	0
Degeneration, Cystic ¹	0	1	0	0	0	0	0	0	0	0	1	0
Cyst, Bile Duct ¹	0	1	1	0	0	.0	1	1	1	1	0	0
Hematopoietic Cell Proliferation	0	0	0	0	0	• 0	0	0	0	0	0	1
Average Severity:	0.0	0,0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Fatty Change, Periportal	0	2	0	0	0	1	1	0	0	0	1	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.1	0.0
LUNG												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Abscess	0	1	0	0	0	0	0 -	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alveolar Histiocytosis	0	0	0	0	0	0	· 0	0	2	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Hemorrhage	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Alveolar Epithelium, Focal	1	0	0	0	1	0	2	2	1	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-l	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
LUNG												-
Inflammation, Granulomatous	0	1	0	3	2	0	0	1	1	0	1	0
Average Severity:	0.0	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Inflammation, Subacute	6	0	2	2	1	1	0	2	0	0	3	2
Average Severity:	0.3	0.0	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.2	0.3
Inflammation, Suppurative, Bronchus	1	0	0	0	0	1	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Mineralization, Interstitium	2	0	1	1	1	0	0	1	0	3	0	0
Average Severity:	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0
Thrombosis	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-MEDIASTINAL												
Number Examined:	2	2	1	0	0	0	0	0	2	0	0	0
Hyperplasia, Lymphoplasmacytic	0	1	1	0	0	0	0	0	2	0	0	0
Average Severity:	0.0	2.0	4.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0
Infiltration, Erythrocyte	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-MESENTERIC												
Number Examined:	33	22	20	20	21	17	11	27	25	24	19	18
Hyperplasia, Lymphoplasmacytic	0	1	0	0	0	0	0	1	1	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
LYMPH NODE-MANDIBULAR												
Number Examined:	1	1	4	2	0	0	1	4	3	0	0	1
Hyperplasia, Lymphoplasmacytic	0	0	4	2	0	0	1	3	3	0	0	1
Average Severity:	0.0	0.0	3.3	4.0	0.0	0.0	3.0	2.8	3.3	0.0	0.0	3.0
LYMPH NODE-OTHER												
Number Examined:	1	1	0	2	0	0	0	0	0	1	0	0
Hyperplasia, Lymphoplasmacytic	0	1	0	2	0	0	0	0	0	1	0	0
Average Severity:	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
MAMMARY GLAND												
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
Abscess	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Hyperplasia, Cystic	9	8	6	6	8	7	0	4	5	10	7	7
Average Severity:	0.5	0.6	0.8	0.6	0.8	1.1	0.0	0.2	0.3	0.9	0.6	0.6
Hyperplasia, Nodular, Glandular Tissue	0	1	1	0	1	1	2	0	0	0	0	0
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
MESENTERY												
Number Examined:	1	0	0	1	0	0	1	4	2	1	0	1
Arteritis, Chronic	0	0	0	1	0	0	1	1	2	0	0	0
Average Severity:	0.0	0.0	0.0	3.0	0.0	0.0	4.0	1.0	3.5	0.0	0.0	0.0
Peritonitis, Chronic	0	0	0	0	0	0	0	2	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	4.0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²												
Number Examined:	32	22	21	21	20	17	11	27	25	25	19	18
ORAL MUCOSA ²				÷.,								
Number Examined:	0	0	0	0	0	0	0	1	2	0	1	0
OVARY												
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
Arteritis	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst ¹	1	3	0	3	3	1	0	1	3	3	0	2
Dilatation, Bursa ¹	0	1	0	1	1	0	2	2	0	0	1	1
Hyperplasia, Stromal Epithelium	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
OVIDUCT ²							Ţ					
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-	1016	Aroclo	r-1242	Aro	clor-)	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
PANCREAS				•								
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Atrophy, Acinar Epithelium	4	0	1	5	1	2	2	3	10	1	0	1
Average Severity:	0.2	0.0	0.0	0.2	0.0	0.1	0.3	0.1	0.7	0.0	0.0	0.2
Hyperplasia, Acinar Epithelium	0	2	0	2	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Hyperplasia, Artery	0	0	1	1	2	0	0	4	5	0	1	1
Average Severity:	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.3	0.6	0.0	0.1	0.2
Hyperplasia, Islets	4	2	3	0	0	1	1	3	0	0	0	0
Average Severity:	0.2	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Inflammation, Chronic-Active	0	0	0	0	0	0	0	0	1	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
PARATHYROID		·										
Number Examined:	31	16	17	18	19	15	10	25	24	21	18	18
Hyperplasia	2	0	0	2	3	1	0	2	1	3	0	0
Average Severity:	0.2	0.0	0.0	0.3	0.5	0.3	0.0	0.2	0.1	0.5	0.0	0.0
PITUITARY GLAND								·				
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Angiectasis ¹	2	0	1	0	0	1	0	0	0	1.	1	1
Cyst ¹	1	0	1	0	0	0	0	3	7	0	0	0
Gliosis, Diffuse	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Hyperplasia, Pars Distalis	3	1	3	1	4	2	3	4	6	3	2	5
Average Severity:	0.2	0.1	0.3	0.0	0.5	0.2	0.5	0.2	0.4	0.2	0.3	0.5
RECTUM									·			
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Inflammation, Chronic-Active	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metazoan Parasite ¹	0	0	0	0	0	0	1	0	0	0	1	0
SALIVARY GLAND-SUBLINGUAL ²												
Number Examined:	32	22	21	21	21	15	11	28	25	25	17	18

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
SALIVARY GLAND-SUBMAXILLAI	λY.											
Number Examined:	33	22	21	20	21	17	11	28	25	25	19	18
Atrophy, Acinus	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
SCIATIC NERVE ²												
Number Examined:	33	22	21	20	21	17	10	28	24	25	19	18
SKELETAL MUSCLE												
Number Examined:	33	22	21	20	21	17	10	28	25	25	18	18
Degeneration	0	0	0	1	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Mineralization	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Thrombus/Infarct	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
SKIN	<u></u>									·		
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Abscess	1	1	1	2	2		0	1	2	1	0	1
Average Severity:	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.2	0.1	0.0	0.1
Epidermal Inclusion Cyst ¹	0	0	0	0	0	0	0	0	1	0	0	0
Hyperkeratosis/Acanthosis	0	0	0	2	0	1	1	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.0
Inflammation, Pyogranulomatous	1	2	1	1	0	0	0	0	1	1	0	0
Average Severity:	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Ulcer	2	3	3	2	1	0	1	0	0	3	0	2
Average Severity:	0.2	0.4	0.4	0.2	0.1	0.0	0.2	0.0	0.0	0.4	0.0	0.2
SPINAL CORD ²		· · · · · ·			· · · · · ·	······································	· · · · · ·		· · · · · · · · · · · · · · · · · · ·			
Number Examined:	33	22	21	21	21	17	11	28	25	25	.19	18
SPLEEN			· .			·						
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Congestion, Sinusoids	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1. Lesions not graded for severity.

Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
SPLEEN			<u></u>			•						
Fibrosis	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hematopoietic Cell Proliferation	11	8	6	6	3	2	1	9	5	6	4	7
Average Severity:	1.0	0.9	0.9	0.9	0.2	0.3	0.4	0.8	0.5	0.7	0.6	1.2
Pigment, Hemosiderin	2	5	6	5	4	5	3	5	3	8	7	6
Average Severity:	0.1	0.3	0.5	0.3	0.2	0.4	0.3	0.3	0.1	0.4	0.5	0.5
STERNUM ²					·.							
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
STOMACH				·	-							
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Acanthosis/Hyperkeratosis, Forestomach	0	0	0	0	0	1	1	1	1	1	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.0	0.2
Inflammation, Acute	0	0	1	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyst, Forestomach ¹	0	0	0	0	0	0	0	0	0	0	0	1
Ulcer, Forestomach	1	3	2	2	. 0	1	1	3	0	0	4	3
Average Severity:	0.1	0.4	0.2	0.3	0.0	0.1	0.3	0.3	0.0	0.0	0.7	0.4
Ulcer, Glandular Stomach	3	3	0	2	0	0	2	3	2	2	1	1
Average Severity:	0.2	0.3	0.0	0.2	0.0	0.0	0.4	0.1	0.1	0.2	0.2	0.2
Mineralization, Glandular Stomach	2	0	0	1	2	1	0	0	0	2	0	0
Average Severity:	0.2	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.3	0.0	0.0
THYMUS												
Number Examined:	32	20	21	20	20	16	9	25	24	25	19	17
Ectopic Tissue, Thyroid ¹	3	2	4	3	0	3	0	0	1	1	0	0
Fibrosis, Perivacular	1	0	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Medulla	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Аго	clor-l	254	Аго	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
THYROID GLAND												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Hyperplasia, C-Cell	12	6	5	8	2	2	1	5	2	4	6	3
Average Severity:	0.8	0.6	0.5	0.9	0.2	0.2	0.3	0.4	0.2	0.4	0.8	0.5
Hyperplasia, Follic lar Cell	1	0	1	1	1	0	0	0	1	0	1	1
Average Severity:	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1
TONGUE												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Fibrosis	0	0	0	0	1	1	. 0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Polyarteritis Nodosa	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Ulcer	0	0	0	0	0	1	1	1	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.1	0.0	0.0
TRACHEA ²												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER		•			·							
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
Calculus ¹	0	0	0	0	0	0	0	1	0	0	0	0
Inflammation, Chronic-Active	0	0	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Hyperplasia, Urothelium	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UTERUS		1.1										
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
Angiectasis	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Dilatation	2	0	1	1	2	3	0	1	0	2	1	1
Average Severity:	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.1	0.0	0.2	0.1	0.1

1. Lesions not graded for severity.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-1	1016	Arocle	r-1242	Аго	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
UTERUS	<u> </u>											
Hyperplasia, Endometrium	0	0	0	0	1	1	0	2	1	0	1	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.1
Hyperplasia, Myometrium	0	0	0	0	0	0	0	0	• 0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Pyometra	0	1	0	0	0	. 0	1	1	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
VAGINA	here and the second			Tr.						In a state of the second		
Number Examined:	33	22	. 21	21	21	17	11	28	24	25	19	18
Hyperplasia, Smooth Muscle, Wall	0	0	0	0	0	0	0	0	0	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Thrombosis, Vein	0	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SYSTEMIC LESIONS ²	<u></u>	him the second second										
Number Examined:	2	3	0	2	0	0	0	0	2	1	0	1
ZYMBAL'S GLAND ²	· · · ·	<u></u>			······································						h	
Number Examined:	0	0	0	0	0	0	0	1	0	0	0	1

Table 96. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18 to 24 Months) for Core Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

STATISTICS.

(action)

Test Substance	Control ³	Aro	clor-1	1016	Aroclo	н т-1242	Aro	clor-J	254	Arc	xlor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
ADRENAL GLAND			<u> </u>								h	
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Degeneration, Fatty, Cortex	17	0	1	5	2	0	0	2	2	0	4	1
Average Severity:	1.4	0.0	1.0	2.3	1.0	0.0	0.0	3.5	1.2	0.0	2.0	1.5
Hyperplasia/Hypertrophy, Cortex	5	1	0	1	0	1	0	0	1	0.	1	0
Average Severity:	0.3	0.5	0.0	0.3	0.0	0.7	0.0	0.0	0.2	0.0	0.5	0.0
Hyperplasia, Medulla	2	1	0	0	3	0	1	0	0	1	0	0
Average Severity:	0.1	2.0	0.0	0.0	1.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0
AORTA												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Mineralization	5	1	0	0	0	0	1	1	0	0	0	0
Average Severity:	0.5	0.5	0.0	0.0	0.0	0.0	1.3	1.5	0.0	0.0	0.0	0.0
BONE	· .		· · · · ·								<u></u>	
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Fibrous Osteodystrophy	0	0	0	0	0	0	1	0	.0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
BONE MARROW ²				<u></u>		1000000	1					
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
BRAIN ²		house and a second		hat state the second								
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
CECUM ²								X				
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
CLITORAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

1. Lesions not graded for severity.

2. No lesions present.

3. Core and Interim subgroup unscheduled termination (12-18 months) control findings reported for comparison.

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

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整个的人, 他们的确认着你的有一个人。

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ³	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor+1	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
COLON ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
DUODENUM												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Ulcer	1	0	0	0	0 '	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
ESOPHAGUS												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Ulcer	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
EYE ²							÷					
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
HARDERIAN GLAND ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
HEART										·		
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Cardiomyopathy	21	1	2	2	1	0	2	1	0	1	4	0
Average Severity:	1.0	1.5	0.8	0.3	0.3	0.0	1.3	1.0	0.0	0.3	1.0	0.0
Mineralization	1	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thrombus, Atrial ¹	0	0	0	0	0	0	0	1	0	0	0	0
ILEUM ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
JEJUNUM ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
KIDNEY												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Cyst ¹	0	0	0	0	0	0	0	0	0	1	0	0
Hydronephrosis ¹	2	0	0	0	0	0	0	0	0	2	0	0
Nephropathy, Chronic	12	1	1	4	2	2	2	1	0	1	3	1
Average Severity:	0.7	2.0	0.5	1.0	1.3	1.0	1.7	2.0	0.0	0.3	0.8	0.5

Table 97. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control ³	Aro	clor-1	1016	Arocio	r-1242	Аго	clor-1	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
LACRIMAL GLAND ²												
Number Examined:	33	2	4	8	4	3	3	2	6	3	6	2
LIVER												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Hypertrophy, Hepatocyte, Centrilobular	0	2	2	4	2	3	1	?	1	2	4	2
Average Severity:	0.0	1.0	0.8	1.0	0.8	1.7	0.7	3.ŭ	0.5	1.3	1.5	1.5
Basophilic Cell Focus ¹	0	0	0	0	1	1	1	1	0	0	1	0
Eosinophilic Cell Focus ¹	0	0	0	0	0	1	1	2	5	1	2	1
Mixed Cell Focus ¹	1	1	0	0	0	0	0	1	2	1	0	0
Congestion, Focal/Multifocal	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Bile Duct	15	2	۲ <u>۲</u>	5	3	3	3	2	4	1	5	1
Average Severity:	0.8	2.5	0.5	1.0	1.5	2.3	1.7	2.5	2.0	0.7	1.3	1.0
Inflammation, Focal/Multifocal	0	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Necrosis	3	0	0	2	0	1	0	0	2	2	2	0
Average Severity:	0.2	0.0	0.0	0.4	0.0	1.0	0.0	0.0	0.7	1.0	0.7	0.0
Pigment	0	0	1	0	0	0	0	1	1	0	0	0
Average Severity:	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.0	0.2	0.0	0.0	0.0
Vacuolization, Hepatocyte	4	1	1	0	2	1	3	1	1	0	4	0
Average Severity:	0.2	1.5	0.3	0.0	1.0	0.3	1.7	0.5	0.2	0.0	1.2	0.0
LUNG								, i				
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Inflammation, Subacute	1	0	0	1	0	0	0	0	- 1	0	1	0
Average Severity:	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0
Mineralization, Interstitium	1	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

1. Lesions not graded for severity.

2. No lesions present.

Test Substance Control Arocior-1018 Arocior-1242 Arocior-1242 Arocior-1243 Arocior-1240 Conc. (ppm) 0 50 100 200 50 100 25 50 100 <td< th=""></td<>
Conc. (ppm) 0 30 100 200 30 100 23 30 100 10 10 10 10 10 10 10 10 10 10
(N) 34 2 4 8 4 3 3 2 6 3 6 2 LYMPH NODE-MESENTERIC Number Examined: 33 2 4 8 4 3 3 2 6 3 6 2 Hyperplasia, Lymphoplasmacytic 0 0 0 0 0 0 0 0 0 1 0 Average Severity: 0.0 <
LYMPH NODE-MESENTERIC Number Examined: 33 2 4 8 4 3 3 2 6 3 6 2 Hyperplasia, Lymphoplasmacytic 0 0 0 0 0 0 0 0 0 1 0 Average Severity: 0.0
Number Examined: 33 2 4 8 4 3 3 2 6 3 6 2 Hyperplasia, Lymphoplasmacytic 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 Average Severity: 0.0
Hyperplasia, Lymphoplasmacytic 0 0 0 0 0 0 0 0 0 0 0 0 1 0 Average Severity: 0.0
Average Severity: 0.0
LYMPH NODE-MANDIBULAR . Number Examined: 1 0 0 1 0
Number Examined: 1 0 0 1 0
Hyperplasia, Lymphoplasmacytic 1 0 0 0 1 0 0 0 0 0 0 0
Average Severity: 3.0 0.0 0.0 3.0 0.0
LYMPH NODE-OTHER ²
Number Examined: 1 0
MAMMARY GLAND
Number Examined: 34 2 4 8 4 3 3 2 6 3 6 2
Hyperplasia, Cystic 16 1 1 5 0 0 2 2 1 1 0
Average Severity: 1.1 2.0 0.3 1.6 0.0 0.0 2.5 0.7 0.3 0.3 0.0
Hyperplasia, Nodular, Glandular 3 0 0 0 0 0 0 0 1 0 0 0 Tissue
Average Severity: 0.2 0.0
MESENTERY
Number Examined: 1 0 0 0 0 0 1 0 0 1
Arteritis, Chronic 0 0 0 0 0 0 1 0 0 0 0
Average Severity: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 3.0 0.0 0.0
NOSE/TURBINATES
Number Examined: 0
OPTIC NERVE ²
Number Examined: 30 2 3 7 3 2 3 2 6 3 6 1
ORAL MUCOSA
Number Examined: 0
OVARY
Number Examined: 34 2 4 8 4 3 3 2 6 3 6 2
Cyst ¹ 0 0 0 0 0 0 0 1 0 0 0
Dilatation, Bursa ¹ 1 0 0 2 0 0 1 0 1 0 1 0

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control ³	Aro	clor-)	1016	Aroclo	r-1242	Aro	clor-1	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
OVIDUCT ²		<u> </u>		-								
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
PANCREAS												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Atrophy, Acinar Epithelium	4	0	0	0	1	0	0	0	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Hyperplasia, Artery	1	0	0	1	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia, Islets	3	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
PARATHYROID	-											
Number Examined:	33	2	3	-5	4	1	2	2	5	3	3	2
Hyperplasia	3	1	0	0	1	0	0	1	0	0	0	0
Average Severity:	0.3	1.0	0.0	0.0	0.8	0.0	0.0	1.5	0.0	0.0	0.0	0.0
PITUITARY GLAND												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Angiectasis ¹	0	0	0	0	0	0	0	0	0	1	0	0
Hyperplasia, Pars Distalis	7	0	0	1	-1	0	1	0	1	1	0	0
Average Severity:	0.4	0.0	0.0	0.1	0.5	0.0	0.3	0.0	0.2	0.7	0.0	0.0
RECTUM ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SALIVARY GLAND-SUBLINGUAL ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SALIVARY GLAND-SUBMAXILLAF	RY											
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SCIATIC NERVE ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SKELETAL MUSCLE ²								1.2				
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SKIN												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2

1. Lesions not graded for severity.

2. No lesions present.

3. Core and Interim subgroup unscheduled termination (12-18 months) control findings reported for comparison.

(Actional)

Test Substance	Control ³	Aro	clor-	1016	Arocio	эг-1242	Аго	clor-1	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
SKIN												
Hyperkeratosis/Acanthosis	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	0	0	0	0	0	0	0	0	1,	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
SPINAL CORD ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SPLEEN												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Hematopoietic Cell Proliferation	9	0	0	0	0	1	1	0	0	2	2	0
Average Severity:	0.9	0.0	0.0	0.0	0.0	1.3	1.0	0.0	0.0	2.3	1.2	0.0
Pigment, Hemosiderin	0	0	0	0	0	0	0	0	1	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0
STERNUM ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
STOMACH												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Mineralization, Glandular Stomach	3	1	0	0	0	0	1	0	0	0	1	0
Average Severity:	0.2	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.3	0.0
Ulcer, Forestomach	1	0	2	0	1	0	0	0	0	0	0	0
Average Severity:	0.1	0.0	2.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer, Glandular Stomach	1	1	0	0	1	0	0	0	0	0	1	1
Average Severity:	0.1	2.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.0
Acanthosis/Hyperkeratosis, Forestomach	1	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
THYMUS ²		•										
Number Examined:	32	1	4	8	4	3 **	2	2	6	3	6	2
THYROID GLAND	••••••••••••••••••••••••••••••••••••••		•••••••	••••••								
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Hyperplasia, C-Cell	9	1	0	0	0	0	1	0	0	1	3	0
Average Severity:	0.6	2.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.7	0.5	0.0

Table 97. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

Test Substance	Control ³	Aro	clor-1	1016	Arocio	r-1242	Aro	clor-1	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	- 3	3	2	6	3	6	2
THYROID GLAND			h						•			
Hyperplasia, Follicular Cell	1	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
TONGUE ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
TRACHEA												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Inflammation, Suppurative	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
URETHRA ²												
Number Examined:	1	0	0	0	0	0	0	0	0	1	0	0
URINARY BLADDER ²	· .											
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
UTERUS												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Dilatation	1	0	0	0	0	0	0	0	1	0	2	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.0	0.0
Inclusion Cyst ¹	0	0	0	0	0	0	0	0	0	0	1	0
Pyometra	0	0	0	0	0	0	1	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
VAGINA									-			
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
Ulcer	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
SYSTEMIC LESIONS ²												
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

1. Lesions not graded for severity.

2. No lesions present.

3. Core and Interim subgroup unscheduled termination (12-18 months) control findings reported for comparison.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ³	Aro	clor-	1016	Aroclo	r-1242	Aro	clor-	1254	Arc	oclor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
ADRENAL GLAND		· · ·		÷								
Number Examined:	0	12	10	7	9	11	9	8	4	6	12	10
Degeneration, Fatty, Cortex	20	8	10	3	7	9	4	4	1	5	7	5
Average Severity:	1.4	1.5	2.4	0.6	1.7	2.1	1.0	1.3	0.5	1.7	1.6	1.3
Hyperplasia, Cortex, Diffuse	1	0	0	0	0	1	0	0	0	0	.0	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Hyperplasia/Hypertrophy, Cortex	. 5	2-	1	1	2	4	2	3	0	0	1	3
Average Severity:	0.3	0.5	0.2	0.3	0.3	0.5	0.4	0.9	0.0	0.0	0.1	0.6
Hyperplasia, Medulla	5	3	1	0	2	1	0	1	0	2	2	2
Average Severity:	0.2	0.4	0.2	0.0	0.3	0.1	0.0	0.1	0.0	0.7	0.3	0.3
Necrosis, Cortex	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
AORTA												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Mineralization	2	0	1	0	. 0	0	0	0	0	0	1	2
Average Severity:	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
BONE												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Osteodysplasia ¹	1	1	0	0	0	0	0	0	0	0	0	0
BONE MARROW ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
BRAIN ²					- -							
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
CECUM ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

2

Grades for Defining Severity	(Degree) or Amount of Change
1 = Minimum change, barely exceeds normal limits	3 = Moderate severity and significance
2 = Mild degree of change	4 = Marked severity, change is essentially maximal

Test Substance	Control ³	Aroclor-1016		Aroclor-1242		Aroclor-1254			Arc	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
CLITORAL GLAND												
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
COLON ²										<u></u>		
Number Examined:	33	12	10	7	9	11	9	7	4	6	12	10
DUODENUM	· · · ·											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Ulcer	1	0	0	0	0	0	0	1	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.0
ESOPHAGUS ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
EYE												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Inflammation, Chronic-Active, Anterior Chamber	0	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Ulcer, Cornea	1	1	0	0	0	0	0	0	1	0	0.	0
Average Severity:	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
HARDERIAN GLAND												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Hyperplasia	. 1	0	0	0	1	0	0	0	0	0	1	0
Average Severity:	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0
HEART												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Cardiomyopathy	9	5	5	4	6	8	5	4	2	3	8	6
Average Severity:	0.3	0.5	0.5	0.7	1.0	1.2	0.8	0.6	0.5	0.5	0.8	0.6
Mineralization	2	0	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thrombus, Atrial ¹	1	0	0	0	0	0	0	0	1	0	0	1
ILEUM ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

3. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

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Test Substance	Control ³	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	- 33	12	10	7	9	11	9	8	4	6	12	10
JEJUNUM			.				•				lease and the second	
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Adhesion ¹	0	0	0	0	0	0	0	0	0	0	0	1
Ulcer	0	0	0	0	0	1	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
KIDNEY												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Cyst ¹	0	0	0	0	0	0	0	1	0	0	0	0
Hyaline Droplets	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydronephrosis ¹	0	0	0	1	1	0	0	0	0	0	0	0
Nephropathy, Chronic	10	7	5	6	9	8	8	5	2	3	7	7
Average Severity:	0.5	0.9	0.8	0.9	1.7	1.3	1.3	1.1	0.5	0.7	1.0	1.5
LACRIMAL GLAND ²												
Number Examined:	33	12	9	7	9	11	9	7	4	6	12	10
LIVER												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Hypertrophy, Hepatocyte, Centrilobular	0	3	3	1	6	9	5	6	4	4	7	9
Average Severity:	0.0	0.3	0.4	0.3	1.8	1.9	1.1	1.9	2.8	1.2	1.5	3.1
Basophilic Cell Focus ¹	1	0	0	2	2	1	1	0	0	0	2	5
Clear Cell Focus ¹	1	0	0	0	1	0	0	0	0	0	1	0
Eosinophilic Cell Focus ¹	2	1	1	1	3	6	4	6	1	2	7	3
Mixed Cell Focus ¹	1	0	0	0	1	2	2	1	0	0	5	2
Bacterial Colonies ¹	1	0	0	0	0	0	0	0	1	0	0	0
Congestion, Focal/Multifocal	2	0	0	0	0	0	1	0	0	0	0	1
Average Severity:	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Cyst, Bile Duct ¹	0	1	0	0	0	1	0	0	0	0	1	0
Fatty Change, Periportal	0	0	0	0	0	0	1	0	1	0	0	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.2

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) at Unscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

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1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control ³	Aro	clor-]	1016	Aroclo	Aroclor-1242		Aroclor-1254			Aroclor-1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100	
(N)	33	12	10	7	9	11	9	8	4	6	12	10	
LIVER	/ER												
Hyperplasia, Bile Duct	13	10	2	3	7	8	6	7	4	2	6	9	
Average Severity:	0.7	1.5	0.4	0.9	1.6	1.5	1.0	2.0	2.3	0.7	1.1	2.0	
Necrosis	2	3	1	0	1	2	0	2	2	0	3	1	
Average Severity:	0.1	0.5	0.1	0.0	0.2	0.4	0.0	0.4	0.8	0.0	0.5	0.2	
Pigment	7	1	0	0	2	3	1	1	4	0	3	1	
Average Severity:	0.2	0.1	0.0	0.0	0.4	0.3	0.1	0.1	1.0	0.0	0.3	0.1	
Vacuolization, Hepatocyte	3	2	0	1	3	0	3	3	2	1	3	4	
Average Severity:	0.1	0.3	0.0	0.1	0.7	0.0	0.3	0.4	1.0	0.3	0.4	0.4	
LUNG													
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10	
Alveolar Histiocytosis	0	1	0	0	0	0	0	0	0	0	0	0	
Average Severity:	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fibrosis, Focal/Multifocal	0	0	0	0	0	0	0	0	0	0	1	0	
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
Inflammation, Granulomatous	0	0	0	1	1	1	0	0	0	0	0	1	
Average Severity:	0.0	0.0	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	
Inflammation, Subacute	6	0	0	1	0	0	0	0	1	0	0	0	
Average Severity:	0.3	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	
Mineralization, Interstitium	2	0	1	0	0	0	0	0	0	0	0	2	
Average Severity:	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
LYMPH NODE-MEDIASTINAL ²													
Number Examined:	2	0	0	0	0	1	2	0	0	0	0	0	
LYMPH NODE-MESENTERIC ²													
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10	
LYMPH NODE-MANDIBULAR													
Number Examined:	1	1	0	0	3	0	1	0	0	0	0	0	
Hyperplasia, Lymphoplasmacytic	0	1	0	0	3	0	1	0	0	0	0	0	
Average Severity:	0.0	3.0	0.0	0.0	3.3	0.0	4.0	0.0	0.0	0.0	0.0	0.0	

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Control³ Aroclor-1242 Aroclor-1254 **Test Substance** Aroclor-1016 Aroclor-1260 100 200 Conc. (ppm) (N) LYMPH NODE-OTHER Number Examined: Hyperplasia, Lymphoplasmacytic 0.0 Average Severity: 0.0 0.0 0.0 0.0 0.0 0.0 4.0 0.0 0.0 0.0 0.0 MAMMARY GLAND Number Examined: Abscess Average Severity: 0.0 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Hyperplasia, Cystic 0.2 0.1 0.3 0.5 0.7 0.0 0.5 0.3 0.3 0.7 Average Severity: 0.5 0.8 MESENTERY Number Examined: Arteritis, Chronic 0.0 Average Severity: 0.0 0.0 0.0 0.0 0.0 0.0 2.0 0.0 0.0 0.0 0.0 NOSE/TURBINATES Number Examined: **OPTIC** NERVE² Number Examined: ORAL MUCOSA² Number Examined: OVARY Number Examined: Cyst¹ Dilatation, Bursa¹ 0. OVIDUCT² Number Examined: PANCREAS Number Examined: Atrophy, Acinar Epithelium 0.0 0.2 0.0 0.0 0.4 0.1 0.1 0.1 0.3 0.0 0.0 0.1 Average Severity:

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Test Substance	Control ³	Aroclor-1016		Aroclor-1242		Aroclor-1254			Arc	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
PANCREAS												
Hyperplasia, Artery	0	1	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Hyperplasia, Islets	4	0	0	0	0	0	0	0	1	0	0	0
Average Severity:	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
PARATHYROID												
Number Examined:	31	11	9	4	7	10	9	7	4	6	10	10
Hyperplasia	<u>,</u>	0	1	0	2	0	0	1	0	0	1	1
Average Severity:	0.2	0.0	0.2	0.0	0.6	0.0	0.0	0.4	0.0	0.0	0.3	0.2
PITUITARY GLAND												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Hyperpiasia, Pars Distalis	3	1	1	0	1	1	1	2	0	2	2	0
Average Severity:	0.2	0.3	0.1	0.0	0.3	0.2	0.2	0.4	0.0	0.5	0.4	0.0
RECTUM	· .											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Metazoan Parasite ¹	0	0	0	0	0	0	0	1	0	0	0	0
SALIVARY GLAND-SUBLINGUAL												
Number Examined:	: 32	12	10	7	9	11	9	8	4	6	12	10
Atrophy, Acinus	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SALIVARY GLAND-SUBMAXILLA	RY											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Atrophy, Acinus	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCIATIC NERVE ²				10								
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
SKELETAL MUSCLE												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Fibrosis	0	0	0	0	0	0	0	0	0	0	1	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ³	Aroclor-1016			Aroclo	Aroclor-1254			Arc	1260		
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
SKELETAL MUSCLE												
Mineralization	0	1	1	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SKIN												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Abscess	- 1	0	1	1	0	0	0	0	0	0	0	0
Average Severity:	0.1	0-0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Edema	0	Û	0	0	0	0	0	0	0	1	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Hyperkeratosis/Acanthosis	0	0	1	0	0	0	0	-0	0	0	1	0
Average Severity:	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Inflammation, Pyogranulomatous	i	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ulcer	2	1	1	0	0	0	0	1	0	0	0	0
Average Severity:	0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
SPINAL CORD ²	•											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
SPLEEN												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Adhesion ¹	0	0	0	1	0	0	0	0	0	0	0	0
Depletion, Lymphoid	0	0	0	0	0	0	0	0	0	0	1	1
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
Hematopoietic Cell Proliferation	11	2	3	0	2	1	2	-5	1	2	2	1
Average Severity:	1.0	0.3	0.5	0.0	0.6	0.4	0.7	1.4	0.8	0.5	0.4	0.3
Necrosis	0	0	0	0	1	0	0	0	0	0	0	-0
Average Severity:	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pigment, Hemosiderin	2	2	2	2	1	3	2	0	2	1	6	4
Average Severity:	0.1	0.2	0.3	0.4	0.1	0.3	0.2	0.0	0.5	0.2	0.6	0.4
Thrombus	0	0	0	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

2
Test Substance	Control ³	Aro	clor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
STERNUM ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
STOMACH												
Number Examined:	33	12	10	7	9	11	9	8 -	4	6	12	10
Cyst, Forestomach ¹	0	0	0	0	0	0	0	0	0	0	0	1
Mineralization, Glandular Stomach	2	0	2	0	0	Û.	1	0	0	0	1	2
Average Severity:	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.4
Ulcer, Forestomach	0	3	1	2	0		0	1	0	0	0	1
Average Severity:	0.0	0.6	0.2	0.7	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.2
Ulcer, Glandular Stomach	0	1	2	1	0	0	0	1	0	1	1	0
Average Severity:	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.3	0.0	0.3	0.3	0.0
THYMUS												
Number Examined:	32	11	9	7	8	10	7	5	3	6	11	9
Ectopic Tissue, Thyroid ¹	3	3	1	0	1	0	0	2	1	1	0	0
THYROID GLAND												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Hyperplasia, C-Cell	12	6	0	2	2	5	5	3	1	2	2	4
Average Severity:	0.8	0.9	0.0	0.3	0.4	0.9	0.9	0.6	0.8	0.5	0.2	0.8
Hyperplasia, Follicular Cell	1	1	1	0	0	0	0	1	0	0	0	0
Average Severity:	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
TONGUE ²	·											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
TRACHEA ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
URETHRA ²												
Number Examined:	0	0	0	0	0	0	0	0	0	0	2	0
URINARY BLADDER ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Lesions not graded for severity.

2. No lesions present.

3. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

Test Substance	Control ³	Aro	clor-]	1016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
UTERUS						·						
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Dilatation	2	1	0	0	0	1	0	0	0	1	0	0
Average Severity:	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Hyperplasia, Epithelium, Cervix, Focal	0	0	0	0	0	0	1	0	0	0	0	د ۲/ ۵
Average Severity:	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Inclusion Cyst ¹	0	0	1	0	0	0	0	0	0	0	. 0 .	-9
VAGINA	i.											1
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
Hyperplasia, Smooth Muscle, Wall	0	1	0	0	0	0	0	0	0	0	0	0
Average Severity:	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0,0	0.0
SYSTEMIC LESIONS ²										<u> </u>		
Number Examined:	2	0	1	0	1	1	2	1	0	1	0	0
ZYMBAL'S GLAND												
Number Examined:	1	0	0	0	1	0	0	0	0	0	0	0
Abscess	0	0	0	0	1	0	0	0	0	0	0	0
Average Severity:	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 98. Incidence Summary of Microscopic Observations (Non-Neoplastic) atUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

 $\{ i \} \}$

1. Lesions not graded for severity.

2. No lesions present.

3. Core and Interim subgroup unscheduled termination (18-24 months) control findings reported for comparison.

and style

Test Substance	Control	Aro	clor-	1016	Aroclo	or-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
ADRENAL GLAND	-											•
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
AORTA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BLOOD VESSEL												
Number Examined:	0	0.	0	0	0	0	0	0	0	0	o	0
BONE ¹												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1
BONE MARROW											1	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN ¹												
Number Examined:	5	6	6	6	6	6	5	6	6	6	6	6
THORACIC CAVITY	· · · · · ·											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM	-											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COAGULATING GLAND ¹						••••••••••••••••••••••••••••••••••••••						
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
COLON							.					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
DUODENUM												
Number Examined:	0	0	.0	0	0	0	0	0	0	0	0	0
EPIDIDYMIS						•						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
EYE				-								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HEART												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ILEUM												
Number Examined:	0	0	.0.	0	0	0	0	0	0	0	0	0

Table 99. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-Week Interim Termination for Male Rats

Table 99. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-WeekInterim Termination for Male Rats

Test Substance	Control	Aro	clor-	1016	Arocle	or-1242	A	oclor-	1254	Ar	oclor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100	
(N)	5	6	6	6	6	6	5	6	6	6	6	6	
JEJUNUM						<u>1.</u>	.			•			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
JOINT						.		•	•		•		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
KIDNEY ¹	**************************************						<u></u>			•	•		
Number Examined:	1	0	0	0	2	1	0	1	0	1	0	1	
LACRIMAL GLAND	•												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0.	
LIVER ¹												2	
Number Examined:	5	6	6	6	6	6	5	6	6	6	6	6	
LUNG				·.					-				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-BRONCHIAL													
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-MEDIASTINAL			. 1							.	•	٩	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-MESENTERIC ¹			•	•		<u> </u>	•	•					
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0	
LYMPH NODE-MANDIBULAR			A										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
LYMPH NODE-OTHER ¹				•			•				•		
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0	
MAMMARY GLAND ¹				•				A	•				
Number Examined:	4	6	6	6	6	6	5	6	6	6	6	6	
MESENTERY						<u></u>				· · · · ·	•		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
NOSE/TURBINATES													
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
OPTIC NERVE ¹													
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0	
ORAL MUCOSA													
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0	
PANCREAS ¹													
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0	

1. No lesions present.

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Test Substance	Control	Aro	clor-1	1016	Aroclo	r-1242	Ar	oclor-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
PARATHYROID			4			· ·			<u></u>		· · · · ·	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND ¹			•									
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	0
PREPUTIAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0.
PROSTATE											:	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
RECTUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLINGUAL						:				••••••••••••••••••••••••••••••••••••••		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBMAXILLAR	Y										1411	
Number Examined:	0	0	0	0	0	0	0	0.	0	0	0	0
SCIATIC NERVE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SEMINAL VESICLE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKIN											V .	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPLEEN ¹	••••••••••••••••••••••••••••••••••••••											
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
STERNUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STOMACH			-			3 1						
Number Examined:	0	0	0	0	0	0	0	. 0	0	0	0	0
TESTIS	· ·								· · · · · · · · · · · ·			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 99. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-Week Interim Termination for Male Rats

1. No lesions present.

Table 99. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-Week Interim Termination for Male Rats

Test Substance	Control	Аго	clor-1	1016	Aroclo	or-1242	Ar	oclor-	1254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	·25	50	100	25	50	100
(N)	5	6	6	6	6	6	5	6	6	6	6	6
THYMUS							. :					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TRACHEA											·	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												1.
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	Ó
SYSTEMIC LESIONS						•						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Test Substance	Control	Aro	clor-1	016	Aroclor	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
ADRENAL GLAND												
Number Examined:	6 ·	0	0	6	0	5	0	0	6	0	0	6
B-Adenoma, Cortex	0	0	0	0	0	0	0	0	1	0	0	0
B-Pheochromocytoma, Benign	1	0	0	0	0	0	0	0	0	0	0	0
AORTA ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
BLOOD VESSEL							÷.					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE ¹								, ,				
Number Examined:	0	0	1	0	0	0	0	0	0	0	0	0
BONE MARROW ¹						· .		i.				
Number Examined:	- 6	0	0	6	0	5	0	0	6	0	0	6
BRAIN ¹												
Number Examined:	6	6	5	6	6	5	6	6	6	6	6	6
THORACIC CAVITY	-											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	-0
CECUM ¹										-		
Number Examined:	6	0	0	6	0.	5	0	0	6	0	0	6
COAGULATING GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
DUODENUM ¹	· ·											
Number Examined:	6	0	0	6	0	5 .	0	0	6	. 0	0	6
EPIDIDYMIS ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	1	0	6
ESOPHAGUS ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
EYE ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
HARDERIAN GLAND ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6

Table 100. Incidence Summary of Microscopic Observations (Neoplastic) at the52-Week Interim Termination for Male Rats

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Test Substance	Control	Arc	clor-1	016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	-5	6	6	6	6	6	6
HEART ¹	·					••••••		_				
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
ILEUM ¹			.	.	••••••••••••••••••••••••••••••••••••••	••••••••••••••••••••••••••••••••••••••	4	C~ .				
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
JEJUNUM ¹	*				•	·		.				
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
JOINT ¹	••••••••••••••••••••••••••••••••••••••		.									
Number Examined:	0	0	0	0	0	0	0	0	1	0	0	0
KIDNEY ¹	L	l								La		
Number Examined:	6	0	1	6	0	5	1	0	6	1	0	6
LACRIMAL GLAND ¹		L	L	L	L			h			L	L
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
LIVER	.	L		L	L	I		L	L		L	L
Number Examined:	6	6	5	6	6	5	6	6	6	6	6	6
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	0	0
LUNG ¹		.	•		.						l	1
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
LYMPH NODE-BRONCHIAL ¹											L.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	• • • •
Number Examined:	0	0	0	0	0	0	0	0	1	0	0	0
LYMPH NODE-MEDIASTINAL	.		8	••••••••••••••••••••••••••••••••••••••	•		1. 1.			L		<u>.</u>
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ¹	<u> </u>		I		L	L	سيبيد حشيا	L	L	L	L.,	
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
LYMPH NODE-MANDIBULAR			L		L	L		him				k
Number Examined:	0	0	0	0	• 0	0	0	0	0	0	0	0
LYMPH NODE-OTHER				L	L	L	L	L	l,		·	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND ¹											L	
Number Examined:	5	6	5	6	6	5	6	6	6	6	6	6
MESENTERY		L	<u></u>									
Number Examined:	0	0	0	.0	0	0	0	0	0	0	0	0
NOSE/TURBINATES	L								ل <u>بن</u> ا	<u> </u>	· · ·	.
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 100. Incidence Summary of Microscopic Observations (Neoplastic) at the52-Week Interim Termination for Male Rats

1. No lesions present.

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Test Substance	Control	Arc	clor-1	016	Aroclo	-1242	Aro	clor-J	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	. 6	6	6	6	6	6
OPTIC NERVE ¹			•		••••••							
Number Examined:	5	0	0	6	0	4	0	0	4	0	0	6
ORAL MUCOSA			.	•								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS ¹												
Number Examined:	6	0	0	6	0	5	0	0	-6	0	0	6
PARATHYROID ¹												
Number Examined:	5	0	0	6	0	5	0	0	6	0	0	6
PENIS			A									
Number Examined:	0	0	0	-0	0	0	0	0	0	0	0	0
PITUITARY GLAND												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
B-Adenoma, Pars Distalis	1.	0	0	1	0	0	0	0	0	0	0	1
PREPUTIAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	-0	0	0	0
PROSTATE ¹					· .							
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
RECTUM ¹										÷ .		
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SALIVARY GLAND-SUBLINGUAL	1											
Number Examined:	- 6	0	0	6	0	5	0	0	6	0	0	6
SALIVARY GLAND-SUBMAXILLA	RY ¹								· · ·			
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SCIATIC NERVE ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SEMINAL VESICLE ¹	· .											
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SKELETAL MUSCLE ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SKIN											2.3	
Number Examined:	6	0	0	6	0	5	0	1	6	0	0	6
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	0	0	0	1	0
B-Keratoacanthoma	1	0	0	0	0	0	0	0	0	0	0	0

Table 100. Incidence Summary of Microscopic Observations (Neoplastic) at the52-Week Interim Termination for Male Rats

1. No lesions present.

Test Substance	Control	Arc	clor-1	1016	Arocio	r-1242	Aro	clor-	1254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	5	6	6	5	6	6	6	6	6	6
SKIN	<u> </u>				·	A						
M-Fibrosarcoma	0	0	0	0	0	0	0	0	1	0	0	0
M-Neurofibrosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
SPINAL CORD ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
SPLEEN ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
STERNUM ¹	-											
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
STOMACH ¹												
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
TESTIS ¹		·										
Number Examined:	6	0	.0	6	0	5	0	0	6	0	0	6
THYMUS ¹												
Number Examined:	6	0	0	5	0	4	0	0	5	0	0	6
THYROID GLAND		·····			·					· · · · · · · · · · · · · · · · · · ·		
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
B-Adenoma, C-Cell	0	0	0	0	0	0	0	0	0	0	0	1
TONGUE ¹												-
Number Examined:	6	0	0	6	0	5	0	0	6	0	0	6
TRACHEA ¹	Protocologica de la constanción de la c											
Number Examined:	6	0	0	6	0	.5	0	0	6	0	0	6
URINARY BLADDER ¹	A					· · · · ·			<u></u>			b
Number Examined:	6	0	0	6	0	5	0.	0	6	0	0	6
SYSTEMIC LESIONS		<u></u>			<u></u>	A						<u></u>
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
M-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	0	0
ZYMBALS GLAND					A				· · · · ·		·	
Number Examined:	0	0	0	0	0	0	0	Ö	0	0	0	0

Table 100. Incidence Summary of Microscopic Observations (Neoplastic) at the52-Week Interim Termination for Male Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	- 5	3	4	4	5	3
ADRENAL GLAND	·											
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
B-Pheochromocytoma, Benign	1	0	0	1	0	0	0	0	0	0	0.	1
AORTA ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
BLOOD VESSEL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE ¹		-										
Number Examined:	0	0	0	1	2	0	0	0	0	0	1	0
BONE MARROW ¹	Į.											
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
BRAIN ¹					·							
Number Examined:	4	5	3	4	5	4	4	3	4	4	5	3
THORACIC CAVITY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
COAGULATING GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
DUODENUM ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
EPIDIDYMIS ¹				-						· · ·		
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
ESOPHAGUS ¹												
Number Examined:	4	0	0	. 4	0	4	0	0	4	0	0	3
EYE ¹												
Number Examined:	4	0	0	4	0	4	1	0	4	0	0	3
HARDERIAN GLAND ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
HEART ¹									<u>.</u>			
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3

Table 101. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Male Rats

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-1	1016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	- 5	3	4	5	4	5	3	4	4	5	3
ILEUM ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
JEJUNUM ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
JOINT												
Number Examined:	0	0	0	0.	0	0	0	0	0	0	0	0
KIDNEY ¹												
Number Examined:	4	0	0	4	1	4	0	0	4	0	0	3
LACRIMAL GLAND ¹								4.74 1				
Number Examined:	3	0	0	4	0	4	0	0	4	0	0	3
LIVER												
Number Examined:	4	5	3	4	5	4	3	4	4	4	5	3
B-Hepatocellular Adenoma	0	0	0	0	0	0	0	0 -	0	0	1	1
LUNG ¹		•••••		•••••••••••								
Number Examined:	4	0	0	4	0	4	0	1	4	0	0	3
LYMPH NODE-BRONCHIAL												·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ¹			•						•			f
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
LYMPH NODE-MANDIBULAR												h
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER ¹				·								L
Number Examined:	0	1	0	1	0	0	0	0	0	0	1	0
MAMMARY GLAND	· ·	·										
Number Examined:	3	5	3	4	4	3	5	3	4	4	5	3
B-Fibroma	0	1	0	0	0	0	0	0	0	0	0	0
MESENTERY		L	L	8	l	. .		<u> </u>	L			L
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES		L	L							<u></u> .		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 101. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Male Rats

1. No lesions present.

ALC: NO.

Test Substance	Control	Aro	clor-1	016	Aroclo	-1242	Aro	clor-J	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
OPTIC NERVE ¹					.		·					·
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS ¹												
Number Examined:	. 4	0	0	1. 4	0	4	0	0	4	0	0	3
PARATHYROID ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
PENIS						·						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND												
Number Examined:	4	0	1	4	2	4	1	0	4	3	2	3
B-Adenoma, Pars Distalis	2	0	1.	3	1	2	1	0	2	3	2	1
B-Adenoma, Pars Intermedia	0	0	0	0	1	0	0	0	0	0	0	0
PREPUTIAL GLAND ¹	-		1.4									
Number Examined:	1	0	0	1	0	0	0	0	0	1	0	0
PROSTATE ¹												
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
RECTUM ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SALIVARY GLAND-SUBLINGUAL			•				.	•				
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SALIVARY GLAND-SUBMAXILLA	RY ¹			.	·	· · · · ·						
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SCIATIC NERVE ¹					•••••••••	· .						
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SEMINAL VESICLE ¹												
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
SKELETAL MUSCLE ¹						ری <u>ن برمند</u>			••••••••••••••••••••••••••••••••••••••		.	
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SKIN	· · · · · · · · ·				· · · · · · ·							
Number Examined:	4	0	0	4	1	4	1	1	4	1	1	3
B-Keratoacanthoma	0	0	0	0	0	0	1	0	0	0	0	1

Table 101. Incidence Summary of Microscopic Observations (Neoplastic) at the 78-Week Interim Termination for Male Rats

Test Substance	Control	trol Aroclor-1016 Aro		Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	4	5	3	4	5	4	5	3	4	4	5	3
SPINAL CORD ¹				·								
Number Examined:	4 ·	0	0	4	0	4	0	0	4	0	0	3
SPLEEN ¹												
Number Examined:	4	1	1	4	0	4	0	0	4	0	1	-3
STERNUM ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
STOMACH ¹						×.						
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
TESTIS ¹		li anti calamita in							Automore Station			
Number Examined:	4	0	0	4	0	4	0	0	4	0	1	3
THYMUS ¹	••••••	. '										
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
THYROID GLAND	······································	·										
Number Examined:	4	1	0	4	0	4	0	0	4	0	0	3
B-Adenoma, C-Cell	0	1	0	0	0	0	0	0	0	0	0	0
TONGUE ¹												
Number Examined:	4	0	0	4	0	- 4	0	0	4	0	0	3
TRACHEA ¹												
Number Examined:	4	0	Ó	4	0	4	0	0	4	0	0	3
URINARY BLADDER ¹												
Number Examined:	4	0	0	4	0	4	0	0	4	0	0	3
SYSTEMIC LESIONS	·											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND	-				· · · · · · · · · · · · · · · · · · ·							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 101. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Male Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
ADRENAL GLAND			•									
Number Examined:	43	2	2	25	0	17	1	0	20	0	1 -	15
B-Adenoma, Cortex	0	0	0	1	0	0	0	0	0	0	0	0
B-Pheochromocytoma, Benign	7	2	2	3	0	0	0	0	1	0	1	0
M-Pheochromocytoma, Malignant	0	0	0	1	0	0	0	0	Û	0	0	0
AORTA ¹										1		
Number Examined:	43	0	0	25	.0	17	0	0	20	0	0	15
BLOOD VESSEL ¹		,			· · · · ·					,		
Number Examined:	2	0	0	0	0	1	0	1	1	1	0	0
BONE								•				
Number Examined:	8	2	1	3	5	4	3	1	2	4	2	2
N-Squamous Cell Carcinoma, Nasal Mucosa	1	0	0	î.	0	0	0	0	0	0	0	0
BONE MARROW ¹					• •							
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
BRAIN												
Number Examined:	43	13	14	25	24	17	21	11	20	24	16	15
M-Astrocytoma, Malignant	0	0	0	0	1	0	1	0	0	1	0	2
B-Granular Cell Tumor, Benign	0	0	:0	1	0	0	0	0	0	0	0	0
THORACIC CAVITY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM						•					<u> </u>	
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
B-Leiomyoma	0	0	0	1	0	0	0	0	0	0	0	0
COAGULATING GLAND ¹				• <u>•</u> •••••					••••••••••••••••••••••••••••••••••••••			
Number Examined:	0	0	0	2	0	0	0	0	0	0	0	1
COLON ¹	<u></u>											
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
DUODENUM	-											
Number Examined:	43	0	0	25	0	17	0	0	20	0	1	15
B-Adenocarcinoma	0	0	0	0	0	0	0	0	0	0	1	0
EPIDIDYMIS ¹												
Number Examined:	43	0	0	25	1	17	0	0	20	0	0	15

Table 102. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Male Rats

Test Substance	Control	Aro	clor-1	016	Arocle	or-1242	Aro	clor-l	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
ESOPHAGUS ¹						·						
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
EYE ¹												
Number Examined:	43	0	0	25	2	17	1	1	20	2	0	15
HARDERIAN GLAND ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
HEART ¹												
Number Examined:	43	0	1	25	0	17	1	0	20	0	0	15
ILEUM ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
JEJUNUM ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
JOINT ¹												
Number Examined:	0	0	0	0	2	0	0	0	0	0	0	1
KIDNEY												
Number Examined:	43	3	7	25	3	17	6	1	20	4	2	15
M-Carcinoma, Renal Tubular	1	0	0	0	0	0	0	0	0	0	0	0
B-Lipoma	0	0	0	0	0	0	2	0	0	0	0	0
LACRIMAL GLAND ¹												
Number Examined:	43	1	4	24	5	17	6	2	20	4	4	15
LIVER												
Number Examined:	43	14	14	25	24	17	21	11	20	24	16	15
B-Hepatocellular Adenoma	3	1	1	1	- 0	2	0	1	3	0	1	1
B-Hepatocellular Adenoma, Multiple	0	0	0	0	0	0	0	0	0	0	1	2
M-Hepatocellular Carcinoma	2	1	1	1	0	1	- 1	0	0	1	1	1
N-Hepatocholangioma	0	0	0	0	0	0	0	0	0	0	0	1
N-Carcinoma, Islet Cell	1	0	0	0	0	0	0	0	0	0	0	0
N-Carcinoma, Pancreatic Acinar Cell	1	0	0	0	0	0	0	0	0	0	0	0
N-Carcinoma, Prostatic	0	0	0	0	0	0	0	0	1	0	0	0
N-Hemangiosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
M-Histiocytic Sarcoma	1	0	0	0	0	0	0	0	0	0	0	0

Table 102. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Male Rats

1. No lesions present.

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Test Substance	Control	Аго	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Arc	clor-	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
LUNG												
Number Examined:	43	1	0	25	0	17	0	1	20	0	0	15
N-Hemangiosarcoma	. 1	0	0	0	0	0	0	0	0	0	0	0
N-Histiocytic Sarcoma	1	0	0	0	0	0	0	0	0	0	0	0
M-Pheochromocytoma, Malignant	0	0	0	1	0	0	0	0	0	0	0	0
LYMPH NODE-BRONCHIAL					· .							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	1	0	0	0	0	0	0	0	0	1	0	1
N-Histiocytic Sarcoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	1	0	0
LYMPH NODE-MESENTERIC												
Number Examined:	42	0	0	25	0	17	1	0	20	0	0	15
B-Hemangioma	0	0	0	0	0	0	0	0	0	0	0	1
N-Hemangiosarcoma	1	0	0	0	0.	0	0	0	0	0	0	0
M-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	0	0	0
LYMPH NODE-MANDIBULAR ¹												
Number Examined:	1	1	0	0	0	0	0	0	1	0	0	3
LYMPH NODE-OTHER												
Number Examined:	1	1	0	1	1	2	2	1	1	0	1	3
B-Hemangioma	0	0	0	0	0	0	1	0	0	0	0	0
MAMMARY GLAND						÷						
Number Examined:	40	13	12	23	18	16	19	11	20	23	15	15
B-Adenoma	0	0	0	0	0	0	0	0	0	0	1	0
M-Adenocarcinoma	0	0	0	0	0	0	1	0	0	0	0	0
MESENTERY												
Number Examined:	1	0	0	0	0	1	0	0	0	1	0	1
M-Hemangiosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES		·					Ai					
Number Examined:	1	0	0	0	0	0	0	0	0	1	0	0
B-Odontoma, Complex, Benign	0	0	0	0	0	0	0	0	0	1	0	0
M-Squamous Cell Carcinoma	1	0	0	0	0	0	0	0	0	0	0	0

Table 102. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Male Rats

Test Substance	Control	rol Aroclor-1016 A		Arocle	or-1242	Aro	clor-1	254	Arc	clor-)	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
OPTIC NERVE ¹												
Number Examined:	41 ·	0	0	18	1	17	1	1	20	0	0	14
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	43	0	0	25	1	17	0	0	20	0	1	15
B-Adenoma, Islet Cell	4	0	0	3	0	0	0	0	2	0	0	1
M-Carcinoma, Islet Cell	1	0	0	0	1	0	0	0	0	0	1	0
B-Adenoma, Mixed Acinar-Islet Cell	0	0	0	0	0	0	0	0	1	0	0	0
M-Carcinoma, Acinar Cell	1	0	0	0	0	0	0	0	0	0	0	0
N-Hemangiosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
PARATHYROID												
Number Examined:	40	14	10	22	12	15	19	11	19	22	16	15
B-Adenoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Carcinoma, C-Cell	0	0	0	0	0	0	0	1	1	0	0	0
PENIS										B,		
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
M-Hemangiosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND												
Number Examined:	43	6	7	24	10	17	9	2	19	10	10	15
B-Adenoma, Pars Distalis	22	5	7	14	9	5	7	2	6	8	8	9
B-Adenoma, Pars Intermedia	1	0	0	0	0	0	0	0	0	0	0	0
PREPUTIAL GLAND ¹												·····
Number Examined:	0	1	0	0	0	1	0	0	0	0	0	1
PROSTATE												
Number Examined:	43	0	1	25	2	17	0	0	20	0	0	15
M-Carcinoma	7	0	0	1	1	1	0	0	3	0	0	4
RECTUM									,			
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
SALIVARY GLAND-SUBLINGUAL ¹												
Number Examined:	41	0	0	24	0	16	0	0	20	0	0	15

Table 102. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Male Rats

化物理试验 静脉的变形 如此

1. No lesions present.

Test Substance	Control	Аго	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Aro	clor-	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
SALIVARY GLAND-SUBMAXILLA	RY ¹											
Number Examined:	42	0	0	25	0	17	0	0	20	0	0	15
SCIATIC NERVE ¹												
Number Examined:	42	0	0	25	0	15	0	0	20	0	0	14
SEMINAL VESICLE												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
SKELETAL MUSCLE												
Number Examined:	43	0	0	25	0	- 16	0	0	20	0	1.	15
M-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
M-Neurofibrosarcoma	0	0	0	0	0	0	0	0	0	0	1	0
SKIN								·				
Number Examined:	43	8	6	25	7	17	7	3	20	10	9	15
B-Squamous Cell Papilloma	0	0	1	0	0	0	1	0	1	2	0	2
M-Squamous Cell Carcinoma	1	0	0	0	0	0	0	0	0	0	0	0
B-Keratoacanthoma	4	0	0	1	0	0	0	0	1	1	1	1
B-Fibroma	2	0	0	1	0	1	0	1	0	0	0	2
M-Neurofibrosarcoma	1	0	0	0	0	0	0	0	0	0	1	0
B-Lipoma	3	2	0	0	0	0	1	1	1	0	1	1
N-Malignant Fibrous Histiocytoma	0	0	0	0	1	1	0	0	0	0	0	0
SPINAL CORD ¹												
Number Examined:	43	0	0	25	0	17	Ö	0	20	0	0	15
SPLEEN												
Number Examined:	43	. 3	0	25	0	17	2	1	20	0	1	15
M-Hemangiosarcoma	0	1	0	0	0	0	0	0	0	0	0	0
N-Leiomyosarcoma	1	0	0	0	0	0	0	0	0	0	1	0
STERNUM ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
STOMACH												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
B-Squamous Cell Papilloma, Forestomach	1	0	0	0	0	0	0	0	1	0	0	0
M-Squamous Cell Carcinoma, Forestomach	· 0	0	0	0	0	0	0	0	0	0	0	1

Table 102. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Male Rats

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-1	016	Aroclo	or-1242	Aro	cior-1	254	Aro	clor-)	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	14	14	25	24	17	21	11	20	24	16	15
TESTIS												
Number Examined:	43	1	2	25	3	17	0	1	20	4	3	15
B-Adenoma, Interstitial Cell	2	0	0	1	0	0	0	1	1	2	2	0
THYMUS ¹						·						
Number Examined:	41	0	0	21	0	13	0	0	16	1	0	14
THYROID GLAND											-	
Number Examined:	43	14	14	25	24	17	21	11	20	24	16	15
B-Adenoma, Follicular Cell	0	1	1	0	2	2	6	2	1	2	2	2
M-Carcinoma, Follicular Cell	0	0	1	0	2	1	1	1	1	0	0	1
B-Adenoma, C-Cell	4	4	1	2	1	1	3	3	3	2	2	0
M-Carcinoma, C-Cell	0	0	0	0.	0	0	0	1	1	0	0	0
TONGUE ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
TRACHEA ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
URINARY BLADDER ¹												
Number Examined:	43	0	0	25	0	17	0	0	20	0	0	15
SYSTEMIC LESIONS												
Number Examined:	1	0	0	0	1	1	1	0	0	1	0	0
M-Histiocytic Sarcoma	1	0	0	0	0	0	0	0	0	0	0	0
M-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	1	0	0
M-Malignant Fibrous Histiocytoma	0	0	. 0	0	1	1	0	0	0	0	0	0
ZYMBALS GLAND ¹												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1

Table 102. Incidence Summary of Microscopic Observations (Neoplastic) at the 105-Week Termination for Male Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc.(ppm)	0	- 50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
ADRENAL GLAND ¹												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
AORTA ¹												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
BLOOD VESSEL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE												
Number Examined:	0	1	0	0	0	0	0	0	2	0	0	0
M-Osteosarcoma	0	0	0	0	0	0	0	0	0	0	1	0
BONE MARROW												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	1	1	0	1	0	0	2	1	0	0
BRAIN	·										-	
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
M-Astrocytoma, Malignant	0	0	1	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	1	0	0	0	0	0	1	1	0	0
THORACIC CAVITY								•				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM ¹											-	
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
COAGULATING GLAND			·				-					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ¹			-									
Number Examined:	. 3	4	2	2	0	4	3	1	4	1	2	3
DUODENUM												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	2	0	0	0
EPIDIDYMIS ¹								-	·			
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
ESOPHAGUS ¹												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
EYE	· · · · · · · · · · · · · · · · · · ·					<u>.</u>		·				÷
Number Examined:	3	3	1	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	1	0	0

Table 103. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (0-12 Months) for Core and Interim Subgroup Male Rats

1. No lesions present.

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Table 103. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (0-12 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	Aro	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	. 3	1	4	1	2	3
HARDERIAN GLAND												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	. 0	0	0	0	0	0	0	2	1	0	0
N-Neurofibrosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
HEART	5 <u></u>			يروري والتسميم معددة								
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0.	0	0	1	1	0	0
ILEUM ¹			A			.						
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
JEJUNUM												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	0	0
JOINT												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY			.				.				•	
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	1	0	0	0	0	0	2	1	0	0
LACRIMAL GLAND			•									
Number Examined:	3	4	2	2	0	5	2	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	1 .	0	0
LIVER												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
M-Hepatocellular Carcinoma	0	0	0	0	0	0	0	0	0	0	Ö	1
M-Leukemia/Lymphoma	2	0	1	1	0	1	1	0	2	1	0	0
LUNG			.									
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0.	1	0	0	0	0	0	2	1	0	1
N-Malignant Fibrous Histiocytoma	1	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-BRONCHIAL				• •								
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	1 :	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL		L	• • • • • • •		L	.		ليسييسها				
Number Examined:	1	1	1	1	0	0	0	0	2	1	0	1
N-Leukemia/Lymphoma	1	0	1	1	0	0	0	0	2	1	0	1

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	- 4	1	2	3
LYMPH NODE-MESENTERIC												
Number Examined:	3	4	3	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	2	0	1	1	0	0	1	0	2	1	0	0
LYMPH NODE-MANDIBULAR												
Number Examined:	0	1	0	1	0 -	1	0	0	2	1	0	0
N-Leukemia/J.ymphoma	0	0	0	1	0	0	0	0	2	1	0	0
LYMPH NODE-OTHER				-								
Number Examined:	2	1	0	0	0	1	0	0	2	0	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	2	0	0	0
MAMMARY GLAND				-								
Number Examined:	3	3	1	1	0	4	3	1	2	1	1	3
M-Adenocarcinoma	0	1	0	0	0	0	0	0	0	0	0	0
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES ¹									-			
Number Examined:	0	1.	0	0	0	0	0	0	1	0	0	0
OPTIC NERVE												
Number Examined:	3	4	1	2	0	5	3	1	3	0	1	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	0	0
ORAL MUCOSA												
Number Examined:	0	0	0	.0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	0	0
PARATHYROID ¹											· · · · · · · · · · · · · · · · · · ·	
Number Examined:	3	3	2	1	0	5	3	1	3	1	2	2
PENIS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND						· .	<u> </u>					
Number Examined:	3	4	2	2	0	5	2	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	Ó	0	0	0	0	0	2	1	0	0
PREPUTIAL GLAND						······						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 103. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (0-12 Months) for Core and Interim Subgroup Male Rats

Table 103. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (0-12 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	Aro	clor-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	5	3	1	4	1	2	3
PROSTATE												
Number Examined:	3.	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	2	0	0	0
RECTUM							-					
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
M-Leiomysarcoma	0	0	0	0	0	0	0	1	0	0	0	0
SALIVARY GLAND-SUBLINGUAL ¹												·
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
SALIVARY GLAND-SUBMAXILLA	RY	· 5.	2									
Number Examined:	3	£	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	1	0	0
SCIATIC NERVE ¹												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
SEMINAL VESICLE ¹												
Number Examined:	3	. 4	2	2	0	4	3	1	4	1	2	3
SKELETAL MUSCLE												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	1	0	0	0	0	0	0
M-Malignant Fibrous Histiocytoma	1	0	0	0	0	0	0	0	0	0	0	0
SKIN									•			
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
M-Fibrosarcoma	0	0	0	0	0	0	1	0	0	0	0	0
M-Neurofibrosarcoma	0	0	0	0	0	0	0	0	1	0	0	0
SPINAL CORD												
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	1	0	0	0	0	0	0
SPLEEN												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	1	0	1	0	0	0	1	0	2	1	0	0
STERNUM ¹						-						
Number Examined:	3	4	2	2	0	4	3	1	4	1	2	3

1. No lesions present.

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Test Substance	Control	trol Aroclor-1016 Aroclor-1242				Aro	clor-1	254	Aro	clor-1	260	
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	4	2	2	0	.5	3	1	4	1	2	3
STOMACH								-				
Number Examined:	. 3	4	2	2	0	4	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	0	0
TESTIS ¹								:				
Number Examined:	3	4	1	2	0	5	3	1	4	1	2	3
THYMUS												
Number Examined:	3	4	2	2	0	5	3	0	4	1	1	3
N-Leukemia/Lymphoma	0	0	1	1	0	0	0	0	2	1	0	0
THYROID GLAND												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	1	0	0
TONGUE ¹												
Number Examined:	3	4	2	2	0	- 5	3	1	4	1	2	3
TRACHEA ¹												
Number Examined:	3	4	2	2	0	5	3	1	4	1	2	3
URINARY BLADDER ¹												
Number Examined:	. 3	4	2	2	0	5	3	1	4	1	2	3
SYSTEMIC LESIONS	· ·				-							
Number Examined:	3	0	1	1	0	1	1	0	2	1	0	1
M-Leukemia/Lymphoma	2	0	1	1	0	1	: 1	0	2	1	0	1
M-Malignant Fibrous Histiocytoma	1	0	0	0	Ó	0	0	0	0	0	0	0
ZYMBALS GLAND		L		L	L	I		L	!		L	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 103. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (0-12 Months) for Core and Interim Subgroup Male Rats

idence Summary of Microscopic Observations (Neoplastic) at the

Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-J	254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
ADRENAL GLAND								••••••••••••••••••••••••••••••••••••••				
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
B-Pheochromocytoma, Benign	0	0	1	1	1	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	1	1	0	0	0	1	0
AORTA ¹												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
BLOOD VESSEL		-										
Number Examined:	0	0	C .	0	0	0	0	0	0	0	0	·0
BONE								- 14 - L				
Number Examined:	0	1	0	0	2	0	Ð	0	0	0	2	0
M-Chordoma, Malignant	0	0	0	0	1	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	0	0
BONE MARROW									•			
Number Examined:	14	10	11	8	8	- 1 0	8	16	5	10	12	. 13
N-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Leukemia/Lymphoma	0	0	0	1	1	0	0	0	0	1	1	0
BRAIN											· · ·	
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
M-Astrocytoma, Malignant	1	1	0	1	0	0	0	0	0	0	0	0
M-Oligodendroglioma, Malignant	0	0	0	0	0	0	0	0	0	0	0	1
M-Schwannoma, Malignant	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	1	1	0	0	0	0	0	0
THORACIC CAVITY					· · ·							
Number Examined:	0	1 .	0	0	0 ·	0	0	0	0	0	0	1
N-Fibrosarcoma, Mediastinum	0	0	0	0	0	0	0	- 0	0	0	0	1
CECUM ¹				-		<u></u>						
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
COAGULATING GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ¹	······································											
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arock	or-1242	Аго	clor-J	254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
DUODENUM ¹											· ·	
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
EPIDIDYMIS						······						
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	1	0	0
ESOPHAGUS ¹												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
EYE	10											
Number Examined:	. 14	10	11	8	8	10	8	16	5	10	12	13
M-Schwannoma, Malignant	0	0	1.	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND										·		
Number Examined:	14	10	11	7	8	10	8	16	5	10	12	13
N-Leukemia/Lymphoma	0	0	0	1	0	0	1	0	0.	- 1	1	0
N-Squamous Cell Carcinoma	0	1	0	0	0	0	0	0	0	0	0	0
HEART	· ·											
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
M-Schwannoma Malignant, Subendocardial	0	0	0	0	0	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	0	1	1	0	0	1	1	0
ILEUM ¹						· · · ·						
Number Examined:	14	10	11	8	8	10	8	15	5	10	12	13
JEJUNUM ¹	······											
Number Examined:	14	10	11	8	8	10	. 8	16	5	10	12	13
JOINT	•											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY				-* 							·	
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	1	1	0	0	1	1	0
LACRIMAL GLAND			.,									
Number Examined:	14	10	11	8	8	10	8	15	5	9	12	11
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	1	1	0

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	Aro	clor-1	1016	Arock	or-1242	Aro	clor-1	254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
LIVER												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
B-Hepatocellular Adenoma	0	0	0	1	1 -	0	0	0	0	0	0	0
M-Hepatocellular Carcinoma	0	0	0	0	1	0	0	0	0	0.	0	0
N-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
M-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Leiomyosarcoma	0	0	0	1	0	0	0	0.	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	1	1	1	1	1	0	1	1	0
LUNG												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Chordoma, Malignant	0	0	0	0	1	0	0	0	0	0	0	0
N-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	° 0	0	0	1	0	1	1	1	0.	1	1	0
LYMPH NODE-BRONCHIAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL	······											
Number Examined:	0	1	0	1	1	0	1	3	1	1	1	0
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	- 1	0	0	0	0
N-Leiomyosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	1	1	0	1	1	0
LYMPH NODE-MESENTERIC						·					A	
Number Examined:	12	10	11	8	8	10	8	16	5	10	12	13
B-Hemangioma	0	0	0	0	0	0	1	0	0	0	0	0
N-Leiomyosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	1	1	0	. 0 .	1	1	0
LYMPH NODE-MANDIBULAR	,											
Number Examined:	.0	2	0	0	1	0	1	1	1	1	1	2
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	1	1	0
LYMPH NODE-OTHER				•••••••••••••••••••••••••••••••••••••••								
Number Examined:	0	1	0	2	0	0	1	2	Ö	1	0	2
N-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Leiomyosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	-1	0	1	0	0

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

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1. No lesions present.

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Test Substance	Control	Aro	clor-l	016	Arocl	or-1242	Аго	clor-J	254	Аго	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
MAMMARY GLAND												
Number Examined:	14	10	11	8	8	10	8	16	5	10	10	13
B-Fibroma	0	0	0	0	0	1	0	0	0	0	0	0
B-Fibroadenoma	0	0	0	0	0	0	0	0	0	0	0	1
MESENTERY												
Number Examined:	0	0	0	1	0	1	1	2	0	1	1	0
M-Leiomyosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	Ç	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	C	0	1	1	0
NOSE/TURBINATES												
Number Examined:	0	1	0	0	0	0	0	0	0	0	0	1
M-Squamous Cell Carcinoma	0	1	-0	0	0	0	0	0	0	0	0	1
OPTIC NERVE									-			
Number Examined:	12	10	11	8	7	9	7	16	5	10	11	12
N-Schwannoma, Malignant, Cranial Nerve	1	0	0	0	0	0	0	0	0	0	0	0
ORAL MUCOSA ¹					h							
Number Examined:	0	0	· 0 ·	0	1 -	1	0	0	0	0	0	0
PANCREAS	•											
Number Examined:	14	10	11	. 8	8	10	8	16	5	10	12	12
B-Adenoma, Islet Cell	1	0	0	0	0	0	0	0	0	0	0	0
N-Leiomyosarcoma	0	0	0	1	0	Ó	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0.0	0	0	1	0	1	1	0
PARATHYROID												
Number Examined:	14	9	11	8	6	9	8	14	5	10	11	9
B-Adenoma	1	0	0	0	0	0	0	0	0	0	0	0
PENIS ¹												
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	0
PITUITARY GLAND												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	12
B-Adenoma, Pars Distalis	10	5	3	5	5	6	5	10	3	9	8	9

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

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Test Substance	Control Aroclor-1016 Aroclor-1242 Aroclor-12					254	Aro	clor-	1260			
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
PITUITARY GLAND												
N-Leukemia/Lymphoma	0	0	0	0	1	1	1	0	0	1	1	0
N-Schwannoma, Malignant, Cranial Nerve	1	0	0	0	0	0	0	0	0	0	0	0
PREPUTIAL GLAND ¹				L							hereiter	·
Number Examined:	0	0	0	1	1	0	0	0	0	2	0	1
PROSTATE	· · · ·											
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
M-Carcinoma	0	0	0	0	0	0	0.	0	0	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	1	1	0
RECTUM ¹				-								
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
SALIVARY GLAND-SUBLINGUA	\mathbf{L}^{1}											
Number Examined:	14	9	11	8	8	10	7	16	5	10	12	13
SALIVARY GLAND-SUBMAXILI	ARY											
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	0	1	0
SCIATIC NERVE ¹												
Number Examined:	14	9	11	8	7	10	8	16	5	10	12	12
SEMINAL VESICLE		, .										
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	1	1	0
SKELETAL MUSCLE		· · · · · ·										
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Leukemia/Lymphoma	0	0	0	0	1	• 0	1	0	0	0	1	0
SKIN												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
B-Basal Cell Adenoma	0	0	1	0	0	0	0	0	0	0	0	0
B-Keratoacanthoma	0	1	0	0	0	0	0	0	0	0	0	0
B-Fibroma	0	0	1	0	0	0	0	0	0	0	0	0
M-Fibrosarcoma	0	0	0	0	0	0	1	0	0	0	0	1
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	1	0	0	1	0
N-Schwannoma, Malignant, Cranial Nerve	1	0	0	0	0	0	0	0	0	0	0	0

Test Substance	Control	Aro	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	14	10	11	8	8	10	8	16	5	10	12	13
SPINAL CORD												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	1	0
SPLEEN	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Leiomyosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	1	1	1	1	0	0	1	1	0
STERNUM					.							
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
STOMACH												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
B-Squamous Cell Papilloma, Forestomach	0	0	0	0	1	1	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	1	0	0	0	0	0
TESTIS ¹												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
THYMUS								•				
Number Examined:	14	10	11	7	8	9	8	16	5	9	12	13
N-Leukemia/Lymphoma	0	0	0	0	0	- 0	1	0	0	1	1	0
THYROID GLAND												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
B-Adenoma, Follicular Cell	0	0	0	0	0	0	0	1	0	1	0	0
M-Carcinoma, Follicular Cell	0	0	0	0	0	0	0	1	0	0	0	0
B-Adenoma, C-Cell	0	0	0	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	0	1	0
TONGUE ¹												
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13
TRACHEA ¹												
Number Examined:	14	10	11	8	8	10	8	16	.5	10	12	13

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

Test Substance	Control	Aro	clor-]	1016	Arocl	or-1242	Аго	clor-l	1254	Aro	clor-	1260		
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100		
(N)	14	10	11	8	8	10	8	16	5	10	12	13		
URINARY BLADDER		· · ·	•			·		•						
Number Examined:	14	10	11	8	8	10	8	16	5	10	12	13		
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	0	- 1	0		
SYSTEMIC LESIONS														
Number Examined:	0	0	0	1	1	1	1	2	0	1	1	0		
M-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	0	0		
M-Leukemia/Lymphoma	0	0	0	1	1	1	1	1	0	1	1	0		
ZYMBALS GLAND				-					-					
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	0		
B-Adenoma	0	0	0	0	0	0	0	0	0	0	1	0		

Table 104. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (12-18 Months) for Core and Interim Subgroup Male Rats

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Test Substance	Control	ol Aroclor-1016 Aroclor-1242 Aroclor-1254 A				Aro	clor-	260				
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
ADRENAL GLAND				•				•••••				
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Adenoma, Cortex	2	0	0	1	0	0	0	. 1	1	0	0	1
B-Pheochromocytoma, Benign	2	1	1	1	0	1	2	0	0	0	3	4
M-Pheochromocytoma, Malignant	0	0	1	0	0	0	0	0	0	0	0	0
N-Fibrosarcoma	0	0	0	0	0	0	1	0	0	0	0	0
N-Leukemia/Lymphoma	1	0	1	0	0	0	0	0	0	0	0	0
AORTA ¹										_		
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
BLOOD VESSEL ¹												
Number Examined:	- 3	1	3	1	2	2	6	2	2	2	4	1
BONE	· · ·	·										
Number Examined:	14	5	5	3	3	1	5	3	2	3	5	1
M-Osteosarcoma	0	0	0	0	0	0	0	0	1	0	0	0
BONE MARROW												
Number Examined:	43	23	27	17	19	21	20	25	22	17	21	22
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
BRAIN												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
M-Astrocytoma, Malignant	0	2	0	0	1	1	0	0	0	1	0	0
N-Carcinoma, Pituitary Gland	0	0	0	0	0	0	0	0	1	0	0	0
N-Leukemia/Lymphoma	1	0	1	0	0	0	0	0	0	0	0	0
THORACIC CAVITY												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CECUM												
Number Examined:	43	23	27	17	19	- 21	20	25	23	17	21	22
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
COAGULATING GLAND ¹												
Number Examined:	1	0	0	0	0	1	0	1	1	1	0	0

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at the Unscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

Test Substance	Control	ol Aroclor-1016			Arock	or-1242	Aro	clor-1	254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
COLON	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
N-Mesothelioma, Malignant	0	0	0	0	0	0	0	0	1	0	0	0
DUODENUM												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
N-Mesothelioma, Malignant	0	0	0	0	0	0	0	0	1	0	0	0
EPIDIDYMIS				-								
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
M-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	- 1	. 0	.0	0	0	0	. 0	0	0	0	0	0
ESOPHAGUS ¹												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	21
EYE												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Schwannoma, Benign, Iris	0	0	0	0	0	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
HEART												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
M-Fibrosarcoma	0	0	0	0	0	0	1	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
ILEUM												
Number Examined:	43	23	27	17	19	21	20	25	23	16	21	22
N-Mesothelioma, Malignant	0	0	0	0	0	0	0	0	1	0	0	0
JEJUNUM												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
M-Adenocarcinoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Mesothelioma	0	0	0	0	0	- 0	0	0	1	0	0	0

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	Aro	clor-1	1254	Аго	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
JOINT					-							
Number Examined:	0.	0	0	0	0	0	0	0	0	0	0	0
KIDNEY												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	0	0	0	0	1
M-Liposarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	1	0	1	0	0	0	0	0	0	0	0	0
LACRIMAL GLAND				×								
Number Examined:	43	22	27	16	19	20	20	23	23	17	21	22
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
LIVER												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Hepatocellular Adenoma	1	0	0	1	0	1	2	1	1	2	2	3
B-Hepatocellular Adenoma, Multiple	0	0	0	0	0	0	0	0	2	0	1	1
M-Hepatocellular Carcinoma	1	0	0	1	0	0	1	2	0	0	0	0
M-Hepatocellular Carcinoma, Multiple	0	0	0	0	0	0	0	0	0	0	0	1
B-Cholangioma	0	0	0	0	0	1	0	0	0	0	0	0
B-Hepatocholangioma	0	0	0	0	0	0	0	0	0	0	0	1
N-Histiocytic Sarcoma	0	0	1	.0	0	0	0	1	0	0	0	2
N-Leukemia/Lymphoma	1	0	1	0	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
LUNG		1										
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Adenoma, Bronchioalveolar	1	0	0	0	0	0	0	0	0	0	0	0
M-Hibernoma, Malignant, Mediastinum	0	0	0	0	0	0	0	0	1	0	0	0
N-Fibrosarcoma	0	0	0	0	0	0	0	0	1	0	1	0
N-Fibrosarcoma, Mediastinum	0	0	0	0	0	0	1	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	1	0	0	0	2

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	Aro	clor-1	1254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
LUNG									•••••••		-	
N-Leukemia/Lymphoma	1.	0	1	0	0	0	0	0	0	0	0	0
N-Liposarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	Ö	1	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
LYMPH NODE-BRONCHIAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	2	1	3	0	0	0	0	1	1	0	0	2
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	1	0	0	0	2
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	0	0	0	0	0	0	0	0	1	0	0	0
LYMPH NODE-MESENTERIC												
Number Examined:	43	22	27	17	19	21	20	25	23	16	20	22
B-Hemangioma	0	0	1	0	0	0	0	0	0	0	0	1
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	1	0	1	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR												
Number Examined:	3	1	2	2	1	0	1	0	2	2	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER										•		
Number Examined:	4	1	3	0	1	1	1	1	0	0	2	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	0	0	0	0	0
MAMMARY GLAND												
Number Examined:	38	22	25	15	18	21	20	23	22	14	19	19
B-Adenoma	0	1	0	0	0	1	0	0	0	0	0	0
M-Adenocarcinoma	0	0	0	0	1	0	0	0	0	0	0	0
B-Fibroma	0	0	0	0	1	0	0	0	0	0	0	0
B-Fibroadenoma	0	0	0	2	0	0	0	0	1	0	0	0

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

1. No lesions present.

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No. of Lot of Lo
Test Substance	Control	Aro	clor-1	016	Aroch	or-1242	Аго	clor-1	254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
MESENTERY	· · ·		• • • • • • • • • • • • • • • • • • •									
Number Examined:	5	1	2	1	2	1	1	1	2	0	0	4
M-Fibrosarcoma	0	1	0	0	0	0	0	0	0	0	0	1
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	0	0	0	0	2
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	- 1	0	0	0
NOSE/TURBINATES												
Number Examined.	0	0	0	0	1	0	0	0	1	2	0	0
M-Carcinoma	0	0	0	0	0	0	0	0	0	1	0	0
M-Squamous Cell Carcinoma	0	0	. 0	0	0	0	0	0	1	0	0	0
N-Squamous Cell Carcinoma	0	0	0	0	1	0	0	0	0	1	0	0
OPTIC NERVE ¹											-	
Number Examined:	41	21	25	16	18	18	19	25	23	16	21	21
ORAL MUCOSA												
Number Examined:	0	0	0	0	1	0	0	0	0	1	0	0
M-Squamous Cell Carcinoma	0	0	0	0	1	0	0	0	0	1	0	0
PANCREAS												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Adenoma, Islet Cell	4	0	1	1	0	0	0	2	0	1	2	3
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	. 1 .	0	0	0	0	0	0	0	1	0	0	0
PARATHYROID												
Number Examined:	41	22	26	17	18	19	20	20	18	16	17	22
B-Adenoma	0	0	0	0	1	0	0	1	2	0	0	0
PENIS					·							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND	•											
Number Examined:	43	23	27	16	19	21	19	25	23	17	21	22
B-Adenoma, Pars Distalis	26	13	19	10	12	12	12	15	12	8	12	12
M-Carcinoma	0	0	0	0	0	0	0	0	1	0	0	0
N-Leukemia/Lymphoma	1	0	1	0	0	0	0	0	0	0	0	0
PREPUTIAL GLAND										<u>.</u>		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-1	1254	Arc	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
PROSTATE	••••••				·:							
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
M-Carcinoma	2	2	1	2	2	0	2	2	0	1	1	1
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	. 0	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
RECTUM					·							
Number Examined:	43	23	27	17	19	20	20	25	23	17	21	22
M-Leiomyosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLINGUA	L ¹		÷.,					-				
Number Examined:	42	22	27	17	19	20	19	23	23	17	21	21
SALIVARY GLAND-SUBMAXILI	LARY											
Number Examined:	43	22	27.	17	19	21	20	25	23	17	21	22
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE ¹	· · · · · · · · · · · · · · · · · · ·				••••••							
Number Examined:	42	22	26	15	19	21	20	20	23	17	20	21
SEMINAL VESICLE			:									
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
N-Malignant Fibrous	0	0	1	0	0	0	0	0	0	0	0	0
						<u> </u>						
SKELETAL MUSCLE	42			17	10		20	24		1.77	20	
Number Examined:	43	23	21		19	21	20	24	23	17	20	22
N-Histiocytic Sarcoma	0	0	0	0	0	0	0		0	0	0	
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
Histiocytoma	U	0	1 ·	0	0	0	0	U	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
SKIN												ų.
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Squamous Cell Papilloma	Ó	1	0	0	0	0	0	0	0	0	1	0
M-Squamous Cell Carcinoma	0	0	1	0	0	0	0	1	0	0	0	0
B-Basal Cell Adenoma	0	0	0	0	0	0	0	0	0	0	1	0

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

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Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-	1260
Conc.(ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	43	23	27	17	19	21	20	25	23	17	21	22
SKIN												
B-Keratoacanthoma	1	1	0	0	0	0	0	0	0	3	0	0
B-Sebaceous Gland Adenoma	1	0	0	0	0	0	0	0	0	0	0	0
B-Fibroma	1	1	1	0	1	0	1	1	-1	1	0	0
M-Fibrosarcoma	0	0	0	0	0	0	0	0	2	0	1	0
B-Fibrolipoma	0	0	0	1	<u>ن</u>	0	0	0	0	0	0	0
M-Neurofibrosarcoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Carcinoma, Nasal Mucosa	0	0	0	0	U	0	0	0	0	1	0	0
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	0	0	0	0	0
N-Squamous Cell Carcinoma, Nasal Mucosa	0	0	0	0	0	0	0	0	1	0	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD ¹			· · · ·								·	
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
SPLEEN												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Hemangioma	0	0	0	0	0	0	0	1	0	0	0	0
M-Hemangiosarcoma	0	0	0	0	0.	0	0	0	0	0	1	0
N-Histiocytic Sarcoma	0	0	1	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	2	0	1	0	0	0	0	0	0	0	0	0
N-Mesothelioma, Malignant	1	0	0	0	0	0	0	0	1	0	0	0
STERNUM ¹												
Number Examined:	43	23	27	17	19	21	20	25	22	16	21	22
STOMACH												
Number Examined:	43	23	27	17	19	21	20	25	23	17	21	22
B-Squamous Cell Papilloma, Forestomach	1	3	1	2	1	1	0	2	0	1	1	3
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Mesothelioma	1	0	0	0	0	0	0	0	1	0	0	0

Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

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Table 105. Incidence Summary of Microscopic Observations (Neoplastic) at theUnscheduled Terminations (18-24 Months) for Core Subgroup Male Rats

1. No lesions present.

M-Histocytic Sarcoma

M-Malignant Fibrous

Histiocytoma ZYMBALS GLAND

M-Carcinoma

M-Leukemia/Lymphoma

Number Examined:

Test Substance	Control	Aro	clor-	1016	Arocle	or-1242	Ar	oclor-1	1254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
ADRENAL GLAND			•	d	L	A			<u>1</u>			·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
AORTA	.		·	· · · · ·		<u> </u>						<u> </u>
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE	•					ليستعد ويوجل				ii		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BONE MARROW	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1									·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN ¹				·		.			المستعملية وال			
Number Examined:	6	6	6	6	6	6	6	6	6	ő	6	6
CECUM	L	L				••••••			.	استيب يو پرها	•	·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND			.	.								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON		•	•		يشيهي يستجعا	.		<u></u>	L	· · · · ·		
Number Examined:	0	0	0	0	0	0	0	0	0	Ö	0	0
DUODENUM	L	L		L	·	<u></u>						·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS						L	. '					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
EYE	<u>L</u>	L							<u> </u>			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND	L			-	· · · ·	ي بيني من الم			L			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
HEART	L	<u>.</u>						L	L			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ILEUM	<u>.</u>	1										
Number Examined:	0	0	0	0	0	0	0	0.	0	0	0	0
JEJUNUM	L								L			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY		.				1						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LACRIMAL GLAND	L	1		.			·	<u>.</u>	L			·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LIVER ¹	<u> </u>		•••••						.		il. Ist	
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
LUNG	•		•••••									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 106. Incidence Summary of Microscopic Observations (Neoplastic) at the 13-WeekInterim Termination for Female Rats

1. No lesions present.

医额头上垂 计公司公司 诺尔

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 106. Incidence Summary of Microscopic Observations (Neoplastic) at the 13-WeekInterim Termination for Female Rats

Conc. (ppm) 0 50 100 25 50 100 25 50 100 (N) 6 <th>Test Substance</th> <th>Control</th> <th>Aro</th> <th>clor-</th> <th>1016</th> <th>Arocle</th> <th>or-1242</th> <th>Ar</th> <th>oclor-1</th> <th>1254</th> <th>Arc</th> <th>xlor-1</th> <th>260</th>	Test Substance	Control	Aro	clor-	1016	Arocle	or-1242	Ar	oclor-1	1254	Arc	xlor-1	260
(N) 6 0	Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
LYMPH NODE-MEDIASTINAL Number Examined: 0 <td>(N)</td> <td>6</td>	(N)	6	6	6	6	6	6	6	6	6	6	6	6
Number Examined: 0	LYMPH NODE-MEDIASTINAL								i.			· · · · · · · · · · · · · · · · · · ·	
LYMPH NODE-MESENTERIC 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	LYMPH NODE-MESENTERIC		<u>.</u>		4					·		<u></u>	
LYMPH NODE-MANDIBULAR 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	LYMPH NODE-MANDIBULAR	A	L	••••••			••••••••••••••••••••••••••••••••••••••						
LYMPH NODE-OTHER 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	LYMPH NODE-OTHER			A -1111-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-									
MAMMARY GLAND ¹ Number Examined: 6 0 <t< td=""><td>Number Examined:</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></t<>	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 6 0	MAMMARY GLAND ¹	.	L	1					· ·			••••••	L
MESENTERY Number Examined: 0 <td>Number Examined:</td> <td>6</td>	Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
Number Examined: 0	MESENTERY			•		<u> </u>	•		L			4	.
NOSE/TURBINATES Number Examined: 0 <th< td=""><td>Number Examined:</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></th<>	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	NOSE/TURBINATES				1	<u>.</u>	I	أستعجبهم	L	L			l
OPTIC NERVE Number Examined: 0 </td <td>Number Examined:</td> <td>0</td> <td>. 0</td> <td>0</td>	Number Examined:	0	0	0	0	0	0	0	0	0	0	. 0	0
Number Examined: 0	OPTIC NERVE	1		1	ليتحجب							L	L
ORAL MUCOSA Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	ORAL MUCOSA			L.,	1	Lawrence	L						
OVARY Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	OVARY			I			L.,			<u>ا</u>		L	
OVIDUCT Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	OVIDUCT		L	L	I					L		I	
PANCREAS Number Examined: 0 <td>Number Examined:</td> <td>0</td>	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	PANCREAS	L <u></u> .		1	لسبستنا		1			L	L	I	
PARATHYROID Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	PARATHYROID		L	L	1		L	<u> </u>	<u> </u>	L			L
PITUITARY GLAND Number Examined: 0	Number Examined:	Ó	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	PITUITARY GLAND	I		1	.	L	I		<u></u>	L		L	· · · · · ·
RECTUM Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	Ó	0	0
Number Examined: 0	RECTUM	· · · · · · · · · · · · · · · · · · ·	L	<u> </u>			L		<u></u>			L	
SALIVARY GLAND-SUBLINGUAL Number Examined: 0<	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	SALIVARY GLAND-SUBLINGUAL		L	L	L		L			L	L	نى يېشى يې	L
SALIVARY GLAND-SUBMAXILLARY Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
Number Examined: 0	SALIVARY GLAND-SUBMAXILLAR	Y	L	<u> </u>			L.,						L
	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE	SCIATIC NERVE		<u> </u>	<u>ـــــ</u>	.		L		-	إ	Ļ	L	
Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE	SKELETAL MUSCLE		L	L	<u> </u>	L	l	L					
Number Examined: 0	Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

1. No lesions present.

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and the second

Table 106. Incidence Summary of Microscopic Observations (Neoplastic) at the 13-Week Interim Termination for Female Rats

Test Substance	Control	Aro	clor-	1016	Aroclo	r-1242	Ar	ocior-1	254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
SKIN										· . · ·		
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD												
Number Examined	0	0	0	0	0	0	0	0	0	0	-0	0
SPLEEN	· .											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STERNUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	-0
STOMACH												
Number Examined	0	0	0	0	0 0	0	0	0	0	0	0	0
THYMUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Number Examined	0	0	0	0	0	0	0	0	Û	0	0	0
TONGUE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TRACHEA												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
URETHRA						,						
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
UTERUS												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA											÷	
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
SYSTEMIC LESIONS												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBAL'S GLAND				:								
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0

1. No lesions present.

· 1997年前,1996年前,1997年

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 107. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-Week **Interim Termination for Female Rats**

Test Substance	Control	Are	oclor-	1016	Arocle	or-1242	Ar	oclor-	1254	Are	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
ADRENAL GLAND				•		.						
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
AORTA			,	•		•						
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
BONE						•						
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
BONE MARROW												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
BRAIN ¹												
Number Examined	6	6	6	6	6	6	6	6	6	6	6	6
CECUM												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND		1.1	-									
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
COLON			-		······							
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
DUODENUM											·	_
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS						· .						
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
EYE												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
HEART						······································					-	
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
ILEUM					1.							
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
KIDNEY ¹											<u> </u>	
Number Examined	0	0	0	1	0	0	0	0	0	0	0	0
LACRIMAL GLAND												
Number Examined	0	0	0	0	0	0	0	0	0	0	0	0
LIVER ¹												
Number Examined	6	6	6	6	6	6	6	6	6	6	6	6

Test Substance	Control	Aro	clor-	1016	Arocle	or-1242	Ar	oclor-1	1254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	- 6	6	6
LUNG	· .					ð						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL			•	••••••••								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC	· ·											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR ¹		·										
Number Examined:	1	1	0	0	0	0	1	0	0	0	0	0
LYMPH NODE-OTHER	A				•••	.	•					
Number Examined:	0	0	0	0	-0	0	0	0	0	0	0	0
MAMMARY GLAND ¹				•				L	.			
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
MESENTERY			:		<u></u>							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES											L	
Number Examined:	- 0	0	0	0	0	0	0	0	0	0	0	. 0
OPTIC NERVE				1					••••••			
Number Examined:	0	0	0	0	0	0	0	-0	0	0	0	0
ORAL MUCOSA				dan di di second		4			استر کا			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ¹			1									
Number Examined:	6	0	0	6	0	6	0	0	6	0	0	6
OVIDUCT	••••••••••••••••••••••••••••••••••••••					<u>.</u>	•		•			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS			L	A								
Number Examined:	0	0	0	. 0	0	0	0	0	0	0	0	0
PARATHYROID			1	-		.	-					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND				.		.					i	
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
RECTUM			L.,	1		.						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLINGUAL	·	• •				•	•	••••••		÷		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBMAXILLA	RY	·										ę.,
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 107. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-Week Interim Termination for Female Rats

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 $\mathcal{S}_{1}(\gamma) \approx (\mathcal{S}_{1}(4), -p) \circ \mathcal{S}_{2}^{1} \circ \mathcal{D}_{1}^{2}$

Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 107. Incidence Summary of Microscopic Observations (Neoplastic) at the 26-WeekInterim Termination for Female Rats

Test Substance	Control	Aro	clor-	1016	Aroclo	r-1242	Ā	oclor-	1254	Arc	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
SCIATIC NERVE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE										•		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKIN												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD									2			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SPLEEN												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STERNUM												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
STOMACH												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYMUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND	i											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TONGUE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TRACHEA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URETHRA	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
UTERUS				-					<u></u>			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA ¹	<u></u>					••••••••••						
Number Examined:	6	0	0	6	0	6	0	0	6	0	0	6
SYSTEMIC LESIONS	-					•			•			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBAL'S GLAND									.			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

 Table 108. Incidence Summary of Microscopic Observations (Neoplastic) at the 39-Week

 Interim Termination for Female Rats

1. No lesions present.

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Test Substance	Control	Ar	oclor-1	016	Aroclo	or-1242	Ar	oclor-12	254	Ar	oclor-12	:60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
LACRIMAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LIVER ¹												
Number Examined:	6	6	6	6	- 6	6	6	6	6	6	6	6
LUNG												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIAST	INAL											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTE	ERIC		:									
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBU	JLAR ¹											
Number Examined:	0	1	0	0	0	0	0	0	0	0	1	0
LYMPH NODE-OTHER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND	· .		•						A			•
Number Examined:	6	6	6	6	6	6	6	6	6	6	6	6
B-Adenoma	0	0	1	0	0	0	0	0	0	0	0	0
MESENTERY												
Number Examined:	0	0	0	0	0	0	0	0	-0	0	0	0
NOSE/TURBINATES												·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE				A								A
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ¹												
Number Examined:	0	0	0	0	0	0	1	0	0	0	0	0
OVIDUCT									•			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
PARATHYROID												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

 Table 108. Incidence Summary of Microscopic Observations (Neoplastic) at the 39-Week

 Interim Termination for Female Rats

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Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Ar	oclor-12	54	Are	oclor-12	60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	6	6	6	6	6	6	6
PITUITARY GLAND ¹												
Number Examined:	1	0	0	1	1	0	0	0	0	0	.0	0
RECTUM												
Number Examined:	0	0	0	: 0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBI	INGUAL											
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUB	MAXILLA	RY										
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
SKIN								· · · ·				
Number Examined:	0	0	0	0	0	1	0	0	0	0	0	0
M-Fibrosarcoma	0	0	0	0	0	1	0	0	0	0	0	0
SPINAL CORD												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	Ø
SPLEEN ¹												
Number Examined:	0	0	0	0	0	0	1	0	0	0	0	0
STERNUM					· · · ·					-		
Number Examined:	0	0	0	0	0	0.	0	0	0	0	0	0
STOMACH												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYMUS				L								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Number Examined:	0	0	0	Ó	0	0	0	0	0	0	0	0
TONGUE			•							,		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
TRACHEA									-	·		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URETHRA			.							kaan tirataan tarat gi		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 108. Incidence Summary of Microscopic Observations (Neoplastic) at the 39-WeekInterim Termination for Female Rats

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-12	254	Аг	oclor-12	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	. 6	6	6	6	6	6	6
URINARY BLADDER									-			
Number Examined:	0	0	-0	0	0	0	0	0	0	0	0	0
UTERUS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
VAGINA				. <						: [.] .		
Number Examined:	0	0	0	0	} 0	0	0	0	0	0	0	0
SYSTEMIC LESIONS			•		ζ					j.		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 108. Incidence Summary of Microscopic Observations (Neoplastic) at the 39-Week Interim Termination for Female Rats

Test Substance	Control	Ar	oclor-1()16	Aroclo	r-1242	Ar	oclor-1	254	Ar	oclor-12	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	.5	6	6	5	6	5	6
ADRENAL GLAND			· · · · · · · · · · · · · · · · · · ·									
Number Examined:	6	0	• 0	6	· 0	5	0	0	5	0	1	6
B-Adenoma, Cortex	0	0	0	0	0	1	0	0	0	0	0	0
AORTA ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
BONE ¹												
Number Examined:	6	0	3	6	0	5	0	0	5	0	0	6
BONE MARROW ¹												
Number Examined:	6	0	0	ť	0	5	0	0	5	0	0	6
BRAIN ¹												
Number Examined:	6	6	6	6	6	5	6	6	5	6	5	6
CECUM ¹					·							
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
CLITORAL GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
DUODENUM ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
ESOPHAGUS ¹										·		
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
EYE ¹												
Number Examined:	6	0	· 0 ·	6	0	5	0	0	5	0	0	6
HARDERIAN GLAND ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
HEART ¹			11.1									
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
ILEUM ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
JEJUNUM ¹								· · ·				
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
KIDNEY ¹												
Number Examined:	6	1	1	6	0	5	0	0	5	0	0	6

Table 109. Incidence Summary of Microscopic Observations (Neoplastic) at the 52-Week Interim Termination for Female Rats

1. No lesions present.

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Test Substance	Control	Ar	oclor-1	016	Aroclo	r-1242	Ar	oclor-1	254	Ar	oclor-12	:60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	- 5	6
LACRIMAL GLAND ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
LIVER ¹												
Number Examined:	6	6	6	6	6	5	6	6	5	6	5	6
LUNG ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
LYMPH NODE-MEDIAST	INAL		· ·				1	····	•			
Number Examined:	0	0	0	0	0	0	0	0.0	0	0	0	0
LYMPH NODE-MESENTI	ERIC ¹							· .				
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
LYMPH NODE-MANDIB	ULAR ¹											
Number Examined:	0	0	0	0	- 0	0	0	0	0	1	0	0
LYMPH NODE-OTHER										· · · · · · · · · · · · · · · · · · ·		-
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND												
Number Examined:	6	6	6	6	6	5	6	6	5	6	5	6
M-Adenocarcinoma	0	1	0	0	0	0	0	0	0	0	0	0
B-Fibroadenoma	0	0	1	0	- 0	0	0	1	0	2	0	0
MESENTERY												
Number Examined:	0	0	-0	0	0	0	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
OVIDUCT ¹	ž ⁱ	·						<u> </u>				
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
PANCREAS ¹						2.		·				
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6

Table 109. Incidence Summary of Microscopic Observations (Neoplastic) at the 52-Week **Interim Termination for Female Rats**

Test Substance	Control	Ar	oclor-1()16	Aroclo	r-1242	Ar	oclor-12	254	Ar	oclor-12	.60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	5	6
PARATHYROID ¹												
Number Examined:	6	0	· 0	5	0	4	0	0	4	0	0	6
PITUITARY GLAND												
Number Examined:	6	3	2	6	- 1	5	0	1	5	0	0	6
B-Adenoma, Pars Distalis	2	2	1	0	1	0	0	0	0	0	0	0
RECTUM ¹	· · · · · · ·											
Number Examined:	6	0	0	5	C	5	0	Û,	5	0	0	6
SALIVARY GLAND-SUBI	LINGUAL	,1							1			
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SALIVARY GLAND-SUB	MAXILLA	RY ¹										
Number Examined:	6	0	0	6	0	- 5	0	0	5	0	0	6
SCIATIC NERVE ¹	· .											
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SKELETAL MUSCLE ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SKIN ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SPINAL CORD ¹											-	
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SPLEEN ¹					,				·			
Number Examined:	- 6	0	0	6	0	5	0	0	5	0	0.	6
STERNUM ¹												-
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
STOMACH ¹				-								
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
THYMUS ¹					-							
Number Examined:	5	0	0	5	0	3	0	0	5	0	0	6
THYROID GLAND ¹		-										
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
TONGUE ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
TRACHEA ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6

Table 109. Incidence Summary of Microscopic Observations (Neoplastic) at the 52-Week Interim Termination for Female Rats

Test Substance	Control	Ar	oclor-1)16	Aroch	»r-1242	Ar	oclor-1	254	Ar	oclor-12	:60
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	6	6	6	6	6	5	6	6	5	6	5	6
URETHRA	-											
Number Examined:	0	0	· 0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ¹												
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
UTERUS	2											\rightarrow
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
B-Stromal Polyp	0	0	0	-1	0	0	0	0	0	0	0	0
VAGINA ¹											-	
Number Examined:	6	0	0	6	0	5	0	0	5	0	0	6
SYSTEMIC LESIONS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

 Table 109. Incidence Summary of Microscopic Observations (Neoplastic) at the 52-Week

 Interim Termination for Female Rats

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1. No lesions present.

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Table 110. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Female Rats

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Arc	clor-1	016	Arocl	or-1242	Arc	oclor-l	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
JEJUNUM ¹					•							
Number Examined:	3 ·	0	0	6	0	5	0	0	5	0	0	6
KIDNEY ¹	•				d							
Number Examined:	3	0	0	6	0	5	0	0	5	1	0	6
LACRIMAL GLAND ¹												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
LIVER	•											
Number Examined:	3	5	6	6	5	5	4	6	5	5	6	6
B-Hepatocellular Adenoma	0	0	1	0	0	1	0	1	1	0	0	1
B-Hepatocellular Adenoma, Multiple	0	0	0	0	0	1	0	0	1	0	1	1
LUNG								•••••••••	6			
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
N-Adenocarcinoma, Mammary Gland	0	0	0	1	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC	•		A	A								
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
N-Adenocarcinoma, Mammary Gland	0	0	0	1	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR ¹								- -				
Number Examined:	0	0	0	0	0	0	0	0	0	0	1	1
LYMPH NODE-OTHER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND	••••••••••••••••••••••••••••••••••••••			A					A			
Number Examined:	3	5	6	6	5	4	3	6	5	5	6	6
B-Adenoma	1	1	0	0	0	0	0	1	0	1	1	0
B-Adenoma, Multiple	0	1	0	0	0	0	0	1	0	0	0	0
B-Adenocarcinoma	0	0	1	0	0	0	1	0	0	0	1	0
M-Adenocarcinoma, Multiple	0	0	0	1	0	0	0	0	0	0	0	0
B-Fibroadenoma	1	0	0	0	0	0	0	2	0	2	2	1
B-Fibroadenoma, Multiple	1	0	0	0	1	0	0	1	0	0	0	0
MESENTERY ¹												
Number Examined:	0	0	0	1	0	0	0	0	0	0	0	0

Table 110. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Female Rats

 $f_{i} = -3 (-1, \delta_{i})^{i}$

1. No lesions present.

Test Substance	Control	rol Aroclor-1016 A		Arocl	or-1242	Aro	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
NOSE/TURBINATES												
Number Examined:	0 ·	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ¹												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY												
Number Examined:	3	0	0	6	1	5	0	2	5	0	0	6
B-Cystadenoma, Papillary	0	0	0	0	1	0	0	0	0	0	0	0
OVIDUCT ¹												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
PANCREAS					•							
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
N-Adenocarcinoma, Mammary Gland	0	0	0	1	0	0	0	0	0	0	0	0
PARATHYROID ¹	·		8									
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
PITUITARY GLAND					•							
Number Examined:	3	5	5	6	2	5	4	5	5	2	3	6
B-Adenoma, Pars Distalis	2	1	2	1	1	2	1	5	2	1	3	1
RECTUM ¹												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SALIVARY GLAND-SUBLINGUAL ¹	• •		. .	.						· · · ·		
Number Examined:	3	0	0	6	0	5	0	0	5	0	.0	6
SALIVARY GLAND-SUBMAXILLARY	71					, in the second s						·····
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SCIATIC NERVE ¹												
Number Examined:	3	0	0	6	0	5	0	0	5	Ö	0	6
SKELETAL MUSCLE ¹	••••••••••••••••••••••••••••••••••••••					••••••••••••••••••••••••••••••••••••••						
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SKIN	·								•	N.		
Number Examined:	3	0	0	6	0	5	0	1	5	0	0	6
M-Fibrosarcoma	0	0	0	0	0	0	0	0	1	0	0	0

Table 110. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Female Rats

1. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	ol Arocior-1016 A		Arocl	or-1242	Arc	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	5	6	6	5	5	4	6	5	5	6	6
SPINAL CORD ¹						:						
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
SPLEEN ¹		_										
Number Examined:	3	0	1	6	0	5	0	0	5	0	0	6
STERNUM ¹												÷
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
STOMACH												1
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
B-Adenoma, Glandular Stomach	0	0	0	0	0	0	0	0	1	0	0	0
THYMUS ¹												
Number Examined:	3	0	0	6	0	4	0	0	5	0	0	6
THYROID GLAND												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
B-Adenoma, C-Cell	0	0	0	1	0	1	0	-0	1	0	0	0
TONGUE ¹												
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
TRACHEA ¹				-								
Number Examined:	3	0	0	6	0	5	0	0	5	0	0	6
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ¹					· · ·					·		
Number Examined:	2	0	0	6	0	5	0	0	5	0	0	5
UTERUS	-											
Number Examined:	3	0	0	6	0	5	0	1	5	0	1	6
B-Stromal Polyp	0	0	0	0	0	0	0	0	1	0	0	0
VAGINA ¹			•									
Number Examined:	2	0	0	6	0	5	0	0	5	0	0	6
SYSTEMIC LESIONS												·
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBALS GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 110. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Interim Termination for Female Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
ADRENAL GLAND												
Number Examined:	31	2	4	24	5	26	4	1	20	0	3	22
B-Adenoma, Cortex	0	0	0	2	1	3	0	0	1	0	0	1
M-Adenocarcinoma, Cortex	1	1	0	0	0	0	0	0	0	0	0	0
B-Pheochromocytoma, Benign	4	0	1	1	0	0	1	0	1	0	0	3
M-Pheochromocytoma, Malignant	1	0	0	2	0	0	0	0	0	0	0	0
AORTA									-			
Number Examined:	31	0	0	24	0	26	1	0	20	0	0	22
M-Carcinoma, Aortic Body	0	0	0	0	0	0	1	0	0	0	0	. 0
BONE ¹												
Number Examined:	31	2	4	24	0	26	0	1	20	1	1	22
BONE MARROW ¹							-					
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
BRAIN ¹	-					-						
Number Examined:	31	20	21	24	23	26	33	17	20	20	21	22
CECUM						·			-			
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
B-Lipoma	1	0	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND ¹												
Number Examined:	0	0	0	1	0	0	0	0	0	0	0	0
COLON												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
M-Leiomyosarcoma	0	0	0	0	0	1	0	0	0	0	0	0
DUODENUM ¹	-											
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
ESOPHAGUS ¹												
Number Examined:	30	0	0	24	0	26	0	0	20	0	0	21
EYE ¹												
Number Examined:	31	0	1	24	3	26	1	0	20	0	0	22
HARDERIAN GLAND ¹												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
HEART												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0

Table 111. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Female Rats

1. No lesions present.

Test Substance	Control	Arc	clor-	1016	Arocl	or-1242	Aro	clor-	1254	Aro	clor-)	12
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	
(N)	31	20	21	24	23	26	33	17	20	20	21	
ILEUM ¹												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	
JEJUNUM ¹				·								
Number Examined:	31	0	0	24	0	26	0	0	20	1	0	Γ
KIDNEY												
Number Examined:	31	3	2	24	.2	26	4	1	20	0	1	I
B-Adenoma, Renal Tubular	0	0	0	0	0	0	0	0	0	0	0	I
B-Lipoma	0	0	1	0	0	0	0	0	0	0	0	Γ
T-i-Liposarcoma	0	0	0	0	0	1	0	0	0	0	0	
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	Γ
LACRIMAL GLAND ¹						·						
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	Γ
LIVER												
Number Examined:	31	20	21	24	23	26	33	17	20	20	21	Γ
B-Hepatocellular Adenoma	1	1	2	2	5	3	7	1	4	1	1	Γ
B-Hepatocellular Adenoma, Multiple	0	0	1	1	2	5	9	9	8	5	4	ſ
M-Hepatocellular Carcinoma	0	0	0	0	0	0	0	2	2	1	1	Ī
M-Hepatocellular Carcinoma, Multiple	0	0	0	0	0	0	0	1	2	0	0	Ī
M-Cholangiocarcinoma	0	0	0	0	1	1	0	0	1	0	0	T
B-Hepatocholangioma	0	0	0	0	0	0	1	3	0	0	0	Γ
B-Hepatocholangioma, Multiple	0	0	0	0	0	1	1	0	0	0	0	Γ
M-Hemangiosarcoma	0	0	0	0	0	0	0	0	0	0	0	Γ
N-Carcinoma, Adrenal Cortical	0	1	0	0	0	0	0	0	0	0	0	ſ
N-Granulosa Cell Tumor, Malignant, Ovary	0	0	1	0	0	0	0	0	0	0	0	ſ
LUNG												_
Number Examined:	31	2	0	24	0	26	1	1	20	1	0	ſ
M-Carcinoma, Bronchioalveolar	0	0	0	0	0	0	1	0	0	0	0	ſ
M-Squamous Cell Carcinoma	0	1	0	0	0	0	0	0	2	0	0	ſ
N-Adenocarcinoma, Adrenal Cortical	1	1	0	0	0	0	0	0	0	0	0	ſ
N-Adenocarcinoma, Mammary Gland	1	0	0	0	0	0	0	0	0	0	0	ſ
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	Г

Table 111. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Female Rats

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1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocle	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
LUNG												
N-Pheochromocytoma, Malignant	0	0	0	1	0	0	0	0	0	0	0	0
N-Rhabdomyosarcoma	0	0	0	0	0	0	0	0	0	1	0	0
LYMPH NODE-MEDIASTINAL ¹												
Number Examined:	0	0	0	0	0	0	0	0	1	1	0	0
LYMPH NODE-MESENTERIC ¹		1										
Number Examined:	30	0	0	24	0	26	1	0	19	0	1	22
LYMPH NODE-MANDIBULAR ¹		·			-				-			
Number Examined:	3	0	0	0	0	1	0	0	1	0	1	3
LYMPH NODE-OTHER												
Number Examined:	0	0	3	0	0	0	1	0	1	1	0	0
N-Rhabdomyosarcoma	0	0	Ó	0	0	0	. 0	0	0	1	0	0
MAMMARY GLAND												
Number Examined:	31	20	21	24	23	25	33	17	20	19	21	22
B-Adenoma	3	1	4	2	1	1	3	1	2	2	- 3	0
B-Adenoma, Multiple	1	0	2	3	0	0	1	0	0	1	0	0
M-Adenocarcinoma	1	1	2	0	0	1	1	2	0	0	2	4
M-Adenocarcinoma, Multiple	1	1	1	0	0	0	0	0	0	0	0	0
B-Fibroadenoma	11	5	5	5	4	6	14	7	2	3	5	5
B-Fibroadenoma, Multiple	2	2	3	4	2	2	3	3	1	2	1	3
MESENTERY												
Number Examined:	0	0.	0	0	0	2	1	1	1	0	1	0
M-Mesothelioma, Malignant	0	0	0	0	0	1	0	1	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0.	0	0	0	0	0	0	0	0	0
OPTIC NERVE ¹												
Number Examined:	31	0	0	22	0	25	0	0	19	0	0	21
ORAL MUCOSA								·	1 .	_		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	0	0	0	0	1
OVARY												
Number Examined:	31	2	4	24	3	26	4	1	20	2	2	22
M-Carcinoma, Tubular	0	0	1	Ó	0	0	0	0	0	0	0	0

Table 111. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Female Rats

Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aro	clor-1	1254	Aro	clor-1	1260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
OVARY												
M-Thecoma, Malignant	0	0	0	0	0	0	0	0	0	0	0	1
B-Granulosa Cell Tumor, Benign	0	0	1	0	0	0	1	0	0	0	0	0
OVIDUCT ¹												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
PANCREAS						-						;
Number Examined:	31	0	.0	24	1	26	1	0	20	1	0	22
B-Adenoma, Islet Cell	1	0	0	2	- 1	1	0	0	1	1	0	1
B-Adenoma, Islet Cell, Multiple	0	0	0	0	0	0	1	0	0	0	0	0
PARATHYROID ¹				<u> </u>		•		.	•			Y
Number Examined:	19	0	0	22	1	26	0	0	17	0	0	20
PITUITARY GLAND					•							
Number Examined:	31	14	17	24	15	26	25	11	20	17	17	22
B-Adenoma, Pars Distalis	21	14	17	18	14	20	21	8	11	16	12	12
B-Adenoma, Pars Intermedia	0	0	0	0	0	0	1	0	1	0	0	0
M-Adenocarcinoma, Pars Distalis	0	0	0	0	0	1	0	0	0	0	0	0
RECTUM ¹	••••••••••••••••••••••••••••••••••••••					.		.				
Number Examined:	31	0	0	24	0	26	0	0	20	0	. 0	22
SALIVARY GLAND-SUBLINGUAL	1	ار فعسب ال				.						
Number Examined:	30	0	0	24	0	26	0	0	20	0	0	22
SALIVARY GLAND-SUBMAXILLA	RY ¹								·			
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
SCIATIC NERVE ¹	.								L		·	• <u> </u>
Number Examined:	31	0	0	23	0	26	0	0	20	0	0	22
SKELETAL MUSCLE	.					••••••••••••••••••••••••••••••••••••••		.				
Number Examined:	31	0	0	24	0	26	0	0	20	1	0	22
M-Rhabdomyosarcoma	0	0	0	0	0	0	0	0	0	1	0	0
SKIN	•								•••••••	•		•
Number Examined:	31	1	5	24	2	26	4	3	20	3	: 4	22
B-Basal Cell Adenoma	0	0	0	0	1	1	0	0	0	0	0	0
B-Keratoacanthoma	0	0	0	0	0	0	1	0	1	0	0	0
M-Fibrosarcoma	1	0	1	0	0	1	1	0	0	0	2	0
B-Lipoma	1	0	0	1	0	0	1	0	0	0	0	0

Table 111. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Female Rats

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1. No lesions present.

Test Substance	Control	Aroclor-1016		Arock	or-1242	Aro	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
SKIN												
N-Malignant Fibrous Histiocytoma	0.	0	0	0	0	0	0	0	0	1	0	0
SPINAL CORD ¹												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
SPLEEN ¹	·											
Number Examined:	31	0	0	24	0	26	1	0	20	1	0	22
STERNUM ¹												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
STOMACH ¹	استستبر يتلط											
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
THYMUS												
Number Examined:	28	1	0	23	0	26	1	0	18	0	0	19
N-Adenocarcinoma, Mammary Gland	- 1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	1	1	0	0	0	0	0	0	0	0	0	0
THYROID GLAND												
Number Examined:	31	0	0	24	0	26	1	0	20	1	0	22
B-Adenoma, Follicular Cell	1	0	0	1	0	2	0	0	0	0	0	0
B-Adenoma, Follicular Cell, Bilateral	0	0	0	1	0	0	0	0	0	0	0	0
M-Carcinoma, Follicular Cell	0	0	0	0	0	0	1	0	0	0	0	0
B-Adenoma, C-Cell	1	0	0	3	0	5	1	0	2	0	0	3
B-Adenoma, C-Cell, Bilateral	1	0	0	0	0	. 0	0	0	0	0	0	0
M-Carcinoma, C-Cell	1	0	0	0	Ó	0	0	0	0	1	0	0
TONGUE ¹					· .							
Number Examined:	31	0	0	. 24	0	26	0	0	20	0	0	22
TRACHEA ¹												
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
URETHRA ¹												
Number Examined:	0	0	0	2	0	0	0	0	1	1	0	2
URINARY BLADDER										-		
Number Examined:	31	0	0	24	0	26	0	0	20	0	0	22
B-Papilloma	0	0	0	0	0	0	0	0	1	0	0	0

Table 111. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Female Rats

1. No lesions present.

Test Substance	Control	Aro	clor-1	016	Arocl	Aro	clor-1	254	Aroclor-126			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	20	21	24	23	26	33	17	20	20	21	22
UTERUS	•									_		
Number Examined:	31	1	2	24	1	26	5	0	20	3	5	22
B-Adenoma	0	0	1	1	0	0	0	0	0	0	0	1
M-Adenocarcinoma	0	0	0	0	0	1	0	0	0	0	0	0
B-Stromal Polyp	1	0	0	3	0	[`] °1	1 -	0	⁻ 1	1	1	0
M-Leiomyosarcoma	0	0	0	1	0	1. A. 1.	0	0	0	0	ິ 0	0
VAGINA					· .			en e				
Number Examined:	31	0	0	24	0	25	2	0	20	0	- 0	22
N-Leiomyosarcoma, Uterine	0	0	0	1	0	e t : -	0	0	0	0	0	0
SYSTEMIC LESIONS							1					
Number Examined:	2	1	0	0	0	0	0	0	0	0	0	0
M-Leukemia/Lymphoma	2	1	0	0	0	0	0	0	- 0	0	0	0
ZYMBALS GLAND						· A	;					
Number Examined:	0	0	0	0	0	Ö	0	0	0	0	0	0

Table 111. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Termination for Female Rats

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Test Substance	Control ¹	Aroclor-1016		5 Aroclor-1242		42 Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	6	6	4	5
ADRENAL GLAND	·											
Number Examined:	3	0	1	0	1	1	2	0	0	0	0	1
B-Adenoma, Cortex	0	0	0	0	0	0	1	0	0	0	0	0
AORTA ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
BONE ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	1	0
BONE MARROW ²	· · ·					2						
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
BRAIN ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
CECUM ²				<u> </u>								
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
CLITORAL GLAND ²								•				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1
COLON ²												·
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
DUODENUM ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
ESOPHAGUS ²			.									
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
EYE ²			.									
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
HARDERIAN GLAND ²				.		•		• <u> </u>	A			·
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
HEART ²			•	4				.				
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
ILEUM ²	<u></u>	l			•		.					
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
JEJUNUM ²		••••••••••••••••••••••••••••••••••••••	•			•						
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0

Table 112. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Stop Study B Termination for Female Rats

1. 78-Week Interim Termination control findings reported for comparison.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ¹	Aro	clor-1	016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	6	6	4	5
KIDNEY ²												
Number Examined:	3 ·	0	0	0	0	0	0	0	0	0	0	0
LACRIMAL GLAND ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
LIVER										्रत	5 5 N	
Number Examined:	3	6	6	5	5	5	5	6	-6	6	÷.	5
B-Hepatocellular Adenoma	0	0	. 1	0	0	0	0	0	2	0	0	1
LUNG ²						·						
Number Examined:	3	0	0	0	0	0	0	1	0	0	0	0
LYMPH NODE-MEDIASTINAL								· · ·				
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR ²												
Number Examined:	0	0	1	0	0	0	0	0	0	1	1	0
LYMPH NODE-OTHER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND												
Number Examined:	3	3	2	3	3	0	3	1	1	2	2	1
B-Adenoma	1	-1	1	1	2	0	0	0	0	2	0	0
M-Adenocarcinoma	0	0	0	0	0	0	1	1	1	0	0	0
B-Fibroadenoma	1	1	1	2	0	0	1	0	1	0	0	1
B-Fibroadenoma, Multiple	1	2	0	0	0	0	0	0	0	0	0	0
MESENTERY ²												
Number Examined:	0	0	0	0	1	0	0	0	1	0	0	0
NOSE/TURBINATES												•
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²							· · · · · · ·					
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
ORAL MUCOSA					·	·				<u></u>		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

Table 112. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Stop Study B Termination for Female Rats

1. 78-Week Interim Termination control findings reported for comparison.

2. No lesions present.

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Test Substance	Control ¹	Aro	clor-1	016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	6	6	4	5
OVARY ²												
Number Examined:	3	0	0	1	0	0	0	2	1	1	0	1
OVIDUCT ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
PANCREAS												
Number Examined:	3	0	0	0	0	0	1	0	0	0	U	0
M-Carcinoma, Acinar Cell	0	0	0	0	0	0	1	0	0	0	Q	0
PARATHYROID										, ·		
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
PITUITARY GLAND												:
Number Examined:	3	4	3	4	4	2	2	3	2	5	3	4
B-Adenoma, Pars Distalis	2	2	1	3	1	1	2	3	1	1	1	2
RECTUM ²									19			
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBLINGUA	L ²											
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND-SUBMAXILL	ARY ²											
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SCIATIC NERVE ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SKELETAL MUSCLE ²	·											
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SKIN ²	••••••••••••••••••••••••••••••••••••••											
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SPINAL CORD ²											•	
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
SPLEEN ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
STERNUM ²	· · · ·										-	
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0

Table 112. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Stop Study B Termination for Female Rats

1. 78-Week Interim Termination control findings reported for comparison.

2. No lesions present.

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Test Substance	Control ¹	Aroclor-1016		Aroclor-1242		Aroclor-1254			Aroclor-1260			
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	3	6	6	5	5	5	5	6	6	6	4	5
STOMACH ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
THYMUS ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
THYROID GLAND ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
TONGUE ²		- - -	:									
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
TRACHEA ²												
Number Examined:	3	0	0	0	0	0	0	0	0	0	0	0
URETHRA												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER ²												
Number Examined:	2	0	0	0	0	0	0	0	0	0	0	0
UTERUS ²											<u></u>	- N.
Number Examined:	3	1	0	0	0	1	1	1	1	2	0	1
VAGINA ²												
Number Examined:	2	0	0.	0	0	0	0	0	.0	0	0	0
SYSTEMIC LESIONS												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	- 0	0	0	0	0	0	0	0	0

Table 112. Incidence Summary of Microscopic Observations (Neoplastic) at the78-Week Stop Study B Termination for Female Rats

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1. 78-Week Interim Termination control findings reported for comparison.

2. No lesions present.

Test Substance	Control ¹	Aro	clor-1	016	Aroclo	r-1242	Аго	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	.31	10	10	7	10	11	11	14	13	14	6	13
ADRENAL GLAND												
Number Examined:	31 ·	0	0	7	1	11	0	2	13	1	0	13
B-Adenoma, Cortex	0	0	0	0	0	0	0	0	2	0	0	0
M-Adenocarcinoma, Cortex	1	0	0	0	0	- 1	0	0	0	0	0	0
B-Pheochromocytoma, Benign	4	0	- 0	0	0	0	0	0	1	0	0	0
B-Pheochromocytoma, Benign, Bilateral	0	0	• 0	0	0	1	0	0	1	0	0	0
AORTA ²												
Number Examined:	31	0	0	7	- 0	11	0	0	13	0	0	13
BONE ²												
Number Examined:	31	2	0	7	0	. 11	0	0	13	0	2	13
BONE MARROW ²												
Number Examined:	31	- 0	0	7	0	11	0	0	13	0	0	13
BRAIN ²												
Number Examined:	31	10	10	7	10	11	11	14	13	14	6	13
CECUM ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
CLITORAL GLAND ²												
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
COLON ²							•					
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
DUODENUM ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
ESOPHAGUS ²	· ·											
Number Examined:	30	0	0	7	0	11	0	0	13	0	0	13
EYE ²												
Number Examined:	31	1	0	7	0	11	1	0	13	0	0	13
HARDERIAN GLAND ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
HEART ²		ē										
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
ILEUM ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13

Table 113. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Stop Study A Termination for Female Rats

1. 105-Week Core control findings reported for comparison.

2. No lesions present.

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Test Substance	Control ¹	Aroclor-1016		Aroclo	or-1242	Аго	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
JEJUNUM ²												
Number Examined:	31 -	0	0	7	0	11	0	0	13	0	0	13
KIDNEY ²												
Number Examined:	31	0	0	7	0	11	0	0	13	1	0	13
LACRIMAL GLAND ²				-								
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
LIVER												
Number Examined:	31	10	10	7	10	-11	11	14	13	14	6	13
B-Hepatocellular Adenoma	1	0	0	0	0	1	1	3	3	3	2	3
B-Hepatocellular Adenoma, Multiple	0	0	0	0	2	1	2	3	0	0	1	7
M-Hepatocellular Carcinoma	0	0	0	0	1	0	1	2	1	0	0	1
B-Cholangioma	0	0	0	0	0	1	0	0	0	0	0	2
B-Cholangioma, Multiple	0	0	0	1	0	0	0	0	0	0	0	0
M-Cholangiocarcinoma	0	0	0	0	0	0	0	0	1	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	1	0	0	0	0	0	0
LUNG												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
N-Adenocarcinoma, Adrenal Cortical	1	0	0	0	0	· 1	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	1	0	0	0	0	0	0	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	1	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL ²												
Number Examined:	0	0	0	0	0	0	1	0	0	0	0	0
LYMPH NODE-MESENTERIC ²												
Number Examined:	30	0	0	7	0	11	0	0	13	0	0	12
LYMPH NODE-MANDIBULAR												
Number Examined:	3	0	0	1	0.	0	0	1	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	1	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER												
Number Examined:	0	0	0	1	0	1	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	1	0	0	0	0	0	0	0	0

Table 113. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Stop Study A Termination for Female Rats

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1. 105-Week Core control findings reported for comparison.

2. No lesions present.

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Test Substance	Control ¹	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
MAMMARY GLAND												
Number Examined:	31	10	10	7	10	11	11	14	13	14	5	13
B-Adenoma	3	0	0	0	1	0	0	3	0	3	1	0
B-Adenoma, Multiple	1	0	0	0	0	0	3	0	0	1	0	0
M-Adenocarcinoma	1	0	2	1	1	1	0	0	1	4	1	2
M-Adenocarcinoma, Multiple	1	1	. 0	0	0	0	0	0	1	0.	1	0
B-Fibroadenoma	11	3	3	0,	4	2	4	4	8	5	1	4
B-Fibroadenoma, Multiple	2	1	2	2	2	3	2	5	0	3	. 3	2
MESENTERY ²												
Number Examined:	0	0	0	0	0	0	0	0	1	0	0	0
NOSE/TURBINATES									-			
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²												
Number Examined:	31	0	0	5	0	11	0	0	12	0	0	13
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	0	0	. 0	0	0
OVARY												
Number Examined:	31	2	1	7	2	11	1	1	13	1	0	13
B-Thecoma, Benign	0	0	0	0	0	0	0	0	1	0	0	0
B-Granulosa Cell Tumor, Benign	· . 0	0	0	0	0	0	0	0	0	0	0	1
OVIDUCT ²												
Number Examined:	31	0	0	7	0	11	- 0	0	13	0	0	13
PANCREAS												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
Adenoma, B-Islet Cell	1	0	0	0	0	0	0	0	0	0	0	1
PARATHYROID ²												
Number Examined:	19	0	0	7	0	10	0	0	10	0	0	10
PITUITARY GLAND			· .				·			1		
Number Examined:	31	7	5	7	10	10	10	9	13	13	6	13
B-Adenoma, Pars Distalis	21	6	5	6	10	6	9	7	9	10	5	12
RECTUM ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13

Table 113. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Stop Study A Termination for Female Rats

1. 105-Week Core control findings reported for comparison.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ¹	Arc	clor-1	016	16 Aroclor-124		2 Aroclor-1254		254	Aroclor-1		260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	31	10	10	7	10	11	11	14	13	14	6	13
SALIVARY GLAND-SUBLINGUAL	2											
Number Examined:	30 ·	0	0	7	0	-11	0	0	13	0	0	13
SALIVARY GLAND-SUBMAXILLA	RY ²											
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
SCIATIC NERVE ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
SKELETAL MUSCLE												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
N-Malignant Fibrous Histiocytoma	0	0	0	1	0	0	0	0	0	0	0	0
SKIN												
Number Examined:	31	4	0	7	1	11	2	1	13	2	2	13
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	0	1	0	0	0
B-Keratoacanthoma	0	0	0	0	0	0	0	1	0	0	0	0
M-Fibrosarcoma	1	1	0	0	0 -	0	2	0	1	0	0	.0
B-Lipoma	1	0	0	0	1	0	0	0	0	1	0	1
SPINAL CORD ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
SPLEEN ²												
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
STERNUM ²							• • • • • • • • • • • • • • • • • • •					
Number Examined:	31	0	0	7	0	11	0	0	13	0	0	13
STOMACH ²												
Number Examined:	31	0	0	7	0	11	0	1	13	0	0	13
THYMUS											•	
Number Examined:	28	0	0	7	0	8	0	0	12	0	0	12
N-Malignant Fibrous Histiocytoma	0	0	0	1 .	0	0	0	0	0	0	0	0
THYROID GLAND							•				•	•
Number Examined:	31	0	0	7	1	11	0	1	13	1	0	13
B-Adenoma, Follicular Cell	1	0	0	0	0	1	0	0	0	0	0	0
M-Carcinoma, Follicular Cell	0	0	0	0	0	0	0	1	0	0	0	0
B-Adenoma, C-Cell	1	0	0	3	0	2	0	0	1	1	-0	3
M-Carcinoma, C-Cell	1	0	0	0	1	0	0	0	0	0	0	0

Table 113. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Stop Study A Termination for Female Rats

1. 105-Week Core control findings reported for comparison.

2. No lesions present.
| Test Substance | Control ¹ | Aro | clor-1 | 016 | Aroclo | r-1242 | Aro | clor-1 | 254 | Aro | clor-1 | 260 |
|-------------------------------------|----------------------|-----|--------|------------|--------|--------|-----|--------|-----|-----|--------|-----|
| Conc. (ppm) | 0 | 50 | 100 | 200 | 50 | 100 | 25 | 50 | 100 | 25 | 50 | 100 |
| (N) | 31 | 10 | 10 | 7 | 10 | 11 | 11 | .14 | 13 | 14 | 6 | 13 |
| TONGUE ² | | · | | | | | | | | | | |
| Number Examined: | 31 | 0 | 0 | 7 | . 0 | 11 | .0 | 0 | 13 | 0 | 0 | 13 |
| TRACHEA ² | | | | | | | | | | | | |
| Number Examined: | 31 | 0 | 0 | 7 | 0 | 11 | 0 | 0 | 13 | 0 | 0 | 13 |
| URETHRA | | | | | - | | | | | | | |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| URINARY BLADDER ² | | | | | - | | | | | | | |
| Number Examined: | 31 | 0 | 0 | 7 | 0 | 11 | 0 | 0 | 13 | 0 | 0 | 13 |
| UTERUS | | | | • <u> </u> | | | | | | | | |
| Number Examined: | 31 | 1 | 0 | 7 | 4 | 11 | 1 | 0 | 13 | 3 | 1 | 13 |
| B-Adenoma | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M-Adenocarcinoma | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-Stromal Polyp | 1 | 1 | Ö | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| M-Endometrial Stromal Sarcoma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| M-Leiomyosarcoma | . 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| N-Malignant Fibrous Histiocytoma | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VAGINA | | | | : | | | | | | | | |
| Number Examined: | 31 | 0 | 0 | 7 | 0 | 11 | 0 | 0 | 13 | 0 | 0 | 13 |
| N-Leiomyosarcoma, Uterine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| N-Malignant Fibrous Histiocytoma | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SYSTEMIC LESIONS | | | • | | | | | | | | | |
| Number Examined: | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M-Malignant Fibrous
Histiocytoma | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ZYMBALS GLAND | | | | • | | | | | | | | |
| Number Examined: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 113. Incidence Summary of Microscopic Observations (Neoplastic) at the105-Week Stop Study A Termination for Female Rats

1. 105-Week Core control findings reported for comparison.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 114. Incidence Summary of Microscopic Observations (Neoplastic) at Unscheduled Termination (0-12 Months) for Core, Interim, and Stop Study Subgroup Female Rats

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Test Substance	Control	Arc	clor-1	1016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
ADRENAL GLAND	·											
Number Examined:	5	0	2	2	2	- 3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	0	0
AORTA ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	- 1	- 6	0
BONE ¹												
Number Examined:	5	0	1	2	2	3	4	1	3	1	6	0
BONE MARROW												·
Number Examined:	5	0	1	2	2	3	4	1 -	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	1	0
BRAIN												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
B-Oligodendroglioma, Benign	0	0	0	1	0	0	1	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	0	1	0
CECUM ¹			.									
Number Examined:	4	0	2	1	2	3	4	1	-3	1	6	0
CLITORAL GLAND					· · ·	.						
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
COLON ¹		<u></u>	•									
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
DUODENUM ¹			.		L							
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
ESOPHAGUS ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
EYE ¹				· · · · ·								
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
HARDERIAN GLAND ¹			.									
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
HEART ¹			•									
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
ILEUM ¹												·····
Number Examined:	5	0	2	1	2	3	4	1	3	1	6	0

1. No lesions present.

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Table 114. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (0-12 Months) for Core, Interim, and Stop Study SubgroupFemale Rats

Test Substance	Control	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	-3	1	6	-01
JEJUNUM	•											
Number Examined:	4	0	2	2	2	3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	0	1	0
KIDNEY												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	1	0	0	0
LACRIMAL GLAND ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
LIVER	· · · · · · · · · · · · · · · · · · ·			· ·								
Number Examined:	5	0	2	2	2	3	4	-1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	· 1	0	0	0	1	0	0	0
LUNG												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
N-Adenocarcinoma, Mammary Gland	0	0	0	0	0	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	1	0
LYMPH NODE-MEDIASTINAL	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	0	0	0	0	1	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	1	0
LYMPH NODE-MESENTERIC												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	1	0
LYMPH NODE-MANDIBULAR												
Number Examined:	0	0	0	0	1	0	0	0	1	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	1	0	1	0
LYMPH NODE-OTHER									·			
Number Examined:	0	0	0	0	1	0	0	0	1	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	1	0	1	0
MAMMARY GLAND	· · ·											
Number Examined:	5	0	2	2	2	3	4	1	3	1	5	0
B-Adenoma	1	0	0	0	0	1	0	1	1	0	0	0
M-Adenocarcinoma	0	0	0	0	0	0	0	0	0	0	1	0
B-Fibroadenoma	0	0	1	0	0	0	1	0	0	0	0	0

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 114. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (0-12 Months) for Core, Interim, and Stop Study SubgroupFemale Rats

Test Substance	Control	Arc	clor-1	1016	Aroclo	r-1242	Aro	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
MESENTERY ¹												
Number Examined:	0	0	0	0	0	0	1	0	0	0	1	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ¹					ъ.,			÷.				
Number Examined:	5	0		2	2	3	4	1 <.	3	1	6	0
ORAL MUCOSA										*		
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ¹	.							10 . S.				·
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
OVIDUCT ¹		•				•						••••••••••••••••••••••••••••••••••••••
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
PANCREAS	.			.				L <u></u>	<u>ي</u> . م			••••••••••••••••••••••••••••••••••••••
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	0	0	1	0
PARATHYROID ¹	L	L	ļ	I	· · · ·			1		Ţ		ł
Number Examined:	4	0	2	2	2	2	4	1	3	0	3	0
PITUITARY GLAND	L		1			L						
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
B-Adenoma, Pars Distalis	2	0	2	0	0	1	1	1	0	0	1	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	1	0
RECTUM ¹	L				•						l	L
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SALIVARY GLAND-SUBLINGUAL ¹	· · · · · ·		L			.						.
Number Examined:	5	0	2	2	2	3	3	1	3	1	6	0
SALIVARY GLAND-SUBMAXILLAR	Y		1			L	<u> </u>					.
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	0	0
SCIATIC NERVE ¹		L	.				4					L
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SKELETAL MUSCLE		 .		L	,							-
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
M-Rhabdomyosarcoma	0	0	0	0	0	1	0	0	0	0	0	0

1. No lesions present.

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Table 114. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (0-12 Months) for Core, Interim, and Stop Study SubgroupFemale Rats

Test Substance	Control	Arc	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	5	0	2	2	2	3	4	1	3	1	6	0
SKIN ¹					•							·
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
SPINAL CORD ¹												
Number Examined:	5	0	_1	2	2	3	4	1	3	1	6	0
SPLEEN		1.1										
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	1	0	1	0
STERNUM ¹	· · · ·											
Number Examined:	5	0	1	2	1	3	3	0	3	1	4	0
STOMACH ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
THYMUS	·						·.					
Number Examined:	5	0	1	2	2	3	4	1	2	1	6	0
N-Leukemia/Lymphoma	0	0	0	0	0	0	0	0	1	0	. 1	0
THYROID GLAND ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
TONGUE ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
TRACHEA ¹												
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
URETHRA	· · · · · · · · · · · · · · · · · · ·		14 L							-		
Number Examined:	0	0	0	0	0	0	0	0	Ó	0	0	0
URINARY BLADDER ¹		,										
Number Examined:	5	;• 0 ·	2	2	2	3	4	1	3	1	6	0
UTERUS ¹											· .	
Number Examined:	5	0	2	2	2	3	4	1	3	1	6	0
VAGINA ¹		-	••••••••••••••••••••••••••••••••••••••									
Number Examined:	5	0	2	2	2	3	-4	-1	3	1	6	0
SYSTEMIC LESIONS	-								f			
Number Examined:	0	0	0	0	1	0	0	0	1	0	1	0
M-Leukemia/Lymphoma	0	0	0	0	1.	0	0	0	1	0	1	0
ZYMBAL'S GLAND	1			· .	••••••••••••••••••••••••••••••••••••••							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	A	roclor-1	1254	Are	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
ADRENAL GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
B-Adenoma, Cortex	3	0	0	0	0	0	1	0	0 -	0	0	0
B-Pheochromocytoma	1	0	0	0	0	0	0	0	0	0	0	0
AORTA ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
BONE ¹									7			
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
BONE MARROW ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
BRAIN												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
B-Oligodendroglioma, Benign	1	0	0	0	0	0	0	0	1	0	0	0
N-Carcinoma, Pituitary Gland	1	0	0	0	0	0	0	0	0	0	0	0
CECUM ¹						••••••••••••••••••••••••••••••••••••••			.	· · ·	·	·*····
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
CLITORAL GLAND ¹					•							
Number Examined:	0	0	0	0	1	0	0	0	0	0	0	0
COLON ¹									L	•••••		
Number Examined:	34	9	6	-5	6	6	6	4	5	6	7	10
DUODENUM ¹					-		مەيرىيەت <u>ب</u>				••••••••••••••••••••••••••••••••••••••	
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
ESOPHAGUS ¹					· · ·	4					······	
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
EYE ¹	.		· · ·		·	L	· · · · · · · · · · · · · · · · · · ·		L			.
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
HARDERIAN GLAND ¹					·	•						A
Number Examined:	34	9	6	4	6	6	6	4	5	6	7	10
HEART ¹	· · ·				• • • • • • • • • • • • • • • • • • •							
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
ILEUM ¹		·					لىا					
Number Examined	34	9	6	5	6	6	6	Δ	5	6	7	10

Table 115. Incidence Summary of Microscopic Observations (Neoplastic) at Unscheduled Termination (12-18 Months) for Core and Interim Subgroup Female Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	A	oclor-1	254	Arc	oclor-12	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
JEJUNUM ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
KIDNEY												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
M-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	Û	0	0	0	0
LACRIMAL GLAND ¹			•						h. > 100000000000		•	
Number Examined:	33	9	6	5	4	6	4	-4	5	6	7	10
LIVER											•	
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
B-Hepatocellular Adenoma	0	0	· 0	0	1	0	0	0	0	1	0	2
B-Hepatocellular Adenoma, Multiple	0	0	0	1	0	0	0	1	0	1	0	1
M-Hepatocellular Carcinoma	0	0	0	0	0	0	0	υ	0	0	0	1
N-Leiomyosarcoma, Uterine	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	. 1	0	1	0	1	0	0	0	1	0	0	0
LUNG												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
N-Adenocarcinoma, Mammary Gland	1	0	1	0	0	0	0	0	0	1	0	0
N-Adenocarcinoma, Pars Distalis, Pituitary	1	0	0	0	0	0	0	0	0	0	0	0
N-Hemangiosarcoma	0	0	0	0	0	1	0	0	0	0	0	0
N-Leiomyosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	1	0	0	0
N-Rhabdomyosarcoma	0	1	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	1
LYMPH NODE-MESENTERIC ¹						•						
Number Examined:	33	9	6	5	6	6	6	4	5	6	7	10
N-Leiomyosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	0	0	1	0	0	0	0	0	0	0	0

Table 115. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Female Rats

1. No lesions present.

Test Substance	Control	Aro	clor-1	1016	Arocl	or-1242	Aı	oclor-1	254	Are	oclor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
LYMPH NODE-MANDIBULAR								1				
Number Examined:	1	.0	0	0	1	0	1	0	0	0	2	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	0	0
LYMPH NODE-OTHER												
Number Examined:	1	0	0	0	1	0	0	0	1	0	0	0
N-Leukemia/Lymphoma	0	0	0	0	1	0	0	0	0	0	0	0
MAMMARY GLAND												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
B-Adenoma	7	0	1	0	0	0	0	0	0	0	0	0
M-Adenocarcinoma	5	0	1	0	0	0	0	0	1	1	1	1
B-Fibroadenoma	7	1	0	2	2	0	0	2	0	2	0	3
B-Fibroadenoma, Multiple	_1	0	0	0	0	0	0	0	0	0	0	0
MESENTERY ¹												
Number Examined:	1	0	0	0	0	0	0	0	0	0	1	0
M-Fibrosarcoma	0	0	0	0	0	0	0	0	0	0	1	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ¹									· · ·			
Number Examined:	30	7	6	5	6	5	6	4	4	5	6	10
ORAL MUCOSA				-								
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
OVIDUCT ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
PANCREAS ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
PARATHYROID ¹							-					
Number Examined:	33	7	5	5	5	4	6	4	4	4	7	10
PITUITARY GLAND							-					
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
B-Adenoma, Pars Distalis	19	8	4	1	4	4	3	2	0	5	4	8
B-Adenoma, Pars Intermedia	1	0	0	0	0	0	0	0	0	0	0	0
M-Adenocarcinoma, Pars Distalis	1	0	0	0	0	0	0	0	0	0	0	0

Table 115. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Female Rats

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1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	Aı	oclor-1	254	Arc	clor-12	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
RECTUM ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
SALIVARY GLAND-SUBLINGU	JAL ¹											
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
SALIVARY GLAND-SUBMAXII	LLARY ¹											
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
SCIATIC NERVE ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6 -	7	10
SKELETAL MUSCLE												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
M-Rhabdomyosarcoma	0	1	0	0	0	1	0	0	0	0	0	0
SKIN												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	0	0	0	1	0
M-Fibrosarcoma	2	0	0	1	0	0	1	0	0	0	0	1
M-Hemangiosarcoma	0	0	0	0	0	1	0	0	0	0	0	1
SPINAL CORD ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
SPLEEN												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
N-Leukemia/Lymphoma	0	0	1	0	1	0	0	0	0	0	0	0
STERNUM ¹												
Number Examined:	34	9	6	3	6	6	4	4	5	6	7	10
STOMACH ¹									······································			
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
THYMUS ¹											•••••••••	
Number Examined:	32	9	6	5	6	6	6	4	5	6	7	9
N-Leukemia/Lymphoma	1	0	0	0	1	0	0	0	0	0	0	0
THYROID GLAND ¹		i			-							
Number Examined:	34	9	6	5	6	6	6	-4	5	6	7	10
B-Adenoma, Follicular Cell	1	0	0	0	0	0	0	0	0	0	0	0
M-Carcinoma, Follicular Cell	1	0	0	0	0	0	0	0	0	0	0	0
B-Adenoma, C-Cell	2	0	0	.1	1	0	0	- 1	0	0	1	1

Table 115. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Female Rats

1. No lesions present.

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Test Substance	Control	Aro	clor-1	016	Arocl	or-1242	A	oclor-	254	Are	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	9	6	5	6	6	6	4	5	6	7	10
TONGUE ¹										P		
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
TRACHEA ¹											,	
Number Examined:	34	9	6	.5	6	6	6	4	5	6	7	10
URETHRA												
Number Examined:	1	0	0	1	0	0	0	1	0	0	0	0
URINARY BLADDER ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
UTERUS -												
Number Examined:	34	9	6	5	6	6	6	4	5	6	7	10
B-Stromal Polyp	0	0	0	0	0	0	1	0	0	0	0	0
M-Leiomyosarcoma	1	0	0	0	0	0	1	0	0	0	0	0
VAGINA ¹												
Number Examined:	34	9	6	5	6	6	6	4	5	5	7	10
N-Leiomyosarcoma, Uterine	1	0	0	0	0	0	0	0	0	0	0	0
SYSTEMIC LESIONS												
Number Examined:	1	0	1	0	1	0	0	0	1	0	0	0
M-Leukemia/Lymphoma	1	0	1	0	1	0	0	0 -	1	0	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	-0	0	0	0	0	0	0	0	0

Table 115. Incidence Summary of Microscopic Observations (Neoplastic) atUnscheduled Termination (12-18 Months) for Core and Interim Subgroup Female Rats

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Test Substance	Control Aroclor-1016 Aroc			Aroclor	-1242	Aro	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	-50	100
(N)	33	22	21	21	21	- 17	11	28	25	25	19	18
ADRENAL GLAND	•	2										
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Adenoma, Cortex	0	2	1	1	1	0	1	2	1	0	0	1
B-Adenoma, Cortex, Multiple	0	1	0	0	0	0	0	1	1	0	0	0
M-Adenocarcinoma, Cortex	0	0	1	0	0	0	0	0	0	0	1	0
B-Pheochromocytoma, Benign	1	1	1	0	1	0	0	1	1	2	0	1
M-Pheochromocytoma, Malignant	0	0	0	0	1	0	0	1	0	0	1	0
AORTA												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
M-Carcinoma, Aortic Body	0	0	0	0	0	0	0	0	0	0	1.	0
BONE		A.P.1										
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
N-Adenocarcinoma, Mammary	1	0	0	0	0	0	0	0	0	0	0	0
M-Squamous Cell Carcinoma, Tongue	0	0	0	0	0	0	0	0	0	0	- 1	0
BONE MARROW ¹		•	· ·									
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
BRAIN												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Granular Cell Tumor, Benign	0	0	0	0	0	-0	0	1	0	0	0	0
CECUM ¹												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
CLITORAL GLAND												
Number Examined:	1	0	0	0	0	0	. 0	0	0	0	0	0
B-Squamous Cell Papilloma	1	0	0	0	0	0	0	0	0	0	0	0
COLON ¹	-										-	
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
DUODENUM ¹												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
ESOPHAGUS ¹			1									
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
EYE ¹												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18

Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Core Subgroup Female Rats

Test Substance	Control	Arc	oclor-1	1016	Aroclo	-1242	Arc	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
HARDERIAN GLAND			4						•	ð	••••••••••••••••••••••••••••••••••••••	
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Adenoma	0	0	0	0	0	0	0	0	1	0	0	0
HEART												
Number Examined:	33	22	21	21	21	17	- 11	28	25	25	19	18
N-Adenocarcinoma, Mammary Gland	2	0	0	0	0	0	0	0	0	0	0	0
ILEUM ¹			-									
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
JEJUNUM												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Leiomyoma	0	0	0	0	1	0	0	0	0	0	0	0
M-Leiomyosarcoma	0	0	0	0	0	0	0	1	0	0	0	0
KIDNEY	·											
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
N-Leiomyosarcoma, Uterine	0	0	0	0	0	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
M-Osteosarcoma, Mesentery	1	0	0	0	0	0	0	0	0	0	0	0
N-Squamous Cell Carcinoma, Uterine	0	0	0	0	0	0	0	1	0	0	0	0
LACRIMAL GLAND												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
N-Leiomyosarcoma, Uterine	0	0	0	0	0	0	0	0	0	0	1	0
LIVER	· · · · · · · · · · · · · · · · · · ·											
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Hepatocellular Adenoma	0	0	2	0	1	2	2	10	2	1	1	1
B-Hepatocellular Adenoma, Multiple	0	0	0	1	1	2	Ó	5	13	1	4	3
M-Hepatocellular Carcinoma	0	0	1	0	0	2	0	1	0	0	0	1
M-Hepatocellular Carcinoma, Multiple	0	0	0	0	0	0	0	0	2	0	0	1
B-Cholangioma	0	0	0	0	0	0	0	0	0	1	1	0
B-Cholangiofibroma	0	0	0	0	0	0	0	0	1	0	0	0
B-Hepatocholangioma	0	0	0	0	. 1	1	0	3	1	0	0	0

Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Core Subgroup Female Rats

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Test Substance	Control	Aro	clor-1	016	Aroclo	-1242	Aro	clor-J	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
LIVER												
M-Hepatocholangiocarcinoma	0	0	0	0	1	0	0	0	Ó	0	0	0
B-Hemangioma	1	0	0	0	0	0	0	0	0	0	0	0
N-Carcinoma, Adrenal Cortical	0	0	1	0	0	0	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	2	0	0	0	0	0	0	1	0	.0	1
N-Leiomyosarcoma, Uterine	0	0	0	0	0	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	2	1	0	1	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	0	1	0	0
N-Osteosarcoma, Mesentery	1	0	0	0	0	0	0	0	0	0	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	0	0	1	0	0	0	0
LUNG												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Adenoma, Bronchioloalveolar	0	1	0	0	0	0	0	0	0	0	0	0
M-Carcinoma, Bronchioloalveolar	0	0	1	0	0	0	0	0	0	0	0	0
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	0	1	0	0	0
M-Squamous Cell Carcinoma, Multiple	0	0	0	0	0	0	0	0	2	0	0	0
N-Adenocarcinoma, Adrenal Cortical	0	0	1	0	0	0	0	0	0	0	0.	0
N-Adenocarcinoma, Mammary Gland	2	1	3	1	0	0	0	1	0	0	0	0
N-Carcinoma, Aortic Body	0	0	0	0	0	0	0	0	0	0	1	0
N-Carcinoma, C-Cell	1	0	0	0	0	0	0	0	0	0	0	0
N-Carcinoma, Hepatocellular	0	0	0	0	0	0	0	0	0	0	0	1
N-Histiocytic Sarcoma	0	2	0	0	0	0	0	0	0	0	0	1
N-Leiomyosarcoma	0	0	0	0	0	0	0	0	0	0	1	0
N-Leukemia/Lymphoma	1	1	0	0	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	1	1	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	0	0	1	0	0	1	0
N-Rhabdomyosarcoma	0	0	0	0	0	0	0	0	1	0	0	0
LYMPH NODE-MEDIASTINAL												
Number Examined:	2	2	1	0	0	0	0	0	2	0	0	0
N-Leukemia/Lymphoma	1	1	0	0	0	0	0	0	0	0	0	0

Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Core Subgroup Female Rats

Test Substance	Control	Arc	clor-1	1016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
LYMPH NODE-MESENTERIC			·		••••••••••••••••••••••••••••••••••••••		· · · · · ·		.			
Number Examined:	33	22	20	20	21	17	11	27	25	24	19	18
N-Leukemia/Lymphoma	0	1	0	1	0	0	0	0	0	0	0	0
LYMPH NODE-MANDIBULAR						•						
Number Examined:	1	1	4	2	0	0	1	4	3	0	0	1
N-Careinoma, Unidentified Primary Tumor	0	0	0	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	1	1	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-OTHER												
Number Examined:	1	1	0	2	0	0	0	0	0	1	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND	· · ·											
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
B-Adenoma	2	1	1	4	2	0	0	1	1	2	2	2
B-Adenoma, Multiple	1	0	1	0	0	0	0	0	0	0	0	0
M-Adenocarcinoma	5	1	4	2	2	0	0	1	0	3	0	1
M-Adenocarcinoma, Multiple	3	0	0	0	0	0	0	0	0	0	0	0
B-Fibroadenoma	13	4	3	8	8	6	3	15	4	4	5	3
B-Fibroadenoma, Multiple	0	5	3	1	· 1 ·	2	1	2	3	0	2	0
N-Rhabdomyosarcoma, Skeletal Muscle	0	0	0	0	0	0	0	0	1	0	0	0
MESENTERY												
Number Examined:	1	0	0	1	0	0	1	4	2	1	0	1
M-Osteosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	0	1	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	0	0	1	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ¹												
Number Examined:	32	22	21	21	20	17	11	27	25	25	19	18
ORAL MUCOSA												
Number Examined:	0	0	0	0	0	0	0	1	2	0	1	0
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	1	1	0	0	0

Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Core Subgroup Female Rats

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1. No lesions present.

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	Contral			016		1242		-1	254		-1 1	200
l est Substance	Control	Aro	CIOT-I	010	AFOCIO	-1242	Aro	CIOT-	1254	АГО	cior-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
ORAL MUCOSA												
M-Squamous Cell Carcinoma, Tongue	0	0	0	0	0	0	0	0	1	0	1	0
OVARY												
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
B-Granulosa Cell Tumor, Benign	1	0	0	0	0	1	0	0	0	0	0	0
M-Carcinoma, Tubular	0	0	0	0	0	0	0	1	0	0	0	0
OVIDUCT ¹					L			L		L		
Number Examined:	33 .	22	21	21	21	17	11	28	25	25	19	18
PANCREAS	l								L.,	L		
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Adenoma, Islet Cell	1	0	0	0	0	1	0	0	1	0	1	0
Badenoma, Acinar Cell	0	0	0	0	0	0	0	0	0	1	0	0
N-Leukemia/Lymphoma	0	1	0	0	0	0	0	0	0	0	0	0
PARATHYROID	L					<u> </u>		L		ر رون میں		
Number Examined:	31	16	17	18	19	15	10	25	24	21	18	18
B-Adenoma	0	0	0	1	1	0	0	0	1	0	0	0
PITUITARY GLAND	<u> </u>		· · ·		<u></u>			L	li	la sector	<u> </u>	L
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Adenoma, Pars Distalis	28	21	16	19	17	14	7	12	4	19	16	11
B-Adenoma, Pars Intermedia	0	0	0	0	0	0	0	1	0	0	0	0
N-Leukemia/Lymphoma	0	1	0	0	0	0	0	0	0	0	0	0
RECTUM	.	L	L			 ,J						
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
M-Leiomyosarcoma	0	1	0	0	0	0	0	0	0	0	1	0
SALIVARY GLAND-SUBLINGUAL			ليستعينها	L	L			L			<u> </u>	
Number Examined:	32	22	21	21	21	15	11	28	25	25	17	18
N-Leiomyosarcoma, Uterine	0	0	0	0	0 .	0	0	0	0	0	1	0
SALIVARY GLAND-SUBMAXILLAR	Y	L .,	ليتبيها	Ь								
Number Examined:	33	22	21	20	21	17	11	28	25	25	19	18
M-Adenocarcinoma	0	1	0	0	.0	0	0	0	0	0	0	0
N-Leiomyosarcoma Literine		0	0	0	0	0	0	0	0	0	1	0

Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Core Subgroup Female Rats

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Table 116.	Incidence Summ	ary of Microscop	ic Observations	(Neoplastic) for the
Unscheduled	I Termination (18	8-24 Months) for	Core Subgroup	Female Rats

Test Substance	Control	Arc	clor-1	1016	Aroclo	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
SCIATIC NERVE ¹												
Number Examined:	33	22	21	20	21	17	10	28	24	25	19	18
SKELETAL MUSCLE												
Number Examined:	33	22	21	20	21	17	10	28	25	25	18	18
M-Fibrosarcoma	0	1	0	. 0	0	0	0	0	0	0	0	0
M-Rhabdomyosarcoma	\ ð	Q	1	0	0	0	0	0	1	0	0	1
N-Histiocytic Sarcoma	0	0	0	0	0	0	0	0	0	0	0	1
N-Leukemia/Lymphoma	0	1	0	0	0	0	0	0	0	0	0	0
SKIN												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Squamous Cell Papilloma	1	0	0	0	0	0	0	0	0	1	0	0
M-Squamous Cell Carcinoma	0	0	0	0	1	0	1	0	0	0	0	0
B-Keratoacanthoma	0	0	1	0	0	0	0	0	0	0	0	0
B-Trichoepithelioma	0	0	0	0	0	1	0	0	0	0	0	0
M-Fibrosarcoma	1	0	0	1	0	0	0	0	0	0	1	0
M-Hemangiosarcoma	0	0	0	0	0	0	0	1	0	0	0	.0
M-Histiocytic Sarcoma	0	1	0	0	0	0	0	0	0	0	0	0
B-Lipoma	0	0	0	0	0	0	0	0	0	1	0	0
N-Leukemia/Lymphoma	0	1	0	1	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	1	1	0	0
SPINAL CORD ¹												·
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
SPLEEN												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
M-Hemangiosarcoma	0	0	0	0	0	1	0	0	0	0	0	1
N-Leukemia/Lymphoma	2	1	0	1	0	0	0	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	0	1	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	0	0	1	0	0	0	0
STERNUM ¹		:									· · · ·	
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
STOMACH												
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	0	1	0	0

1. No lesions present.

Test Substance	Control	Aro	clor-1	016	Aroclor	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
THYMUS												
Number Examined:	32	20	.21	20	20	16	9	25	24	25	19	17
M-Chondosarcoma	1	0	0	0	0	0	0	0	0	0	0	0
N-Thymoma, Malignant	0	0	0	1	0	0	0	0	0	0	0	0
M-Adenocarcinoma, Mammary	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	1	1	0	0	0	0	0	0	0	0	0	0
THYROID GLAND						••••••••••••••••••••••••••••••••••••••		••••••	e <u></u>			
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
B-Adenoma, Follicular Cell	0	1	1	1	2	0	0	1	0	1	0	1
B-Adenoma, C-Cell	4	2	1	1	0	1	1	1	0	1	1	1
M-Carcinoma, C-Cell	1	0	0	0	0	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	0	1	0	0	0	0	0	0	0	0	0	0
TONGUE								•			-	
Number Examined:	33	22	21	21	21	17	11	28	25	-25	19	18
M-Squamous Cell Carcinoma	0	0	0	0	. 0	0	0	0	0	0	1	0
TRACHEA ¹					.				.		.	•
Number Examined:	33	22	21	21	21	17	11	28	25	25	19	18
URETHRA ¹					•••••							
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
URINARY BLADDER												
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
N-Leiomyosarcoma, Uterine	0	0	0	0	0	0	0	0	0	0	1	0
UTERUS												
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18
B-Stromal Polyp	2	1	1	0	0	1	0	1	0	0	1	0
M-Endometrial Stromal Sarcoma	0	0	0	0	0	0	0	0	0	1	0	0
M-Leiomyosarcoma	0	0	0	1	0	0	0	0	1	0	1	1
M-Squamous Cell Carcinoma	0	0	0	0	0	0	0	1	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	0	1	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	0	0	0	0	0	1	0
VAGINA		· ·							<u></u>			
Number Examined:	33	22	21	21	21	17	11	28	24	25	19	18

Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Core Subgroup Female Rats

1. No lesions present.

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Test Substance	Control	Aroclor-1016			Aroclor	-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	22	21	21	21	17	11	28	25	25	19	18
VAGINA			1									
M-Leiomyosarcoma	0	0	0	1	0	0	0	1	0	0	-0	0
M-Endometrial Stromal Sarcoma	0	0	0	0	0	0	0	0	0	1	0	0
SYSTEMIC LESIONS										_		
Number Examined:	2	3	0	2	0	0	0	0	2	1	0	1
M-Histiocytic Sarcoma	0	2	0	0	0 -	0	0	0	1	0	0	1
M-Leukemia/Lymphoma	2	1	0	2	0	0	Ô	0	0	0	0	0
M-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	0	1 -	1	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	0	0	0	0	1	0	0	0	1
M-Carcinoma	0	0	0	0	0	0	0	1	0	0	0	1

 Table 116. Incidence Summary of Microscopic Observations (Neoplastic) for the

 Unscheduled Termination (18-24 Months) for Core Subgroup Female Rats

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1. No lesions present.

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Test Substance	Control ¹	Aroclor-1016			Aroclo	or-1242	Aro	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
ADRENAL GLAND		·	A			A		•			•	
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
M-Pheochromocytoma, Malignant, Bilateral	0	0	0	0	0	1	0	0	0	0	0	0
AORTA ²									•			A
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
BONE ²			.	•	•			.				
Number Examin	ed: 34	$[2^{-1}]$	4	8	4		3	2	6	3	6	2
BONE MARROW ²		·	-									.
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
BRAIN ²					A	•		••••••••	•			•••••••
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
CECUM ²	k								1			.
Number Examin	ed: 34	2	4	8	4	3	3	2	6	-3	6	2
CLITORAL GLAND			1	.	•	1						
Number Examin	ed: 0	0	0	0	0	0	0	0	0	0	0	0
COLON ²	il anı i	L	L	.		1		.		.	<u> </u>	L
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
DUODENUM ²		L		.	L	L.,						ı
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
ESOPHAGUS ²		L	L	L	·	L		I	I			.
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
EYE ²		L	••••••	·			L	1	I	L.,		
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
HARDERIAN GLAND ²		·		.	·			ł	·			L
Number Examin	ed: 34	2	4	8	4	3	2	2	6	3	6	2
HEART ²		L	I	I	.	1		I				L
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
ILEUM ²	k				R			· ·				.
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2
JEJUNUM ²		Ļ	ł	.	L	L		1			.	.
Number Examin	ed: 34	2	4	8	4	3	3	2	6	3	6	2

Table 117. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim Subgroup Unscheduled Termination (12-18 Months) control findings reported for comparison.

Test Substance	Control ¹	Aroclor-1016			Aroclo	or-1242	Аго	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
KIDNEY		****										
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
M-Carcinoma, Renal Tubular	0	0	0	0	0	0	0	0	1	0	0	0
M-Carcinoma, Transitional Cell, Pelvis	0	0	0	0	0	0	0	0	1	0	0	0
LACRIMAL GLAND ²											•	
Number Examined:	33	2	4	8	4	3	3	2	6	3	6	2
LIVER											;	
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
B-Hepatocellular Adenoma	0	0	1	0	0	0	0	0	0	0	1	Ò
B-Hepatocellular Adenoma, Multiple	0	0	0	0	0	0	0	0	1	0	0	0
B-Hepatocholangioma	0	0	0	0	0	1	0	0	0	0	0	0
LUNG						4A			•	L		
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
N-Adenocarcinoma, Renal Tubular	0	0	0	0	0	0	0	0	1	0	0	0
N-Carcinoma, C-cell	0	0	0	1	0	0	0	0	0	0	0	0
N-Pheochromocytoma, Malignant	0	0	0	0	0	1	0	0	0	0	0	0
LYMPH NODE-MEDIASTINAL				•			· .					
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
LYMPH NODE-MESENTERIC ²						•						
Number Examined:	33	2	4	8	4	3	3	2	6	3	6	2
LYMPH NODE-MANDIBULAR ²												
Number Examined:	1	0	0	0	1	0	0	0	0.	0	0	0
LYMPH NODE-OTHER												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
MAMMARY GLAND	-											
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
B-Adenoma	7	0	0	0	0	0	0	0	0	1	2	0
M-Adenocarcinoma	5	0	0	0	0	1	1	0	0	0	0	0
B-Fibroadenoma	7	0	1	1	1	2	0	0	3	1	1	0

Table 117. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

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1. Core and Interim Subgroup Unscheduled Termination (12-18 Months) control findings reported for comparison.

Test Substance	Control ¹	Aro	clor-1	016	Aroclo	r-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
MESENTERY												
Number Examined:	1	0	0	0	0	0	0	1	0	0	0	1
N-Endometrial Stromal Sarcoma	0	0	0	0	0	0	0	0	0	0	0	1
NOSE/TURBINATES	· ·											-
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²												
Number Examined:	30	2	3	7	3	2	3	2	6	3	6	1
ORAL MUCOSA											(
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OVARY ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
OVIDUCT ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
PANCREAS												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
M-Carcinoma, Acinar Cell	0	0	0	0	0	0	0	0	1	0	0	0
N-Endometrial Stromal Sarcoma	0	0	0	0	0	0	0	0	0	0	0	1
PARATHYROID ²												
Number Examined:	33	2	3	5	4	1	2	2	5	3	3	2
PITUITARY GLAND	· · · · ·											
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
B-Adenoma, Pars Distalis	19	2	4	7	3	2	1	1	2	1	5	1
RECTUM ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SALIVARY GLAND-SUBLINGUAL	2											
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SALIVARY GLAND-SUBMAXILLA	RY ²				· · ·							
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SCIATIC NERVE ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SKELETAL MUSCLE ²												
Number Examined:	34	2	4	8	.4	3	3	2	6	3	6	2

Table 117. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim Subgroup Unscheduled Termination (12-18 Months) control findings reported for comparison.

2. No lesions present.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test Substance	Control ¹	Aroclor-1016		Arocle	ог-1242	Arc	clor-1	254	Aro	clor-1	260	
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
SKIN ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SPINAL CORD ²												
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
SPLEEN ²	<u></u>	.						·				
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
STERNUM ²	L				•	.			.			
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
STOMACH ²	1		4		.	L		L	L			—
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
THYMUS ²	L		1	L	I							<u> </u>
Number Examined:	32	1	4	8	4	3	2	2	6	3	6	2
THYROID GLAND	L			L		L.,		.	L			
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
B-Adenoma, Follicular Cell	1	0	0	0	0	0	0	0	0	0	1	0
M-Carcinoma, Follicular Cell	1	0	0	0	0	1	0	0	0	0	0	0
B-Adenoma, C-Cell	2	0	1	0	0	0	0	0	0	0	0	0
M-Carcinoma, C-Cell	0	0	0	1	0	0	0	0	0	0	0	0
TONGUE ²	· · · · · · · · · · · · · · · · · · ·	L	.		I	L.,		L				L
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
TRACHEA ²			.		L	L		L		L	L	
Number Examined:	34	2	4	8	4	3	3	2	6	- 3	6	2
URETHRA ²			.	l	L	ļ.,I		·	L	<u> </u>		<u>L</u>
Number Examined:	1	0	0	0	0	0	0	0	0	1	0	0
URINARY BLADDER ²			L	L	I					L		<u> </u>
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
UTERUS	ļ		L	I				L	L			<u> </u>
Number Examined:	34	2	4	8	4	3	3	2	6	3	6	2
B-Stromal Polyp	0	0	0	0	0	1	1	0	0	0	0	0
M-Endometrial Stromal Sarcoma	0	0	0	0	0	0	0	0	0	0	0	$\frac{1}{1}$
N-Adenocarcinoma, Pancreatic Acinar	0	0	0	0	0	0	0	0	1	0	0	0

Table 117. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim Subgroup Unscheduled Termination (12-18 Months) control findings reported for comparison.

2. No lesions present.

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Test Substance	Control ¹	Aroclor-1016			Aroclo	ог-1242	Arc	clor-1	1254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	34	2	4	8	4	3	3	2	6	3	6	2
VAGINA												
Number Examined:	34 ·	2	4	8	4	3	3	2	6	3	6	2
M-Endometrial Stromal Sarcoma	0	0	0	0	0	0	0	0	0	0	0	1
SYSTEMIC LESIONS												
Number Examined:	1	0	0	0	0	0	0	0	0	0	0	0
ZYMBAL'S GLAND												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0

 Table 117. Incidence Summary of Microscopic Observations (Neoplastic) for the

 Unscheduled Termination (12-18 Months) for Stop Study Subgroup Female Rats

1. Core and Interim Subgroup Unscheduled Termination (12-18 Months) control findings reported for comparison. 2. No lesions present.

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Test Substance	Control ¹	Arc	clor-1	016	Aroci	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
ADRENAL GLAND											•	
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
B-Adenoma, Cortex	0	0	0	0	0.0	0	0	0	1	0	1	0
B-Pheochromocytoma, Benign	1	0	0	0	0	0	1	1	0	0	0	1
B-Pheochromocytoma, Benign, "Bilateral	0	0	0	0	1	0	0	0	0	0	0	1
M-Pheochromocytoma, Malignant	0	0	0	1	0	0	0	1	0	0	0	0
N-Mesothelioma, Malignant	0	0	0	0	0	0	0	1	0	0	0	0
AORTA		•										
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
N-Malignant Fibrous Histiocytoma	0	0	0	0	0	0	0	1	0	0	0	0
BONE ²			_									
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
BONE MARROW ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
BRAIN ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
CECUM ²	· .											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
CLITORAL GLAND ²												
Number Examined:	- 1	0	0	0	0	0	0	0	0	0	0	0
COLON ²												
Number Examined:	33	12	10	7	9	11	9	7	4	6	12	10
DUODENUM ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
ESOPHAGUS ²	· .											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
EYE ²			·									
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
HARDERIAN GLAND ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10

Table 118. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core subgroup unscheduled termination (18-24 Months) control findings reported for comparison.

2. No lesions present.

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Test Substance	Control ¹	Arc	clor-1	1016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
HEART			4								h	
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
M-Scwannoma, Malignant, Subendocardial	0	0	0	0	0	0	0	0	0	0	0	1
N-Carcinoma, Bronchioalveolar	0	1	0	0	0	0	0	0	0	Ö	0	0
ILEUM ²	·											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
JEJUNUM ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
KIDNEY		_										
Number Examined:	33	12	10	7	9	11	.9	8	4	6	12	10
M-Carcinoma, Renal Tubular	0	0	0	0	0	1	0	0	0	0	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	1	1	0	0	0	0	0
N-Mesothelioma, Malignant, Mesentery	0	0	0	0	0	0	0	1	0	0	0	0
LACRIMAL GLAND ²												
Number Examined:	33	12	9	7	9	11	9	7	4	6	12	10
LIVER												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
B-Hepatocellular Adenoma	0	0	0	0	0	3	1	0	2	0	0	-5
B-Hepatocellular Adenoma, Multiple	0	0	0	0	0	1	0	1	0	1	0	0
M-Hepatocellular Carcinoma, Multiple	0	0	0	0	0	0	0	0	0	0	0	2
B-Hepatocholangioma	0	0	0	0	0	1	0	0	0	0	0	0
B-Hemangioma	1	1	0	0	0	0	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	0	0	1	0	1	0	0	1	0	0
N-Leukemia/Lymphoma	2	0	0	0	0	1	1	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	0	0	0	0	0
LUNG												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
M-Carcinoma, Bronchioalveolar	0	1	0	0	0	0	0	0	0	0	0	0
N-Adenocarcinoma, Mammary Gland	2	0	0	0	0	0	0	1	0	0	0	0
N-Carcinoma, Hepatocellular	0	0	0	0	0	0	0	0	0	0	0	1

Table 118. Incidence Summary of Microscopic Observations (Neoplastic) for the Unscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core subgroup unscheduled termination (18-24 Months) control findings reported for comparison.

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Test Substance	Control ¹	Arc	clor-1	016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
LUNG												
N-Carcinoma, Renal Tubular	0	0	0	0	0	1	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	0	0	1 -	0	1	0	0	1	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	1	1	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	0	0	0	0	0
N-Schwannoma, Malignant, Subendocardial	0	0	0	0	0	0	0	0	. 0	0	0	1
LYMPH NODE-MEDIASTINAL												
Number Examined:	2	0	0	0	0	1	2	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	0	0	0	0	1	0	0	0	0	0
N-Leukemia/Lymphoma	1	0	0	0	0	1	1	0	0	0	0	0
LYMPH NODE-MESENTERIC	· · ·											
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
N-Leukemia/Lymphoma	Ó	0	0	0	0	1	1	0	0	0	0	0
LYMPH NODE-MANDIBULAR ²												
Number Examined:	1	1	0	0	3	0	1	0	0	0	0	0
LYMPH NODE-OTHER ²	·											
Number Examined:	1	0	0	0	0	0	0	1	0	0	0	0
MAMMARY GLAND	-								-			
Number Examined:	33	12	10	7	- 9	11	9	8	4	6	12	10
B-Adenoma	2	0	1	0	1	0	1	1	0	0	1	0
B-Adenoma, Multiple	1	0	1	0	0	0	0	0	1	1	0	1
M-Adenocarcinoma	5	1	0	1	1	1	1	2	0	1	0	0
B-Fibroadenoma	13	3	2	3	1	4	4	4	0.	0	4	0
B-Fibroadenoma, Multiple	0	3	4	0	1	1	2	2	0	0	1	3
MESENTERY												
Number Examined:	1	0	0	0	0	1	0	2	0	0	0	1
N-Carcinoma, Hepatocellular	0	0	0	0	0	0	0	0	0	0	0	1
N-Carcinoma, Renal Tubular	0	0	0	0	0	1	0	0	0	0	0	0
NOSE/TURBINATES												
Number Examined:	0	0	0	0	0	0	0	0	0	0	0	0
OPTIC NERVE ²	·											
Number Examined:	32	11	10	5	. 7	10	9	8	4	5	12	10

Table 118. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core subgroup unscheduled termination (18-24 Months) control findings reported for comparison.

2. No lesions present.

 $\overline{\mathbb{Q}}^{n}$

Test Substance	Control ¹	Arc	cior-1	016	Arock	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
ORAL MUCOSA												
Number Examined:	0	0	1	0	0	0	0	0	0	0	0	0
M-Squamous Cell Carcinoma	0	0	1	0	0	0	.0	0	0	0	0.	0
OVARY												
Number Examined:	33	12.	10	7	9	11	9	8	4	6	12	10
B-Adenoma, Tubular	0	0	0	0	0	0	0	0	0	0.	0	1
B-Granulosa Cell Tumor, Benign	1	1	0	0	0	0	0	0	0	0	0	0
OVIDUCT ²					, i							
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
PANCREAS												
Number Examined:	33	12	10	7	9	11	9	8	-4	6	12	10
B-Adenoma, Islet Cell	1	0	0	0	0	0	1	0	0	0	. 0	0
N-Carcinoma, Renal Tubular	0	0	0	0	0	1	0	0	0	0	0	0
PARATHYROID ²												
Number Examined:	31	11	9	4	7	10	9	7	4	6	10	10
PITUITARY GLAND												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
B-Adenoma, Pars Distalis	28	10	9	7	7	10	8	5	3	4	9	8
RECTUM												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
M-Leiomyosarcoma	0	0	0	0	0	0	0	0	0	0	1	0
SALIVARY GLAND-SUBLINGUAL ²												
Number Examined:	32	12	10	7	9	11	9	8	4	6	12	10
SALIVARY GLAND-SUBMAXILLARY	2				-							
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
SCIATIC NERVE ²	••••••••••••••••••••••••••••••••••••••		·									
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
SKELETAL MUSCLE												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
N-Histiocytic Sarcoma	0	0	0	0	1	0	0	0	0	1	0	0
N-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	1	0	0	0	0

Table 118. Incidence Summary of Microscopic Observations (Neoplastic) for the Unscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core subgroup unscheduled termination (18-24 Months) control findings reported for comparison.

Test Substance	Control ¹	Aro	clor-1	016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
SKIN												
Number Examined:	33	12	10	7	- 9	11	9	8	4	6	12	10
M-Squamous Cell Carcinoma	0	0	0	0	1	0	0	0	0	0	0	0
M-Fibrosarcoma	1	0	0	0	0	0	0	0	. 0	1	0	0
M-Histiocytic Sarcoma	0	0	0	0	1	0	1	0	0	0	0	0
N-Malignant Fibrous Histiocytoma	· 0	0	0	0	0	0	0	1	0	0	0	0
SPINAL CORD ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
SPLEEN												
Number Examined:	33	12	10	7	. 9	11	9	8	4	6	12	10
N-Carcinoma, Renal Tubular	0	0	0	0	0	1	0	0	0	0	0	0
N-Histiocytic Sarcoma	0	0	0	0	1	0	0	0	0	0	0	0
N-Leukemia/Lymphoma	2	0	0	0	0	1	1	0	0	0	0	0
STERNUM ²		•										
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
STOMACH ²											•	
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
THYMUS	•											
Number Examined:	32	11	9	7	8	10	7	5	3	6	11	9
M-Thymoma, Malignant	0	0	0	0	0	0	0	0	0	0	1	0
THYROID GLAND												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
B-Adenoma, Follicular Cell	0	0	0	0	0	0	1	0	0	0	1	0
M-Carcinoma, Follicular Cell	0	0	0	1	0	0	0	0	0	1	0	0
B-Adenoma, C-Cell	4	2	1	0	0	1	1	1	0	1	1	1
B-Adenoma C-Cell, Bilateral	0	0	0	0	1	0	0	0	0	0	0	0
TONGUE ²				·							-	
Number Examined:	33	12	10	7	. 9	11	9	8	4	6	12	10
TRACHEA ²							į.					
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
URETHRA ²												
Number Examined:	0	0	0	0	0	0	0	0	0	0	2	0

Table 118. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core subgroup unscheduled termination (18-24 Months) control findings reported for comparison.

Test Substance	Control ¹	Arc	clor-1	016	Arocl	or-1242	Aro	clor-1	254	Aro	clor-1	260
Conc. (ppm)	0	50	100	200	50	100	25	50	100	25	50	100
(N)	33	12	10	7	9	11	9	8	4	6	12	10
URINARY BLADDER ²												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
UTERUS												
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
B-Stromal Polyp	2	0	2	0	0	0	0	0	1	1	1	1
M-Leiomyosarcoma	0	0	0	0	0	0	0	0	0	0	1	0
VAGINA ²					-				· .			
Number Examined:	33	12	10	7	9	11	9	8	4	6	12	10
SYSTEMIC LESIONS												
Number Examined:	2	0	1	0	1	1	2	1	Ö	1	0	0
M-Histiocytic Sarcoma	0	0	0	0	1	0	1	0	0	1	0	0
M-Leukemia/Lymphoma	2	.0	0	0	0	1	1	0	0	0	0	0
M-Malignant Fibrous Histiocytoma	0	0	1	0	0	0	0	1	0	0	0	0
ZYMBAL'S GLAND ²												
Number Examined:	1	0	0	0	1	0	0	0	0	0	0	0

Table 118. Incidence Summary of Microscopic Observations (Neoplastic) for theUnscheduled Termination (18-24 Months) for Stop Study A Subgroup Female Rats

1. Core subgroup unscheduled termination (18-24 Months) control findings reported for comparison.

Test		Control	l Concentration					
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm		
		Liver, Hepatoce	llular Adenom	12				
Aroclor-1016	Overall Rates ^a	4/100 (4%)		1/50 (2%)	1/50 (2%)	2/50 (4%)		
	Adjusted Rates ^b	9%		7%	7%	7%		
	Final Termination Rates ^c	3/43 (7%)		1/14 (7%)	1/14 (7%)	1/25 (4%)		
	First Incidence (days)	719		FT	FT	673		
	Fatal Tests ^d	P=0.844N		P=0.811N	P=0.820N	P=0.883		
	Incidental Tests ^d	P=0.932N		P=0.876N	P=0.905N	P=0.988		
	Unadjusted Tests ^d	P=0.853N		P=0.665N	P=0.665N	P=1.000		
Aroclor-1242	Overall Rates ^a	4/100 (4%)]	1/50 (2%)	3/50 (6%)			
	Adjusted Rates ^b	9%	1	2%	14%			
	Final Termination Kates ^c	3/43 (7%)		0/24 (0%)	2/17 (12%)			
	First Incidence (days)	719		479	598			
	Fatal Tests ^d	P=0.519		P=0.481N	P=0.388			
	Incidental Tests ^d	P=0.582		P=0.508N	P=0.405			
	Unadjusted Tests ^d	P=0.663	-	P=0.665N	P=0.686			
Aroclor-1254	Overall Rates ^a	4/100 (4%)	2/50 (4%)	2/50 (4%)	6/50 (12%)			
	Adjusted Rates ^b	9%	6%	12%	23%			
	Final Termination Rates ^c	3/43 (7%)	0/21 (0%)	1/11 (9%)	3/20 (15%)			
	First Incidence (days)	719	610	635	645			
	Fatal Tests ^d	P=0.052	P=0.951	P=0.469	P=0.051			
	Incidental Tests ^d	P=0.069	P=0.933	P=0.666	P=0.055			
	Unadjusted Tests ^d	P=0.089	P=1.000	P=1.000	P=0.084			
	Multiple Tumor Rates	0/100 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)			
Aroclor-1260	Overall Rates ^a	4/100 (4%)	2/50 (4%)	5/50 (10%)	7/50 (14%)			
	Adjusted Rates ^b	9%	7%	22%	33%			
	Final Termination Rates ^c	3/43 (7%)	0/24 (0%)	2/16 (13%)	3/15 (20%)			
	First Incidence (days)	719	671	606	680			
	Fatal Tests ^d	P=0.003	P=0.943	P=0.056	P=0.005	1		
	Incidental Tests ^d	P=0.007	P=0.985	P=0.094	P=0.013			
	Unadjusted Tests ^d	P=0.017	P=1.000	P=0.161	P=0.043			
	Multiple Tumor Rates	0/100 (0%)	0/50 (0%)	2/50 (4%)	3/50 (6%)			

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

FT = Final Termination.

1

a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

c. Observed tumor occurrence rate at final termination.

d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e.

Not applicable; no tumors in animal group. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week f. termination. All interim termination subgroup animals were excluded from this analysis.

Test		Control	Concentration						
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm			
		Liver, Hepatoce	llular Carcinon	na		· · · · · · · · · · · · · · · · · · ·			
Aroclor-1016	Overall Rates ^a	3/100 (3%)	1	1/50 (2%)	1/50 (2%)	2/50 (4%)			
	Adjusted Rates ^b	6%		7%	7%	6%			
	Final Termination Rates ^c	2/43 (5%)		1/14 (7%)	1/14 (7%)	1/25 (4%)			
	First Incidence (days)	637		FT	FT	555			
	Fatal Tests ^d	P=0.856	· · · · · · · · · · · · · · · · · · ·	P=0.990N	P=0.996N	P=0.810			
	Incidental Tests ^d	P=0.815	1	P=0.928N	P=0.901N	P=0.748			
	Unadjusted Tests ^d	P=0.844		P=1.000N	P=1.000N	P=1.000			
Aroclor-1242	Overall Rates ^a	3/100 (3%)]	1/50 (2%)	1/50 (2%)				
	Adjusted Rates ^b	6%	h a	2%	6%	[
	Final Termination Rates ^c	2/43 (.7%)		0/24 (0%)	1/17 (6%)	1			
	First Incidence (days)	637	1	479	FT	1			
	Fatal Tests ^d	P=0.790N		P = 0.704 N	P=0.888N	1			
	Incidental Tests ^d	P=0.696N		P=0.707N	P=0.860N				
	Unadjusted Tests ^d	P=0.682N		P=1.000N	P=1.000N				
Aroclor-1254	Overall Rates ^a	3/100 (3%)	2/50 (4%)	2/50 (4%)	0/50 (0%)				
	Adjusted Rates ^b	6%	7%	11%	0%	1			
	Final Termination Rates ^c	2/43 (5%)	1/21 (5%)	0/11 (0%)	0/20 (0%)				
	First Incidence (days)	637	607	620	NA ^e				
	Fatal Tests ^d	P=0.573N	P=0.695	P=0.376	P=0.234N				
	Incidental Tests ^d	P=0.463N	P=0.704	P=0.610	P=0.123N				
	Unadjusted Tests ^d	P=0.430N	P=1.000	P=1.000	P=0.551N				
Aroclor-1260	Overall Rates ^a	3/100 (3%)	1/50 (2%)	1/50 (2%)	3/50 (6%)				
	Adjusted Rates ^b	6%	4%	6%	12%				
	Final Termination Rates ^c	2/43 (5%)	1/24 (4%)	1/16 (6%)	1/15 (7%)	1			
	First Incidence (days)	637	FT	FT	354				
	Fatal Tests ^d	P=0.277	P=0.666N	P=0.896N	P=0.241				
	Incidental Tests ^d	P=0.430	P=0.707N	P=0.830N	P=0.400				
	Unadjusted Tests ^d	P=0.460	P=1.000N	P=1.000N	P=0.401				
	Multiple Tumor Rates	0/100 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	1			

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

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FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

Test		Control	Concentration					
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm		
	Liver, Hepato	cellular Adenom	a or Hepatocel	lular Carcinoma				
Aroclor-1016	Overall Rates ^a	7/100 (7%)		2/50 (4%)	2/50 (4%)	4/50 (8%)		
	Adjusted Rates ^b	15%		14%	14%	13%		
	Final Termination Rates ^c	5/43 (12%)		2/14 (14%)	2/14 (14%)	2/25 (8%)		
	First Incidence (days)	637		FT	FT	555		
	Fatal Tests ^d	P=0.983N		P=0.863N	P=0.861N	P=0.956		
	Incidental Tests ^d	P=0.926		P=0.827N	P=0.808N	P=0.823		
	Unadjusted Tests ^d	P=1.000		P=0.718N	P=0.718N	P=1.000		
Aroclor-1242	Overall Rates ^a	7/100 (7%)		1/50 (2%)	4/50 (8%)			
	Adjusted Rates ^b	15%		2%	20%			
	Final Termination Rates ^c	5/43 (12%)		0/24 (0%)	3/17 (18%)			
	First Incidence (days)	637		479	598			
	Fatal Tests ^d	P=0.795		P=0.179N	F =0.537			
	Incidental Tests ^d	P=0.855		P=0.169N	P=0.562			
	Unadjusted Tests ^d	P=1.000		P=0.270N	P=1.000			
Aroclor-1254	Overall Rates ^a	7/100 (7%)	4/50 (8%)	4/50 (8%)	6/50 (12%)			
	Adjusted Rates ^b	15%	13%	22%	23%			
	Final Termination Rates ^c	5/43 (12%)	1/21 (5%)	1/11 (9%)	3/20 (15%)			
	First Incidence (days)	637	607	620	645			
	Fatal Tests ^d	P=0.206	P=0.754	P=0.250	P=0.254			
	Incidental Tests ^d	P=0.274	P=0.743	P=0.509	P=0.261			
	Unadjusted Tests ^d	P=0.348	P=1.000	P=1.000	P=0.360			
Aroclor-1260	Overall Rates ^a	7/100 (7%)	3/50 (6%)	6/50 (12%)	9/50 (18%)			
	Adjusted Rates ^b	15%	11%	28%	40%			
	Final Termination Rates ^c	5/43 (12%)	1/24 (4%)	3/16 (19%)	4/15 (27%)			
	First Incidence (days)	637	671	606	354			
	Fatal Tests ^d	P=0.005	P=0.739N	P=0.122	P=0.007			
	Incidental Tests ^d	P=0.014	P=0.799N	P=0.186	P=0.025			
	Unadjusted Tests ^d	P=0.030	P=1.000N	P=0.360	P=0.051			

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

865

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. . Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

Test		Control		Conce	ntration	
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Liver, Hepa	atocellular Ader	noma or Hepat	ocholangioma		_
Aroclor-1016	Overall Rates ^a	4/100 (4%)	[1/50 (2%)	1/50 (2%)	2/50 (4%)
	Adjusted Rates ^b	9%		7%	7%	7%
	Final Termination Rates ^c	3/43 (7%)		1/14 (7%)	1/14 (7%)	1/25 (4%)
	First Incidence (days)	719		FT	FT	673
	Fatal Tests ^d	P=0.844N		P=0.811N	P=0.820N	P=0.883
	Incidental Tests ^d	P=0.932N		P=0.876N	P=0.905N	P=0.988
	Unadjusted Tests ^d	P=0.853N		P=0.665N	P=0.665N	P=1.000
Aroclor-1242	Overall Rates ^a	4/100 (4%)		1/50 (2%)	3/50 (6%)	
	Adjusted Rates ^b	9%		2%	14%	
	Final Termination Rates ^c	3/43 (7%)		0/24 (0%)	2/17 (12%)	
	First Incidence (days)	719	· ·	479	598	
	Fatal Tests ^d	P=0.519		P=0.481N	P=0.388	
· · ·	Incidental Tests ^d	P=0.582		P=0.508N	P=0.405	
	Unadjusted Tests ^d	P=0.663		P=0.665N	P=0.686	
Aroclor-1254	Overall	4/100 (4%)	2/50 (4%)	2/50 (4%)	6/50 (12%)	
	Adjusted	9%	6%	12%	23%	
	Final	3/43 (7%)	0/21 (0%)	1/11 (9%)	3/20 (15%)	
	First	719	610	635	645	
	Fatal Tests ^d	P=0.052	P=0.951	P=0.469	P=0.051	
	Incidental	P=0.069	P=0.933	P=0.666	P=0.055	
	Unadjusted	P=0.089	P=1.000	P=1.000	P=0.084	
Aroclor-1260	Overall Rates ^a	4/100 (4%)	2/50 (4%)	5/50 (10%)	8/50 (16%)	
	Adjusted Rates ^b	9%	7%	22%	39%	
	Final Termination Rates ^c	3/43 (7%)	0/24 (0%)	2/16 (13%)	4/15 (27%)	
	First Incidence (days)	719	671	606	680	
	Fatal Tests ^d	P<0.001	P=0.943	P=0.056	P=0.001	
	Incidental Tests ^d	P=0.002	P=0.985	P=0.094	P=0.004	
	Unadjusted Tests ^d	P=0.007	P=1.000	P=0.161	P=0.021	

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control	trol				
Substance	Description	0 ppm	25 ppm	50 ppm	100 ррт	200 ppm	
	Liver, Hepatoc	ellular Carcino	ma or Hepatoc	holangiocarcino	ma		
Aroclor-1016	Overall Rates ^a	3/100 (3%)	[1/50 (2%)	1/50 (2%)	2/50 (4%)	
	Adjusted Rates ^b	6%		7%	7%	6%	
	Final Termination Rates ^c	2/43 (5%)		1/14 (7%)	1/14 (7%)	1/25 (4%)	
	First Incidence (days)	637		FT	FT	555	
	Fatal Tests ^d	P=0.856		P=0.990N	P=0.996N	P=0.810	
	Incidental Tests ^d	P=0.815		P=0.928N	P=0.901N	P=0.748	
	Unadjusted Tests ^d	P=0.844		P=1.000N	P=1.000N	P=1.000	
Aroclor-1242	Overall Rates ^a	3/100 (3%)		1/50 (2%)	1/50 (2%)		
	Adjusted Rates ^b	6%		2%	6%	· New ·	
	Final Termination Rates ^c	2/43 (5%)		0/24 (0%)	1/17 (6%)		
	First Incidence (days)	637		479	FT		
	Fatal Tests ^d	P=0.790N		P=0.704N	P=0.888N		
	Incidental Tests ^d	P=0.696N		P=0.707N	P=0.860N		
	Unadjusted Tests ^d	P=0.682N		P=1.000N	P=1.000N		
Aroclor-1254	Overall Rates ^a	3/100 (3%)	2/50 (4%)	2/50 (4%)	0/50 (0%)		
	Adjusted Rates ^b	6%	7%	11%	0%		
	Final Termination Rates ^c	2/43 (5%)	1/21 (5%)	0/11 (0%)	0/20 (0%)		
	First Incidence (days)	637	607	620	NA ^e		
	Fatal Tests ^d	P=0.537N	P=0.695	P=0.376	P=0.234N		
	Incidental Tests ^d	P=0.463N	P=0.704	P=0.610	P=0.123N		
	Unadjusted Tests ^d	P=0.430N	P=1.000	P=1.000	P=0.551N		
Aroclor-1260	Overall Rates ^a	3/100 (3%)	1/50 (2%)	1/50 (2%)	3/50 (6%)		
	Adjusted Rates ^b	6%	4%	6%	12%		
	Final Termination Rates ^c	2/43 (5%)	1/24 (4%)	1/16 (6%)	1/15 (7%)		
	First Incidence (days)	637	FT	FT	354		
	Fatal Tests ^d	P=0.277	P=0.666N	P=0.896N	P=0.241		
and the second second	Incidental Tests ^d	P=0.430	P=0.707N	P=0.830N	P=0.400		
	Unadjusted Tests ^d	P=0.460	P=1.000N	P=1.000N	P=0.401		

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

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FT = Final Termination.

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a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

c. Observed tumor occurrence rate at final termination.

d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

Test		Control	Concentration							
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm				
	Liver, Hepato Liver, Hepa	cellular Adenor tocholangioma	na or Hepatoco or Hepatochol	ellular Carcinon angiocarcinoma	18					
Aroclor-1016	Overall Rates ^a	7/100 (7%)		2/50 (4%)	2/50 (4%)	4/50 (8%)				
	Adjusted Rates ^b	15%		14%	14%	13%				
	Final Termination Rates ^c	5/43 (12%)		2/14 (14%)	2/14 (14%)	2/25 (8%)				
	First Incidence (days)	637		FT	FT	555				
	Fatal Tests ^d	P=0.983N		P=0.863N	P=0.861N	P=0.956				
	Incidental Tests ^d	P=0.926		P=0.827N	P=0.808N	P=0.823				
	Unadjusted Tests ^d	P=1.000		P=0.718N	P=0.718N	P=1.000				
Aroclor-1242	Overall Rates ^a	7/100 (7%)		1/50 (2%)	4/50 (8%)					
	Adjusted Rates ^b	15%		2%	20%	5				
	Final Termination Rates ^c	5/43 (12%)		0/24 (0%)	3/17 (18%)	·				
	First Incidence (days)	637		479	598					
	Fatal Tests ^d	P=0.795		P=0.179N	P=0.537					
	Incidental Tests ^d	P=0.855		P=0.169N	P=0.562					
	Unadjusted Tests ^d	P=1.000		P=0.270N	P=1.000					
Aroclor-1254	Overall Rates ^a	7/100 (7%)	4/50 (8%)	4/50 (8%)	6/50 (12%)					
	Adjusted Rates ^b	15%	13%	22%	23%					
	Final Termination Rates ^c	5/43 (12%)	1/21 (5%)	1/11 (9%)	3/20 (15%)					
	First Incidence (days)	637	607	620	645					
	Fatal Tests ^d	P=0.206	P=0.754	P=0.250	P=0.254					
	Incidental Tests ^d	P=0.274	P=0.743	P=0.509	P=0.261	-				
	Unadjusted Tests ^d	P=0.348	P=1.000	P=1.000	P=0.360					
Aroclor-1260	Overall Rates ^a	7/100 (7%)	3/50 (6%)	6/50 (12%)	10/50 (20%)					
	Adjusted Rates ^b	15%	11%	28%	46%					
	Final Termination Rates ^c	5/43 (12%)	1/24 (4%)	3/16 (19%)	5/15 (33%)					
	First Incidence (days)	637	671	606	354					
	Fatal Tests ^d	P=0.002	P=0.739N	P=0.122	P=0.002					
	Incidental Tests ^d	P=0.006	P=0.799N	P=0.186	P=0.010					
	Unadjusted Tests ^d	P=0.014	P=1.000N	P=0.360	P=0.027					

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test Substance	Description	Control 0 ppm	Concentration			
			25 ppm	50 ppm	100 ррт	200 ppm
Thyroid Gland, Follicular Cell Adenoma						
Aroclor-1016	Overall Rates ^a	1/100 (1%)		3/50 (6%)	2/50 (4%)	0/50 (0%)
	Adjusted Rates ^b	1%		14%	13%	0%
	Final Termination Rates ^c	0/43 (0%)		1/14 (7%)	1/14 (7%)	0/25 (0%)
	First Incidence (days)	657		613	709	NA ^e
	Fatal Tests ^d	P=0.959N		P=0.023	P=0.100	P=0.483N
	Incidental Tests ^d	P=0.964		P=0.058	P=0.166	P=0.366N
	Unadjusted Tests ^d	P=0.944N		P=0.108	P=0.258	P=1.000N
Aroclor-1242	Overall Rates ^a	1/100 (1%)		5/50 (10%)	5/50 (10%)	
	Adjusted Rates ^b	1%		16%	21%	
	Final Termination Rates ^c	0/43 (0%)		2/24 (8%)	2/17 (12%)	
	First Incidence (days)	657		562	579	
	Fatal Tests ^d	P=0.004		P=0.010	P=0.002	
	Incidental Tests ^d	P=0.012		P=0.010	P=0.007	
	Unadjusted Tests ^d	P=0.012		P=0.016	P=0.016	
Aroclor-1254	Overall Rates ^a	1/100 (1%)	6/50 (12%)	4/50 (8%)	5/50 (10%)	
	Adjusted Rates ^b	1%	29%	24%	17%	
	Final Termination Rates ^c	0/43 (0%)	6/21 (29%)	2/11 (18%)	1/20 (5%)	
	First Incidence (days)	657	FT	650	629	
	Fatal Tests ^d	P=0.015	P=0.002	P=0.004	P=0.008	
	Incidental Tests ^d	P=0.020	P=0.002	P=0.016	P=0.011	
	Unadjusted Tests ^d	P=0.030	P=0.006	P=0.043	P=0.016	
Aroclor-1260	Overall Rates ^a	1/100 (1%)	6/50 (12%)	4/50 (8%)	3/50 (6%)	
	Adjusted Rates ^b	1%	18%	19%	17%	
	Final Termination Rates ^c	0/43 (0%)	2/24 (8%)	2/16 (13%)	2/15 (13%)	
	First Incidence (days)	657	474	636	705	
	Fatal Tests ^d	P=0.062	P=0.004	P=0.010	P=0.036	
	Incidental Tests ^d	P=0.115	P=0.003	P=0.020	P=0.061	
	Unadjusted Tests ^d	P=0.144	P=0.006	P=0.043	P=0.108	

 Table 119.
 Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.f. This analysis was conducted on the Core su
- f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control		Concer	tration	
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Thy	roid Gland, Fol	licular Cell Ca	rcinoma		
Aroclor-1016	Overall Rates ^a	1/100 (1%)		1/50 (2%)	1/50 (2%)	1/50 (2%)
	Adjusted Rates ^b	2%		4%	7%	3%
	Final Termination Rates ^c	0/43 (0%)		0/14 (0%)	1/14 (7%)	0/25 (0%)
	First Incidence (days)	709		622	FT	605
	Fatal Tests ^d	P=0.615		P=0.440	P=0.409	P=0.648
	Incidental Tests ^d	P=0.603		P=0.586	P=0.449	P=0.626
	Unadjusted Tests ^d	P=0.604		P=1.000	P=1.000	P=1.000
Aroclor-1242	Overall Rates ^a	1/100 (1%)		2/50 (4%)	1/50 (2%)	
	Adjusted Rates ^b	2%		8%	6%	
	Final Termination Rates ^c	0/43 (0%)		2/24 (8%)	1/17 (6%)	
	First Incidence (days)	709		FT	FT	
	Fatal Tests ^d	P=0.424		P=0.250	P=0.494	
	Incidental Tests ^d	P=0.399		P=0.137	P=0.499	
	Unadjusted Tests ^d	P=0.542		P=0.258	P=1.000	
Aroclor-1254	Overall Rates ^a	1/100 (1%)	1/50 (2%)	3/50 (6%)	1/50 (2%)	
	Adjusted Rates ^b	2%	5%	14%	5%	· · · · ·
	Final Termination Rates ^c	0/43 (0%)	1/21 (5%)	1/11 (9%)	1/20 (5%)	
	First Incidence (days)	709	FT	548	FT	
	Fatal Tests ^d	P=0.246	P=0.606	P=0.021	P=0.548	
	Incidental Tests ^d	P=0.311	P=0.580	P=0.087	P=0.335	
	Unadjusted Tests ^d	P=0.321	P=1.000	P=0.108	P=1.000	
Aroclor-1260	Overall Rates ^a	1/100 (1%)	1/50 (2%)	1/50 (2%)	1/50 (2%)	
	Adjusted Rates ^b	2%	4%	3%	7%	
	Final Termination Rates ^c	0/43 (0%)	0/24 (0%)	0/16 (0%)	1/15 (7%)	
	First Incidence (days)	709	714	650	FT	
	Fatal Tests ^d	P=0.465	P=0.612	P=0.510	P=0.464	
	Incidental Tests ^d	P=0.527	P=0.629	P=0.588	P=0.537	
	Unadjusted Tests ^d	P=0.604	P=1.000	P=1.000	P=1.000	

Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control	Concentration				
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	Thyroid G	land, Follicular	Cell Adenoma	or Carcinoma			
Aroclor-1016	Overall Rates ^a	2/100 (2%)	· ·	4/50 (8%)	3/50 (6%)	1/50 (2%)	
	Adjusted Rates ^b	3%		18%	19%	3%	
	Final Termination Rates ^c	0/43 (0%)		1/14 (7%)	2/14 (14%)	0/25 (0%)	
	First Incidence (days)	657		613	709	605	
	Fatal Tests ^d	P=0.781		P=0.021	P=0.071	P=0.978	
	Incidental Tests ^d	P=0.697		P=0.059	P=0.119	P=0.848	
	Unadjusted Tests ^d	P=0.782		P=0.096	P=0.334	P=1.000	
Aroclor-1242	Overall Rates ^a	2/100 (2%)		7/50 (14%)	6/50 (12%)		
	Adjusted Rates ^b	3%		23%	26%		
	Final Termination Rates ^c	0/43 (0%)	1	4/24 (17%)	3/17 (18%)		
	First Incidence (days)	657		562	579		
	Fatal Tests ^d	P=0.004		P=0.006	P=0.003		
	Incidental Tests ^d	P=0.008		P=0.004	P=0.008		
	Unadjusted Tests ^d	P=0.012		P=0.007	P=0.017		
Aroclor-1254	Overall Rates ^a	2/100 (2%)	7/50 (14%)	7/50 (14%)	6/50 (12%)		
	Adjusted Rates ^b	3%	33%	36%	21%		
	Final Termination Rates ^c	0/43 (0%)	7/21 (33%)	3/11 (27%)	2/20 (10%)		
	First Incidence (days)	657	FT	548	629		
	Fatal Tests ^d	P=0.007	P=0.003	P<0.001	P=0.009		
	Incidental Tests ^d	P=0.011	P=0.002	P=0.003	P=0.015		
	Unadjusted Tests ^d	P=0.016	P=0.007	P=0.007	P=0.017		
Aroclor-1260	Overall Rates ^a	2/100 (2%)	7/50 (14%)	5/50 (10%)	4/50 (8%)	-	
	Adjusted Rates ^b	3%	21%	22%	24%		
	Final Termination Rates ^c	0/43 (0%)	2/24 (8%)	2/16 (13%)	3/15 (20%)		
	First Incidence (days)	657	474	636	705		
	Fatal Tests ^{d[*]}	P=0.046	P=0.005	P=0.012	P=0.032		
	Incidental Tests ^d	P=0.087	P=0.005	P=0.028	P=0.057		
	Unadjusted Tests ^d	P=0.121	P=0.007	P=0.041	P=0.096		

 Table 119. Dose-Response Tumor Analysis for Core Subgroup Male Rats^f

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FT = Final Termination.

a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Core subgroup males only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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		Control		Concer	ntration	
Test Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	L	iver, Hepatoce	llular Adenoma	1		
Aroclor-1016	Overall Rates ^a	1/100 (1%)		1/50 (2%)	5/50 (10%)	5/50 (10%)
	Adjusted Rates ^b	3%		5%	19%	17%
	Final Termination Rates ^c	1/31 (3%)		1/20 (5%)	3/21 (14%)	3/24 (13%)
	First Incidence (days)	FT		FT	612	443
	Fatal Tests ^d	P=0.017	·····	P=0.752	P=0.027	P=0.041
	Incidental Tests ^d	P=0.008		P=0.677	P=0.018	P=0.019
	Unadjusted Tests ^d	P=0.003		P=1.000	P=0.016	P=0.016
	Multiple Tumor Rates	0/100 (0%)		0/50 (0%)	1/50 (2%)	3/50 (6%)
Aroclor-1242	Overall Rates ^a	1/100 (1%)		10/50 (20%)	12/50 (24%)	
	Adjusted Rates ^b	3%		37%	38%	
	Final Termination Rates ^c	1/31 (3%)		7/23 (30%)	8/26 (31%)	
	First Incidence (days)	FT		508	611	
	Fatal Tests ^d	P<0.001		P<0.001	P<0.001	
	Incidental Tests ^d	P<0.001		P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001		P<0.001	P<0.001	
	Multiple Tumor Rates	0/100 (0%)		3/50 (6%)	7/50 (14%)	
Aroclor-1254	Overall Rates ^a	1/100 (1%)	18/50 (36%)	26/50 (52%)	27/50 (54%)	
	Adjusted Rates ^b	3%	51%	75%	76%	
	Final Termination Rates ^c	1/31 (3%)	16/33 (48%)	10/17 (59%)	12/20 (60%)	
	First Incidence (days)	FT	601	505	576	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	-
	Multiple Tumor Rates	0/100 (0%)	9/50 (18%)	15/50 (30%)	21/50 (42%)	
Aroclor-1260	Overall Rates ^a	1/100 (1%)	9/50 (18%)	10/50 (20%)	21/50 (42%)	
	Adjusted Rates ^b	3%	37%	37%	70%	
	Final Termination Rates ^c	1/31 (3%)	6/20 (30%)	5/21 (24%)	14/22 (64%)	
	First Incidence (days)	FT	532	590	483	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
1. A.	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Multiple Tumor Rates	0/100 (0%)	6/50 (12%)	8/50 (16%)	16/50 (32%)	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control	itration			
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Li	ver, Hepatocel	lular Carcinor	na		
Aroclor-1016	Overall Rates ^a	0/100 (0%)		0/50 (0%)	1/50 (2%)	0/50 (0%)
	Adjusted Rates ^b	0%		0%	3%	0%
	Final Termination Rates ^c	0/31 (0%)	al and	0/20 (0%)	0/21 (0%)	0/24 (0%)
	First Incidence (days)	NA ^e		NA ^e	621	NA ^e
	Fatal Tests ^d	P=0.582		NA ^e	P=0.212	NA ^e
	Incidental Tests ^d	P=0.470		NA ^e	P=0.135	NA ^e
	Unadjusted Tests ^d	P=0.492		NA ^e	P=0.333	NA ^e
Aroclor-1242	Overall Rates ^a	0/100 (0%)		0/50 (0%)	2/50 (4%)	
	Adjusted Rates ^b	0%		0%	7%	
	Final Termination Rates ^c	0/31 (0%)		0/23 (0%)	0/26 (0%)	
	First Incidence (days)	NA ^e		NA ^e	686	
	Fatal Tests ^d	P=0.071		NA ^e	P=0.113	
	Incidental Tests ^d	P=0.017	·	NAe	P=0.033	
	Unadjusted Tests ^d	P=0.032		NA ^e	P=0.110	
Aroclor-1254	Overall Rates ^a	0/100 (0%)	0/50 (0%)	4/50 (8%)	6/50 (12%)	
	Adjusted Rates ^b	0%	0%	20%	25%	
	Final Termination Rates ^C	0/31 (0%)	0/33 (0%)	3/17 (18%)	4/20 (20%)	
	First Incidence (days)	NA ^e	NA ^e	634	636	
	Fatal Tests ^d	P<0.001	NA ^e	P=0.008	P=0.002	
	Incidental Tests ^d	P<0.001	NAe	P=0.005	P<0.001	
	Unadjusted Tests ^d	P<0.001	NA ^e	P=0.011	P=0.001	
	Multiple Tumor Rates	0/100 (0%)	0/50 (0%)	1/50 (2%)	4/50 (8%)	
Aroclor-1260	Overall Rates ^a	0/100 (0%)	1/50 (2%)	1/50 (2%)	5/50 (10%)	
	Adjusted Rates ^b	0%	5%	5%	18%	
	Final Termination Rates ^c	0/31 (0%)	1/20 (5%)	1/21 (5%)	2/22 (9%)	
	First Incidence (days)	NA ^e	FT	FT	498	
	Fatal Tests ^d	P=0.005	P=0.213	P=0.224	P=0.007	
	Incidental Tests ^d	P=0.002	P=0.174	P=0.182	P=0.001	
	Unadjusted Tests ^d	P=0.002	P=0.333	P=0.333	P=0.004	
	Multiple Tumor Rates	0/100 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

FT = Final Termination.

a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

c. Observed tumor occurrence rate at final termination.

d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

Test		Control		Conce	ntration	
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Liver, Hepatoce	ellular Adenom	a or Hepatoce	llular Carcino	ma	· · · · · · · · · · · · · · · · · · ·
Aroclor-1016	Overall Rates ^a	1/100 (1%)		1/50 (2%)	6/50 (12%)	5/50 (10%)
	Adjusted Rates ^b	3%		5%	22%	17%
	Final Termination Rates ^c	1/31 (3%)		1/20 (5%)	3/21 (14%)	3/24 (13%)
	First Incidence (days)	FT		FT	612	443
	Fatal Tests ^d	P=0.015		P=0.752	P=0.012	P=0.041
	Incidental Tests ^d	P=0.006		P=0.677	P=0.006	P=0.019
	Unadjusted Tests ^d	P=0.002		P=1.000	P=0.006	P=0.016
Aroclor-1242	Overall Rates ^a	1/100 (1%)		10/50 (20%)	14/50 (28%)	
	Adjusted Rates ^b	3%		37%	43%	
	Final Termination Rates ^c	1/31 (3%)		7/23 (30%)	8/26 (31%)	
	First Incidence (days)	FT		508	611	
	Fatal Tests ^d	P<0.001		P<0.001	P<0.001	
	Incidental Tests ^d	P<0.001		P<0.001	P<0.001	
. ·	Unadjusted Tests ^d	P<0.001		P<0.001	P<0.001	
Aroclor-1254	Overall Rates ^a	1/100 (1%)	18/50 (36%)	26/50 (52%)	28/50 (56%)	
	Adjusted Rates ^b	3%	51%	75%	76%	
	Final Termination Rates ^c	1/31 (3%)	16/33 (48%)	10/17 (59%)	12/20 (60%)	
	First Incidence (days)	FT	601	505	576	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
• • •	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
Aroclor-1260	Overall Rates ^a	1/100 (1%)	10/50 (20%)	11/50 (22%)	23/50 (46%)	
	Adjusted Rates ^b	3%	41%	41%	73%	1
	Final Termination Rates ^c	1/31 (3%)	7/20 (35%)	6/21 (29%)	14/22 (64%)	
	First Incidence (days)	FT	532	590	483	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	İ
	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control	Concentration				
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	Liver, Hepato	cellular Aden	oma or Hepato	cholangioma			
Aroclor-1016	Overall Rates ^a	1/100 (1%)		1/50 (2%)	5/50 (10%)	5/50 (10%)	
	Adjusted Rates ^D	3%		5%	19%	17%	
	Final Termination Rates ^c	1/31 (3%)		1/20 (5%)	3/21 (14%)	3/24 (13%)	
	First Incidence (days)	FT		FT	612	443	
- -	Fatal Tests ^d	P=0.017		P=0.752	P=0.027	P=0.041	
	Incidental Tests ^d	P=0.008		P=0.677	P=0.018	P=0.019	
	Unadjusted Tests ^d	P=0.003		P=1.000	P=0.016	P=0.016	
Aroclor-1242	Overall Rates ^a	1/100 (1%)		10/50 (20%)	13/50 (26%)		
	Adjusted Rates ^b	3%		37%	40%		
4	Final Termination Rates ^c	1/31 (3%)		7/23 (30%)	8/26 (31%)		
	First incidence (days)	FT		508	611		
	Fatal Tests ^d	P<0.001		P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001		P<0.001	P<0.001		
	Unadjusted Tests ^d	P<0.001		P<0.001	P<0.001		
Aroclor-1254	Overall Rates ^a	1/100 (1%)	19/50 (38%)	28/50 (56%)	27/50 (54%)		
	Adjusted Rates ^b	3%	54%	79%	76%		
	Final Termination Rates ^c	1/31 (3%)	17/33 (52%)	11/17 (65%)	12/20 (60%)		
	First Incidence (days)	FT	601	505	576		
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
· · · ·	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
Aroclor-1260	Overall Rates ^a	1/100 (1%)	9/50 (18%)	10/50 (20%)	22/50 (44%)		
	Adjusted Rates ^b	3%	37%	37%	74%		
	Final Termination Rates ^c	1/31 (3%)	6/20 (30%)	5/21 (24%)	15/22 (68%)		
	First Incidence (days)	FT	532	590	483		
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		

 Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control		Concer	ntration	
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Liver, Hepatoc	ellular Carcino	ma or Hepatoc	holangiocarcino	ma	
Aroclor-1016	Overall Rates ^a	0/100 (0%)		0/50 (0%)	1/50 (2%)	0/50 (0%)
	Adjusted Rates ^b	0%	· · · ·	0%	3%	0%
	Final Termination Rates ^c	0/31 (0%)		0/20 (0%)	0/21 (0%)	0/24 (0%)
	First Incidence (days)	NA ^e		NA ^e	621	NA ^e
	Fatal Tests ^d	P=0.582		NA ^e	P=0.212	NA ^e
	Incidental Tests ^d	P=0.470		NA ^e	P=0.135	NA ^e
	Unadjusted Tests ^d	P=0.492		NA ^e	P=0.333	NA ^e
Aroclor-1242	Overall Rates ^a	/100 (0%)		1/50 (2%)	2/50 (4%)	
	Adjusted Rates ^b	0%		4%	7%	
	Fina' Termination Rates ^c	2/31 (0%)		0/23 (0%)	0/26 (0%)	
	First Incidence (days)	NA ^e		683	686	
	Fatal Tests ^d	P=0.120		P=0.218	P=0.113	
	Incidental Tests ^d	P=0.055		P=0.163	P=0.033	-
	Unadjusted Tests ^d	P=0.054		P=0.333	P=0.110	
Aroclor-1254	Overall Rates ^a	0/100 (0%)	0/50 (0%)	4/50 (8%)	6/50 (12%)	
	Adjusted Rates ^b	0%	0%	20%	25%	
	Final Termination Rates ^c	0/31 (0%)	0/33 (0%)	3/17 (18%)	4/20 (20%)	
	First Incidence (days)	NA ^e	NA ^e	634	636	
-	Fatal Tests ^d	P<0.001	NA ^e	P=0.008	P=0.002	
	Incidental Tests ^d	P<0.001	NA ^e	P=0.005	P<0.001	
	Unadjusted Tests ^d	P<0.001	NA ^e	P=0.011	P=0.001	
Aroclor-1260	Overall Rates ^a	0/100 (0%)	1/50 (2%)	1/50 (2%)	5/50 (10%)	
	Adjusted Rates ^b	0%	5%	5%	18%	
	Final Termination Rates ^c	0/31 (0%)	1/20 (5%)	1/21 (5%)	2/22 (9%)	
	First Incidence (days)	NA ^e	FT	FT	498	
	Fatal Tests ^d	P=0.005	P=0.213	P=0.224	P=0.007	
	Incidental Tests ^d	P=0.002	P=0.174	P=0.182	P=0.001	
	Unadjusted Tests ^d	P=0.002	P=0.333	P=0.333	P=0.004	·

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

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Test		Control		Concen	tration	
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Liver, Hepatoce Liver, Hepato	llular Adenom cholangioma o	a or Hepatocel or Hepatochola	llular Carcinon ngiocarcinoma	na	
Aroclor-1016	Overall Rates ^a	1/100 (1%)		1/50 (2%)	6/50 (12%)	5/50 (10%)
	Adjusted Rates ^b	3%		5%	22%	17%
	Final Termination Rates ^c	1/31 (3%)	[1/20 (5%)	3/21 (14%)	3/24 (13%)
	First Incidence (days)	FT		FT	612	.443
	Fatal Tests ^d	P=0.015		P=0.752	P=0.012	P=0.041
	Incidental Tests ^d	P=0.006		P=0.677	P=0.006	P=0.019
	Unadjusted Tests ^d	P=0.002		P=1.000	P=0.006	P=0.016
Aroclor-1242	Overall Rates ^a	1/100 (1%)		11/50 (22%)	15/50 (30%)	
	Adjusted Rates ^b	3%		~40%	45%	
	Final Termination Rates ^c	1/31 (3%)		7/23 (30%)	8/26 (31%)	
	First Incidence (days)	FT		508	611	
	Fatal Tests ^d	P<0.001		P<0.001	P<0.001	
- 	Incidental Tests ^d	P<0.001		P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001		P<0.001	P<0.001	
Aroclor-1254	Overall Rates ^a	1/100 (1%)	19/50 (38%)	28/50 (56%)	28/50 (56%)	
	Adjusted Rates ^b	3%	54%	79%	76%	·
	Final Termination Rates ^c	1/31 (3%)	17/33 (52%)	11/17 (65%)	12/20 (60%)	
	First Incidence (days)	FT	601	505	576	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
Aroclor-1260	Overall Rates ^a	1/100 (1%)	10/50 (20%)	11/50 (22%)	24/50 (48%)	
	Adjusted Rates ^b	3%	41%	41%	76%	
	Final Termination Rates ^c	1/31 (3%)	7/20 (35%)	6/21 (29%)	15/22 (68%)	
	First Incidence (days)	FT	532	590	483	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	· · · · · ·
	Incidental Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

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FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

		Control		Concentration		
Test Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
		Mammary Gla	nd, Adenoma	<u>, , ,</u>		
Aroclor-1016	Overall Rates ^a	14/100 (14%)		2/50 (4%)	9/50 (18%)	9/50 (18%)
	Adjusted Rates ^b	25%		7%	34%	30%
	Final Termination Rates ^c	4/31 (13%)		1/20 (5%)	6/21 (29%)	5/24 (21%)
	First Incidence (days)	282		603	367	622
	Fatal Tests ^d	P=0.890		P=0.031N	P=0.940	P=0.823
	Incidental Tests ^d	P=0.331		P=0.067N	P=0.500	P=0.508
	Unadjusted Tests ^d	P=0.327		P 0.090N	P=0.631	P=0.631
	Multiple Tumor Rates	2/100 (2%)		0/5^ (0%)	3/50 (6%)	3/50 (6%)
Aroclor-1242	Overall Rates ^a	14/100 (14%)	· · · · · · · · · · · · · · · · · · ·	3/50 (6%)	2/49 (4%)	
	Adjusted Rates ^b	25%		11%	6%	· · · · ·
	Final Termination Rates ^c	4/31 (13%)		1/23 (4%)	1/25 (4%)	
	First Incidence (days)	282	r.	659	212	
	Fatal Tests ^d	P=0.010N		P=0.061N	P=0.027N	
	Incidental Tests ^d	P=0.052N		P=0.167N	P=0.081N	
	Unadjusted Tests ^d	P=0.037N		P=0.179N	P=0.091N	
Aroclor-1254	Overall Rates ^a	14/100 (14%)	4/50 (8%)	3/50 (6%)	3/49 (6%)	
	Adjusted Rates ^b	25%	12%	13%	13%	
	Final Termination Rates ^c	4/31 (13%)	4/33 (12%)	1/17 (6%)	2/20 (10%)	
	First Incidence (days)	282	FT	347	635	
	Fatal Tests ^d	P=0.035N	P=0.048N	P=0.104N	P=0.078N	
-	Incidental Tests ^d	P=0.092N	P=0.313N	P=0.212N	P=0.182N	
	Unadjusted Tests ^d	P=0.075N	P=0.425N	P=0.179N	P=0.182N	
	Multiple Tumor Rates	2/100 (2%)	1/50 (2%)	0/50 (0%)	0/49 (0%)	
Aroclor-1260	Overall Rates ^a	14/100 (14%)	5/49 (10%)	5/50 (10%)	2/50 (4%)	
	Adjusted Rates ^b	25%	22%	19%	7%	
	Final Termination Rates ^c	4/31 (13%)	3/19 (16%)	3/21 (14%)	0/22 (0%)	
	First Incidence (days)	282	641	611	628	
	Fatal Tests ^d	P=0.021N	P=0.307N	P=0.278N	P=0.028N	
	Incidental Tests ^d	P=0.061N	P=0.561N	P=0.490N	P=0.067N	
	Unadjusted Tests ^d	P=0.070N	P=0.608N	P=0.607N	P=0.090N	
	Multiple Tumor Rates	2/100 (2%)	1/49 (2%)	0/50 (0%)	0/50 (0%)	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- Observed tumor occurrence rate at final termination. c.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- Not applicable; no tumors in animal group.
- e. f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

		Control		Concer	itration	
Test Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm 20/50 (40%) 55% 9/24 (38%) 443 P=0.379 P=0.927 P=0.477 5/50 (10%)
· · · · · · · · · · · · · · · · · · ·	Ν	fammary Gland	, Fibroadenom	8		
Aroclor-1016	Overall Rates ^a	34/100 (34%)		17/50 (34%)	15/50 (30%)	20/50 (40%)
	Adjusted Rates ^b	62%	· · ·	55%	50%	55%
	Final Termination Rates ^c	13/31 (42%)		7/20 (35%)	8/21 (38%)	9/24 (38%)
	First Incidence (days)	382		530	358	443
	Fatal Tests ^d	P=0.268N		P=0.325	P=0.179N	P=0.379
	Incidental Tests ^d	P=0.852N		P=0.502	P=0.372N	P=0.927
	Unadjusted Tests ^d	P=0.664		P=1.000	P=0.713N	P=0.477
·	Multiple Tumor Rates	3/100 (3%)		7/50 (14%)	6/50 (12%)	5/50 (10%)
Aroclor-1242	Overall Rates ^a	34/100 (34%)		17/50 (34%)	16/49 (33%)	-
	Adjusted Rates ^b	62%		46%	46%	
	Final Termination Rates ^c	13/31 (42%)		6/23 (26%)	8/25 (32%)	
	First Incidence (days)	382		449	569	
	Fatal Tests ^d	P=0.091N		P=0.236	P=0.103N	
	Incidental Tests ^d	P=0.489N		P=0.623	P=0.419N	
	Unadjusted Tests ^d	P=0.880N		P=1.000	P=1.000N	
	Multiple Tumor Rates	3/100 (3%)		3/50 (6%)	4/49 (8%)	
Aroclor-1254	Overall Rates ^a	34/100 (34%)	22/50 (44%)	29/50 (58%)	10/49 (20%)	
	Adjusted Rates ^b	62 %	57%	78%	33%	
	Final Termination Rates ^c	13/31 (42%)	17/33 (52%)	10/17 (59%)	3/20 (15%)	
	First Incidence (days)	382	295	505	602	
	Fatal Tests ^d	P=0.230N	P=0.141	P=0.128	P=0.017N	
	Incidental Tests ^d	P=0.295N	P=0.754	P=0.028	P=0.021N	
	Unadjusted Tests ^d	P=0.710N	P=0.283	P=0.008	P=0.126N	
	Multiple Tumor Rates	3/100 (3%)	4/50 (8%)	5/50 (10%)	4/49 (8%)	
Aroclor-1260	Overall Rates ^a	34/100 (34%)	10/49 (20%)	13/50 (26%)	14/50 (28%)	
	Adjusted Rates ^b	62%	38%	44 %	47%	
	Final Termination Rates ^c	13/31 (42%)	5/19 (26%)	6/21 (29%)	8/22 (36%)	
	First Incidence (days)	382	463	586	466	
	Fatal Tests ^d	P=0.055N	P=0.023N	P=0.080N	P=0.082N	
	Incidental Tests ^d	P=0.160N	P=0.022N	P=0.158N	P=0.189N	
	Unadjusted Tests ^d	P=0.383N	P=0.126N	P=0.355N	P=0.578N	
	Multiple Tumor Rates	3/100 (3%)	2/49 (4%)	3/50 (6%)	3/50 (6%)	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^r

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- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

Test		Control		Concer	itration		
Substance	Description	0 ppm	25 ppm	50 ppm	100 ррт	200 ppm	
	Mam	mary, Adenoma	a or Fibroaden	oma			
Aroclor-1016	Overall Rates ^a	43/100 (43%)		18/50 (36%)	21/50 (42%)	26/50 (52%)	
	Adjusted Rates ^b	68%	· · · · · · · · · · · · · · · · · · ·	58%	64%	69%	
1	Final Termination Rates ^c	14/31 (45%)		8/20 (40%)	11/21 (52%)	13/24 (54%)	
	First Incidence (days)	282		530	358	443	
	Fatal Tests ^d	P=0.383N		P=0.092N	P=0.279N	0.417	
	Incidental Tests ^d	P=0.632		P=0.214N	P=0.755N	0.527	
	Unadjusted Tests ^d	P=0.358		P=0.482N	P=1.000N	0.304	
Aroclor-1242	Overall Rates ^a	43/100 (43%)		18/50 (36%)	18/49 (37%)		
	Adjusted Rates ^b	68%		48%	50%		
ł	Final Termination Rates ^c	14/31 (45%)		6/23 (26%)	9/25 (36%)		
	First Incidence (days)	282		449	212		
	Fatal Tests ^d	P=0.024N		P=0.063N	P=0.038N		
	Incidental Tests ^d	P=0.310N		P=0.309N	P=0.328N		
	Unadjusted Tests ^d	P=0.405N		P=0.482N	P=0.484N		
Aroclor-1254	Overall Rates ^a	43/100 (43%)	25/50 (50%)	31/50 (62%)	12/49 (24%)		
	Adjusted Rates ^b	68%	65%	80%	39%		
	Final Termination Rates ^c	14/31 (45%)	20/33 (61%)	10/17 (59%)	4/20 (20%)		
	First Incidence (days)	282	295	347	602		
	Fatal Tests ^d	P=0.071N	P=0.051	P=0.384	P=0.006N		
	Incidental Tests ^d	P=0.138N	P=0.801	P=0.056	P=0.012N		
	Unadjusted Tests ^d	P=0.303N	P=0.487	P=0.037	P=0.031N		
Aroclor-1260	Overall Rates ^a	43/100 (43%)	14/49 (29%)	16/50 (32%)	16/50 (32%)		
	Adjusted Rates ^b	68%	51%	50%	51%		
	Final Termination Rates ^c	14/31 (45%)	7/19 (37%)	7/21 (33%)	8/22 (36%)		
	First Incidence (days)	282	463	586	466		
	Fatal Tests ^d	P=0.013N	P=0.025N	P=0.048N	P=0.028N		
	Incidental Tests ^d	P=0.067N	P=0.041N	P=0.127N	P=0.108N		
	Unadjusted Tests ^d	P=0.145N	P=0.107N	P=0.218N	P=0.218N		

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

		Control	Concentration				
Test Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	M	ammary Gland,	Adenocarcinon	na	<u></u>		
Aroclor-1016	Overall Rates ^a	15/100 (15%)		3/50 (6%)	8/50 (16%)	2/50 (4%)	
	Adjusted Rates ^b	25%		13%	28%	5%	
	Final Termination Rates ^c	2/31 (6%)		2/20 (10%)	3/21 (14%)	0/24 (0%)	
-	First Incidence (days)	382		671	428	569	
	Fatal Tests ^d	P=0.036N		P=0.048N	P=0.696	P=0.015N	
	Incidental Tests ^d	P=0.160N		P=0.095N	P=0.798	P=0.060N	
	Unadjusted Tests ^d	P=0.139N		P=0.181N	P=1.000	P=0.056N	
	Multiple Tumor Rates	4/100 (4%)		1/50 (2%)	1/50 (2%)	0/50 (0%)	
Aroclor-1242	Overall Rates ^a	15/100 (15%)		2/50 (4%)	1/49 (2%)		
	Adjusted Rates ^b	25%		7%	4%		
	Final Termination Rates ^c	2/31 (6%)		0/23 (0%)	1/25 (4%)		
	First Incidence (days)	382		680	FT		
	Fatal Tests ^d	P=0.001N		P=0.016N	P=0.006N		
	Incidental Tests ^d	P=0.006N		P=0.039N	P=0.025N		
	Unadjusted Tests ^d	P=0.005N		P=0.056N	P=0.021N		
Aroclor-1254	Overall Rates ^a	15/100 (15%)	1/50 (2%)	3/50 (6%)	1/49 (2%)		
	Adjusted Rates ^b	25%	3%	14%	2%		
	Final Termination Rates ^c	2/31 (6%)	1/33 (3%)	2/17 (12%)	0/20 (0%)		
	First Incidence (days)	382	FT	562	485		
	Fatal Tests ^d	P=0.002N	P=0.003N	P=0.054N	P=0.007N		
	Incidental Tests ^d	P=0.004N	P=0.062N	P=0.079N	P=0.009N		
	Unadjusted Tests ^d	P=0.005N	P=0.022N	P=0.181N	P=0.021N		
Aroclor-1260	Overall Rates ^a	15/100 (15%)	4/49 (8%)	3/50 (6%)	6/50 (12%)		
	Adjusted Rates ^b	25%	13%	12%	23%		
	Final Termination Rates ^c	2/31 (6%)	0/19 (0%)	2/21 (10%)	4/22 (18%)		
	First Incidence (days)	382	532	546	487		
	Fatal Tests ^d	P=0.135N	P=0.111N	P=0.057N	P=0.310N		
	Incidental Tests ^d	P=0.344N	P=0.178N	P=0.130N	P=0.646N		
	Unadjusted Tests ^d	P=0.334N	P=0.302N	P=0.181N	P=0.804N		

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

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- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

Test	Test Concentrati					
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Mammary Gland,	Adenoma, Fibr	roadenoma, or	Adenocarcin	oma	
Aroclor-1016	Overall Rates ^a	54/100 (54%)		20/50 (40%)	28/50 (56%)	28/50 (56%)
	Adjusted Rates ^b	74%		63%	76%	70%
	Final Termination Rates ^c	15/31 (48%)		9/20 (45%)	13/21 (62%)	13/24 (54%)
	First Incidence (days)	282		530	358	443
	Fatal Tests ^d	P=0.151N		P=0.020N	P=0.348	P=0.123
	Incidental Tests ^d	P=0.934		P=0.048N	P=0.954	P=0.999
	Unadjusted Tests ^d	P=0.664		P=0.121N	P=0.863	P=0.863
Aroclor-1242	Overall Rates ^a	54/100 (54%)		19/50 (38%)	18/49 (37%)	
-	Adjusted Rates ^b	74%		50%	50%	
	Final Termination Rates ^c	15/31 (48%)		6/23 (26%)	9/25 (36%)	
	First Incidence (days)	282		449	212	
	Fatal Tests ^d	P<0.001N		P=0.008N	P=0.002N	
	Incidental Tests ^d	P=0.022N		P=0.051N	P=0.031N	
	Unadjusted Tests ^d	P=0.029N		P=0.083N	P=0.056N	
Aroclor-1254	Overall Rates ^a	54/100 (54%)	26/50 (52%)	34/50 (68%)	13/49 (27%)	
	Adjusted Rates ^b	74%	68%	86%	40%	
	Final Termination Rates ^c	15/31 (48%)	21/33 (64%)	12/17 (71%)	4/20 (20%)	
	First Incidence (days)	282	295	347	485	
	Fatal Tests ^d	P=0.008N	P=0.004N	P=0.817	P<0.001N	
	Incidental Tests ^d	P=0.018N	P=0.489N	P=0.152	P<0.001N	
	Unadjusted Tests ^d	P=0.044N	P=0.863N	P=0.116	P=0.002N	
Aroclor-1260	Overall Rates ^a	54/100 (54%)	17/49 (35%)	18/50 (36%)	20/50 (40%)	
	Adjusted Rates ^b	74%	55%	55%	63%	
	Final Termination Rates ^c	15/31 (48%)	7/19 (37%)	8/21 (38%)	11/22 (50%)	
	First Incidence (days)	282	463	546	466	
	Fatal Tests ^d	P=0.003N	P=0.009N	P=0.011N	P=0.013N	
	Incidental Tests ^d	P=0.022N	P=0.015N	P=0.024N	P=0.056N	5
	Unadjusted Tests ^d	P=0.051N	P=0.036N	P=0.040N	P=0.121N	

Table 120. Dose-Response Tumor Analysis for Core Subgroup Female Rats^f

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Core subgroup females only, from unscheduled deaths and the 105-week termination. All interim termination subgroup animals were excluded from this analysis.

		Control	Concentration				
Test Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
		Liver, Hepatoce	llular Adenoma	3			
Aroclor-1016	Overall Rates ^a	1/100 (1%)		0/24 (0%)	0/24 (0%)	0/24 (0%)	
	Adjusted Rates ^b	3%		0%	0%	0%	
	Final Termination Rates ^c	1/31 (3%)		0/10 (0%)	0/10 (0%)	0/7 (0%)	
	First Incidence (days)	FT		NA ^e	NAe	NA ^e	
	Fatal Tests ^d	P=0.409N		P=0.570N	P=0.570N	P=0.611N	
	Incidental Tests ^d	P=0.215N		P=0.397N	P=0.407N	P=0.448N	
	Unadjusted Tests ^d	P=0.453N		P=1.000N	P=1.000N	P = 1.000N	
Aroclor-1242	Overall Rates ^a	1/100 (1%)		3/24 (13%)	6/24 (25%)	<u>,</u>	
	Adjusted Rates ^b	3%		23%	37%		
	Final Termination Rates ^c	1/31 (3%)		2/10 (20%)	2/11 (18%)		
	First Incidence (days)	FT		443	639		
	Fatal Tests ^d	P<0.001		P=0.014	P<0.001		
	Incidental Tests ^d	P<0.001		P=0.019	P<0.001		
	Unadjusted Tests ^d	P<0.001		P=0.023	P<0.001		
	Multiple Tumor Rates	0/100 (0%)		2/24 (8%)	2/24 (8%)		
Aroclor-1254	Overall Rates ^a	1/100 (1%)	4/24 (17%)	7/24 (29%)	6/24 (25%)		
	Adjusted Rates ^b	3%	32%	46%	35%		
	Final Termination Rates ^c	1/31 (3%)	3/11 (27%)	6/14 (43%)	3/13 (23%)		
	First Incidence (days)	FT	611	597	392		
·	Fatal Tests ^d	P<0.001	P=0.004	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P=0.007	P<0.001	P<0.001		
	Unadjusted Tests ^d	P<0.001	P=0.005	P<0.001	P<0.001		
	Multiple Tumor Rates	0/100 (0%)	2/24 (8%)	4/24 (17%)	1/24 (4%)		
Aroclor-1260	Overall Rates ^a	1/100 (1%)	4/24 (17%)	3/24 (13%)	15/24 (63%)		
	Adjusted Rates ^b	3%	26%	50%	83%		
	Final Termination Rates ^c	1/31 (3%)	3/14 (21%)	3/6 (50%)	10/13 (77%)		
	First Incidence (days)	FT	695	FT	561		
	Fatal Tests ^d	P<0.001	P<0.015	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P<0.016	P<0.017	P<0.001		
	Unadjusted Tests ^d	P<0.001	P<0.005	P<0.023	P<0.001		
	Multiple Tumor Rates	0/100 (0%)	1/24 (4%)	1/24 (4%)	7/24 (29%)		

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

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- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Test		Control	Concentration				
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	Li	ver, Hepatocel	lular Carcinor	na			
Aroclor-1016	Overall Rates ^a	0/100 (0%)		0/24 (0%)	0/24 (0%)	0/24 (0%)	
	Adjusted Rates ^b	0%		0%	0%	0%	
	Final Termination Rates ^c	0/31 (0%)		0/10 (0%)	0/10 (0%)	0/7 (0%)	
•	First Incidence (days)	NA ^e		NA ^e	NA ^e	NA ^e	
	Fatal Tests ^d	NA ^e		NA ^e	NA ^e	NA ^e	
	Incidental Tests ^d	NA ^e		NA ^e	NA ^e	NA ^e	
	Unadjusted Tests ^d	NA ^e		NA ^e	NA ^e	NA ^e	
Aroclor-1242	Overall Rates ^a	0/100 (0%)		1/24 (4%)	0/24 (0%)		
	Adjusted Rates ^b	0%		10%	0%		
	Final Termination Rates ^c	0/31 (0%)		1/10 (10%)	0/11 (0%)		
	First Incidence (days)	NA ^e		FT	NA ^e		
	Fatal Tests ^d	P=0.636		P=0.078	NA ^e		
	Incidental Tests ^d	P=0.533N		P=0.437	NA ^e		
	Unadjusted Tests ^d	P=0.496		P=0.194	NA ^e		
Aroclor-1254	Overall Rates ^a	0/100 (0%)	1/24 (4%)	2/24 (8%)	1/24 (4%)		
	Adjusted Rates ^b	0%	9%	14%	8%		
	Final Termination Rates ^c	0/31 (0%)	1/11 (9%)	2/14 (14%)	1/13 (8%)		
	First Incidence (days)	NA ^e	FT	FT	FT		
	Fatal Tests ^d	P=0.131	P=0.093	P=0.033	P=0.123		
	Incidental Tests ^d	P=0.244	P=1.000	P=0.035	P=0.425		
	Unadjusted Tests ^d	P=0.036	P=0.194	P=0.036	P=0.194		
Aroclor-1260	Overall Rates ^a	0/100 (0%)	0/24 (0%)	0/24 (0%)	3/24 (13%)		
	Adjusted Rates ^b	0%	0%	0%	18%		
	Final Termination Rates ^c	0/31 (0%)	0/14 (0%)	0/6 (0%)	1/13 (8%)		
	First Incidence (days)	NA ^e	NA ^e	NA ^e	675		
	Fatal Tests ^d	P=0.004	NA ^e	NA ^e	P=0.008		
	Incidental Tests ^d	P<0.001	NA ^e	NA ^e	P=0.002		
	Unadjusted Tests ^d	P<0.001	NA ^e	NA ^e	P=0.007		
	Multiple Tumor Rates	0/100 (0%)	0/24 (0%)	0/24 (0%)	2/24 (8%)		

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

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FT = Final Termination.

a. Number of tumor-bearing animals/number of animals examined.

- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

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Test		Control	Concentration				
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	Liver, Hepatocel	lular Adenoma	a or Hepatocel	lular Carcino	ma		
Aroclor-1016	Overall Rates ^a	1/100 (1%)		0/24 (0%)	0/24 (0%)	0/24 (0%)	
	Adjusted Rates ^b	3%		0%	0%	0%	
	Final Termination Rates ^c	1/31 (3%)		0/10 (0%)	0/10 (0%)	0/7 (0%)	
	First Incidence (days)	FT		NA ^e	NA ^e	NA ^e	
	Fatal Tests ^d	P=0.409N	-	P=0.570N	P=0.570N	P=0.611N	
	Incidental Tests ^d	P=0.215N		P=0.397N	P=0.407N	P=0.448N	
	Unadjusted Tests ^d	P=0.453N		P=1.000N	P=1.000N	P=1.000N	
Aroclor-1242	Overall Rates ^a	1/100 (1%)		3/24 (13%)	6/24 (25%)		
	Adjusted Rates ^b	3%		23%	37%		
	Final Termination Rates ^c	1/31 (3%)		2/10 (20%)	2/11 (18%)		
	First Incidence (days)	FT		443	639		
	Fatal Tests ^d	P<0.001		P=0.014	P<0.001		
	Incidental Tests ^d	P<0.001		P=0.019	P<0.001		
	Unadjusted Tests ^d	P<0.001		P=0.023	P<0.001		
Aroclor-1254	Overall Rates ^a	1/100 (1%)	5/24 (21%)	7/24 (29%)	6/24 (25%)		
	Adjusted Rates ^b	3%	40%	46%	35%		
	Final Termination Rates ^c	1/31 (3%)	4/11 (36%)	6/14 (43%)	3/13 (23%)		
	First Incidence (days)	FT	611	597	392		
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P=0.002	P<0.001	P<0.001		
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001		
Aroclor-1260	Overall Rates ^a	1/100 (1%)	4/24 (17%)	3/24 (13%)	17/24 (71%)	· · ·	
	Adjusted Rates ^b	3%	26%	50%	85%		
· ·	Final Termination Rates ^c	1/31 (3%)	3/14 (21%)	3/6 (50%)	10/13 (77%)	······································	
	First Incidence (days)	FT	695	FT	561		
	Fatal Tests ^d	P<0.001	P=0.015	P<0.001	P<0.001	· · · · · · · · · · · · · · · · · · ·	
	Incidental Tests ^d	P<0.001	P=0.016	P=0.017	P<0.001		
	Unadjusted Tests ^d	P<0.001	P=0.005	P=0.023	P<0.001		

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats¹

FT = Final Termination.

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- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Test		Control	Concentration				
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
· · · · · · · · · · · · · · · · · · ·	Liver, Hepate	cellular Aden	oma or Hepato	cholangioma			
Aroclor-1016	Overall Rates ^a	1/100 (1%)		0/24 (0%)	0/24 (0%)	0/24 (0%)	
	Adjusted Rates ^b	3%	-	0%	0%	0%	
	Final Termination Rates ^c	1/31 (3%)		0/10 (0%)	0/10 (0%)	0/7 (0%)	
	First Incidence (days)	FT		NA ^e	NA ^e	NA ^e	
	Fatal Tests ^d	P=0.409N		P=0.570N	P=0.570N	P=0.611N	
	Incidental Tests ^d	P=0.215N		P=0.397N	P=0.407N	P=0.448N	
	Unadjusted Tests ^d	P=0.453N		P=1.000N	P=1.000N	P=1.000N	
Aroclor-1242	Overall Rates ^a	1/100 (1%)		3/24 (13%)	6/24 (25%)		
	Adjusted Rates ^b	3%		23%	37%		
	Final Termination Rates ^c	1/31 (3%)		2/10 (20%)	2/11 (18%)		
	First Incidence (days)	FT		443	639		
	Fatal Tests ^d	P<0.001		P=0.014	P<0.001		
	Incidental Tests ^d	P<0.001		P=0.019	P<0.001		
	Unadjusted Tests ^d	P<0.001		P=0.023	P<0.001		
Aroclor-1254	Overall Rates ^a	1/100 (1%)	4/24 (17%)	7/24 (29%)	6/24 (25%)		
	Adjusted Rates ^b	3%	32%	46%	35%		
	Final Termination Rates ^c	1/31 (3%)	3/11 (27%)	6/14 (43%)	3/13 (23%)		
	First Incidence (days)	FT	611	597	392		
	Fatal Tests ^d	P<0.001	P=0.004	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P=0.007	P<0.001	P<0.001		
	Unadjusted Tests ^d	P<0.001	P=0.005	P<0.001	P<0.001		
Aroclor-1260	Overall Rates ^a	1/100 (1%)	4/24 (17%)	3/24 (13%)	15/24 (63%)		
	Adjusted Rates ^b	3%	26%	50%	83%		
	Final Termination Rates ^c	1/31 (3%)	3/14 (21%)	3/6 (50%)	10/13 (77%)		
	First Incidence (days)	FT	695	FT	561		
	Fatal Tests ^d	P<0.001	P=0.015	P<0.001	P<0.001		
	Incidental Tests ^d	P<0.001	P=0.016	P=0.017	P<0.001		
	Unadjusted Tests ^d	P<0.001	P=0.005	P=0.023	P<0.001		

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

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- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Test		Control		Concer	ntration	
Substance	Description	0 ррт	25 ppm	50 ppm	100 ppm	200 ppm
	Liver, Hepatoc	ellular Carcino	ma or Hepatoc	holangiocarcino	ma	
Aroclor-1016	Overall Rates ^a	0/100 (0%)		0/24 (0%)	0/24 (0%)	0/24 (0%)
	Adjusted Rates ^b	0%		0%	0%	0%
-	Final Termination Rates ^c	0/31 (0%)		0/10 (0%)	0/10 (0%)	0/7 (0%)
	First Incidence (days)	NA ^e		NA ^e	NA ^e	NA ^e
	Fatal Tests ^d	NA ^e		NA ^e	NA ^e	NA ^e
	Incidental Tests ^d	NA ^e		NA ^e	NA ^e	NA ^e
	Unadjusted Tests ^d	NA ^e		NA ^e	NA ^e	NA ^e
Aroclor-1242	Overall Rates ⁴	0/100 (0%)		1/24 (4%)	0/24 (0%)	
	Adjusted Rates ³	0%		10%	0%	
	Final Termination Rates ^c	0/31 (0%)		1/10 (10%)	0/11 (0%)	
	First Incidence (days)	NA ^e		FT	NA ^e	
	Fatal Tests ^d	P=0.636		P=0.078	NA ^e	
	Incidental Tests ^d	P=0.533N		P=0.437	NA ^e	
	Unadjusted Tests ^d	P=0.496		P=0.194	NA ^e	
Aroclor-1254	Overall Rates ^a	0/100 (0%)	1/24 (4%)	2/24 (8%)	1/24 (4%)	
	Adjusted Rates ^b	0%	9%	14%	8%	
	Final Termination Rates ^c	0/31 (0%)	1/11 (9%)	2/14 (14%)	1/13 (8%)	
	First Incidence (days)	NA ^e	FT	FT	FT	
	Fatal Tests ^d	P=0.131	P=0.093	P=0.033	P=0.123	
	Incidental Tests ^d	P=0.244	P=1.000	P=0.035	P=0.425	
	Unadjusted Tests ^d	P=0.036	P=0.194	P=0.036	P=0.194	
Aroclor-1260	Overall Rates ^a	0/100 (0%)	0/24 (0%)	0/24 (0%)	3/24 (13%)	
	Adjusted Rates ^b	0%	0%	0%	18%	
	Final Termination Rates ^c	0/31 (0%)	0/14 (0%)	0/6 (0%)	1/13 (8%)	
	First Incidence (days)	NA ^e	NA ^e	NA ^e	675	
	Fatal Tests ^d	P=0.004	NA ^e	NA ^e	P=0.008	
	Incidental Tests ^d	P<0.001	NA ^e	NA ^e	P=0.002	
	Unadjusted Tests ^d	P<0.001	NA ^e	NA ^e	P=0.007	

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

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- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Test		Control		tration		
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Liver, Hepatocell Liver, Hepatoc	ular Adenoma cholangioma oi	or Hepatocell Hepatocholar	ular Carcinor ngiocarcinoma	na,	
Aroclor-1016	Overall Rates ^a	1/100 (1%)		0/24 (0%)	0/24 (0%)	0/24 (0%)
	Adjusted Rates ^b	3%		0%	0%	0%
	Final Termination Rates ^c	1/31 (3%)		0/10 (0%)	0/10 (0%)	0/7 (0%)
	First Incidence (days)	FT		NA ^e	NA ^e	NA ^e
	Fatal Tests ^d	P=0.409N		P=0.570N	P=0.570N	P=0.611N
	Incidental Tests ^d	P=0.215N		P=0.597N	P=0.407N	P=0.448N
	Unadjusted Testad	P=0.453N		P=1.000N	P=1.000N	P=1.000N
Aroclor-1242	Overal! Rates ^a	1/100 (0%)		3/24 (13%)	6/24 (25%)	
	Adjusted Rates ^b	3%		23%	37%	
	Final Termination Rates ^c	1/31 (3%)		2/10 (20%)	2/11 (18%)	
	First Incidence (days)	FT		443	639	······································
	Fatal Tests ^d	P<0.001	· · · ·	P=0.014	P<0.001	
-	Incidental Tests ^d	P<0.001		P=0.019	P<0.001	
	Unadjusted Tests ^d	P<0.001		P=0.023	P<0.001	
Aroclor-1254	Overall Rates ^a	1/100 (1%)	5/24 (21%)	7/24 (29%)	6/24 (25%)	
	Adjusted Rates ^b	3%	40%	46%	35%	
	Final Termination Rates ^c	1/31 (3%)	4/11 (36%)	6/14 (43%)	3/13 (23%)	
	First Incidence (days)	FT	611	597	392	
	Fatal Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
	Incidental Tests ^d	P<0.001	P=0.002	P<0.001	P<0.001	
	Unadjusted Tests ^d	P<0.001	P<0.001	P<0.001	P<0.001	
Aroclor-1260	Overall Rates ^a	1/100 (1%)	4/24 (17%)	3/24 (13%)	17/24 (71%)	
	Adjusted Rates ^b	3%	26%	50%	85%	
	Final Termination Rates ^c	1/31 (3%)	3/14 (21%)	3/6 (50%)	10/13 (77%)	
	First Incidence (days)	FT	695	FT	561	
	Fatal Tests ^d	P<0.001	P=0.015	P<0.001	P<0.001	
	Incidental Tests ^d	P<0.001	P=0.016	P=0.017	P<0.001	
	Unadjusted Tests ^d	P<0.001	P=0.005	P=0.023	P<0.001	

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

FT = Final Termination.

a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

c. Observed tumor occurrence rate at final termination.

d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Test		Control	Concentration					
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm		
		Mammary G	land, Adenoma	L				
Aroclor-1016	Overall Rates ^a	14/100 (14%)		0/24 (0%)	2/24 (8%)	0/24 (0%)		
	Adjusted Rates ^b	25%	,	0%	11%	0%		
	Final Termination Rates ^c	4/31 (13%)		0/10 (0%)	0/10 (0%)	0/7 (0%)		
	First Incidence (days)	282	4	NA ^e	611	NA ^e		
	Fatal Tests ^d	P=0.022N		P=0.036N	P=0.317N	P=0.067N		
	Incidental Tests ^d	P=0.016N		P=0.018N	P=0.514N	P=0.010N		
	Unadjusted Tests ^d	P=0.028N	· · ·	P=0.070N	P=0.735N	P=0.070N		
	Multiple Tumor Rates	2/100 (2%)		0/24 (0%)	1/24 (4%)	0/24 (0%)		
Aroclor-1242	Overall Rates ^a	14/100 (14%)		2/24 (8%)	0/24 (0%)			
	Adjusted Rates ^b	25%	**************************************	15%	0%			
	Final Termination Rates ^c	4/31 (13%)		1/10 (10%)	0/11 (0%)			
	First Incidence (days)	282		569	NA ^e			
	Fatal Tests ^d	P=0.021N		P=0.313N	P=0.034N			
	Incidental Tests ^d	P=0.036N		P=0.519N	P=0.018N			
	Unadjusted Tests ^d	P=0.043N	· · · · · · · · · · · · · · · · · · ·	P=0.735N	P=0.070N			
Aroclor-1254	Overall Rates ^a	14/100 (14%)	4/24 (17%)	4/24 (17%)	2/24 (8%)			
	Adjusted Rates ^b	25%	32%	26%	10%	·		
	Final Termination Rates ^c	4/31 (13%)	3/11 (27%)	3/14 (21%)	0/13 (0%)			
	First Incidence (days)	282	611	641	332			
	Fatal Tests ^d	P=0.261N	P=0.883	P=0.665	P=0.304N			
	Incidental Tests ^d	P=0.745N	P=0.712	P=0.662	P=0.506N			
	Unadjusted Tests ^d	P=0.681N	P=0.750	P=0.750	P=0.735N			
	Multiple Tumor Rates	2/100 (2%)	3/24 (13%)	0/24 (0%)	1/24 (4%)			
Aroclor-1260	Overall Rates ^a	14/100 (14%)	6/24 (25%)	3/22 (14%)	1/24 (4%)			
	Adjusted Rates ^b	25%	35%	29%	4%			
	Final Termination Rates ^c	4/31 (13%)	4/14 (29%)	1/5 (20%)	0/13 (0%)			
	First Incidence (days)	282	458	443	561			
	Fatal Tests ^d	P=0.160N	P=0.683	P=0.945N	P=0.091N			
	Incidental Tests ^d	P=0.436N	P=0.177	P=0.992N	P=0.232N	·		
	Unadjusted Tests ^d	P=0.348N	P=0.218	P=1.000N	P=0.299N			
	Multiple Tumor Rates	2/100 (2%)	2/24 (8%)	0/22 (0%)	1/24 (4%)			

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

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	Description	Control	Concentration				
Test Substance		0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	Ν	Aammary Gland	, Fibroadenom	a			
Aroclor-1016	Overall Rates ^a	34/100 (34%)		10/24 (42%)	12/24 (50%)	7/24 (29%)	
	Adjusted Rates ^D	62%		61%	69%	54%	
	Final Termination Rates ^c	13/31 (42%)		4/10 (40%)	5/10 (50%)	2/7 (29%)	
	First Incidence (days)	382		611	467	449	
	Fatal Tests ^d	P=0.786N		P=0.687	P=0.703	P=0.614N	
	Incidental Tests ^d	P=0.916		P=0.993	P=0.315	P=0.659N	
	Unadjusted Tests ^d	P=0.750		P=0.486	P=0.163	P=0.810N	
	Multiple Tumor Rates	3/100 (6%)		4/24 (17%)	6/24 (25%)	3/24 (13%)	
Aroclor-1242	Overall Rates ^a	34/100 (34%)		10/24 (42%)	11/24 (46%)		
	Adjusted Rates ^D	62%		69%	63%		
	Final Termination Rates ^c	13/31 (42%)	· · · · · · · · · · · · · · · · · · ·	6/10 (60%)	5/11 (45%)		
	First Incidence (days)	382		443	479		
	Fatal Tests ^d	P=0.797N		P=0.835	P=0.829		
	Incidental Tests ^d	P=0.648		P=0.813	P=0.666		
	Unadjusted Tests ^d	P=0.239		P=0.486	P=0.346		
	Multiple Tumor Rates	3/100 (6%)		3/24 (13%)	4/24 (17%)		
Aroclor-1254	Overall Rates ^a	34/100 (34%)	12/24 (50%)	15/24 (63%)	11/24 (46%)		
	Adjusted Rates ^D	62%	69%	75%	67%		
	Final Termination Rates ^c	13/31 (42%)	6/11 (55%)	9/14 (64%)	8/13 (62%)		
	First Incidence (days)	382	557	557	392		
	Fatal Tests ^d	P=0.974N	P=0.822	P=0.677	P=0.827		
	Incidental Tests ^d	P=0.137	P=0.320	P=0.068	P=0.406		
	Unadjusted Tests ^a	P=0.042	P=0.163	P=0.019	P=0.346		
	Multiple Tumor Rates	3/100 (6%)	4/24 (17%)	7/24 (29%)	0/24 (0%)		
Aroclor-1260	Overall Rates ^a	34/100 (34%)	9/24 (38%)	10/22 (45%)	9/24 (38%)		
	Adjusted Rates ⁰	62%	59%	88%	56%		
	Final Termination Rates ^c	13/31 (42%)	8/14 (57%)	4/5 (80%)	6/13 (46%)		
,	First Incidence (days)	382	466	458	692		
	Fatal Tests ^d	P=0.551N	P=0.228	P=0.195	P=0.257		
	Incidental Tests ^d	P=1.000N	P=0.783	P=0.321	P=0.620		
	Unadjusted Tests ^d	P=0.482	P=0.813	P=0.334	P=0.813	· · · · ·	
	Multiple Tumor Rates	3/100 (6%)	3/24 (13%)	4/22 (18%)	5/24 (21%)		

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

FT = Final Termination.

a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

c. Observed tumor occurrence rate at final termination.

d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.

e. Not applicable; no tumors in animal group.

f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Test		Control		ntration		
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Mammar	y Gland, Adend	oma or Fibroa	idenoma		
Aroclor-1016	Overall Rates ^a	43/100 (43%)		10/24 (42%)	14/24 (58%)	7/24 (29%)
	Adjusted Rates ^b	68%		61%	73%	54%
	Final Termination Rates ^c	14/31 (45%)		4/10 (40%)	5/10 (50%)	2/7 (29%)
	First Incidence (days)	282		611	467	449
	Fatal Tests ^d	P=0.379N		P=0.283N	P=0.854	P=0.274N
	Incidental Tests ^d	P=0.588N	í í	P=0.625N	P=0.267	P=0.216N
	Unadjusted Tests ^d	P=0.684N		P=1.000N	P=0.?54	P=0.253N
Aroclor-1242	Overall Rates ^a	43/100 (43%)	Î	12/24 (50%)	11/24 (46%)	
	Adjusted Rates ^b	68%	1	78%	63%	
	Final Termination Rates ^c	14/31 (45%)		7/10 (70%)	5/11 (45%)	
	First Incidence (days)	282		443	479	
•	Fatal Tests ^d	P=0.340N		P=0.727	P=0.367	
	Incidental Tests ^d	P=0.989		P=0.718	P=0.951	
	Unadjusted Tests ^d	P=0.680		P=0.648	P=0.822	
Aroclor-1254	Overall Rates ^a	43/100 (43%)	15/24 (63%)	16/24 (67%)	13/24 (54%)	
	Adjusted Rates ^b	68%	83%	80%	70%	
	Final Termination Rates ^c	14/31 (45%)	8/11 (73%)	10/14 (71%)	8/13 (62%)	
	First Incidence (days)	282	557	557	332	
÷	Fatal Tests ^d	P=0.686N	P=0.766	P=0.923	P=0.749	
	Incidental Tests ^d	P=0.149	P=0.151	P=0.094	P=0.376	
	Unadjusted Tests ^d	P=0.073	P=0.111	P=0.043	P=0.366	
Aroclor-1260	Overall Rates ^a	43/100 (43%)	14/24 (58%)	12/22 (55%)	10/24 (42%)	
	Adjusted Rates ^b	68%	82%	89%	58%	
	Final Termination Rates ^c	14/31 (45%)	11/14 (79%)	4/5 (80%)	6/13 (46%)	
	First Incidence (days)	282	458	443	561	· · ·
	Fatal Tests ^d	P=0.336N	P=0.589	P=0.253	P=0.134N	
	Incidental Tests ^d	P=0.991	P=0.294	P=0.340	P=0.608N	
	Unadjusted Tests ^d	P=0.686	P=0.254	P=0.352	P=1.000N	

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

FT = Final Termination.

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a. Number of tumor-bearing animals/number of animals examined.

b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.

- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

		Control	Concentration				
Test Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm	
	M	ammary Gland,	Adenocarcinon	18		,	
Aroclor-1016	Overall Rates ^a	15/100 (15%)		2/24 (8%)	2/24 (8%)	2/24 (8%)	
	Adjusted Rates ^D	25%		18%	20%	19%	
	Final Termination Rates ^c	2/31 (6%)		1/10 (10%)	2/10 (20%)	1/7 (14%)	
	First Incidence (days)	382		724	FT	678	
	Fatal Tests ^d	P=0.170N	· · ·	P=0.209N	P=0.253N	P=0.417N	
	Incidental Tests ^d	P=0.218N		P=0.421N	P=0.442N	P=0.583N	
	Unadjusted Tests ^d	P=0.245N	· · · · · · · · · · · · · · · · · · ·	P=0.522N	P=0.522N	P=0.522N	
	Muliple Tumor Rates	4/100 (4%)		1/24 (4%)	0/24 (0%)	0/24 (0%)	
Aroclor-1242	Overall Rates ^a	15/100 (15%)		2/24 (8%)	2/24 (5%)		
	Adjusted Rates ^D	25%		18%	16%		
	Final Termination Rates ^c	2/31 (6%)		1/10 (10%)	1/11 (9%)		
	First Incidence (days)	382		709	699		
	Fatal Tests ^d	P=0.128N		P=0.254N	P=0.203N	·	
	Incidental Tests ^d	P=0.274N		P=0.362N	P=0.423N		
	Unadjusted Tests ^d	P=0.293N		P=0.522N	P=0.522N		
Aroclor-1254	Overall Rates ^a	15/100 (15%)	2/24 (8%)	2/24 (8%)	2/24 (8%)		
	Adjusted Rates ^D	25%	12%	11%	15%		
	Final Termination Rates ^c	2/31 (6%)	0/11 (0%)	0/14 (0%)	2/13 (15%)		
	First Incidence (days)	382	443	597	FT		
	Fatal Tests ^d	P=0.104N	P=0.250N	P=0.182N	P=0.261N		
	Incidental Tests ^d	P=0.334N	P=0.531N	P=0.484N	P=0.478N		
	Unadjusted Tests ^d	P=0.245N	P=0.522N	P=0.522N	P=0.522N		
	Muliple Tumor Rates	4/100 (4%)	0/24 (0%)	0/24 (0%)	1/24 (4%)		
Aroclor-1260	Overall Rates ^a	15/100 (15%)	5/24 (21%)	2/22 (9%)	2/24 (8%)		
	Adjusted Rates ^D	25%	33%	40%	15%		
	Final Termination Rates ^c	2/31 (6%)	4/14 (29%)	2/5 (40%)	2/13 (15%)		
	First Incidence (days)	382	700	FT	FT	-	
	Fatal Tests ^d	P=0.137N	P=0.893	P=0.538N	P=0.168N		
	Incidental Tests ^d	P=0.257N	P=0.286	P=0.448N	P=0.447N		
	Unadjusted Tests ^d	P=0.348N	P=0.538	P=0.735N	P=0.522N		
	Muliple Tumor Rates	4/100 (4%)	0/24 (0%)	1/22 (5%)	0/24 (0%)		

Table 121.	Dose-Response	Tumor	Analysis	for Stop	p Study	y A Sul	bgroup	Female	Rats

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Test		Control		Concer	tration	
Substance	Description	0 ppm	25 ppm	50 ppm	100 ppm	200 ppm
	Mammary Gla	nd, Adenoma, F	ibroadenoma,	or Adenocarcine	oma	
Aroclor-1016	Overall Rates ^a	54/100 (54%)		11/24 (46%)	15/24 (63%)	9/24 (38%)
	Adjusted Rates ^D	74%		68%	78%	66%
	Final Termination Rates ^c	15/31 (48%)		5/10 (50%)	6/10 (60%)	3/7 (43%)
	First Incidence (days)	282		611	467	449
	Fatal Tests ^d	P=0.202N		P=0.115N	P=0.704	P=0.244N
	Incidental Tests ^d	P=0.307N		P=0.308N	P=0.581	P=0.153N
	Unadjusted Tests ^a	P=0.375N		P=0.503N	P=0.500	P=0.176N
Aroclor-1242	Overall Rates ^a	54/100 (54%)		13/24 (54%)	13/24 (54%)	
2 - ¹⁰	Adjusted Rates ^D	74%		80%	71%	
	Final Termination Rates ^c	15/31 (48%)		7/10 (70%)	6/11 (55%)	
	First Incidence (days)	282		443	479	
1. 1. 1. 1. 	Fatal Tests ^d	P=0.172N		P=0.378	P=0.236	
	Incidental Tests ^d	P=0.741N		P=0.845	P=0.811	
-	Unadjusted Tests ^d	P=0.986		P=1.000	P=1.000	
Aroclor-1254	Overall Rates ^a	54/100 (54%)	16/24 (67%)	18/24 (75%)	14/24 (58%)	
	Adjusted Rates ^D	74%	83%	82%	76%	
	Final Termination Rates ^c	15/31 (48%)	8/11 (73%)	10/14 (71%)	9/13 (69%)	
	First Incidence (days)	282	443	557	332	
	Fatal Tests ^d	P=0.314N	P=0.776	P=0.628	P=0.403	
	Incidental Tests ^d	P=0.357	P=0.349	P=0.105	P=0.765	
	Unadjusted Tests ^d	P=0.233	P=0.360	P=0.069	P=0.820	
Aroclor-1260	Overall Rates ^a	54/100 (54%)	16/24 (67%)	12/22 (55%)	11/24 (46%)	
	Adjusted Rates ^b	74%	88%	89%	64%	
	Final Termination Rates ^c	15/31 (48%)	12/14 (86%)	4/5 (80%)	7/13 (54%)	
	First Incidence (days)	282	458	443	561	
	Fatal Tests ^d	P=0.082N	P=0.370	P=0.725	P=0.045N	
	Incidental Tests ^d	P=0.383N	P=0.384	P=0.986	P=0.306N	
	Unadjusted Tests ^d	P=0.621N	P=0.360	P=1.000	P=0.503N	

Table 121. Dose-Response Tumor Analysis for Stop Study A Subgroup Female Rats^f

FT = Final Termination.

- a. Number of tumor-bearing animals/number of animals examined.
- b. Kaplan-Meier estimated tumor occurrence rate at end of study after adjustment for intercurrent mortality.
- c. Observed tumor occurrence rate at final termination.
- d. The p-values in the control column are associated with the trend test. The p-values in the exposed group columns correspond to the pairwise comparisons between the controls and exposed groups. The fatal analysis regards tumors as being (directly or indirectly) the cause of death. The incidental analysis regards these lesions as nonfatal. The unadjusted tests compare directly the overall tumor occurrence rates. For all tests, a negative trend or a lower tumor occurrence in a dosed group is indicated by N.
- e. Not applicable; no tumors in animal group.
- f. This analysis was conducted on the Stop Study A subgroup females from unscheduled deaths and the 105-week termination. Core female control animals (unscheduled deaths and the 105-week termination) were used for comparison. All interim termination subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

Organ	Tumor Type	Dose Level Comparison (ppm)	Overall ^a	1016 vs. 1242 ^b	1016 vs. 1254	1016 vs. 1260	1242 vs. 1254	1242 vs. 1260	1254 vs. 1260
	Hepatocellular	50	0.206	0.930	0.560	0.090	0.493	0.066	0.253
	Adenoma	100	0.134	0.317	0.070	0.027	0.406	0.204	0.631
	Hepatocellular	50	0.897	0.956	0.560	0.981	0.519	0.974	0.542
	Carcinoma	100	0.213	0.994	0.234	0.298	0.232	0.303	0.038
	Hepatocellular	50	0.139	0.458	0.400	0.158	0.110	0.029	0.567
	Adenoma or Carcinoma	100	0.146	0.404	0.190	0.025	0.638	0.149	0.309
Liver	Hepatocellular	50	0.206	0.930	0.560	0.090	0.493	0.066	0.253
	Adenoma or Hepatocholangioma	100	0.080	0.319	0.072	0.014	0.409	0.122	0.435
	Hepatocellular Carcinoma or Hepatocholangio- carcinoma	50	0.897	0.956	0.560	0.981	0.519	0.974	0.542
		100	0.213	0. 994	0.234	0.298	0.232	0.303	0.038
	Benign or Malignant	50	0.139	0.458	0.400	0.158	0.110	0.029	0.567
	Tumor	100	0.082	0.407	0.194	0.013	0.644	0.090	0.197
	Adenoma, Follicular	50	0.967	0.623	0.703	0.771	0.920	0.840	0.923
	Cell	100	0.614	0.237	0.314	0.700	0.836	0.412	0.525
Thyroid	Carcinoma,	50	0.665	0.595	0.301	0.984	0.604	0.577	0.289
Gland	Follicular Cell	100	0.898	0.606	0.464	0.477	0.630	0.614	0.782
	Adenoma or	50	0.769	0.467	0.341	0.797	0.807	0.633	0.480
	Carcinoma, Follicular Cell	100	0.722	0.308	0.435	0.797	0.784	0.431	0.591

Table 122. Statistical Comparison (p-values) of Tumor Occurrence Among Aroclor TestSubstances for Core Subgroup Male Rats^c

a. The overall p-value for any difference among the four Aroclor test substances at the given dose level.

b. The p-value for comparing tumor occurrence between Aroclor-1016 and Aroclor-1242 at the given dose level.

c. This analysis was conducted on Core subgroup males only, from unscheduled deaths and the 105-week termination. Interim termination subgroup animals were not included in this analysis.

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Battelle Study No. SC920192 Chronic Toxicity/Oncogenicity Report

Organ	Tumor Type	Dose Level Comparison (ppm)	Overall ^a	1016 vs. 1242 ^b	1016 vs. 1254	1016 vs. 1260	1242 vs. 1254	1242 vs. 1260	1254 vs. 1260
Liver	Hepatocellular	50	0.001	0.002	0.001	0.001	0.001	0.848	0.001
	Adenoma	100	0.001	0.087	0.001	0.001	0.001	0.035	0.241
	Hepatocellular	50	0.021	NA	0.013	0.235	0.012	0.228	0.132
	Carcinoma	100	0.136	0.601	0.046	0.088	0.122	0.214	0.759
	Hepatocellular	50	0.001	0.002	0.001	0.001	0.001	0.652	0.002
	Adenoma or Carcinoma	100	0.001	0.066	0.001	0.001	0.003	0.039	0.338
	Hepatoceilular	50	0.001	0.002	0.001	0.001	0.001	0.844	0.001
	Hepatocholangioma	100	0.001	0.053	0.001	0.001	0.002	0.037	0.336
	Hepatocellular Carcinoma or	50	0.079	0.243	0.014	0.232	0.124	0.964	0.143
	Hepatocholangio- carcinoma	100	0.136	0.601	0.046	0.088	0.122	0.214	0.759
	Benign or	50	0.001	0.001	0.001	0.001	0.001	0.832	0.001
.*	Malignant Tumor	100	0.001	0.040	0.001	0.001	0.005	0.040	0.455
Mammary	Adenoma	50	0.652	0.652	0.645	0.216	0.992	0.425	0.431
Gland		100	0.049	0.023	0.067	0.021	0.644	0.984	0.628
	Fibroadenoma	50	0.009	0.968	0.015	0.458	0.013	0.482	0.002
		100	0.516	0.855	0.224	0.754	0.162	0.619	0.363
	Adenoma or	50	0.010	0.974	0.009	0.771	0.008	0.797	0.004
	Fibroadenoma	100	0.259	0.550	0.053	0.270	0.180	0.615	0.396
	Adenocarcinoma	50	0.943	0.626	0.989	0.949	0.618	0.586	0.960
		100	0.011	0.009	0.009	0.537	0.998	0.042	0.041
	Benign or	50	0.004	0.807	0.005	0.794	0.002	0.984	0.002
	Malignant Tumor	100	0.019	0.045	0.002	0.091	0.266	0.741	0.147

Table 123. Statistical Comparison (p-values) of Tumor Occurrence Among Aroclor Test Substances for Core Subgroup Female Rats^c

a. The overall p-value for any difference among the four Aroclor test substances at the given dose level.

b. The p-value for comparing tumor occurrence between Aroclor-1016 and Aroclor-1242 at the given dose level.

c. This analysis was conducted on Core subgroup females only, from unscheduled deaths and the 105-week termination. Interim termination and Stop Study subgroup animals were not included in this analysis.

NA = Analysis not performed due to zero tumor occurrence in all groups.

Organ	Tumor Type	Control ^a	Dose Level Comparison (ppm)	Overall Aroclor ^b	1016 ^c	1242	1254	1260
Liver	Hepatocellular		25	0.001			0.001	0.013
	Adenoma	0.268	· 50	0.001	0.920	0.002	0.001	0.160
			100	0.001	0.098	0.022	0.001	0.002
			200	0.237	0.237			
	Hepatocellular		25	0.204			0.074	0.956
	Carcinoma	0.057	50	0.486	0.212	0.237	0.485	0.987
			100	0.053	0.979	0.614	0.003	0.504
			200	0.096	0.096			
	Hepatocellular		25	0.001			0.002	0.021
	Adenoma or Carcinoma	ioma or 0.053 cinoma	50	0.001	0.467	0.002	0.001	0.184
-			100	0.001	0.161	0.018	0.001	0.003
		ļ	200	0.731	0.731			
	Hepatocellular		25	0.001			0.001	0.013
	Adenoma or Hepatocholangioma	0.271	50	0.001	0.915	0.002	0.001	0.161
			100	0.001	0.099	0.012	0.001	0.003
			200	0.237	0.237			
	Hepatocellular		25	0.204			0.074	0.956
	Carcinoma or Hepatocholangiocar	0.057	50	0.727	0.213	1.000	0.482	0.988
	cinoma		100	0.053	0.979	0.614	0.003	0.504
-			200	0.096	0.096			
	Benign or		25	0.001			0.001	0.021
	Malignant Tumor	0.054	50	0.001	0.463	0.001	0.001	0.185
-			100	0.001	0.163	0.010	0.001	0.004
			200	0.731	0.731			

Table 124. Statistical Comparison (p-values) of Tumor Occurrence Between Core Subgroup Male and Female Rats^d

a. The p-value for any difference between males and females in the control group.

b. The overall p-value for any difference between males and females among the four Aroclor test substances at the given dose level.

c. The p-value for comparing tumor occurrence between males and females receiving Aroclor-1016 at the given dose level.

d. This analysis was conducted on Core subgroup males and females only, from unscheduled deaths and the 105-week termination. All interim termination and Stop Study subgroup animals were excluded from this analysis.

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Organ	Tumor Type	Dose Level Comparison (ppm)	Overall ^a	1016 vs. 1242 ^b	1016 vs. 1254	1016 vs. 1260	1242 vs. 1254	1242 vs. 1260	1254 vs. 1260
	Hepatocellular	50	0.012	0.031	0.001	0.017	0.204	0.711	0.426
	Adenoma	100	0.001	0.003	0.002	0.001	0.900	0.008	0.015
	Hepatocellular	50	0.316	0.228	0.112	NA	0.669	0.330	0.202
	Carcinoma	100	0.088	NA	0.225	0.046	0.212	0.039	0.374
	Hepatocellular	50	0.012	0.031	0.001	0.017	0.204	0.711	0.426
	Adenoma or Carcinoma	100	0.001	0.003	0.002	0.001	0.899	0.001	0.003
Liver	Hepatocellular	50	0.012	0.031	0.001	0.017	0.204	0.711	0.426
	Adenoma or Hepatocholangioma	100	0.001	0.003	0.002	0.001	0.900	0.008	0.015
	Hepatocellular Carcinoma or	50	0.316	0.228	0.112	NA	0.669	0.330	0.202
	Hepatocholangio- carcinoma	100	0.088	NA	0.225	0.046	0.212	0.039	0.374
	Benign or Malignant Tumor	50	0.012	0.031	0.001	0.017	0.204	0.771	0.426
		100	0.001	0.003	0.002	0.001	0.899	0.001	0.003
	Fibroadenoma	50	0.454	0.864	0.151	0.399	0.210	0.492	0.612
		100	0.676	0.626	0.899	0.257	0.724	0.511	0.323
	Adenoma	50	0.092	0.090	0.015	0.032	0.389	0.553	0.818
		100	0.522	0.143	0.789	0.833	0.199	0.217	0.988
Mammary	Adenoma or	50	0.318	0.461	0.083	0.176	0.319	0.504	0.770
Gland	Fibroadenoma	100	0.536	0.333	0.838	0.199	0.450	0.746	0.286
	Adenocarcinoma	50	0.951	0.929	0.961	0.616	0.891	0.677	0.585
		100	0.997	0.918	0.932	0.826	0.987	0.907	0.895
	Benign or	50	0.213	0.456	0.038	0.272	0.181	0.690	0.371
	Malignant Tumor	100	0.509	0.451	0.877	0.168	0.553	0.526	0.227

Table 125. Statistical Comparison (p-values) of Tumor Occurrence Among Aroclor Test Substances for Stop Study A Subgroup Female Rats^c

a. The overall p-value for any difference among the four Aroclor test substances at the given dose level.

b. The p-value for comparing tumor occurrence between Aroclor-1016 and Aroclor-1242 at the given dose level.

c. This analysis was conducted on Stop Study A subgroup females only, from unscheduled deaths and the 105-week termination.

NA = Analysis not performed due to zero tumor occurrence in all groups.

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Organ	Tumor Type	Dose Level Comparison (ppm)	Overall Aroclor ^a	1016 ^b	1242	1254	1260
Liver	Hepatocellular	25	0.312	-	+	0.148	0.632
	Adenoma	50	0.166	0.358	0.436	0.029	0.604
		100	0.026	0.039	0.994	0.028	0.161
		200	0.050	0.050	-	-	
	Hepatocellular	25	0.079			0.985	0.060
	Carcinoma	50	0.565	NA	0.136	0.752	0.377
· · · ·		100	0.454	0.364	0.199	0.281	0.865
		200	NA	NA	-		
	Hepatocellular	25	0.467	·		0.325	0.461
	Adenoma or Carcinoma	50	0.149	0.358	0.436	0.028	0.484
		100	0.007	0.023	0.710	0.018	0.076
		200	0.050	0.050		-	-
	Hepatocellular	25	0.243		-	0.109	0.625
	Adenoma or Hepatocholangioma	50	0.087	0.357	0.436	0.012	0.615
		100	0.031	0.039	0.853	0.028	0.220
		200	0.050	0.050			
	Hepatocellular	25	0.079		-	0.985	0.060
	Carcínoma or Hepatocholangiocarcino	50	0.917	NA	0.610	0.764	0.439
	ma	100	0.454	0.364	0.199	0.281	0.865
		200	NA	NA			
	Benign or Malignant	25	0.390		-	0.252	0.456
	Tumor	50	0.068	0.357	0.330	0.011	0.492
		100	0.009	0.023	0.579	0.018	0.109
r.		200	0.050	0.050			

Table 126. Statistical Comparison (p-values) of Tumor Occurrence Between Core and Stop Study A Subgroup Female Rats^c

a. The overall p-value for any difference between Core and Stop Study subgroup females among the four Aroclor test substances at the given dose level.

b. The p-value for comparing tumor occurrence between Core and Stop Study subgroup females receiving Aroclor-1016 at the given dose level.

c. This analysis was conducted on the Core and Stop Study A subgroup females, from scheduled deaths and the 105-week termination. All interim subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

NA = Analysis not performed due to zero tumor occurrence in all groups.

Organ	Tumor Type	Dose Level Comparison (ppm)	Overall Aroclor ^a	1016 ⁵	1242	1254	1260
Mammary	Adenoma	25	0.149	-		0.219	0.133
Gland		50	0.418	0.203	0.706	0.167	0.631
		100	0.592	0.267	0.219	0.807	0.927
		200	0.012	0.012		-	
	Fibroadenoma	25	0.273	-		0.460	0.154
		50	0.384	0.602	0.483	0.836	0.067
		100	0.043	0.106	0.325	0.016	0.518
		200	0.529	0.529	· 		-
	Adenoma or	25	0.024		-	0.185	0.018
	Fibroadenoma	50	0.239	0.712	0.230	0.794	0.049
		100	0.052	0.199	0.504	0.009	0.477
		200	0.156	0.156			.
	Adenocarcinoma	25	0.149	-	—	0.206	0.139
		50	0.881	0.777	0.438	0.823	0.503
		100	0.352	0.319	0.234	0.199	0.542
		200	0.443	0.443		-	
	Benign or Malignant	25	0.013			0.143	0.010
	Tumor	50	0.289	0.715	0.169	0.623	0.099
		100	0.042	0.630	0.187	0.005	0.736
		200	0.305	0.305			

Table 126. Statistical Comparison (p-values) of Tumor Occurrence Between Core and Stop Study A Subgroup Female Rats^c

a. The overall p-value for any difference between Core and Stop Study subgroup females among the four Aroclor test substances at the given dose level.

b. The p-value for comparing tumor occurrence between Core and Stop Study subgroup females receiving Aroclor-1016 at the given dose level.

c. This analysis was conducted on the Core and Stop Study A subgroup females, from scheduled deaths and the 105-week termination. All interim subgroup animals and Stop Study B subgroup animals were excluded from this analysis.

NA = Analysis not performed due to zero tumor occurrence in all groups.

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APPENDIX A

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BATTELLE STUDY PROTOCOL

A-1

AN ASSESSMENT OF THE CHRONIC TOXICITY AND **ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242,** AROCLOR-1254, AND AROCLOR-1260 **ADMINISTERED IN DIET TO RATS**

Prepared for: Environmental Research Center **General Electric Company**



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AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

APPROVED, BATTELLE:

Battelle Study Director

Battelle Management

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Battelle Quality Assurance

APPROVED, GENERAL ELECTRIC:

Study Monitor

Lecember 18, 1992 Date

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Date

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AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

1.0 <u>Principals</u>:

1.1 Sponsor: Environmental Research Center General Electric Company Bldg. K-1, Room 3A23 P.O. Box 8 Schenectady, NY 12301

Sponsor's Study Monitor:

Brian A. Mayes, Ph.D., DABT Environmental Research Center General Electric Company Bldg. K-1, Room 3A23 P.O. Box 8 Schenectady, NY 12301 Tel: (518) 387-7191 Fax: (518) 387-7611

Alternate Study Monitor:

Barbara H. Neal, DABT Jellinek, Schwartz & Connolly, Inc. 1015 Fifteenth St., NW, Suite 500 Washington, D.C. 20005 Tel: (202) 789-3309 Fax: (202) 789-8243

1.2 Testing Facility:

Battelle Columbus Operations 505 King Avenue Columbus, Ohio 43201-2693

Study Director: Arthur C. Peters, D.V.M. Alternate Contact: Timothy M. Sullivan, Ph.D., DABT Study Toxicologist: Gary Wilkinson, M.S., DABT

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2.0 <u>Scheduled Study Milestones (see Attachment A - Study Design):</u>

The study schedule may be revised by protocol amendment.

	Males	Females
Quarantine Start:	Week of Jan. 25, 1993	Week of Jan. 25, 1993
Day 1 of Dosing:	Feb. 8, 1993 (all 986 males)	Feb. 16, 1993 (all 1460 females)
13-Week Interim Necropsy, Neurotoxicity	Week of May 10, 1993 (no male necropsy)	Week of May 17, 1993 (72 females necropsied)
26-Week Interim Necropsy, Clinical Pathology, Neurotoxicity	Week of Aug. 9, 1993 (72 males necropsied)	Week of Aug. 16, 1993 (72 females necropsied)
39-Week Interim Necropsy, Neurotoxicity	Week of Nov. 8, 1993 (no male necropsy)	Week of Nov. 15, 1993 (72 females necropsied)
52-Week Interim Necropsy, Clinical Pathology, Neurotoxicity, Ophthalmology	Week of Feb. 7, 1994 (72 males necropsied)	Week of Feb. 14, 1994 (72 females necropsied)
52-Week Neurotoxicity Necropsy:	Week of Feb. 14, 1994 (120 males necropsied)	Week of Feb. 21, 1994 (120 females necropsied)
78-Week Interim Necropsy, Clinical Pathology	Week of Aug. 8, 1994 (72 males necropsied)	Week of Aug. 15, 1994 (72 females necropsied)
78-Week Stop Study B Necropsy:	None	Week of Aug. 15, 1994 (66 females necropsied)
Final Ophthalmology	Week of Jan. 30, 1995	Week of Feb. 6, 1995
104-Week Final Necropsy, Clinical Pathology	Week of Feb. 6, 1995 (650 males necropsied)	Week of Feb. 13, 1995 (650 females necropsied)
104-Week Stop Study A Necropsy:	None	Week of Feb. 13, 1995 (264 females necropsied)

The numbers of animals scheduled for each necropsy (shown in parentheses) will be reduced by any early decedents in the respective subgroups.

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3.0 <u>Proposed Final Report Completion Date</u>:

A draft final report will be submitted to the Sponsor approximately 9 months after the last necropsy. Unless there are substantial revisions, two unbound copies of the final report will be sent to the Sponsor within 30 days of receipt of the Sponsor's draft report comments by Battelle. A complete draft report prepared from the Neurotoxicity subgroup findings will be submitted to the Sponsor approximately seven months after the scheduled termination of this subgroup.

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4.0 Governing Compliance Regulations:

Battelle shall perform the Project in compliance with all applicable federal, state, and local laws and regulations including, but not limited to, the Toxic Substances Control Act, 7 U.S.C. Secs. 136 *et seq.*; the Occupational Safety and Health Act, 29 U.S.C. Secs. 651 *et seq.*, 40 C.F.R. Parts 761, 792, and 798; and 29 C.F.R. Parts 1900-1910.

5.0 <u>Purpose</u>:

To assess and compare the potential chronic toxicity and oncogenicity in rats of four commercial polychlorinated biphenyl (PCB) test substances administered daily in the diet for up to 2 years.

6.0 <u>Test Substances</u>:

6.1 <u>Identity</u>:

Aroclor-1016 Aroclor-1242 Aroclor-1254 Aroclor-1260

Lot numbers and expiration dates will be entered into the study file and the final report.

6.2 Source:

Battelle will purchase the test substances from Accustandards, Inc. 25 Science Park, New Haven, CT 06511, (203-786-5290 or 800-442-5290). The Sponsor will provide any necessary permit or regulatory support for the transport of the test substances to the testing facility.

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6.3 Description:

Aroclor 1016 is a colorless mobile oil. Aroclor 1242 is a colorless mobile oil. Aroclor 1254 is a colorless viscous oil. Aroclor 1260 is a colorless sticky resin.

6.4 <u>Storage Conditions</u>:

All four test substances are considered inert, and may be stored under ambient conditions of temperature, humidity, and light.

6.5 Handling Precautions:

When handling neat test substance, prepared dosed feed and any materials and/or equipment potentially contaminated with test substance, a strict regimen of personal protective equipment is required. Staff will be required to take precautionary measures required by compliance regulations set forth in Section 4.0. All personnel working within the animal facility will wear Tyvek coveralls with attached hoods and foot covering, full face respirators with organic vapor/high efficiency particulate filters, and two pairs of gloves of dissimilar materials, with the outer pair being neoprene. All work with neat test substance and dosed feed within the animal facility will be performed in a ventilated enclosure. Protective clothing for work outside the animal facility will include two pairs of gloves of dissimilar materials, laboratory coat, and safety goggles. All forms of test substance, including neat test substance or feed preparations, will be transported through corridors within closed containers. For additional information, see the attached material safety data sheet, ATTACHMENT B.

All waste material contaminated by any of the test substances must be collected as PCB waste for proper disposal.

6.6 Waste Disposal:

Battelle accepts responsibility for disposal of all PCB wastes generated during the performance of the study including but not limited to animal waste, possible carcasses, excess dosed diets, personnel protective clothing, cage cleaning water, and unused test substances in accordance with local, state, and federal regulations.

Study-derived specimens generated for additional analyses or archiving will not be considered waste.

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6.7 Characterization:

Characterization of the neat test substances (chemical identity, purity, strength, composition and stability of the bulk material) will be determined with an aliquot of the bulk material from the study and will be the responsibility of the Sponsor.

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7.0 <u>Reserve Sample</u>

A reserve sample of 5 g from each lot of each of the test substances will be stored at ambient temperature at the testing facility and shipped to the Sponsor's designated archive following acceptance of the final report. All excess test substance(s) will be discarded as hazardous waste on issuance of the final report.

8.0 Rationale for Route of Exposure

Dietary administration of the test substances was selected because it represents the principal route of human exposure.

9.0 Dosed-Diet Preparation and Analyses

9.1 Method and Frequency of Preparation

All dosed diets will be prepared by following the appropriate study method for mixing the diet. A sufficient quantity of diet without the test substance will be prepared using the same procedures as the dosed diets (including addition of diluent for premix, if any) and will be used for the control diet. Frequency of dosed diet preparation and storage will depend on the stability results for the test substance in the diet, but dosed diet preparation will not be less frequent than once every 3 weeks. Control diet will be prepared with the same frequency and stored under the same conditions as dosed diet. A method for cleaning the feed blender after preparation of all doses for each test substance (between different test substances) will be developed and validated prior to onset of dosing to insure no cross contamination of dose preparations by different test substances. When possible, the preferred Aroclor diet preparation order to be followed is 1016, 1242, 1254, then 1260. Animals will not be exposed to diet mixes that are more than 35 days old.

9.2 Analysis of Test Diets

The analytical method for verification of test substances concentration has been agreed upon with the Sponsor and will be validated at the testing facility prior to conducting stability, homogeneity, and dose concentration analyses, and is attached as ATTACHMENT C.

- 9.2.1 Dose Stability Analysis: Stability of dose preparations at or below the lowest study concentrations will be conducted by Battelle using storage conditions similar to mose available for the study. The stability study will be conducted for up to 4^o days with samples kept at temperatures of approximately -20°C, 5°C and room temperature in sealed containers which are protected from UV light. Samples kept at each temperature will be analyzed at a minimum of 4 storage times, unless instability is detected with fewer times, using a method validated over a range of concentrations which includes the concentration of the stability study.
- 9.2.2 Homogeneity Analysis: The ability of dose formulation methodology to produc. uniform (homogeneous) and accurate concentrations for each test substance will be assessed prior to the study start at the highest and lowest concentrations to be administered during the study. A minimum of three samples taken from each blend will be analyzed. Samples will be taken from the top right, top left, and bottom of the twin-shell V blender. The coefficient of variation between samples will be ≤10 percent for the blend to be considered homogeneous. To be considered acceptable, the determined concentration of all blends for each test substance will be within 15 percent of target for the lowest concentrations (50 ppm, Aroclors 1016, 1242; 25 ppm Aroclors 1254, 1260), and within 10 percent of target for all greater concentrations. Homogeneity will be reassessed at one randomly selected dose level per test substance at intervals of about 13 weeks.
- 9.2.3 Dose Concentration Analysis: Concentration analysis will be performed for all dose preparations prior to first dosing, and for every third blend of each dose preparation thereafter. Scheduled analyses will be completed prior to release of doses for administration.

If the results for concentration analyses conducted prior to release are outside the described \pm 10 percent or \pm 15 percent limits, the diet will not be administered without the Sponsor's approval.

Retrospective concentration analysis will be performed on samples collected from the dosed-diet bulk container when the containers are removed from the

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animal room for the first preparation and on each sixth preparation thereafter to ensure that no contamination or degradation has occurred during administration.

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9.2.4 Cross Contamination Assessment: The potential for cross contamination between batches of feed blends will be assessed for each test substance prior to the initiation of dosing, and then two times each 12-month period during the inlife phase (total of four times), or when mixing procedures or personnel supervising dose preparation change. Immediately following the preparation of the high concentration homogeneity blend for each test substance, the blender will be cleaned according to a written method proposed for use throughout the animal studies. The blender will then be filled with an amount of blank feed equal to the normal blend size, and the blender will be operated for the period of time specified in the dose formulation method. Samples will be taken from this blank blend from the same three locations as the homogeneity samples. A sample of unblended blank feed will also be taken to establish the baseline value for the test substances. The samples will be analyzed in conjunction with the homogeneity samples. The method will be modified, if necessary, to insure that a concentration equal to 1 percent of the highest concentration homogeneity sample can be detected. This will be established by spiking a blank control feed extract with a standard to achieve the desired concentration. Carryover will be calculated by measuring peak responses in the test substance pattern retention region. If the average response in the test substance region for the cross contamination samples is ≤ 1 percent of the average response of the high concentration homogeneity samples, it will be considered that no cross contamination of blends has occurred when using the proposed cleaning method.

9.2.5 Retained Samples: Samples of 200 g each from all blends and from all lots of the control diet used during the study will be retained frozen. The retained samples will be discarded with Study Monitor approval on acceptance of the final report.

10.0 Test System

10.1 Description

Species: Rat Strain: Sprague-Dawley Crl:CD Source: Charles River, Portage, MI Shipping: Dedicated, non-stop shipment is required. Age at Start of Dosing: 6 to 7 weeks (males) and 7 to 8 weeks (females).

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10.2 Justification of Test System Selection

Rats historically have been used in safety evaluation studies and are a species of choice for oncogenicity studies.

10.3 Method of Identification

Tail tattoos will be used to permanently identify each animal within the study with a unique study number. Color-coded cage cards citing the study, animal, and group numbers will be affixed to each cage.

11.0 Experimental Design and Test Procedures

11.1 <u>Animal Husbandry</u>

11.1.1 Housing: The animals will be housed individually in suspended stainless steel wire-mesh cages. All housing and care will conform to the standards recommended by the *Guide for the Care and Use of Laboratory Animals*, NIH Publication No. 86-23, Revised 1985.

Animals assigned to each test substance will be housed in separate rooms (making a total of four test substance animal treatment rooms). Control animals will be housed separately in a fifth room. The cages constituting each group will be dispersed so that environmental influences arising from their spatial distribution will be equilibrated as far as possible for all doses.

- 11.1.2 Environmental Conditions: Room temperature and relative humidity (RH) will be maintained at $74^{\circ} \pm 6^{\circ}$ F and 55 ± 15 percent, respectively, during the quarantine and study periods. The environmental conditions will be recorded at least twice daily. There will be at least 10 changes/hour of air in the animal holding rooms.
- 11.1.3 Twelve hours of light and twelve hours of dark each day will be maintained with fluorescent lighting using automatic timers, with light starting at approximately 0600 hours.
- 11.1.4 Feed: Animals will be fed *ad libitum* Purina Certified Rodent Diet[®] No. 5002 (Purina Mills, Inc., Richmond, Indiana) in meal form. The manufacturer's certificates of analysis will be examined by Battelle prior to use of the diet to confirm that the lot contains no more than 0.15 ppm polychlorinated biphenyls (PCB).

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11.1.5 Water: Fresh water from the Columbus Municipal Water Supply will be provided *ad libitum*. An automatic watering system will be used for quarantine and throughout the duration of the study. Water samples from the Animal Resources Facility (taken at the level of the sipper tubes) will be analyzed prestudy and then biannually for microbes and other contaminants, including PCBs (Lancaster Laboratories, Lancaster, Pennsylvania).

11.2 <u>Quarantine</u>

All animals will be obtained in a single dedicated shipment. Sera will be collected during quarantine from 10 animals (5 males, 5 females) and tested for antibodies to: Sendai virus, pneumonia virus of mice (PVM), Kilham Rat Virus (KRV), sialodacryoadenitis virus/rat coronavirus (SDAV/RCV), and *Mycoplasma pulmonis* by Microbiological Associates, Inc. The Study Director (with concurrence of the Study Monitor) will decide a course of action if significant titers are encountered.

Animals will be quarantined for at least seven days. A laboratory animal veterinarian will make a visual inspection of the animals to be used in the study and evaluate the health status prior to their release for the study. Animals not selected for the study will not be retained. The disposition of these animals will be recorded and retained in the study files.

11.3 Randomization

Animals will be assigned to groups by body weight so that there will be no statistically significant differences between groups in initial group mean body weights within 5 days prior to initiation of dosing. All group mean body weight values for each sex will be within 10 percent of each other, and no individual animal weight will be more than \pm 15 percent from the mean body weight of all animals within each sex. The XYBION PATH/TOX System (XYBION[®] Medical Systems Corporation, Cedar Knolls, NJ) will be used for group assignment.

11.4 Study Design

The dosage levels have been provided by the Sponsor. The attached table (ATTACHMENT A) presents the study groups and dose levels selected for each of the compounds. The order in which the Xybion program assigns animals to study groups also will be used to allocate animals to the study subgroups within each study group independent of body weight. The first 50 (100 control) animals assigned to a study group will form the Core subgroup (see ATTACHMENT A). Assignments to the Interim necropsy, Neurotoxicity, and Stop Study A and B subgroups will continue, as applicable, to correspond to the sequence of animal allocation to study groups.

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Animals will be scheduled to arrive in a single shipment, with no difference of age range between sexes at the time of arrival for quarantine. A single control group will be used concurrently with the four test substance dosed groups. All males will be held predosing for a period of approximately 12 days before the commencement of dosing; all males will begin dosing on the same day (Day 1 - males). All females will be held for a period of approximately 19 days before starting dosing on a single day (Day 1 females). All females will be approximately one week older at the start of dosing than the males. Females will be housed at arrival in separate rooms and will not be introduced into animal rooms containing test substances until randomized and designated for test substance and dose groups. This starting procedure may be changed by protocol amendment prior to the receipt of any animals, but only after written approval of the protocol amendment by the Study Monitor before the receipt of any animals.

11.5 Administration of the Test Substance

Test and control diets will be administered *ad libitum* to the Core subgroup for up to 104 weeks but not more than 105 weeks, with no recovery period before necropsy. Animals will not be exposed to diet mixes that are more than 35 days old.

Animals in all Interim subgroups and the Neurotoxicity subgroup will receive daily diet treatment until the day of scheduled necropsies.

Twenty-four females in each test substance treatment group allocated to the Stop Study A subgroup will receive test substance in their diet for 52 weeks. After the dose period of 52 weeks, they will be placed on control diet until necropsy at the conclusion of 104 weeks of study. Six females in each test substance treatment group allocated to the Stop Study B subgroup will receive test substance in their diet for 52 weeks. After the dose period of 52 weeks, they will be placed on a control diet until necropsy at the conclusion of 78 weeks of study.

11.6 Parameters to be Evaluated

11.6.1 Clinical Signs: All animals will be checked for mortality and moribundity twice daily, with data recorded by dose group. Detailed clinical observations will be performed on each animal from all subgroups, except Stop Study B, once weekly and will include, but not be limited to, evaluations of the skin and fur, eyes and mucous membrane, respiratory, circulatory, autonomic and central nervous systems, somatomotor activity, and behavior pattern. Established abnormalities may be monitored more frequently. For the Stop Study B subgroup, detailed clinical observations will be performed once weekly for the first 13 weeks, and then every fourth week until 78 weeks.

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Palpation for tissue masses will be done at 4-week intervals for the first 28 weeks of the study and weekly thereafter until necropsy for all groups and subgroups except the Stop Study B subgroup. Palpation of Stop Study B subgroup rats will be done at 4-week intervals until 78 weeks.

Clinical signs of toxicity will be recorded for individual animals as they are observed, including the time of onset, intensity, and duration. Observation of "normal" can be recorded by dose group. The location and size of tissue masses will be recorded. Time of death will recorded as observed.

- 11.6.2 Body Weights: Individual body weights will be recorded weekly until necropsy for all groups and subgroups.
- 11.6.3 Feed Consumption: Individual feed consumption will be measured weekly until necropsy for all groups and subgroups.
- 11.6.4 Clinical Pathology: Ten animals/sex/group from the Core subgroup will be randomly selected and designated at the start of the study for hematology and serum chemistry evaluations. Substitutions will be made in the event of unscheduled death of any of these designated animals. Blood will be collected from non-fasted animals from the retro-orbital sinus. Evaluations will be performed after 26, 52, and 78 weeks of dosing, and at scheduled termination. The following parameters will be measured.

Hematology	Serun	n Chemistry
Hematocrit	LD	Total bilirubin
Erythrocyte count	СК	Serum alkaline
Leukocyte count (total &	Total Protein	phosphatase
differential)	Albumin	Serum alanine
Platelet count	Urea Nitrogen	aminotransferase
Mean corpuscular	Creatinine	Serum aspartate
hemoglobin	Sodium	aminotransferase
Mean corpuscular volume	Potassium	Serum gamma glutamyl
Mean corpuscular	Chloride	transpeptidase
hemoglobin concentration	Calcium	Cholesterol
Hemoglobin	Inorganic Phosphate	Glucose

CLINICAL PATHOLOGY PARAMETERS TO BE MEASURED

Urinalyses will be performed on the animals used for clinical pathology at the intervals specified for clinical pathology and will include the following parameters: Specific Gravity, pH, and volume (quantitative), Protein, Glucose, Blood, Ketones, Bilirubin, Urobilinogen, Color, Appearance (qualitative), and microscopic characteristics.

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11.7 <u>Neurotoxicity Testing</u>

Animals allocated to the Neurotoxicity subgroup will be subjected to a screening battery consisting of the functional observational battery (FOB), motor activity, and neuro-pathology as outlined in the U.S. EPA Neurotoxicity Guidelines (March, 1991).

11.7.1 Functional Observational Battery. The FOB assessment will be made before the initiation of dosing (pre-test) and every 13 weeks thereafter for 52 weeks (a total of five times). The FOB will include a thorough description of the subject's appearance, behavior, and functional integrity. This will be assessed through: observations in the home cage; while the rat is moving freely in an open field; and through manipulative tests. Testing will proceed from the least to the most interactive with the subject. All animals in a given study will be observed carefully by trained observers using standardized procedures to minimize observer variability. Observers will be blind to dose groups.

The functional observational battery will include, but not be limited to, the following list of measures:

- 1. Assessment of signs of autonomic function, including but not limited to:
 - a. ranking of the degree of lacrimation and salivation, with a range of severity scores from none to severe;
 - b. presence or absence of piloerection and exophthalmus;
 - c. ranking or count of urination and defecation, including polyuria and diarrhea (this is most easily conducted during the open field assessment).
 - d. pupillary function such as constriction of the pupil in response to light or a measure of pupil size;
 - e. degree of palpebral closure, e.g., ptosis.
- 2. Description, incidence, and severity of any convulsions, tremors, or abnormal motor movements, both in the home cage and the open field.
- 3. Ranking of the subject's reactivity to general stimuli such as removal from the cage or handling, with a range of severity scores from no reaction to hyperreactivity.
- 4. Ranking of the subject's arousal level or state of alertness during observations of the unperturbed subject in the open field, with a range of severity scores from coma to hyperalertness.



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- 5. Descriptions and incidence of posture and gait abnormalities observed in the home cage and open field.
- 6. Ranking of any gait abnormalities, with a range of severity scores from none to severe.
- 7. Forelimb and hindlimb grip strength measured using an objective procedure, e.g. that described by Meyer *et al.* (1979).
- 8. Quantitative measure of landing foot splay; the procedure described by Edwards and Parker (1977) will be used.
- 9. Sensorimotor responses to stimuli of different modalities will be used to detect gross sensory deficits. Pain perception will be assessed by a measure of the reaction to a tail-pinch. The response to a sudden sound, e.g., click or snap, will be used to assess audition.
- 10. Body weight.
- 11. Description and incidence of any unusual or abnormal behaviors, excessive or repetitive actions (stereotypies), emaciation, dehydration, hypotonia or hypertonia, altered fur appearance, red or crusty deposits around the eyes, nose, or mouth, and any other observations that may facilitate interpretation of the data.

Further information on the neurobehavioral integrity of the subject will be provided by:

- a. Count of rearing activity in the open field;
- b. Ranking of righting ability;
- c. Body temperature;
- d. Excessive or spontaneous vocalizations;
- e. Alterations in rate and ease of respiration, e.g., rales or dyspnea;
- f. Sensorimotor responses to visual or proprioceptive stimuli.

11.7.2 Motor Activity

Motor activity will be monitored by an automated activity recording apparatus (Figure 8 Photobeam Activity System). Motor activity will be determined over six continuous 5-minute intervals (total evaluation time of 30 minutes). Measures of total activity will be obtained as well as an indication of habituation of activity. The motor activity measurements will be made before the start of dosing (pre-test) and every 13 weeks thereafter for 52 weeks (a total of five

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times). The Neurotoxicity subgroup will be necropsied the week following final FOB and motor activity assessments.

11.7.3 Neuropathology

All surviving rats per sex and dose group assigned to the Neurotoxicity subgroup (ATTACHMENT A) will receive in-situ (whole body) perfusion/fixation; animals found dead or killed in a moribund condition will be discarded after a gross necropsy examination. Rats to be perfused will be deeply anesthetized with pentobarbital sodium and the thoracic viscera exposed. Perfusion will be accomplished by the transcardial technique, using Trump's Fixative fed by gravity from a prepared infusion bag and standard intravenous apparatus, and will be followed by a complete gross necropsy. Following fixation, tissue samples will be collected from representative areas of the nervous system from all perfusion-fixed rats: cerebrum, cerebellum, brain stem, spinal cord at cervical and lumbar swellings (C_3 - C_6 , L_1 - L_4), Gasserian ganglia, dorsal root ganglia (C_3 - C_6 , T_3 - T_6 , L_1 - L_4), dorsal and ventral root fibers (C_3 - C_6 , L_1 - L_4), proximal sciatic nerve (mid thigh), distal sural nerve, and distal tibial nerve.

Neuropathological evaluations will be conducted on all surviving animals per sex from the control and high-dose groups.

Brain, spinal cord, and associated ganglia and root fibers will be processed for paraffin embedding; peripheral nerve tissues will be processed for plastic embedding. Paraffin-embedded tissues will be cut at 5 microns and stained with hematoxylin and eosin and cresyl violet-luxol fast blue. Plastic-embedded sections will be cut at 2 microns and stained with toluidine blue. Subject to alterations observed, additional methods, such as Bodian's or Bielchlowsky's silver methods, and/or GFAP immunohistochemistry may be used in conjunction with more standard stains to determine the lowest dose level at which neuropathological alterations are observed. Additional stains, if required, will be at additional cost, after consultation with the sponsor.

Representative histological sections from the tissue samples will be examined microscopically by an appropriately trained pathologist for evidence of neuropathological alterations. A stepwise examination of tissue samples will be performed. In this stepwise examination, sections from the high-dose group are first compared with those of the control group. If no neuropathological alterations are observed in samples from the high-dose group, subsequent analysis is not required. If neuropathological alterations are observed in samples from the high-dose group, samples from the lower-dose groups are then examined sequentially. These additional examinations, of lower-dose

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animals, will be performed only after consultation with the sponsor, and at additional cost.

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If any evidence of neuropathological alterations is found in the qualitative examination, then a subjective diagnosis will be performed for the purpose of evaluating dose-response relationships. All regions of the nervous system exhibiting evidence of compound-induced neuropathological changes will be included in this analysis. Sections from all dose groups and test substances will be coded and examined in randomized order without knowledge of the code. The frequency of each type and severity of each lesion will be recorded. After all samples from all dose groups have been graded, the code will be broken and statistical analysis performed to evaluate dose and comparative relationships.

11.8 Ophthalmology Examinations

Ophthalmology examinations, using an ophthalmoscope, will be performed on all Core subgroup animals and on all Interim necropsy subgroup animals during the period before the start of dosing, with individual abnormalities recorded. Surviving high dose and control animals from the Core subgroups will be examined after 52 weeks of dosing and again during the week before scheduled termination. High dose and control animals from the Interim necropsy subgroups will be examined before scheduled necropsy. If changes are observed in high dose rats when compared to controls from either the Core or Interim necropsy subgroups, then all surviving animals from those same subgroups will be examined. Tropicamide hydrochloride (Mydriacil) will be used as a mydriatic.

11.9 Body Burden Analyses

Tissue samples (1-gram minimum to the extent possible) of the right lobe of liver, perirenal adipose, mammary adipose, and right brain (cerebrum, cerebellum, and brain stem) will be collected, weighed, prepared, and frozen according to the Sponsor's instructions and will be shipped according to the Sponsor's instructions. Carcasses will be saved in a frozen state for possible future analyses until acceptance of the Final Report, when they will be discarded without examination (Sponsor will approve before discard). The tissues specified above will be retained from all males in each treatment group in the 26-, 52-, and 78-week Interim necropsy subgroups and from all 6 males in each treatment group in the Core subgroup. These tissues will also be retained from all females in each treatment group in the 13-, 26-, 39-, 52-, and 78-week Interim necropsy subgroups, and from 6 females in each treatment group in the Core, Stop Study A, and Stop Study B subgroups. The Sponsor may choose to determine PCB tissue burdens in any of the samples provided, but all such analyses will be conducted as a separate study and will not be a component of the Battelle study protocol. Battelle will, at the

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Sponsor's request, attach any independent body burden report as an addendum to its final report.

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11.10 Necropsy

Animals will be weighed, killed by CO_2 and exsanguination, and necropsied. A blood smear will be prepared for all animals killed (except the Neurotoxicity and Stop Study B subgroups), and examined at the discretion of the pathologist.

- 11.10.1 Unscheduled Necropsies and Deaths: Gross necropsy will be performed on animals that die during the study within 4 hours of observation of death, and immediately for animals killed in moribund condition.
- 11.10.2 Interim Necropsies: Gross necropsy will be performed on Interim subgroup animals from all four test substances and controls (on 6 females/Interim subgroup necropsied after 13-, 26-, 39-, 52-, and 78-weeks of dosing and 6 males/Interim subgroup necropsied after the 26- 52-, and 78-week intervals), and on the Stop Study B subgroup killed after 78 weeks. A pathologist will be present at all scheduled interim necropsies.
- 11.10.3 Terminal Necropsies: Gross necropsy will be performed on all Core subgroup animals surviving to the scheduled termination after 104 weeks of dosing, plus the Stop Study A subgroup. A pathologist will be present at all scheduled terminal necropsies.
- 11.10.4 Necropsy procedures for Neurotoxicity subgroup animals are presented in Section 11.7.3 of this protocol.
- 11.10.5 If the Core subgroup controls of either sex decrease to a 20 percent survival level in less than 104 weeks of dosing, the Study Monitor will be notified in writing and all surviving study animals will be scheduled for necropsy beginning in no less than five (5) working days.

12.0 Organ Weights

The liver and brain from all Core, Interim, Stop Study A, and Stop Study B subgroup animals will be weighed at scheduled interim and terminal necropsies. These organs will be weighed prior to sampling for body burden analyses and prior to fixation.

The following tissues from all Interim subgroup and from 10/sex/group Core subgroup animals will be weighed at scheduled interim and terminal necropsies:

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Weigh prior to fixation: Adrenal glands, Epididymides, Heart, Kidneys, Lungs, Ovaries, Prostate, Seminal vesicles (including coagulating glands), Submaxillary (submandibular) salivary glands, Testes, Thymus, and Uterus.

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Weigh after fixation: Pituitary, Thyroid Gland (including Parathyroids).

If the Interim subgroup necropsy data show evidence of any treatment-related trends in organ weights, then the applicable organs may be weighed for all Core subgroup animals at the terminal necropsy (to be scheduled by protocol amendment if implemented).

13.0 Tissue Preservation

The following organs, tissues, or representative samples thereof will be preserved for possible histopathological examination. Ten percent neutral buffered formalin will be used, except for eyes and testes, which will be preserved in Bouin's solution. All wet tissues will be retained until authorization is given by the Sponsor for transfer to an approved archive facility.

Adrenals Acrta Brain (3 levels) Epididymides Esophagus Eyes with Optic Nerve(s) Femoris Muscle with Sciatic Nerve Harderian Glands Heart Kidneys **Exorbital Lacrimal Glands** Large Intestine (section from colon, cecum, and rectum) Liver (left and median lobes) Lungs (with main stem bronchi) Mammary Gland* Mesenteric Lymph Node(s) **Ovaries and Oviducts** Pancreas Pituitary Prostate

Salivary Glands (sublingual and submaxillary) Seminal Vesicles Skin Small Intestine (duodenum, jejunum, and ileum) Spinal Cord at 3 levels (cervical, mid-thoracic, and lumbar) Spleen Sternum and Marrow Stomach Testes Thymus Tongue Thyroid (with parathyroids) Trachea Urinary Bladder Uterus (corpus, cervix) Vagina** All gross lesions and tumors

* Record number and multiplicity of mammary tumors.

** Determine stage of the estrous cycle histologically for the high-dose and control females from each test substance at the 26-, 52-, and 104-week intervals. The scapulo-humoral and coxo-femoral joints will be examined grossly but not preserved.

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14.0 <u>Histopathology</u>

A complete histopathological evaluation will be performed on the control and the high dose animals from all test substance groups from the following subgroups: Core, Stop Study A, and the 52-week and 78-week Interim necropsies. Complete histopathologic evaluations also will be done on all animals that die or are necropsied prior to scheduled termination, except for any unscheduled deaths from the Neurotoxicity subgroup. These latter rats, if any, will be discarded after gross necropsy evaluation.

Histopathological evaluation of liver, brain, mammary gland, all gross lesions, and identified target organs will be performed on all mid- (where applicable) and low-dose animals from the Core subgroups, Stop Study A and the 52- and 78-week Interim subgroups, as well as all females from the 13-, 26- and 39-week Interim subgroups, and on all males from the 26-week Interim subgroup.

Prior to completion of the final report, the histopathologic findings and selected tissue slides will be reviewed by an independent pathologist(s) (Sponsor funded). The results of this review will be shared with Battelle for appropriate consideration in statistical analysis and in the draft final report.

15.0 <u>Reports</u>

Progress data summaries will be issued after completion of 13, 26, 39, 52, 65, 78, 91 and 104 weeks of treatment. Progress data summaries will include information on body weight, feed consumption, clinical signs, clinical chemistries, neurotoxicity testing, and macroscopic and histopathologic findings.

All data relevant to the Neurotoxicity subgroup will be compiled into a separate draft report which will be issued to the Sponsor approximately seven months after the final necropsy of the Neurotoxicity subgroup. This separate neurotoxicity report will include a brief description of all methods and materials applicable to the Neurotoxicity subgroup, data and statistical analyses relevant to the Neurotoxicity subgroup, and a discussion of possible neurotoxicological or neuropathological effects of the different test substances (see Section 15.12 and 16.6 of this protocol). The neurotoxicity report will be revised and issued as an independent report after review by the Sponsor and will be incorporated into the final study report by inclusion as an appendix to the final report.

A draft final report will be produced approximately 9 months after completion of the in-life phase of the study. The final report will contain the following format.

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15.1 Statement Pages*

- 1. GLP Compliance Statement
- 2. Quality Assurance Statement
- 3. Study Identification Page
- 4. Study Personnel Page
- 5. List of any deviations from protocol and their effects on interpretation of study results
- 6. Summary

15.2 Study Design

Test Substances*

- 1. Identification
- 2. Lot numbers for each test substance and degree of chlorination
- 3. Source
- 4. Description
- 5. Storage conditions
- 6. Characteristics
- 7. Location of reserve samples

Test Procedures*

- 1. Species, strain, and source
- 2. Justification for choice of animal model
- 3. Age at initiation of study
- 4. Husbandry (housing, food, and water)
- 5. Environmental conditions
- 6. Randomization procedures
- 7. Numbers/dose group/sex (including tabulation)
- 8. Animal identification
- 9. Observation period or duration of the study

Dosing Procedures*

- 1. Route of administration
- 2. Rationale for route of administration
- 3. Preparation of diet
- 4. Analysis of diet samples (stability, homogeneity, and dose concentration analyses)

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Observation of Animals

- 1. Clinical observations*
- 2. Physical examinations*
- 3. Body weights*
- 4. Feed consumption*
- 5. Clinical pathology (hematology, serum chemistry, and urinalysis)
- 6. Ophthalmic examinations

Postmortem Procedures

- 1. Necropsy (schedule and procedures)* Unscheduled necropsy and deaths* Interim necropsies Terminal necropsies*
- 2. Organ weights
- 3. Tissue preservation*
- 4. Histopathology (tissues examined)*
- 5. Body burden tissue collection

15.3 <u>Results</u>

- 1. Analytical chemistry (stability, homogeneity, dose concentrations)*
- 2. Mortality and clinical observations *
- 3. Body weights and feed consumption*
- 4. Ophthalmic examinations
- 5. Clinical pathology
- 6. Reversibility (comparison with Stop Study subgroups)
- 7. Gross necropsy*
- 8. Organ weights
- 9. Histopathology*

15.4 Comparative Discussion of Individual Test Substance Results*

- 15.5 Statistical Methods*
- 15.6 Graphs*
 - 1. Body weights
 - 2. Feed consumption

15.7 <u>Tables</u>

- 1. Analytical chemistry*
- 2. Cumulative survival rates
- 3. Summary incidence of clinical signs*
- 4. Mean body weights and standard deviations*
- 5. Mean body weight change and standard deviations*
- 6. Mean feed consumption and total feed consumption*
- 7. Mean compound consumption*
- 8. Summary of clinical hematology
- 9. Summary of clinical serum chemistry
- 10. Summary of urinalyses
- 11. Summary of gross pathology incidence*
- 12. Absolute organ weight means
- 13. Relative organ weight means
 - (organ-to-body weight ratio means)
 - (organ-to-brain weight ratio means)
- 14. Summary incidence of histopathology findings*
- 15. Ophthalmic abnormalities (as applicable)

15.8 Appendices

- 1. Individual animal disposition (each animal's type of death and day, week, time, and date of death)*
- 2. Individual clinical observations*
- 3. Individual body weights*
- 4. Individual body weight changes*
- 5. Individual feed consumption*
- 6. Individual compound consumption*
- 7. Individual clinical hematology values
- 8. Individual clinical serum chemistry values
- 9. Individual urinalyses values
- 10. Individual organ weights
- 11. Individual pathologic findings*
 - (includes gross necropsy and histopathology findings)
- 12. Individual abnormal ophthalmic observations

15.9 Protocol and Amendments*

- 15.10 Retention of Specimens and Records*
- 15.11 Figures (as appropriate)*

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15.12 <u>Neurotoxicity Report</u>

The report will include all items from Section 15 above identified with an asterisk (*), plus:

- 1. Observations from neurotoxicity testing (functional observational battery, including parameters evaluated, and motor activity assessments)
- 2. Neurotoxicity results
- 3. Tables summarizing functional observational battery (FOB) and motor activity results
- 4. Table(s) summarizing neuropathology findings
- 5. Appendix individual FOB, motor activity assessment data, and neuropathology findings

16.0 <u>Statistical Analyses</u>

All numeric in-life, clinical pathology, and quantitative postmortem data will be analyzed. Normally distributed data (parametric) will be analyzed for treatment effects by analysis of variance. Pairwise comparisons between groups will be made using Dunnett's t-Test. Nonparametric data will be analyzed by Wilcoxon's Test for pairwise group comparisons; all of these analyses will use Xybion software for analysis.

Statistical analyses of the carcinogenic tumor endpoints as well as the noncarcinogenic toxic endpoints will be carried out for each of the four test substances individually. Further analyses will be carried out treating the substances jointly, to identify the nature and extent of trends in toxicity across the four test substances.

A single interim statistical analysis will be carried out after the clinical and anatomic pathology data from the 12-month and earlier necropsies have been amassed. A final statistical analysis will be carried out after the 24-month clinical pathology and anatomic pathology data have been accumulated.

16.1 Control Groups

The Core subgroup and Stop Study A subgroup animals will use a single control group consisting of 100 animals/sex. These control animals will enter into all comparisons with each of the test substances and with each dose group within each of the test substances at the 24-month final analysis. The Interim necropsy subgroup will have an associated control group consisting of 18 males and 30 females. Six male control animals will be necropsied at each of the three Interim subgroup necropsy intervals and six females at each of the five Interim subgroup necropsy intervals. The 78-week Interim subgroup necropsy control females will serve as control for the Stop Study B

subgroup. The Neurotoxicity subgroup will have a control group of 10 per sex which will be used only as described in Section 16.6 of this protocol.

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16.2 Mortality Analysis

The Kaplan-Meier estimator of survival and Tarone's extension to a trend test for dependence of survivorship on dose will be employed. The log-rank statistic of Mantel and Cox, and Tarone's extension to test for trend, will be utilized.

16.3 Incidental Tumor Analysis

Several statistical methods will be used to analyze tumor incidence data. The first method of analysis is an unadjusted analysis. Fisher's exact test for pair-wise comparisons of each dose group with the control group and the Cochran-Armitage linear trend test for detecting a dose-response trend will be used.

A second method for the analysis of incidental tumors will be the survival adjusted prevalence test, the Hoel-Walburg test. The proportions of tumor bearing animals in dosed and control groups will be compared within specified time intervals: e.g. weeks 0-52; weeks 53-78; weeks 79-92; weeks 93-the week before the terminal kill period; and the terminal kill period. The results will be combined across intervals via the methods of Mantel and Haenszel.

A third method for the analysis of incidental tumors will be based on logistic regression. This method incorporates time to death as a covariate.

16.4 Lethal Tumor Analysis

This analysis assumes that all tumors of a given type observed in animals dying before the end of the study were "fatal". The principal response will be time to death due to tumor. The life table method of Cox, and its extension to trend analyses by Tarone that was discussed in Section 16.2 for mortality analysis, will be utilized.

16.5 Combinations of Results Across Test Substances

We will compare the individual test substances according to relative percentages of chlorine. Various analyses will be used to quantify the effects of test substance, dose, and time.

Page 26 of 27 Battelle Study No.: SC920192 Sponsor Study No.: December 18, 1992

16.6 <u>Neurotoxicity Analyses</u>

The test results will be summarized and tabulated by test substance, within test substance, and by time on test. Separate summarization and analyses will be carried out for males and for females.

The individual responses from the neurotoxicity and neuropathology tests will be subjected to statistical analyses. For the continuous responses, trends in response level will be assessed across test substance, dose within test substance, and time on test by multiple regression analyses and repeated measures analysis. Trends across time within animals constitute the repeated measures.

For the categorical responses, trends across test substance, dose, and time will be assessed by contingency table analyses and logistic regression analyses. Trends across time within animals constitute the repeated measures, which will be accounted for in the analyses by incorporating block effects or by carrying out conditional analyses.

16.7 Additional Statistical Analyses

The Sponsor will designate additional required statistical analyses to be performed by protocol amendment.

17.0 <u>Quality Assurance</u>

Critical phases will be monitored in accordance with applicable GLP regulations and facility standard procedures.

18.0 Maintenance of Raw Data, Record, and Specimen

All raw data, records, test substances, and specimens will be maintained at Battelle until acceptance of the final report, when arrangements will be made to ship these items to the Sponsor or their designated archive.

19.0 Archives

The final archive site will be designated by the Sponsor.

20.0 Communications

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Any deviations from protocol occurring during the conduct of the study will be communicated to the Sponsor's Study Monitor, or alternate Study Monitor if the Study Monitor is not available, by telephone or telefax and discussed. All mutually agreed changes in study conduct or design will be documented in the form of a protocol deviation or amendment as appropriate.

Copies of all protocol amendments will be sent to the Study Monitor for review and concurrence signature.

At intervals of approximately two weeks, the Study Director will contact the Study Monitor by facsimile or telephone with an update of the study status.

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Compound	Group	Dose Levels	Core Su Anir	bgroup nals	Interim Subgr	Necropsy oup(s)	Neuroto	oxicity roup	Stop Subgrout	Study) Females
		Alleh Alleh	Males	Females	Males	Females	Males	Females	Subgroup A	Subgroup B
CONTROLS	1	0	100	100	18	30	10	10	1	1
AROCLOR-1016	1	20	50	50	18	30	10	10	24	6
	2	100	50	50	18	30	10	10	24	6
	e	200	50	50	18	30	10	10	24	6
AROCLOR-1242	1	50	50	50	18	30	10	10	24	6
	2	100	50	50	18	30	10	10	24	6
AROCLOR-1254	1	25	50	50	18	30	10	10	24	6
-	2	50	50	50	18	30	10	10	24	9
	3	100	50	50	18	30	10	10	24	6
AROCLOR-1260	1	25	50	50	18	30	10	10	24	6
	2	50	50	50	18	30	10	10	24	6
	3	100	50	50	18	30	10	10	24	6
	TOTAL N	UMBER RATS	650	650	216	360	120	120	264	66

ATTACHMENT A

STUDY DESIGN

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Protocol Amendment

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 1

. And .

February 12, 1993

Effective Date: January 15, 1993

1. Part to be Changed: Attachment C, Draft Analytical Method, Dose Analysis of Aroclor 1242, 1254, and 1260 in Rodent Feed, Version 1.0, is changed to include final dose analysis methods for the four test substances.

Reason for the Change: The draft procedures needed to be used to identify changes required to arrive at optimum conditions; the methods were completed on January 15 and January 19, 1993, almost three weeks before the start of dosing and in time to analyze the first preparations mixed for dosing. This amendment updates Attachment C with the methods actually used for dose analysis.

- 2. Part to be Changed: Page 17, Section 11.9, Body Burden Analyses, is amended to add the collection of the designated tissue samples from 6 male and 6 female cull rats. The tissue harvest will be performed after female randomization, to provide samples for potential baseline information about starting body burden. The tissue samples will be placed into glass containers closed with a Teflon-lined screw cap. The tissue samples will be kept at Battelle at approximately 70 C. The frozen carcasses will be kept at approximately 20 C.
 - Reason for the Change: The addition of pre-dosing tissue sample collection for body burden analysis was directed by the Study Monitor, Dr. Mayes, during a site visit at Battelle on Monday, February 8, 1993.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Protocol Amendment Number 1.

February 12, 1993

3. Part to be Changed: Page 18, Section 11.10.5, Necropsy; the third line of the sentence is amended by inserting the words, "of that one sex" after the phrase "all surviving study animals" and before the phrase "will be scheduled".

2.

Reason for the Change: The insertion of the words clarifies the intent that each sex will be considered separately when Core subgroup survival is a criterion for advancing the scheduled necropsy dates.

APPROVED BY:

Study Director

Date

Sponsor's Project Monitor

Date

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Protocol Amendment

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Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 2

April 19, 1993

Effective Date: April 1, 1993

1. **Part to be Changed:** Page 17, Section 11.9, Body Burden Analyses, is amended to add the following paragraph to the end of this section on Page 18:

Battelle will conduct lipid determinations in rat carcasses based on AOAC methods 985.15 and 982.27, as described in Battelle's letter to the Project Monitor dated February 25, 1993, and accepted by the Agreement extension completed on April 1, 1993. Carcasses from 4 cull rats of each sex of prestudy rats will be analyzed to establish baseline values. Subsequent carcass numbers analyzed will be 3 control rats per sex from scheduled interim sacrifices. Males will be analyzed after 6, 12, 18, and 24 months of the in-life phase, while females will be analyzed after 3, 6, 9, 12, 18, and 24 months of the in-life phase have been completed.

Reason for the Change: The client requested Battelle to perform these additional analyses in order to evaluate the body fat content of the rats at various stages of development during the 24 months of dosing.

APPROVED BY:

Study Director

Sponsor's Project Monitor

Date

A-32 Battelle Study No. SC920192 Protocol Amendment Chronic Toxicity and Oncogenicity Report

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 3

February 11, 1994

Effective Date: February 11, 1994

1. Part to be Changed: Page 4, Section 2.0, Scheduled Study Milestones:

52-Week Interim	Week of Jan. 31, 1994	Week of Jan. 31, 1994
Necropsy, Clinical	(Ophthalmic Exams); Week of	(Ophthalmic Exams); Week of
Pathology, Neurotoxicity, Ophthalmology	Feb. 14, (72 males necropsied)	Feb. 14, 1994 (72 females necropsied)

78-Week Interim Ophthalmology, Necropsy, Clinical Pathology	Week of Aug. 8, 1994 (Ophthalmic Exams); Week of Aug. 15, 1994 (72 males necropsied)	Week of Aug. 8, 1994 (Ophthalmic Exams); Week of Aug. 15, 1994 (72 females necronsied)
	necropsied)	necropsied)

Reason for the Change: The 52- and 78-week male necropsies were rescheduled at the request of the Sponsor.

2. Part to be Changed: Page 12, Section 11.5, Administration of the Test Substance:

Stop Study A and B Subgroups will be placed on control diet (the same diet prepared for the controls) beginning on February 15, 1994.

Reason for the Change: To clarify when the Stop Study Groups are to be administered the control diet.

3. Part to be Changed: Pages 18 and 19, Section 12.0, Organ Weights:

Spleen weights will be recorded prior to fixation at scheduled termination of the Interim subgroups at 52 and 78 weeks and the Core subgroup rats (10/sex/group).

Reason for the Change: To include spleen weights for organ weight analysis at the request of the Sponsor Monitor during a site visit at Battelle on February 10, 1994.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

AMENDMENT NUMBER 3 (CONTINUED)

4. Part to be Changed: Page 10, Section 11.1.2, Environmental Conditions:

The room temperature is amended from 74 \pm 6 degrees F to 72 \pm 6 degrees F.

Reason for the Change: To coincide with the temperature range recommended by the Guide for the Care and Use of Laboratory Animals, NIH Publication No. 86-23, Revised 1985.

5. Part to be Changed: Page 17, Section 11.9, Body Burden Analysis:

The second "all" in the third sentence is omitted to read "78-Interim necropsy subgroups and from 6 males in each"

Reason for the Change: The second all was incorrect; there are more than 6 in each Core subgroup, but only 6 are designated for body burden sampling.

6. Part to be Changed: Page 18, Section 11.10.5, Necropsy:

The statement is amended to read "the Study Monitor will be notified in writing and all surviving study animals of that sex will be scheduled for necropsy"....

Reason for the Change: To clarify that each sex will be considered separately for early termination.

7. Part to be Changed: Page 18, Section 11.10, Necropsy:

The section is amended to add Section 11.10.6: At scheduled necropsy of the Neurotoxicity subgroup animals, a blood sample (approximately 2 to 3 mL) will be obtained from the retro-orbital sinus following anesthetization (ip injection of a barbiturate). The serum samples will be held frozen at approximately -20° C or lower until their disposition is indicated by the Sponsor Monitor. Additionally, just prior to perfusion, a large portion of the left liver lobe will be clamped (hemostat or like instrument) and removed so as to not interfere with the infusion process. The liver sample will be placed into a plastic container and frozen using a dry ice/acetone bath, then maintained at approximately -70° C. The samples will be held by Battelle until their disposition is indicated by the Sponsor Monitor.

Reason for the Change: The Sponsor Monitor requested these additions during a site visit at Battelle on February 10, 1994.

APPROVED BY:

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C. Peter

Study Director Date

Sponsor's Project Monitor

Date

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Protocol Amendment

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 4

July 27, 1994

Effective Date: July 29, 1994

1. Part to be Changed: Page 12, Section 11.6, <u>Parameters to be Evaluated</u>, is amended by adding the following parameter:

11.6.5 Vaginal Cytology: Fifteen (15) females from each of the 12 Core subgroups will be sampled during early August, 1994, to evaluate the status of estrus cycling. The 15 surviving female rats in each Core subgroup with the highest identification number (no substitutions after start of sampling) will be sampled by vaginal lavage during a period of 3 to 4 hours each morning for 12 consecutive days; cells of vaginal washings will be fixed to slides, stained, and coverslipped. Slides from each high dose group and the controls will be examined microscopically for the stage of estrus after the end of all slide preparation. If any of the high dose groups have unusual findings, the middle and low dose groups for that test substance also will be evaluated. Findings will be reported as stage of estrus (proestrus, estrus, metestrus, diestrus) daily for each female sampled, separated by group.

Reason for the Change: This added task was requested by the Study Monitor, Dr. Brian Mayes, via a telephone call on July 19, 1994.

2. Part to be Changed: Page 20, Section 14.0, Histopathology, is amended to add the following sentence to the end of the second paragraph:

Histopathological evaluation of liver and all gross lesions will be performed on all Stop B females sacrificed at the end of 78 weeks.

Reason for the Change: The client requested Battelle to perform these additional evaluations via a telephone call with the Study Monitor, Dr. Brian Mayes, on July 19, 1994.

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

July 27, 1994

SC920192

Protocol Amendment Number 4

3. Part to be Changed: Page 19, Section 13.0, <u>Tissue Preservation</u>, is amended by adding the 78-week interval to the 26-, 52-, and 104-week intervals for determining the stage of the estrous cycle histologically, (**), for the high-dose and control females from each test substance.

2.

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Reason for the Change: The 78-week histological examination was omitted in the study protocol and was requested by the Study Monitor, Dr. Brian Mayes, via a telephone conversation with the Study Director on July 27, 1994.

APPROVED BY:

Study Director

Sponsor's Project Monitor

Date

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Battelle Study No. SC920192 Protocol Amendment Chronic Toxicity and Oncogenicity Report

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND **ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242,** AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 5

August 12, 1994

Effective Date: August 12, 1994

Part to be Changed: Page 18, Section 11.10, Necropsy, is amended by adding the 1. following subsection:

> 11.10.7 At the 78-week and the 104-week scheduled necropsies, additional samples of liver tissue and blood serum will be collected from up to six surviving interim subgroup rats per sex and dose group at 78 weeks, from six Core subgroup rats per sex and group at 104 weeks, and from up to six surviving Stop Study females per dose group at each interval. As a guideline, solid tissues to be frozen will be processed within 15 minutes of death of the animal (no recording of time).

1. From livers with tumorous-appearing tissue, a weighed sample (about 1 gram) will be excised and frozen in liquid nitrogen, and then stored at -70° C until the Study Monitor directs disposition. Up to three (3) tumorous lesions per surviving animal will be saved at 78 weeks. Similarly, up to three (3) samples of tumorous-appearing tissue will be saved from each of six (6) Core rats per sex and dose group after 104 weeks of dosing. Scheduled histopathology always will take precedence, so tumorous tissue will be collected only after normal histopathology sampling has been completed.

2. Additionally, four (4) additional weighed samples (about 1 gram) of liver of normal appearance will be collected from each of the animals (up to 6 rats per sex and dose group at 78 weeks, and from 6 rats per sex and dose group after 104 weeks); these 4 samples are in addition to the 2 samples that have been collected at each interim sacrifice for possible analysis for porphyrin and/or iron. The additional 4 samples will be frozen in liquid nitrogen and held at -70° C, with disposition as directed by the Study Monitor.

3. From the same animals designated in 2. above, a weighed sample of about 1 gram of mammary tissue will be collected, quickly frozen in liquid nitrogen, and stored at -70° C for disposition as above.

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

SC920192 Protocol Amendment Number 5 August 12, 1994

4. From the same animals designated in 2. above, up to 10 ml of blood for serum will be collected after administering injectable barbiturate anesthesia, and the separated serum will be held frozen at approximately -20° C until disposition is directed by the Study Monitor.

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2.

5. If disposition for any or all of the samples collected above has not been directed by the Sponsor by the time the final study report has been completed and delivered to the Sponsor, the samples will be forwarded to a location designated by the Sponsor, at Sponsor's expense.

- Reason for the Change: This added sampling task was requested by the Study Monitor, Dr. Brian Mayes, via a telephone call on August 8, 1994. The collection of two (2) samples of normal liver for possible analysis for porphyrin and/or iron also was directed by Dr. Brian Mayes via a telephone call on May 14, 1993. The collection and preservation procedure was documented with a memorandum in the study file dated June 4, 1993. The same procedure was followed at interim sacrifices at 26, 39, and 52 weeks (both sexes when available, at 26 and 52 weeks).
- 2. Part to be Changed: Page 13, Section 11.6.4, Clinical Pathology, is amended by changing the third sentence to specify that blood will be collected from <u>fasted</u> animals during the 78-week sampling and at scheduled termination.
 - Reason for the Change: As a deviation from protocol, blood samples at the 26-week sampling were collected after an overnight fast, at the end of the urine collection task. In order to be consistent, it was decided by conversation with the Study Monitor to continue to collect samples after an overnight fast since the only potential influence with interpretation of data might be with serum glucose values. This decision was confirmed via a telephone conversation with the Study Monitor on August 8, 1994.

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

SC920192 Protocol Amendment Number 5 3.

August 12, 1994

APPROVED BY:

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Study Director

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Battelle Study No. SC920192

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Chronic Toxicity and Oncogenicity Report

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 6

January 30, 1995

Effective Date: January 30, 1995

- 1. Part to be Changed: Page 12, Section 11.6, <u>Parameters to be Evaluated</u>, is amended by adding the following parameter:
 - 11.6.6 Fecal Sampling: Fecal samples will be collected from Core and Stop Study subgroup rats designated for body burden analysis at the 105-Week Sacrifice. The six surviving rats with the highest identification number per group will be sampled for up to five consecutive days within a period of two (2) weeks prior to final termination. In the case of an unscheduled death during the collection period, substitutions may occur at the discretion of the Study Director or Coordinator. Rats will be housed in metabolism cages and have *ad libitum* access to both feed and water during the sampling period. A final empty feeder weight will be taken prior to placement of animals in metabolism cages. This will conclude feed consumption for the study on these animals. Clinical observations and body weights will occur as scheduled.

Reason for the Change: This added task was requested by the Study Monitor, Dr. Brian Mayes, via a telephone conversation on January 27, 1995.

APPROVED BY:

Study Director

Date

Sponsor's Project Monitor

Date

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Protocol Amendment

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 7

March 22, 1995

Effective Date: February 1, 1995

1. Part to be Changed: Page 17, Section 11.9, Body Burden Analysis (Protocol Amendment 2):

The first sentence of Protocol Amendment 2 will be amended to read: "Battelle will conduct lipid April 1, 1993; analysis of male and females after completion of 24 months of the in-life phase will be conducted by another laboratory designated by the Sponsor."

Reason for the Change: The change of analysis site for this task was requested by the Study Monitor, Dr. Brian Mayes, via telephone conversations held prior to the 104-week necropsies.

APPROVED BY:

ters

Study Director

Date

Sponsor's Project Monitor

Date

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Protocol Amendment

Battelle Study Number SC920192

AN ASSESSMENT OF THE CHRONIC TOXICITY AND ONCOGENICITY OF AROCLOR-1016, AROCLOR-1242, AROCLOR-1254, AND AROCLOR-1260 ADMINISTERED IN DIET TO RATS

Amendment Number 8

1.

June 7, 1995

Effective Date: May 14, 1993

Part to be Changed: Page 17, Section 11.9, <u>Body Burden Analysis</u>, is amended to add the following collection:

Two additional liver samples for future liver porphyrin and liver iron analysis will be retained at each of the time points designated for body burden collection. Approximately 1 gram of tissue from the right posterior lobe of the liver will be retained for porphyrin concentration determinations and approximately 1 gram of tissue from the caudate lobe of the liver will be retained for iron content. In instances where significantly less than 1 gram of tissue is available for liver iron determination, a portion of the left lateral lobe will also be retained. Liver porphyrin and liver iron samples will be stored frozen at approximately -70°C until disposition is directed by the Study Monitor.

Reason for the Change: The retention of two additional liver samples for possible future analysis of porphyrin and iron was requested by the Study Monitor, Dr. Brian Mayes, via a telephone conversation held on May 14, 1993.

Effective Date: February 22, 1994

2. **Part to be Changed:** Page 12, Section 11.6.6, <u>Fecal Sampling</u>, is amended by adding the following paragraph:

Fecal samples will be collected from 4 to 6 Stop Study A subgroup animals from the Aroclor 1016, 50 ppm; Aroclor 1242, 100 ppm; Aroclor 1254, 100 ppm; and Aroclor 1260, 100 ppm dose groups during the week of February 21, 1994. Individual animals will remain in their respective cages and their droppings will be collected, combined per dose group, and placed into 20 mL plastic containers. Samples will be held frozen at approximately -70°C until disposition is directed by the Study Monitor.

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SC920192 Protocol Amendment Number 8 June 7, 1995

Reason for the Change: The collection of samples for possible future fecal analysis was requested by the Study Monitor, Dr. Brian Mayes, via a telephone conversation held on February 22, 1994.

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APPROVED BY:

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Study Director

15,1995 Date

Sponsor's Project Monitor

Date

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REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Incident: The wrong amount of chemical was weighed for the premix for the 200 ppm dose. This premix was used for Batch: 1016-029 and Batch: 1016-030.

Cause of Incident: These batches were misprepared with 45.05 grams of test article. The required amount in the preparation method was 55.0 grams. The technician removed test article from two bottles and added incorrectly. These batches were in use for approximately 21 days.

Incident: Cross-contamination assays were conducted with a sample collected from a single blender location on 1/93, 7/93, and 6/94.

Cause of Incident: In the first and second instances, the procedure for blender decontamination incorrectly specified collection of a sample from a single location. In the third instance, the correct procedure was in place but a single blender location was again collected.

Incident: Female rats were housed in pairs in hanging wire mesh cages for the quarantine period shown above. The protocol states; page 10, section 11.1.1 "animals will be housed individually in suspended stainless steel wire-mesh cages." This statement was intended for the period of dosing.

Cause of Incident: It is within the scope of the rodent caging standard operating procedure to house rodents in pairs. Quarantine rodents are frequently housed in pairs during the quarantine/acclimation period.

Incidents: Mortality/moribundity was not properly documented for room 7C-076 on 12/13/93 to 12/19/93. Mortality/moribundity was not properly documented for room 7C-074 on 5/7/94 PM. Mortality/moribundity was not properly documented for room 7C-064 on 10/23/94 PM.

Cause of Incident: Technician inadvertently did not record the required data on the Study Activity Records. Study Activity record for 7C-076 missing from study file for week of 12/13/93.

REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Incident: Water samples for analysis from the Aroclor suite (7C-068, 070, 074, 076, and 081) were not taken at the level of the sipper tubes.

Cause of Incident: The animal resources facility inadvertently missed the protocol requirement of a prestudy water sample collection at the level of the sipper tubes as stated on page 11, section 11.1.5.

Incident: Serum sample results were not reported for *Mycoplasma pulmonas* on serology samples collected on August 17, 1994.

Cause of Incident: Mycoplasma pulmonas was not on the Animal Facility prepared list of requested determinations submitted to Microbiological Associates.

Incidents: The following is a list of parameters and the date of collection for clinical observations, body weights, empty and full feeder weights that were omitted for reporting purposes:

Collection Date	Animal ID	Parameter
11-01-93	2013	Body Weight
11-16-93	3054	Clinical Observation
11-30-93	4013	Full Feeder
12-07-93	3088	Clinical Observation
12-07-93	7206	Full Feeder
12-07-93	7206	Empty Feeder
12-13-93	1060	Empty Feeder
12-20-93	1826	Body Weight
02-01-94	4044	Clinical Observation
02-07-94	7041	Body Weight
02-15-94	7295	Full Feeder

Cause of Incidents: A discrepancy exists between the dates of entry recorded or in the way the Xybion Manual Data Collection Form was completed. These data points were documented in the report appendices as data missing, see deviation report.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Incident: Clinical observations were not recorded for animal 3130 on 3/16/93; animal 5250 on 3/30/93; animal 3904 on 6/15/93; animal 3704 on 7/20/93; animal 3130 on 9/14/93; animal #3850 on 8/17/94; animal 3815 on 2/15/94; animal 5304 on 8/9/94; and animal 444 on 11/19/94. A finding of tissue mass was recorded without inclusion of size for animal 3095 on 9/21/93 to 2/15/94.

Cause of Incident: Clinical observations inadvertently not recorded and a data review was not accomplished until a later date.

Incident: Palpation for tissue masses were done more frequently than specified by protocol.

Cause of Incident: Palpation of each animal is part of the procedure for clinical observation. Palpations to determine the existence of a swelling or tissue mass was conducted at every observation period.

Incident: Body weights were not reported for animal 5250 on 3/30/93; animal 3850 on 8/17/93; and animal 3293 on 9/20/94.

Cause of Incident: Body weights inadvertently not recorded and a data review was not accomplished until a later date.

Incident: Full and empty feeder weights were not reported for animal 5250 on 3/30/93. An empty feeder weight was not recorded for 5250 on 4/6/94.

Cause of Incident: Feeder weights inadvertently not recorded and a data review was not accomplished until a later date.

Incident: Scheduled feed consumption measurements were not able to be calculated for animal 641 on 7/5/94; animal 3088 on 8/9/94; animal 3094 on 8/9/94; and animal 4440 on 8/9/94.

Cause of Incident: Empty feeder weight measurements were not documented.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Incident: Documentation that Purina's certificates of analyses were examined at Battelle prior to use of the diet to confirm that each lot of feed contained no more than 0.15 ppm PCB could not be found in the study file.

Cause of Incident: In some instances, the certificate of analysis was not received at Battelle until after a lot of diet was in use.

Incident: Ophthalmology examinations, scheduled for both Core and Interim subgroup surviving high dose and Control group animals after 52 weeks of dosing, were not performed on the Core subgroup animals.

Cause of Incident: Ophthalmology examinations were not performed on scheduled Core subgroup animals at 52 weeks.

Incident: Reticulocytes were measured at every collection period although not required by protocol.

Cause of Incident: This is an automated feature of the Hitachi instrumentation.

Incident: Designated carcasses from the 12-month interim sacrifice reserved for analysis of fat content were discarded before analysis could be performed.

Cause of Incident: Laboratory error.

Incident: Additional samples of blood serum were collected from only 5 of the 6 scheduled Stop Study subgroup rats from the Aroclor-1016 50 ppm dose group at the 78-Week Interim termination.

Cause of Incident: Animal 3310 died during the necropsy procedure prior to collection of blood.

REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Incident: Protocol required organ weights were not collected for animal 860 and animal 1053.

Cause of Incident: The thyroid gland for animal 860 was not weighed after fixation. The lung for animal 1053 was inadvertently fixed and a weight could not be taken.

Incident: Documentation that the Study Director contacted the Study Monitor by facsimile or telephone with an update of the study status approximately every two weeks could not be found in the study file.

Cause of Incident: Due to the lack of change in study status, correspondence with the Sponsor was not done at regular intervals and was not always documented.

Incidents: Temperature/humidity readings were not documented or were out of the protocol stipulated range (66° to 78°F, 40% to 70%) for rooms 7C-064, 7C-068, 7C-070, 7C-074, 7C-080, and 7C-081. The following table lists the date of deviation, the actual temperature/humidity readings, and corrected action.

Room Number	Date of Deviation	Actual Temperature/ Humidity Reading	Corrective Action
7C-064	10/15/94 PM	T°F and RH% not recorded	Deviation prepared
	10/23/94 PM	T°F and RH% not recorded	Deviation prepared
	10/24/94 PM	38%	Reported and adjusted
	10/25/94 AM	38%	Not reported
	10/25/94 PM	38%	Not reported
7C-068	6/14/93 PM	74%	Reported, no maintenance response
	10/24/93 AM	37%	Reported and adjusted
	10/24/93 PM	34%	Reported and adjusted
7C-070	8/18/93 AM	T°F and RH% not recorded	Deviation prepared
	8/18/93 PM	T°F and RH% not recorded	Deviation prepared
	12/93	Record sheet missing	Deviation prepared
	4/9/94 AM	34%	Reported and adjusted
	4/16/94 PM	Discrepancy in entry	Deviation prepared

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Room Number	Date of Deviation	Actual Temperature/ Humidity Reading	Corrective Action
	10/3/94 AM	37%	Reported, no maintenance response
	10/3/94 PM	36%	Not reported
	10/4/94 AM	38%	Reported, no maintenance response
	10/4/94 PM	36%	Not reported
	10/5/94 AM	38%	Reported, no maintenance response
	10/5/94 PM	35%	Reported, no maintenance response
	10/6/94 AM	36%	Reported, no maintenance response
	10/6/94 PM	35%	Reported, no maintenance response
	10/7/94 AM	36%	Reported, delayed maintenance response
7C-074	6/27/94 PM	T°F and RH% not recorded	Deviation prepared
7C-076	10/22/93 PM	39%	Not reported
	10/25/93 AM	39%	Not reported
	10/25/93 PM	39%	Not reported
	1/8/94 AM	37%	Reported, no maintenance response
	1/15/94 AM	38%	Reported, no maintenance response
	1/18/94 AM	38%	Reported, no maintenance response
	5/3/94 AM	38%	Reported, no maintenance response
	5/14/94 AM	38%	Not reported
7C-080	5/3/94 AM	36%	Reported, no maintenance response
	5/14/94 AM	38%	Not reported
	5/14/94 PM	38%	Not reported
	5/20/94 PM	39%	Not reported

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REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Room Number	Date of Deviation	Actual Temperature/ Humidity Reading	Corrective Action
	5/28/94 PM	37%	Not reported
· · · ·	10/3/94 AM	37%	Reported and adjusted
	10/4/94 AM	37%	Reported, no maintenance response
	10/5/94 PM	35%	Reported, no maintenance response
	10/6/94 AM	38%	Reported, no maintenance response
	10/6/94 PM	36%	Reported, no maintenance response time recorded
	10/10/94 AM	35%	Reported and adjusted
	10/13/94 AM	37%	Reported and adjusted
	10/24/94 AM	37%	Reported and adjusted
	10/24/94 PM	35%	Reported, no maintenance response
7C-081	10/6/93 PM	36%	Reported, no maintenance response
	10/21/93 PM	38%	Reported and adjusted
	10/25/93 AM	39%	Reported, no maintenance response
	11/8/94 PM	30%	Reported and adjusted
	2/4/94 PM	31%	Reported and adjusted
	2/14/94 PM	32%	Reported and adjusted
	4/7/94 PM	37%	Reported, no maintenance response
	4/11/94 PM	38%	Reported, no maintenance response
	4/20/94 AM	36%	Reported and adjusted
	4/26/94 PM	78%	Reported and adjusted
	10/22/94 PM	Time not reported.	Deviation prepared

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

REPORT OF DEVIATION FROM TECHNICAL PROTOCOL Battelle's Columbus Laboratories Study Number: SC920192

Study Title: An Assessment of the Chronic Toxicity and Oncogenicity of Aroclor-1016, Aroclor-1242, Aroclor-1254, and Aroclor-1260 Administered in Diet to Rats

Cause of Incidents:

Temperature/humidity controls were out of adjustment. In several instances, the technician did not record the temperature/humidity reading, notify maintenance for adjustment of controls, or failed to insure that maintenance documented a response to the deviated reading.

Impact on Study: None.

Corrective Action: Greater attention to protocol events needed by all personnel involved.

Summary of Statistical Methods

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1.0 Introduction

The primary objective of the statistical analysis was to determine whether or not the Aroclors in the diet resulted in increased tumor occurrence. Additional analyses were conducted to determine the effects of the Aroclors on mortality, growth (through body weights and organ weights), feed consumption, compound consumption and clinical pathology parameters. Four types of hypotheses were tested to assess and compare the effects of the four Aroclors.

Dose effect assessments within each Aroclor were made for each endpoint examined by comparing responses for Aroclor-treated animals at each dose level to those of the untreated control animals. In addition, tests for linear trend in response with increasing dose were conducted for selected endpoints. Separate dose effect assessments were made for the Core males, Core females, and the Stop Study group (after Week 52).

Pairwise comparisons among Aroclors were made for those endpoints where a significant dose effect was observed for at least one Aroclor. Comparisons were made at the 50 ppm and 100 ppm dose levels. These comparisons were made separately for Core males, Core females, and the Stop Study group.

Comparisons between sexes at common Aroclor and dose levels were made for turnor incidence and survival, when a significant dose effect was observed for at least one Aroclor for either the Core males or Core females. Comparisons were made at the control dose and at the 50 ppm and 100 ppm dose levels of each Aroclor.

Comparisons between the Core females and the Stop Study group at common Aroclor and dose levels were made for tumor incidence, body weight, and organ weight (for those organs where Stop Study data were collected) endpoints. Comparisons were made for those endpoints where a significant dose effect was observed for at least one Aroclor in either the Core or the Stop Study group. Comparisons were made at the control dose and at the 50 ppm and 100 ppm dose levels for each Aroclor.

2.0 Methods

The statistical methods for analysis of tumor occurrence rates, survival rates, and in-life parameters are described briefly in the following paragraphs. Details of the statistical methods used for the tumor occurrence and survival analyses are contained in the study file.

2.1 Tumor Analysis

Three approaches were employed for statistically analyzing the tumor data.

(1) Fatal tumor analysis methods utilized the animal's age at death or termination to compare tumor onset rates over time. The underlying assumption in this type of analysis is that

the tumor rapidly causes death, so that the time of death and time of tumor development are nearly the same.

(2) Incidental methods were used to compare probabilities of tumor observation among study groups, after controlling for age at death or termination. Presence of tumor (yes or no) was utilized as the response variable for statistical comparisons among study groups and the animal's age at death or termination was employed as a covariate in the analysis.

(3) Unadjusted methods were used to compare the total number of tumors observed among study groups without adjusting for the varying times at which tumors were observed.

Fatal, incidental, and unadjusted statistical methods for dose effect assessments were based on those utilized by the National Toxicology Program (NTP) for toxicology and carcinogenesis studies. Deviations from the NTP methods are noted.

<u>Fatal Analysis</u>: Cox's (1972) log rank test was used for pairwise comparisons of each dose group with the Control group. Tarone's (1975) test was used to test for a linear trend with increasing dose.

<u>Incidental Analysis</u>: Logistic regression was used both for pairwise comparisons of each dosed group with the Control group and to test for a linear trend with increasing dose. Likelihood ratio tests were used for testing dose effect hypotheses, rather than the likelihood score tests commonly used in NTP studies.

<u>Unadjusted Analysis</u>: Fisher's exact test was used for pairwise comparisons of each dosed group with the Control group. The Cochran-Armitage test was used to test for a linear trend with increasing dose (Armitage, 1971; Gart *et al.*, 1979).

All reported p-values are two-sided with no corrections for continuity (NTP reports one-sided p-values and uses continuity corrections). Separate analyses were performed for the Core males, Core females, and the Stop Study group.

Aroclor, sex, and Stop Study comparisons were made using fatal and incidental methods. Because such comparisons are not typically performed in NTP studies, the statistical methods for these comparisons were not based on NTP methods. Comparisons were made using proportional hazards regression for the fatal analysis and logistic regression for the incidental analysis. Aroclor, sex, and Stop Study comparisons were made for tumors found in the liver and mammary gland for females, and in the liver and thyroid gland for males.

2.2 Survival Analysis

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The statistical methods employed for dose-response assessments were the same as those used by the National Toxicology Program (NTP) for survival analysis in toxicology and carcinogenesis studies. For each Aroclor and sex, Tarone's test was used to test for a linear trend with increasing dose. In addition, Cox's log rank test was used for pairwise comparisons of the probability of survival over time in each dosed group compared to the Control group. Kaplan-Meier survival probabilities were calculated for the Control and each dose group. Separate analyses were performed for the Core males, Core females, and the Stop Study group. Interim termination animals were included in the survival analysis and censored at time of termination.

Because Aroclor, sex, and Stop Study comparisons are not typically performed in NTP studies, the statistical approach for these comparisons was not based on NTP methods. If a linear dose-response trend was detected for any Aroclor, for any group included in the comparison, then survival comparisons were made using proportional hazards regression.

2.3 In-Life Analysis

In-life endpoints included in the statistical analysis were body weights, organ weights, feed consumption, compound consumption and clinical pathology parameters. Dose group versus control comparisons of these endpoints were made using either Dunnett's test or t-tests with adjustment for multiple comparisons, following a preliminary analysis to select the appropriate test procedure.

The statistical methodology used to compare each Aroclor dosed group to the Control group is outlined in Figure A on page A-52. The first step was to perform Bartlett's test for homogeneity of variances among the Control and all Aroclor dose groups. If Bartlett's test was not significant (i.e. the variances were statistically equivalent), then a one-way analysis of variance (ANOVA) was performed. If a significant dose effect was observed in the ANOVA, then Dunnett's multiple comparisons test procedure was used to compare the mean of each dose group to that of the Control group. When Bartlett's test was significant, F-tests for homogeneity of variances were conducted to compare the variance of the Control group to that of each dose group. For a given pair, if the variances were homogeneous, dose group comparisons were conducted using a twosample t-test. Otherwise, dose group comparisons were conducted using a modified t-test which allowed for unequal variances. For each pairwise comparison to the Control group using either t-test procedure, a Bonferroni adjustment to the significance level was used to compensate for multiple comparisons.

Aroclor comparisons were made using analysis of variance (ANOVA) procedures appropriate for each type of data. Comparisons between Core females and the Stop Study group were made using ANOVA procedures, for body weights and for those organ weights where data were collected for the Stop Study group. No Stop Study group data were collected for the clinical pathology endpoints. Sex comparisons were not considered appropriate for these endpoints, as differences between males and females are expected in this species of rats.

Details of the statistical analysis of each type of in-life parameter are described in the paragraphs that follow.

2.3.1 Body Weight, Feed Consumption, and Compound Consumption Analyses

Dose group versus Control comparisons of weekly mean body weights were made separately each week, for males and females. Because there were no differences in diet during the first year on study, the Stop Study group was combined with Core females from the beginning of study through week 52 to increase the statistical power of the comparisons. After week 52, separate analyses were performed for Core females and the Stop Study group. For the weekly body weight analysis, Interim termination animals were analyzed along with the Core animals until time of death or termination. Interim termination animals were not included in other parts of the body weight analysis.

Feed consumption and compound consumption statistical analyses were conducted in a parallel manner as described above for the body weight data.

For body weights only, pairwise comparisons among the Aroclors, smoothed body weights were analyzed using a nonparametric ANOVA procedure. Separate analyses were conducted for Core males, Core females, and the Stop Study group, at 26, 52, 78, and 100 weeks. If an overall Aroclor effect was detected, then pairwise comparisons among the four Aroclors were made. Likewise, a nonparametric ANOVA was conducted to compare smoothed body weights of the Core females and Stop Study group at each timepoint. If an Aroclor effect was detected for either group, then comparisons between groups were made at common Aroclor and dose levels.

Smoothed body weights for this analysis were calculated as the average of up to 9 weekly body weights centered at 26, 52, 78, and 100 weeks. For example, the 52 week smoothed body weight was calculated as the average of the nine body weights measured during weeks 48-51, 52, and 53-56. If an animal died before week 56, the smoothed body weight for that animal was calculated as the average of seven, five, etc. values centered at the week of interest, depending on the amount of data available.

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2.3.2 Organ Weight Analysis

Dose group versus Control comparisons were made for mean absolute organ weights and the following mean relative weights:

- Relative percent organ-to-body weight (RPOB): organ weight expressed as a percentage of the total body weight.
- Relative percent organ-to-brain weight (RPOBr): organ weight expressed as a percentage of the total brain weight.

Separate dose group versus Control comparisons of organ weights, RPOB, and RPOBr were made for Core/Interim males, Core/Interim females, and the Stop Study group. Dose group versus Control comparisons were made for all organs for which data were collected.

For Core males and females, Aroclor intercomparisons were made for the following types of organs: adrenal gland, brain, heart, liver, pituitary gland, salivary gland, and thyroid gland. In addition, the epididymis and prostrate gland were examined for the males and the uterus was examined for the females. Aroclor comparisons were performed within an ANOVA model, with separate analyses for Core males, Core females, and the Stop Study A group (liver and brain only). Specific organ weights were compared across Aroclors when an overall Aroclor effect was detected in the ANOVA. Similarly, comparisons between Core females and the Stop Study group were made using ANOVA, when an overall Aroclor effect was detected for either group.

2.3.3 Clinical Pathology Analysis

Dose group versus Control comparisons were made for each clinical pathology endpoint. Separate analyses were conducted for Core males and females, at 26, 52, 78, and 104 weeks. No Stop Study group data were collected for the clinical pathology endpoints.

Aroclor comparisons were made for the 34 Hematology, Serum Chemistry, and Urinalysis parameters which satisfied the underlying assumptions of the statistical analysis. Separate ANOVA models were fit for each parameter analyzed, for the Core males and females, at each of 26, 52, 78, and 104 weeks. If an overall dose effect was detected, then pairwise comparisons among the four Aroclors were made.

APPENDIX B

Dose Analysis of Aroclor 1016 in Rodent Feed ⁴	B-1
Dose Analysis of Aroclor 1242 in Rodent Feed ^a	B-21
Dose Analysis of Aroclor 1254 in Rodent Feed ^a	B-4 1
Dose Analysis of Aroclor 1260 in Rodent Feed ^a	B-61
Results of Analyses for Cross-Contamination ^a	B-8 1

^aRepresentative skeleton worksheets

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DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED

METHOD PERFORMANCE EVALUATION DOSE STABILITY STUDY ANALYTICAL METHOD

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Method Performance Evaluation (MPE) for Analysis of Aroclor 1016 in Rodent Feed

METHOD

Vehicle, matrix, and solvent standard curves of Aroclor 1016 were evaluated by Gas Chromatography (GC) with Electron Capture Detection (ECD) to determine precision, accuracy, sensitivity, and recovery of the analytical method. Two separate stock standards were prepared by dissolving the appropriate amount of the Aroclor 1016 in hexane. The final concentrations of all solvent, vehicle, and matrix standards were identical. Working solvent standards were prepared at four different concentrations by diluting the stocks to the desired concentration. Matrix standard curves were prepared by diluting the stock solutions with blank feed extract to a concentration equal to the solvent standards. Vehicle standard curves were generated by spiking feed with the appropriate amount of the stock standard, drying the sample, and extracting with the hexane:acetone solvent. The low and high standards were prepared in triplicate for the vehicle standard curve. A four point standard curve was prepared for each sample type using the chromatographic response ratios of single injections of each standard. The full method is included in this Appendix.

RESULTS

TABLE B-1. MPE RESULTS-VEHICLE STANDARD CURVE

Theoretical Peak Area Avg. Peak Determined Relative Amount (μ g/mL) Ratios Area Ratios Amount (μ g/mL) Error % 9.935 $10.0738 \pm$ 2.36 -0.3 10.17 2.368 0.1235(s) 10.11 10.694 2.496 10.6940 2.53 1.4 2.96 12.1090 12.109 2.89 -2.4 13.091 $13.0330 \pm$ 3.14 -0.6 13.048 3.12 0.067 12.960

The results of the MPE are summarized in Table B-1.

The relative standard deviations (RSD) at the low and high concentrations were 1.23 and 0.51% respectively. The results of the linear regression analysis of the data were: a correlation coefficient of 0.9955, a slope of 3.838 and a y-intercept of 1.000. A matrix standard curve at the same concentrations had a correlation coefficient of 0.9984, a slope of 3.626 and a y-intercept of 2.048. A solvent standard curve at the same concentrations had a correlation coefficient of 0.9970, a slope of 4.014, and a y-intercept of 1.040. Because the difference in slope between the matrix and solvent curves was 9.7%, a matrix effect does not exist and the solvent standard curve was used to calculate recoveries.

Recoveries were calculated on a point-to-point basis by comparing the relative chromatographic response of the spiked feed extracts to solvent standards. The recoveries from the lowest to the highest concentration were 96, 96, 95, and 96% respectively. The average recovery was 96% with a standard deviation of 0.5%.

The limit of detection (LOD) is defined as three times the standard deviation of the blank or three times the standard deviation of the lowest concentration if there is no blank response. The LOD was found to be 2.0 ppm in feed for Aroclor 1016.

The limit of quantitation (LOQ) is defined as ten times the standard deviation of the blank or ten times the standard deviation of the lowest concentration if there is no blank response. The LOQ was found to be 6.7 ppm in feed for Aroclor 1016.

CONCLUSIONS

The MPE results indicate that the method is suitable for the analysis of Aroclor 1016 in feed. The precision, as measured by the RSD of the triplicate preparations of the lowest and highest standards, was acceptable with RSD's less than 10%. The accuracy, as measured by the relative error (RE) of each standard, was acceptable with RE's less than 10%. The recovery of the feed spikes was greater than 90% with only small variations in concentration. The limit of quantitation was greater than 20% below the concentration of the lowest standard. There was an observed matrix effect and it was necessary to prepare the working standards in blank feed extract to compensate for the difference.

Dose Stability Study for Analysis of Aroclor 1016 in Rodent Feed

METHOD

A 25 ppm blend was prepared and analyzed for homogeneity and stability. Samples were removed and sealed in amber glass bottles for use in the stability study. Three samples were removed from each storage temperature on all study days as shown in Table B-2. A 2.5 g portion was removed from each sample, extracted and analyzed using the method described in this Appendix. The stability study was conducted for a 42 day period at three temperatures, -20° C, 5° C and room ($\sim 25^{\circ}$ C). Study day 0 was the day on which the blend was prepared.

Study Day	Sample Identification	Storage Conditions
0	Day 0	No storage
7	Day 7	Room Temperature, 5 and -20°C
15	Day 15	Room Temperature, 5 and -20°C
35	Day 35	Room Temperature, 5 and -20°C
42	Day 42	Room Temperature, 5 and -20°C

TABLE B-2. STABILITY STUDY DESIGN

B-4

A four point standard curve, which ranged in final concentration from approximately 2.00 to $3.12 \ \mu g/mL$, was prepared on each analysis day. The concentrations of the samples were calculated using the standard curve, the chromatographic response ratio of the samples, and their dilutions and weights.

RESULTS

The result for each time point was compared to the day 0 value. The results are shown in Table B-3. Reported concentrations reflect the final concentration of the sample extract.

Sample	С	oncentratio (µg/mL)	on	Average Concentration (µg/mL)	% Time 0
Time 0	3.18	3.07	3.08	$3.11 \pm 0.06(s)$	$100 \pm 2.0(s)$
Day 7 (-20)	2.85	2.81	2.85	$2.84 \pm 0.02(s)$	$91.3 \pm 0.7(s)$
Day 15 (-20)	2.97	2.97	2.98	$2.97 \pm 0.01(s)$	$95.5 \pm 0.2(s)$
Day 35 (-20)	2.68	2.71	2.69	$2.69 \pm 0.01(s)$	$86.5 \pm 0.5(s)$
Day 42 (-20)	2.80	2.80	2.80	$2.80 \pm 0.00(s)$	$90.0 \pm 0.0(s)$
Day 7 (5)	2.97	2.97	2.86	$2.93 \pm 0.06(s)$	$94.2 \pm 2.0(s)$
Day 15 (5)	2.98	2.99	2.97	$2.98 \pm 0.01(s)$	$95.8 \pm 0.3(s)$
Day 35 (5)	2.75	2.76	2.75	$2.75 \pm 0.01(s)$	$88.4 \pm 0.2(s)$
Day 42 (5)	2.77	2.77	2.77	$2.77 \pm 0.00(s)$	$89.1 \pm 0.0(s)$
Day 7 (RT)	2.90	2.90	2.92	$2.91 \pm 0.01(s)$	$93.6 \pm 0.4(s)$
Day 15 (RT)	2.97	2.97	2.97	$2.97 \pm 0.00(s)$	$95.5 \pm 0.0(s)$
Day 35 (RT)	2.78	2.76	2.76	$2.77 \pm 0.01(s)$	$89.1 \pm 0.4(s)$
Day 42 (RT)	2.79	2.78	2.79	$2.79 \pm 0.00(s)$	$89.7 \pm 0.2(s)$

TABLE B-3. DOSE STABILITY RESULTS

CONCLUSIONS

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The pooled relative standard deviation for the method was 0.56%. This precision is artificially low and does not allow the use of classical statistical techniques to determine confidence limits. There is a clear trend, however, towards the loss of Aroclor 1016 from feed at all temperatures during the stability study. This loss is probably a result of the volatility of the Aroclor 1016. Feed containers which had relatively large headspaces (such as those used in the stability study) exhibited significant loss of Aroclor 1016 over time. Containers which had a relatively small headspace (such as Animal Room Samples), and were analyzed throughout the study, did not show significant loss of Aroclor 1016, indicating that the losses of Aroclor 1016 observed in the stability study were probably due to volatility and not instability.

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

B-6

SC920192 Aroclor 1016

Analyst: ______
Date of work: ______

Summary: Duplicate samples from each dose batch are extracted with hexane: accetone (1:1 v/v). The extract is diluted with hexane and analyzed by gas chromatography (GC) with electron capture (EC) detection. Dose concentrations are calculated by comparison of peak response ratios of the samples to a regression line constructed from the peak response ratios of spiked feed standards and their concentrations.

<u>Purpose:</u> To determine the concentration of Aroclor 1016 in rodent feed.

Samples:	Pre Administration	Mix Date:
	Post Administration	Mix Date:

Materials:

1. Aroclor:______ Lab control #:______ Lot #:_____ Date received in lab:_____ No expiration date given Store @ Room Temperature

2. Hexane Company:______ Lot #:______ Date received:______ Expiration Date:______ Store @ Room Temperature

3. Acetone Company:_____ Lot #:_____ Date received:_____ Expiration Date:_____ Store @ Room Temperature

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QC'd	By:		<u>, 1</u> .,		_
Date:					

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

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SC920192 Aroclor 1016

Analyst: _____ Date of work: ____

OCN (o-chloronaphthalene) Lab #:_____ Company:_____ Lot #:_____ Date received:_____ Expiration Date:_____ Store @ Room Temperature

4.

Part of the second s

and the second s

5.	Purina Rodent Feed
	Lab control #:
	Lot #:
	Date received in lab:
	Expiration Date:
	Store @ Room Temperature

6. Weight set: Serial Number: Last Calibration date: Calibration due:

7. 50 mL Centrifuge Tubes

8. Volumetric Pipets, Class A (Various sizes)

9. Volumetric Flasks, Class A (Various sizes)

10. Gelman 0.45μ filters or equivalent

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1016

Analyst: _____ Date of work: _____

11. Doses, Homogeneity, & Cross-contamination Sample

A. Doses

Dose Level (ppm)	Batch #	Lab Control #
50	1016-	
50		
100	1016-	
100		
200	1016-	
200		

B. Homogeneity

Dose Level (ppm)	Sampling Location	Batch #	Lab Control #
	Top Left		
	Top Right	1016-	
	Bottom		

C. Cross-contamination Sample

Batch	Lab Control		
#	#		
1016-			

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1016

Analyst: _____ Date of work:

Received in lab on ______. Stored at ______ degrees C. Storage location Revco freezer (X-34641)

Equipment:

 GC System: GC: Hewlett Packard 5890 Gas Chromatograph (X/SN_____) Autosampler: HP 7673 injector (X/SN_____) Integrator: Peak Pro

 Analytical column: Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, cat #

3. Sartorius Model R160P Analytical Balance, X46037

4. Top Loading Balance: (X/SN)

5. Centrifuge: IEC Centra 7 (X/SN), or equivalent

6. Wrist Action Shaker, Burrell Model 75, or equivalent

Procedure:

Note:

1. Weights, dilutions, and final volumes of solutions may be altered as necessary provided the correct final concentration is achieved.

2. Extract and IS may be added to the flask in any order.

3. Dosed feed must be weighed accurately to at least the nearest 0.0001 g (0.1mg). The blank feed must be weighed to an accuracy of at least 0.01 g.

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SC920192 Aroclor 1016

Analyst: ______ Date of work: ______

4. The acceptable ranges for the weights are \pm 0.02 g for doses and 0.1 g for blank feed.

Preparation of Extraction Solvent (Hexane:Acetone:(1:1 v/v))

Add____mL of hexane to____mL of acetone. Shake well to mix.

Preparation of Internal Standard Solutions:

Balance calibration: Balance used: ______(X/SN_____)

Weight used Balance reading (g)

1. Internal Standard Stock Solution: Accurately weigh $50 \pm 5 \text{ mg}$ (to at least the nearest 0.1 mg) of o-chloronaphthalene (OCN), transfer it to a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this solution is ~0.50 mg/mL. Actual Weight (mg):

Actual Concentration (mg/mL):_____

A. Working Internal Standard (IS) Preparation: Pipet 10.0 mL of the internal standard stock solution into a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this working internal standard (IS) solution is $\sim 50.0 \ \mu g/mL$. Actual Concentration ($\mu g/mL$):_____

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1016

Analyst: _____ Date of work:

Preparation of Stock Standards and Blank:

1. Stock Solution A Preparation: Tare a 50-mL volumetric flask and into it accurately weigh 30 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1016. Dilute to volume with hexane and shake well to mix. The final concentration of this solution is ~0.60 mg/mL.

Actual Weight (mg):_____ Actual Concentration (mg/mL):

Stock Solution B Preparation: Tare a 50-mL volumetric flask and into it accurately weigh 25 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1016. Dilute to volume with hexane and shake well to mix. The final concentration of this solution is ~0.50 mg/mL. Actual Weight (mg):

Actual Concentration (mg/mL):

3. Spiking Standards Preparation: Make dilutions the Stock Solutions as specified in the following table.

Stock	Vol. of Stock (mL)	Final Volume (mL)	~ Spiking Std Conc.(µg/mL)
A	5	100	30
В	5	100	25
Α	2	50	24
В	2	50	20

4. Weigh 5 ± 0.2 g of blank feed into five 50-mL centrifuge tubes and spike with 5.0 mL of the appropriate Spiking Standard as specified in the following table. (Spike the blank with 5.0 mL hexane.)

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ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2**

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SC920192 Aroclor 1016

Analyst: Date of work:

Balance calibration: Balance used:

(X/SN)

Weight used Balance .eading (g)

~Final Working Std Conc* (μg/mL)	Blank Feed Wt (g)	Spiking [:td Used (µg/mL)	Vol Spiked (mL)	Vol of hex:ace (mL)	Actual Working Std Conc (µg/mL)
3.0		30	5.0	20.0	
2.5		25	5.0	20.0	
2.4		24	5.0	20.0	
2.0		20	5.0	20.0	
Blank		-	-	20.0	

* Final Std Conc.- Concentration of the solution analyzed following extraction and dilution.

- 5. Evaporate the hexane from the spiked standard using a gentle stream of nitrogen. Stir the feed occasionally to aid in the evaporation, (Make sure the hexane has evaporated entirely before adding the 20.0 mL of hexane:acetone (1:1) extracting solvent.)
- Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal. 6.
- 7. Shake on a wrist action shaker for ~ 30 minutes.
- Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the 8. extract.

9. Pipet 4.0 mL of each standard extract into separate 10-mL volumetric flasks containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1016

Analyst:		 ••••••••••••••••••••••••••••••••••••	·
Date of w	ork:	 	

- 10. Cross-contamination Standard Preparation: Pipet 1.0 mL of the 2.0 μ g/mL standard extract into a 10-mL volumetric flask, dilute to volume with blank feed extract, and shake well to mix. Pipet 4.0 mL of the diluted std extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix. The final concentration of this solution is ~0.20 μ g/mL.
- 11. **Blank+IS Preparation:** Pipet 4.0 mJ. of the blank extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 12. Blank Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask, dilute to volume with hexane, and shake well to mix.
- 13. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

Preparation of Samples:

1. X. X.

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1. Weigh the amounts of dosed and blank feed, as shown in the following table, into 50-mL centrifuge tubes.

Dose Conc (ppm)	~Dose Wt (g)	~Blank Feed Wt (g)	Batch #	Sample Wt A (g)	Blank Feed Wt A (g)	Sample Wt B (g)	Blank Feed Wt B (g)
Cross-con. Sample	5.0	0	1016-		NA		NA
50	2.5	2.5	1016-				
100	2.5	2.5	1016-				
200	2.5	2.5	1016-				

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

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Analyst:		 	
Date of	work:		

Dose Conc (ppm)	Wt.of Dose (g)	Wt. of Blank Feed (g)	Sampling Location	Sa Wt. A (g)	Bl Wt. A (g)	Sa Wt. B (g)	Bl Wt. B (g)	Sa Wt. C (g)	Bl Wt. C (g)
			Top Left						
			Top Rt						
			Bottom						

2. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.

3. Shake on a wrist action shaker for ~ 30 minutes.

- 4. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.
- 5. Pipet 4.0 mL of the 50 ppm extract into individual 10 mL volumetric flasks containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 6. Pipet 2.0 mL of the 100 ppm dose plus 2.0 mL blank feed extract, and 1.0 mL of the 200 ppm dose plus 3.0 mL blank feed extract into individual 10 mL volumetric flasks containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 7. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

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Analyst: ______ Date of work: ______

<u>Analysis:</u>

1.

2.

- Column Treatment: Inject 10 μ L of the 2.5 μ g/mL standard with the column temperature set at 325°C and a run time of ~10 minutes.
- Inject at least four system suitability samples at the beginning of the run. Calculate the peak response ratio ((Sum of 1016 Components A-E)/IS) for each injection. The % relative standard deviation of the replicates should be $\le 10\%$.

Evaluate the peak symmetry of 1016 Component E by calculating the peak asymmetry A_S , using the formula where $A_S = b/a$ where a is the distance before peak center at 10% of the total peak height and b is the distance after the peak center at 10% of the peak height. The peak symmetry should be ≤ 3 .

Use the retention times of 1016 Component B and 1016 Component C to calculate the resolution, R, between the two. The formula for resolution is $R=(t_2-t_1)/((w_1+w_2)/2)$, where w is the peak width at baseline and t is the retention time. The units for w and t must be identical. The value of R should be ≥ 2.0 .

- 3. If any of these criteria is not met notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation before proceeding.
- 4. Make single injections of standards, blank, and samples using the following system.
- 5. The following conditions should be used but may be modified to maintain acceptable chromatographic performance and response.

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Analyst: _____ Date of work: _____

Column	Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, or equivalent.				
Carrier Gas	P ₁₀ (Argon:methane 9:1)				
Carrier Flow Rate	~45 mL/min Actual FlowmL/min.				
Detector	⁶³ Ni Electron Capture Detector				
Detector Temperature	300°C Actual Temperature°C.				
Injector Temperature	250°C Actual Temperature°C.				
Oven Temperature	170°C programmed increase at 2°C/min to 300°C with a 12 minute final hold. Actual Program (if different)				
Injection Volume	2 μL Actual Inj. VolμL.				
Retention Times (RT)					
Component A	~8.4 min. Actual RTmin.				
Component B	~10.4 min. Actual RTmin.				
Component C	~11.4 min. Actual RTmin.				
Component D	~12.9 min. Actual RTmin.				
Component E	~17.2 min. Actual RTmin.				
Internal Standard	~3.3 min. Actual RTmin.				

Note: Use hexane to rinse the GC syringe between injections to prevent the syringe from sticking after a few injections.

Loading Order

SS = system suitability = $\mu g/mL$ standard. Drift = $\mu g/mL$ standard. All conc. in nominal $\mu g/mL$.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

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SC920192 Aroclor 1016

Analyst: _____ Analyst: ______
Date of work: ______

Sample Description	Run #	Sample Description	Run #
*			
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	·		
	· · · · · · · · · · · · · · · · · · ·		

QC'd By: Date:

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1016

Analyst: _____ Date of work:

Calculations:

1.	Calculate the peak response ratio
	((Sum of 1016 Components A-E)/IS) for each injection.

- 2. Calculate the linear regression equation relating peak response ratios of the feed standards (y-axis) to 1016 concentration (x-axis) in μ g/mL in the final dilution with internal standard. Omit the blank.
- 3. Calculate the correlation coefficient. If it is less than 0.99, repeat the preparation and analysis of the standard curve. Also calculate the slope and y-intercept of the line.
- 4. Using the peak response ratios of the samples and the regression equation, calculate the concentration of 1016 in μ g/mL in the final dilution for each dose. Divide this value by the weight of the feed aliquot in grams and multiply by the combined dilution factor to obtain the 1016 concentration in μ g/g (ppm) in the dose.
- 5. For each dose, calculate the average concentration in $\mu g/g$ and the E/O. If the E/O is less than 0.9 or greater than 1.1, analyze additional aliquots.
- 6. For Pre Administration, if the sample concentration differs from target by more than 15% at the low, 10% at the other concentrations, or the peak response ratio of the Cross-contamination Sample is greater than that of the Cross-contamination Standard, notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.
- 7. For Post Administration, if the sample concentration differs significantly from the Pre Administration values notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.

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Date:		

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

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Analyst: _____ Date of work: _____

Results:

1. Chromatography Analysis:

Peak Symmetry:_____ Resolution:_____ % RSD of System Suitability replicates:_____

2. See chromatograms (# ______ to # _____), Lotus 123 spreadsheets, and Harvard Graphics plot.

Comments:

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1016 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1016

Analyst: _____ Date of work: _____

Disposal:

Samples discarded in dose analysis lab room 6233 as hazardous waste on _____, by _____.

All samples and solid waste disposed of separately, tagged as PCB in hexane: acetone (1:1).

Written By:

Wendy M. Miller

Date

Approved By:

Steven W. Graves

Date

Approved By:

Arthur C. Peters

Date

Version 1.2 revises version 1.1 to increase the concentration of IS for improved chromatography.

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DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED

METHOD PERFORMANCE EVALUATION DOSE STABILITY STUDY ANALYTICAL METHOD

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Method Performance Evaluation for Analyses of Aroclor 1242 in Rodent Feed

METHOD

Vehicle, matrix, and solvent standard curves of Aroclor 1242 were evaluated by Gas Chromatography (GC) with Electron Capture Detection (ECD) to determine precision, accuracy, sensitivity, and recovery of the analytical method. Two separate stock standards were prepared by dissolving the appropriate amount of the Aroclor 1242 in hexane. The final concentrations of all solvent, vehicle, and matrix standards were identical. Working solvent standards were prepared at four different concentrations by diluting the stocks to the desired concentration. Matrix standard curves were prepared by diluting the stock solutions with blank feed extract to a concentration equal to the solvent standards. Vehicle standard curves were generated by spiking feed with the appropriate amount of the stock standard, drying the sample, and extracting with the hexane:acetone solvent. The low and high standards were prepared in triplicate for the vehicle standard curve. A four point standard curve was prepared for each sample type using the chromatographic response ratios of single injections of eacn standard. The full method is included in this Appendix.

RESULTS

The results of the MPE are summarized in Table B-4.

Theoretical Amount (µg/mL)	Peak Area Ratios	Avg. Peak Area Ratios	Determined Amount (µg/mL)	Relative Error %
	9.631			
	9.606	9.452 ±	2.37	-0.4
2.38	9.120	0.0218(s)		
2.40	9.613	9.613	2.43	1.8
2.98	11.46	11.46	3.04	2.1
	11.19			- hand hand had had her had her
2.04	11.39	11.39 ±	3.02	-0.6
3.04	11.60	U.1144(s)		

TABLE B-4. MPE RESULTS-VEHICLE STANDARD CURVE

The relative standard deviations at the low and high concentrations were 0.20% and 1.00% respectively. The results of the linear regression analysis of the data were: a correlation coefficient of 0.9798, a slope of 2.997 and a y-intercept of 2.338. A matrix standard curve at the same concentrations had a correlation coefficient of 0.9965, a slope of 2.946 and a y-intercept of 1.360. A solvent standard curve at the same concentrations had a correlation coefficient of 0.9994, a slope of 3.294, and a y-intercept of 1.127. Because the difference in slope between the matrix and solvent curves was greater than 10%, a matrix effect exists, and the matrix standard curve was used to calculate recoveries.

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Recoveries were calculated on a point-to-point basis by comparing the relative chromatographic response of the spiked feed extracts to matrix standards. The recoveries from the lowest to the highest concentration were 112, 94, 112, and 112% respectively. The average recovery was 107.5% with a standard deviation of 9%.

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The limit of detection (LOD) is defined as three times the standard deviation of the blank or three times the standard deviation of the lowest concentration if there is no blank response. The LOD was found to be 1.2 ppm in feed for Aroclor 1242.

The limit of quantitation (LOQ) is defined as ten times the standard deviation of the blank or ten times the standard deviation of the lowest concentration if there is no blank response. The LOQ was found to be 5.9 ppm in feed for Aroclor 1242.

CONCLUSIONS

The MPE results indicate that the method is suitable for the analysis of Aroclor 1242 in feed. The precision, as measured by the standard deviation of the triplicate preparations of the lowest and highest standards, was acceptable with RSD's less than 10%. The accuracy, as measured by the relative error of each standard, was acceptable with RE's of less than 10%. The recovery of the feed spikes was greater than 90% and acceptable although variability was relatively large, and the limit of quantitation was greater than 20% below the concentration of the lowest standard. There was an observed matrix effect and it was necessary to prepare the working standards in blank feed extract to compensate for the difference.

Dose Stability Study for Analysis of Aroclor 1242 in Rodent Feed

METHOD

A 25 ppm blend was prepared and analyzed for homogeneity and stability. Samples were removed and sealed in amber glass bottles for use in the stability study. Three samples were removed from each storage temperature on all study days as shown in Table B-5. A 2.5 g portion was removed from each sample, extracted and analyzed using the method described in this Appendix. The stability study was conducted for a 42 day period at three temperatures, -20° C, 5° C and room ($\sim 25^{\circ}$ C). Study day 0 was the day on which the blend was prepared.

1

Study Day	Sample Identification	Storage Conditions
0	Day 0	No storage
7	Day 7	Room Temperature, 5 and -20°C
15	Day 15	Room Temperature, 5 and -20°C
28	Day 28	Room Temperature, 5 and -20°C
35	Day 35	Room Temperature, 5 and -20°C
42	Day 42	Room Temperature, 5 and -20°C

TABLE B-5. STABILITY STUDY DESIGN

A four point standard curve, which ranged in final concentration from approximately 2.4 to $3.02 \ \mu g/mL$, was prepared on each analysis day. The concentrations of the samples were calculated using the standard curve, the chromatographic response ratios of the samples, and their dilutions and weights.

RESULTS

The result for each time point was compared to the day 0 value. The results are shown in Table B-6. Reported concentrations reflect the final concentration of the sample extract.

	(Concentratio	n	Average Concentration	
Sample		(µg/mL)		(μg/mL)	% Time 0
Time 0	3.09	3.16	3.16	$3.14 \pm 0.04(s)$	$100 \pm 1.3(s)$
Day 7 (-20)	2.99	2.99	2.96	$2.98 \pm 0.02(s)$	$94.9 \pm 0.5(s)$
Day 15 (-20)	2.88	2.93	2.90	$2.90 \pm 0.03(s)$	$92.4 \pm 0.8(s)$
Day 35 (-20)	2.99	2.97	3.01	$2.99 \pm 0.02(s)$	$95.2 \pm 0.7(s)$
Day 42 (-20)	3.00	3.02	3.01	$3.01 \pm 0.01(s)$	$95.9 \pm 0.4(s)$
Day 7 (5)	2.90	2.90	2.94	$2.92 \pm 0.02(s)$	$93.0 \pm 0.7(s)$
Day 15 (5)	2.86	2.85	2.86	2.85 ± 0.01 (s)	$90.8 \pm 0.2(s)$
Day 35 (5)	3.03	3.02	3.02	$3.02 \pm 0.00(s)$	$96.2 \pm 0.2(s)$
Day 42 (5)	3.06	3.06	3.05	$3.06 \pm 0.01(s)$	$97.5 \pm 0.2(s)$
Day 7 (RT)	2.93	2.93	2.94	$2.93 \pm 0.00(s)$	$93.3 \pm 0.2(s)$
Day 15 (RT)	2.79	2.79	2.80	$2.79 \pm 0.01(s)$	$88.9 \pm 0.2(s)$
Day 35 (RT)	3.12	3.09	3.10	$3.10 \pm 0.02(s)$	$98.7 \pm 0.5(s)$
Day 42 (RT)	3.05	3.05	3.04	$3.05 \pm 0.00(s)$	$97.1 \pm 0.2(s)$

TABLE B-6.DOSE STABILITY RESULTS

CONCLUSIONS

The pooled relative standard deviation for the method was 0.49%. This precision is artificially low and does not allow the use of classical statistical techniques to determine confidence limits. Stability analysis results indicate that Aroclor 1242 is stable within the limits specified by the protocol for 42 days at -20°C, 5°C, and room temperature.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work: _____

Summary: Duplicate samples from each dose batch are extracted with hexane: acetone (1:1 v/v). The extract is diluted with hexane and analyzed by gas chromatography (GC) with electron capture (EC) detection. Dose concentrations are calculated by comparison of peak response ratios of the samples to a regression line constructed from the peak response ratios of spiked feed standards and their concentrations.

<u>Purpose:</u> To determine the concentration of Aroclor 1242 in rodent feed.

<u>Samples:</u>	Pre Administration	Mix Date:
	Post Administration	Mix Date:

Materials:

1.	Aroclor:
	Lab control #:
	Lot #:
	Date received in lab:
	No expiration date given
	Store @ Room Temperature

2. Hexane Company: Lot #: Date received: Expiration Date: Store @ Room Temperature

3. Acetone Company: Lot #: Date received: Expiration Date: Store @ Room Temperature

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work: _____

4. OCN (o-chloronaphthalene) Lab #:______ Company:______ Lot #:_____ Date received:______ Expiration Date:______ Store @ Room Temperature

i

5.	Purina Rodent Feed
	Lab control #:
	Lot #:
	Date received in lab:
	Expiration Date:
	Store @ Room Temperature

6. Weight set: Serial Number: Last Calibration date: Calibration due:

7. 50 mL Centrifuge Tubes

8. Volumetric Pipets, Class A (Various sizes)

9. Volumetric Flasks, Class A (Various sizes)

10. Gelman 0.45μ filters or equivalent

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QC'd By: Date:

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work: _____

11. Doses, Homogeneity, & Cross-contamination Sample

A. Doses

Dose Level (ppm)	Batch #	Lab Control #
0	1242-	
50	1242-	· · · · · · · · · · · · · · · · · · ·
50		
100	1242-	
100		

B. Homogeneity

Dose Level (ppm)	Sampling Location	Batch #	Lab Control #
	Top Left		
	Top Right	1242-	
	Bottom		

C. Cross-contamination Sample

Batch	Lab Control	
#	#	
1242-		

Page 3 of _____

QC'd	By:		
Date:			

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

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Analyst: _____ Date of work: _____

Received in lab o	on
Stored at	degrees C.
Storage location	Revco freezer (X-34641)

Equipment:

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- GC System: GC: Hewlett Packard 5890 Gas Chromatograph (X/SN_____) Autosampler: HP 7673 injector (X/SN_____) Integrator: Peak Pro
- Analytical column: Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, cat #
- 3. Sartorius Model R160P Analytical Balance, X46037
- 4. Top Loading Balance:_____(X/SN____)

5. Centrifuge: IEC Centra 7 (X/SN), or equivalent

6. Wrist Action Shaker, Burrell Model 75, or equivalent

Procedure:

Note:

1. Weights, dilutions, and final volumes of solutions may be altered as necessary provided the correct final concentration is achieved.

2. Extract and IS may be added to the flask in any order.

3. Dosed feed must be weighed accurately to at least the nearest 0.0001 g (0.1mg). The blank feed must be weighed to an accuracy of at least 0.01 g.

4. The acceptable ranges for the weights are ± 0.02 g for doses and 0.1 g for blank feed.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

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ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED** VERSION 1.2

APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: Date of work:

Preparation of Extraction Solvent (Hexane:Acetone:(1:1 v/v))

mL of hexane to mL of acetone. Shake well to Add mix.

Preparation of Internal Standard Solutions:

Balance calibration: Balance used: (X/SN)

Weight used Balance reading (g)

Internal Standard Stock Solution: Accurately weigh 50 + 5 mg (to at least the 1. nearest 0.1 mg) of o-chloronaphthalene (OCN), transfer it to a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this solution is -0.50 mg/mL. Actual Weight (mg): Actual Concentration (mg/mL):

A. Working Internal Standard (IS) Preparation: Pipet 10.0 mL of the internal standard stock solution into a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this working internal standard (IS) solution is ~50.0 μ g/mL. Actual Concentration (μ g/mL):

Preparation of Stock Standards and Blank:

1. Stock Solution A Preparation: Tare a 50-mL volumetric flask and into it accurately weigh 30 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1242. Dilute to volume with hexane and shake well to mix. The final concentration of this solution is -0.60 mg/mL. Actual Weight (mg):

Actual Concentration (mg/mL):

Stock Solution B Preparation: Tare a 50-mL volumetric flask and into it 2. accurately weigh 25 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1242. Dilute to volume

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QC'd By: _____ Date:

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Battelle Study No. SC920192

Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED** VERSION 1.2 **APRIL 08, 1993**

SC920192 Aroclor 1242

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Analyst:

Date of work:

with hexane and shake well to mix. The final concentration of this solution is ~ 0.50 mg/mL.

Actual Weight (mg):

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Actual Concentration (mg/mL):

3. Spiking Standards Preparation: Make dilutions the Stock Solutions as specified in the following table.

Stock	Vol. of Stock (mL)	Final Volume (mL)	~ Spiking Std Conc.(μg/mL)
A	5	100	30
В	5	100	25
. A	2	50	24
В	2	50	20

4. Weigh 5 \pm 0.2 g of blank feed into five 50-mL centrifuge tubes and spike with 5.0 mL of the appropriate Spiking Standard as specified in the following table. (Spike the blank with 5.0 mL hexane.)

Balance calibra	tion:		
Balance used:		_(X/SN)

Weight used Balance reading (g)

> QC'd By: _____ Date:

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analy	/st:		
Date	of	work:	

~Final Working Std Conc* (µg/mL)	Blank Feed Wt (g)	Spiking Std Used (μg/mL)	Vol Spiked (mL)	Vol of hex:ace (mL)	Actual Working Std Conc (μg/mL)
3.0		30	5.0	20.0	
2.5		25	5.0	20.0	
2.4		24	5.0	20.0	
2.0		20	5.0	20.0	
Blank		-	-	20.0	

* Final Std Conc.- Concentration of the solution analyzed following extraction and dilution.

- 5. Evaporate the hexane from the spiked standard using a gentle stream of nitrogen. Stir the feed occasionally to aid in the evaporation, (Make sure the hexane has evaporated entirely before adding the 20.0 mL of hexane: acetone (1:1) extracting solvent.)
- 6. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.
- 7. Shake on a wrist action shaker for ~ 30 minutes.
- 8. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.
- 9. Pipet 4.0 mL of each standard extract into separate 10-mL volumetric flasks containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 10. Cross-contamination Standard Preparation: Pipet 0.5 mL of the 2.0 μ g/mL standard extract into a 10-mL volumetric flask, dilute to volume with blank feed extract, and shake well to mix. Pipet 4.0 mL of the diluted std extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix. The final concentration of this solution is ~0.10 μ g/mL.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work:

- 11. Blank+IS Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask containing 1.0 mL of working IS (50.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 12. Blank Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask, dilute to volume with hexane, and shake well to mix.
- 13. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

Preparation of Samples:

i.

i.

1. Weigh the amounts of dosed and blank feed, as shown in the following table, into 50-mL centrifuge tubes.

Dose Conc (ppm)	~Dose Wt (g)	~Blank Feed Wt (g)	Batch #	Sample Wt A (g)	Blank Feed Wt A (g)	Sample Wt B (g)	Blank Feed Wt B (g)
Cross-con. Sample	5.0	0	1242-		NA		NA
0	5.0	0	1242-		NA		NA
50	2.5	2.5	1242-				· · · · · · · · · · · · · · · · · · ·
100	2.5	2.5	1242-				

QC'd By: _____ Date:

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Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst:		
Date of	work:	-

Dose Conc (ppm)	Wt. of Dose (g)	Wt. of Blank Feed (g)	Sampling Location	Sa Wt. A (g)	Bl Wt. A (g)	Sa Wt. B (g)	Bl Wt. B (g)	Sa Wt. C (g)	Bl Wt. C (g)
			Top Left						
			Top Rt						
			Bottom						

2. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.

3. Shake on a wrist action shaker for ~ 30 minutes.

- 4. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.
- 5. Pipet 2.0 mL of the 100 ppm extract plus 2.0 mL of blank feed extract into individual 10 mL volumetric flasks containing 1.0 mL if working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 6. Pipet 4.0 mL of each extract (except the 100 ppm dose) into individual 10 mL volumetric flasks containing 1.0 mL of working IS (50.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 7. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work:

<u>Analysis:</u>

1.

- Column Treatment: Inject 10 μ L of the 2.5 μ g/mL standard with the column temperature set at 325°C and a run time of ~10 minutes.
- 2. Inject at least four system suitability samples at the beginning of the run. Calculate the peak response ratio ((Sum of 1242 Components A-E)/IS) for each injection. The % relative standard deviation of the replicates should be $\leq 10\%$.

Evaluate the peak symmetry of 1242 Component E by calculating the peak asymmetry A_S , using the formula where $A_S = b/a$ where a is the distance before peak center at 10% of the total peak height and b is the distance after the peak center at 10% of the peak height. The peak symmetry should be ≤ 3 .

Use the retention times of 1242 Component B and 1242 Component C to calculate the resolution, R, between the two. The formula for resolution is $R=(t_2-t_1)/((w_1+w_2)/2)$, where w is the peak width at baseline and t is the retention time. The units for w and t must be identical. The value of R should be ≥ 2.0 .

- 3. If any of these criteria is not met notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation before proceeding.
- 4. Make single injections of standards, blank, and samples using the following system.
- 5. The following conditions should be used but may be modified to maintain acceptable chromatographic performance and response.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work: _____

Column	Supelco, SPB-5 fused silica capillary column, $30 \text{ m X } 0.53 \text{ mm}$, $3.0 \text{ film thickness, or equivalent.}$			
Carrier Gas	P ₁₀ (Argon:methane 9:1)			
Carrier Flow Rate	~45 mL/min Actual FlowmL/min.			
Detector	⁶³ Ni Electron Capture Detector			
Detector Temperature	300°C Actual Temperature°C.			
Injector Temperature	250°C Actual Temperature°C.			
Oven Temperature	170°C programmed increase at 2°C/min to 300°C with a 12 minute final hold. Actual Program (if different)			
Injection Volume	$2 \mu L$ Actual Inj. Vol. μL .			
Retention Times (RT)				
Component A	~8.5 min. Actual RTmin.			
Component B	~10.4 min. Actual RTmin.			
Component C	~11.4 min. Actual RTmin.			
Component D	~13.6 min. Actual RTmin.			
Component E	~17.3 min. Actual RTmin.			
Internal Standard	~3.3 min. Actual RTmin.			

Note: Use hexane to rinse the GC syringe between injections to prevent the syringe from sticking after a few injections.

Loading Order

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SS = system suitability = $\mu g/mL$ standard. Drift = $\mu g/mL$ standard. All conc. in nominal $\mu g/mL$.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work: _____

Sample Description	Run #	Sample Description	Run #
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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work:

Calculations:

- 1. Calculate the peak response ratio ((Sum of 1242 Components A E)/IS) for each injection.
- 2. Calculate the linear regression equation relating peak response ratios of the feed standards (y-axis) to 1242 concentration (x-axis) in μ g/mL in the final dilution with internal standard. Omit the blank.
- 3. Calculate the correlation coefficient. If it is less than 0.99, repeat the preparation and analysis of the standard curve. Also calculate the slope and y-intercept of the line.
- 4. Using the peak response ratios of the samples and the regression equation, calculate the concentration of 1242 in μ g/mL in the final dilution for each dose. Divide this value by the weight of the feed aliquot in grams and multiply by the combined dilution factor to obtain the 1242 concentration in μ g/g (ppm) in the dose.
- 5. For each dose, calculate the average concentration in $\mu g/g$ and the E/O. If the E/O is less than 0.9 or greater than 1.1, analyze additional aliquots.
- 6. For Pre Administration, if the sample concentration differs from target by more than 15% at the low, 10% at the other concentrations, or the peak response ratio of the Cross-contamination Sample is greater than that of the Cross-contamination Standard, notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.
- 7. For Post Administration, if the sample concentration differs significantly from the Pre Administration values notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: _____ Date of work: _____

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Results:

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1. Chromatography Analysis:

Peak Symmetry:_____ Resolution:______ % RSD of System Suitability replicates:_____

2. See chromatograms (# ______ to # _____), Lotus 123 spreadsheets, and Harvard Graphics plot.

Comments:

QC'd By: _____ Date:

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1242 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1242

Analyst: ______ Date of work: ______

Disposal:

Samples discarded in dose analysis lab room 6233 as hazardous waste on _____, by _____.

All samples and solid waste disposed of separately, tagged as PCB in hexane: acetone (1:1).

Written By:

Wendy M. Miller

Date

Approved By:

Steven W. Graves

Date

Approved By:

Arthur C. Peters

Date

Version 1.2 revises version 1.1 to increase the concentration of IS for improved chromatography.

QC'd	By:	 	
Date:			

DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED

B-41

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METHOD PERFORMANCE EVALUATION DOSE STABILITY STUDY ANALYTICAL METHOD

Method Performance Evaluation for Analysis of Aroclor 1254 in Rodent Feed

METHOD

Vehicle, matrix, and solvent standard curves of Aroclor 1254 were evaluated by Gas Chromatography (GC) with Electron Capture Detection (ECD) to determine precision, accuracy, sensitivity, and recovery of the analytical method. Two separate stock standards were prepared by dissolving the appropriate amount of the Aroclor 1254 in hexane. The final concentrations of all solvent, vehicle, and matrix standards were identical. Working solvent standards were prepared at four different concentrations by diluting the stocks to the desired concentration. Matrix standard curves were prepared by diluting the stock solutions with blank feed extract to a concentration equal to the solvent standards. Vehicle standard curves were generated by spiking feed with the appropriate amount of the stock standard, drying the sample, and extracting with the hexane:acetone solvent. The low and high standards were prepared in triplicate for the vehicle standard curve. A four point standard curve was prepared for each sample type using the chromatographic response ratios of single injections of each standard. The full method is included in this Appendix.

RESULTS

The results of the MPE are summarized in Table B-7.

Theoretical Amount (µg/mL)	Peak Area Ratios	Avg. Peak Area Ratios	Determined Amount (µg/mL)	Relative Error %
	14.45		····	
	14.62	14.69 ±	2.293	-1.8
2.336	14.98	0.27(s)		
2.944	20.05	20.05	3.057	3.8
2.92	19.92	19.92	3.038	4.0
	24.20	· · · · · · · · · · · · · · · · · · ·		
	24.27	24.19 ±	3.646	-0.9
3.68	24.10	0.09(s)		

TABLE B-7. MPE RESULTS-VEHICLE STANDARD CURVE

The RSD's at the low and high concentrations were 1.9 and 0.4% respectively. The results of the linear regression analysis of the data were: a correlation coefficient of 0.9929, a slope of 7.027 and a y-intercept of -1.428. A matrix standard curve at the same concentrations had a correlation coefficient of 0.9953, a slope of 4.611 and a y-intercept of 5.153. A solvent standard curve at the same concentrations had a correlation coefficient of 0.9983, a slope of 6.863, and a y-intercept of 2.921. Because the difference in slope between the matrix and

solvent curves was greater than 10%, a matrix effect exists and the matrix standard curve was used to calculate recoveries.

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Recoveries were calculated on a point-to-point basis by comparing the relative chromatographic response of the spiked feed extracts to matrix standards. The recoveries from the lowest to the highest concentration were 92, 109, 106, and 109% respectively. The average recovery was 104% with a standard deviation of 8.1%.

The limit of detection (LOD) is defined as three times the standard deviation of the blank or three times the standard deviation of the lowest concentration if there is no blank response. The LOD was found to be 1.5 ppm in feed for Aroclor 1254.

The limit of quantitation (LOQ) is defined as ten times the standard deviation of the blank or ten times the standard deviation of the lowest concentration if there is no blank response. The LOQ was found to be 4.5 ppm in feed for Aroclor 1254.

CONCLUSIONS

The MPE results indicate that the method is suitable for the analysis of Aroclor 1254 in feed. The precision, as measured by the standard deviation of the triplicate preparations of the lowest and highest standards, was acceptable with RSD's less than 10%. The accuracy, as measured by the relative error of each standard, was acceptable with RE's of less than 10%. The recovery of the feed spikes was greater than 90% with only small variations in the concentration. The limit of quantitation was greater than 20% below the concentration of the lowest standard. There was an observed matrix effect and it was necessary to prepare the working standards in blank feed extract to compensate for the difference.

Dose Stability Study for Analysis of Aroclor 1254 in Rodent Feed

METHOD

A batch was prepared at 50 ppm and analyzed for homogeneity and stability. Samples were removed and sealed in amber glass bottles for use in the stability study. Three samples were removed from each storage temperature on all study days as shown in Table B-8. A 5 g portion was removed from each sample, extracted and analyzed using the analysis method described in this Appendix. The stability study was conducted for a 42 day period at three temperatures, -20° C, 5° C and room (-25° C). Study day 0 was the day on which the blend was prepared.

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

Study Day	Sample Identification	Storage Conditions
0	Day 0	No storage
7	Day 7	Room Temperature, 5 and -20°C
15	Day 15	Room Temperature, 5 and -20°C
35	Day 35	Room Temperature, 5 and -20°C
42	Day 42	Room Temperature, 5 and -20°C

TABLE B-8. STABILITY STUDY DESIGN

A four point standard curve, which ranged in final concentration from approximately 2.3 to $3.7 \ \mu g/mL$, was prepared on each analysis day. The concentrations of the samples were calculated using the standard curve, the chromatographic response ratios of the samples, and their dilutions and weights.

RESULTS

The result for each time point was compared to the day 0 value. The results are shown in Table B-9. Reported concentrations reflect the final concentration of the sample extract.

Sample	(Concentratio (µg/mL)	n	Average Concentration (µg/mL)	% Time 0
Time 0	3.17	3.18	3.19	3.18 ± 0.01 (s)	$100 \pm 0.4(s)$
Day 7 (-20)	3.15	3.11	3.10	$3.12 \pm 0.02(s)$	$98.2 \pm 0.7(s)$
Day 15 (-20)	3.09	3.06	3.10	$3.09 \pm 0.02(s)$	$97.1 \pm 0.6(s)$
Day 35 (-20)	3.00	2.82	2.72	$2.84 \pm 0.14(s)$	$89.3 \pm 4.9(s)$
Day 42 (-20)	3.04	3.03	3.06	$3.05 \pm 0.01(s)$	$95.8 \pm 0.4(s)$
Day 7 (5)	3.06	3.06	3.09	$3.07 \pm 0.01(s)$	$96.6 \pm 0.4(s)$
Day 15 (5)	3.06	3.05	3.09	$3.06 \pm 0.02(s)$	$96.4 \pm 0.7(s)$
Day 35 (5)	2.89	3.01	3.06	$2.99 \pm 0.09(s)$	$94.0 \pm 2.7(s)$
Day 42 (5)	2.97	3.00	3.00	$2.99 \pm 0.02(s)$	$94.0 \pm 0.6(s)$
Day 7 (RT)	3.01	3.02	2.97	$3.00 \pm 0.02(s)$	$94.4 \pm 0.7(s)$
Day 15 (RT)	2.92	2.93	2.94	$2.93 \pm 0.01(s)$	$92.1 \pm 0.0(s)$
Day 35 (RT)	2.99	2.85	2.84	$2.89 \pm 0.08(s)$	$91.0 \pm 2.6(s)$
Day 42 (RT)	2.98	3.00	3.01	$3.00 \pm 0.02(s)$	$94.4 \pm 0.5(s)$

TABLE B-9. DOSE STABILITY RESULTS

Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

CONCLUSIONS

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The pooled relative standard deviation for the method was 1.3%. This precision is artificially low and does not allow the use of classical statistical techniques to determine confidence limits. Stability analysis results indicate that Aroclor 1254 is stable within the limits specified by the protocol for 42 days at -20°C, 5°C, and room temperature.

Battelle Study No. SC920192

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED **VERSION 1.2** APRIL 08, 1993

SC920192 Aroclor 1254

Analyst:	
Date of work:	

Duplicate samples from each dose batch are extracted with hexane: acetone (1:1 Summary: v/v). The extract is diluted with hexane and analyzed by gas chromatography (GC) with electron capture (EC) detection. Dose concentrations are calculated by comparison of peak response ratios of the samples to a regression line constructed from the peak response ratios of spiked feed standards and their concentrations.

Purpose: To determine the concentration of Aroclor 1254 in rodent feed.

Samples:	Pre Administration	Mix Date:
	Post Administration	Mix Date:

Materials:

1.	Aroclor:
	Lab control #:
	Lot #:
	Date received in lab:
	No expiration date given
	Store @ Room Temperature

2. Hexane Company: Lot #: Date received: Expiration Date: Store @ Room Temperature

3. Acetone Company: Lot #: Date received: Expiration Date: Store @ Room Temperature

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Battelle Study No. SC920192

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED **VERSION 1.2** APRIL 08, 1993

SC920192 Aroclor 1254

Analyst: Analyst: ______ Date of work: ______

4. OCN (o-chloronaphthalene) Lab #: Company: Lot #: Date received: Expiration Date: Store @ Room Temperature

in the

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5.	Purina Rodent Feed	
	Lab control #:	
	Lot #:	
	Date received in lab:	
	Expiration Date:	
	Store @ Room Temperature	

6.	Weight set:	
	Serial Number:	
	Last Calibration date:	
	Calibration due:	

7. 50 mL Centrifuge Tubes

8. Volumetric Pipets, Class A (Various sizes)

9. Volumetric Flasks, Class A (Various sizes)

10. Gelman 0.45μ filters or equivalent

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QC'd By: _____ Date:

Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2** APRIL 08, 1993

SC920192 Aroclor 1254

Analyst: _____ · Date of work: _____

11. Doses, Homogeneity, & Cross-contamination Sample

A. Doses

Dose Level (ppm)	Batch #	Lab Control #
25	1254-	
25		
50	1254-	
50		
100	1254-	
100		

B. Homogeneity

Dose Level (ppm)	Sampling Location	Batch #	Lab Control #
	Top Left		
	Top Right	1254-	
	Bottom		

C. Cross-contamination Sample

Batch #	Lab Control #
1254-	

Page 3 of _____

QC'd By:	
Date:	

Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2 APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: Date of work:

Received in lab or	n
Stored at	degrees C.
Storage location	Revco freezer (X-34641)

Equipment:

Station of the

1. GC System: GC: Hewlett Packard 5890 Gas Chromatograph (X/SN Autosampler: HP 7673 injector (X/SN) Integrator: Peak Pro

2. Analytical column: Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, cat #

Sartorius Model R160P Analytical Balance, X46037 3.

4. Top Loading Balance: (X/SN_)

Centrifuge: IEC Centra 7 (X/SN_____), or equivalent 5.

6. Wrist Action Shaker, Burrell Model 75, or equivalent

Procedure:

Note:

1. Weights, dilutions, and final volumes of solutions may be altered as necessary provided the correct final concentration is achieved.

2. Extract and IS may be added to the flask in any order.

3. Dosed feed must be weighed accurately to at least the nearest 0.0001 g (0.1mg). The blank feed must be weighed to an accuracy of at least 0.01 g.

4. The acceptable ranges for the weights are \pm 0.02 g for doses and 0.1 g for blank feed.

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Battelle Study No. SC920192

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2 APRIL 08, 1993 SC920192

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SC920192 Aroclor 1254

Analyst: _____ Date of work: _____

Preparation of Extraction Solvent (Hexane:Acetone:(1:1 v/v))

Add _____mL of hexane to _____mL of acetone. Shake well to mix.

Preparation of Internal Standard Solutions:

Balance calibration: Balance used.

ince	ised.	(X/SN)

Weight used Balance reading (g)

1. Internal Standard Stock Solution: Accurately weigh 50 ± 5 mg (to at least the nearest 0.1 mg) of o-chloronaphthalene (OCN), transfer it to a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this solution is ~0.50 mg/mL.

Actual Weight (mg):____

Actual Concentration (mg/mL):

A. Working Internal Standard (IS) Preparation: Pipet 10.0 mL of the internal standard stock solution into a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this working internal standard (IS) solution is $\sim 50.0 \ \mu g/mL$. Actual Concentration ($\mu g/mL$):

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Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED** VERSION 1.2 **APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: Date of work:

Preparation of Stock Standards and Blank:

1. Stock Solution A Preparation: Tare a 50-mL beaker and into it accurately weigh 30 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1254 (May be heated to aid in transfer). Transfer it into a 50-mL volumetric flask, dilute to volume with hexane and shake well to mix. The final concentration of this solution is $\sim 0.60 \text{ mg/mL}$.

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Actual Weight (mg):

Actual Concentration (mg/mL):

2. Stock Solution B Preparation: Tare a 50-mL beaker and into it accurately weigh 25 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1254 (May be heated to aid in transfer). Transfer it into a 50-mL volumetric flask, dilute to volume with hexane and shake well to mix. The final concentration of this solution is $\sim 0.50 \text{ mg/mL}$. Actual Weight (mg):

Actual Concentration (mg/mL):___

3. Spiking Standards Preparation: Make dilutions the Stock Solutions as specified in the following table.

Stock	Vol. of Stock (mL)	Final Volume (mL)	~ Spiking Std Conc.(µg/mL)
Α	5	100	30
В	5	100	25
Α	2	50	24
В	2	50	20

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Weigh 5 \pm 0.2 g of blank feed into five 50-mL centrifuge tubes and spike with 5.0 mL of the appropriate Spiking Standard as specified in the following table. (Spike the blank with 5.0 mL hexane.)

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ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED** VERSION 1.2 **APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: _____ Date of work: _____

Balance calibration: Balance used: _____(X/SN_____)

Weight used Balance reading (g)

~Final Working Std Conc* (µg/mL)	Blank Feed Wt (g)	Spiking Std Used (μg/mL)	Vol Spiked (mL)	Vol of hex:ace (mL)	Actual Working Std Conc (μg/mL)
3.0		30	5.0	20.0	
2.5		25	5.ა	20.0	
2.4		24	5.0	20.0	
2.0		20	5.0	20.0	
Blank		-	-	20.0	

* Final Std Conc.- Concentration of the solution analyzed following extraction and dilution.

- 5. Evaporate the hexane from the spiked standard using a gentle stream of nitrogen. Stir the feed occasionally to aid in the evaporation, (Make sure the hexane has evaporated entirely before adding the 20.0 mL of hexane:acetone (1:1) extracting solvent.)
- 6. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.
- 7. Shake on a wrist action shaker for ~ 30 minutes.
- 8. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.
- 9. Pipet 4.0 mL of each standard extract into separate 10-mL volumetric flasks containing 1.0 mL of working IS (50.0 μ g/mL), dilute to volume with hexane, and shake well to mix.

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Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED** VERSION 1.2 **APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: Date of work:

- 10. Cross-contamination Standard Preparation: Pipet 0.5 mL of the 2.0 μ g/mL standard extract into a 10-mL volumetric flask, dilute to volume with blank feed extract, and shake well to mix. Pipet 4.0 mL of the diluted std extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix. The final concentration of this solution is $\sim 0.10 \ \mu g/mL$.
- 11. Blank+IS Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 12. Blank Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask, dilute to volume with hexane, and shake well to mix.
- 13. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

Preparation of Samples:

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Weigh the amounts of dosed and blank feed, as shown in the following table, 1. into 50-mL centrifuge tubes.

Dose Conc (ppm)	~Dose Wt (g)	~Blank Feed Wt (g)	Batch #	Sample Wt A (g)	Blank Feed Wt A (g)	Sample Wt B (g)	Blank Feed Wt B (g)
Cross-con. Sample	5.0	0	1254-		NA		NA
25	5.0	0	1254-		NA		NA
50	5.0	0	1254-	· · · · ·			
100	2.5	2.5	1254-				

Battelle Study No. SC920192

ANALYTICAL METHOD

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1254

Analyst:		_
Date of work:	·	

Dose Conc (ppm)	Wt. of Dose (g)	Wt. of Blank Feed (g)	Sampling Location	Sa Wt. A (g)	Bl Wt. A (g)	Sa Wt. B (g)	Bl Wt. B (g)	Sa Wt. C (g)	Bl Wt. C (g)
			Top Left						
			Top Rt				-		
			Bottom						

- 2. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.
- 3. Shake on a wrist action shaker for ~ 30 minutes.
- 4. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.
- 5. Pipet 4.0 mL of the 25 ppm dose extract into individual 10 mL volumetric flasks containing 1.0 mL of working IS (50.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 6. Pipet 2.0 mL of the 50 ppm and 100 ppm dose extracts plus 2.0 mL of blank extract into individual 10 mL volumetric flasks containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 7. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

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ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED** VERSION 1.2 **APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: Date of work:

Analysis:

1× 2,000 ×10

- Column Treatment: Inject 10 μ L of the 2.5 μ g/mL standard with the column 1. temperature set at 325° C and a run time of ~10 minutes.
- 2. Inject at least four system suitability samples at the beginning of the run. Calculate the peak response ratio ((Sum of 1254 Components A-E)/IS) for each injection. The % relative standard deviation of the replicates should be $\leq 10\%$.

Evaluate the peak symmetry of 1254 Component E by calculating the peak asymmetry A_S , using the formula where $A_S = b/a$ where a is the distance before peak center at 10% of the total peak height and b is the distance after the peak center at 10% of the peak height. The peak symmetry should be ≤ 3 .

Use the retention times of 1254 Component B and 1254 Component C to calculate the resolution, R, between the two. The formula for resolution is $R = (t_2 - t_1)/((w_1 + w_2)/2)$, where w is the peak width at baseline and t is the retention time. The units for w and t must be identical. The value of R should be ≥ 2.0 .

3. If any of these criteria is not met notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation before proceeding.

- 4. Make single injections of standards, blank, and samples using the following system.
- 5. The following conditions should be used but may be modified to maintain acceptable chromatographic performance and response.

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ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2 APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: Date of work:

Column	Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, or equivalent.
Carrier Gas	P ₁₀ (Argon:methane 9:1)
Carrier Flow Rate	~45 mL/min Actual FlowmL/min.
Detector	⁶³ Ni Electron Capture Detector
Detector Temperature	300°C Actual Temperature°C.
Injector Temperature	250°C Actual Temperature°C.
Oven Temperature	170°C programmed increase at 2°C/min to 300°C with a 12 minute final hold. Actual Program (if different)
Injection Volume	$2 \ \mu L$ Actual Inj. VolµL.
Retention Times (RT)	
Component A	~24.1 min. Actual RTmin.
Component B	~26.2 min. Actual RTmin.
Component C	~28.3 min. Actual RTmin.
Component D	~30.3 min. Actual RTmin.
Component E	~32.6 min. Actual RTmin.
Internal Standard	~3.3 min. Actual RTmin.

Note: Use hexane to rinse the GC syringe between injections to prevent the syringe from sticking after a few injections.

Loading Order

 $\mu g/mL$ standard. SS = system suitability = Drift = $\mu g/mL$ standard. All conc. in nominal $\mu g/mL$.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED **VERSION 1.2** APRIL 08, 1993

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SC920192 Aroclor 1254

Analyst: ____ Date of work:

Sample Description	Run #	Sample Description	Run #
······			
	·····		
·····			

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Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED** VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1254

Analyst: Date of work:

Calculations:

- 1. Calculate the peak response ratio ((Sum of 1254 Components A-E)/IS) for each injection.
- 2. Calculate the linear regression equation relating peak response ratios of the feed standards (y-axis) to 1254 concentration (x-axis) in μ g/mL in the final dilution with internal standard. Omit the blank.
- 3. Calculate the correlation coefficient. If it is less than 0.99, repeat the preparation and analysis of the standard curve. Also calculate the slope and yintercept of the line.
- 4. Using the peak response ratios of the samples and the regression equation, calculate the concentration of 1254 in μ g/mL in the final dilution for each dose. Divide this value by the weight of the feed aliquot in grams and multiply by the combined dilution factor to obtain the 1254 concentration in $\mu g/g$ (ppm) in the dose.
- 5. For each dose, calculate the average concentration in $\mu g/g$ and the E/O. If the E/O is less than 0.9 or greater than 1.1, analyze additional aliquots.
- 6. For Pre Administration, if the sample concentration differs from target by more than 15% at the low, 10% at the other concentrations, or the peak response ratio of the Cross-contamination Sample is greater than that of the Crosscontamination Standard, notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.
- 7. For Post Administration, if the sample concentration differs significantly from the Pre Administration values notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.

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Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2 APRIL 08, 1993**

SC920192 Aroclor 1254

Analyst: _____ Analyst: _____ Date of work: _____

Results:

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1. Chromatography Analysis:

> Peak Symmetry: Resolution: % RSD of System Suitability replicates:

See chromatograms (# ______ to # _____), Lotus 123 spreadsheets, and Harvard Graphics plot. 2.

Comments:

QC'd By: _____ Date:_____

Battelle Study No. SC920192

ANALYTICAL METHOD **DOSE ANALYSIS OF AROCLOR 1254 IN RODENT FEED VERSION 1.2** APRIL 08, 1993

SC920192 Aroclor 1254

Analyst: _____ Date of work:

Disposal:

Samples discarded in dose analysis lab room 6233 as hazardous waste on

_____, by _____.

All samples and solid waste disposed of separately, tagged as PCB in hexane: acetone (1:1).

Written By:

Wendy M. Miller

Date

Approved By:

Steven W. Graves

Date

Approved By:

Arthur C. Peters

Date

Version 1.2 revises version 1.1 to increase the concentration of IS for improved chromatography.

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DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED

METHOD PERFORMANCE EVALUATION DOSE STABILITY STUDY ANALYTICAL METHOD

Method Performance Evaluation for Analysis of Aroclor 1260 in Rodent Feed

METHOD

Vehicle, matrix, and solvent standard curves of Aroclor 1260 were evaluated by Gas Chromatography (GC) with Electron Capture Detection (ECD) to determine precision, accuracy, sensitivity, and recovery of the analytical method. Two separate stock standards were prepared by dissolving the appropriate amount of the Aroclor 1260 in hexane. The final concentrations of all solvent, vehicle, and matrix standards were identical. Working solvent standards were prepared at four different concentrations by diluting the stocks to the desired concentration. Matrix standard curves were prepared by diluting the stock solutions with blank feed extract to a concentration equal to the solvent standards. Vehicle standard curves were generated by spiking feed with the appropriate amount of the stock standard, drying the sample, and extracting with the hexane: acetone solvent. The low and high standards were prepared in triplicate for the vehicle standard curve. A four point standard curve was prepared for each sample type using the chromatographic response ratios of single injections of each standard. The full method is included in this Appendix.

RESULTS

The results of the MPE are summarized in Table B-10.

Theoretical Amount (μg/mL)	Peak Area Ratios	Avg. Peak Area Ratios	Determined Amount (µg/mL)	Relative Error %
	15.27			
Ē.,	15.38	15.33 ±	2.15	0.1
2.14	15.35	- 0.06(s)		
2.68	18.65	18.65	2.70	0.6
3.18	21.32	21.32	3.14	-1.4
	26.23	· · · ·		······································
2.00	26.50	$26.43 \pm$	3.99	0.2
3.98	26.56	0.18(s)		

TABLE B-10. MPE RESULTS-VEHICLE STANDARD CURVE

The RSD's at the low and high concentrations were 0.4 and 0.7% respectively. The results of the linear regression analysis of the data were: a correlation coefficient of 0.9996, a slope of 6.031 and a y-intercept of 2.387. A matrix standard curve at the same concentrations had a correlation coefficient of 0.9998, a slope of 5.930 and a y-intercept of 2.873. A solvent standard curve at the same concentrations had a correlation coefficient of 0.9994, a slope of 7.000, and a y-intercept of 2.703. Because the difference in slope between the matrix and

solvent curves was greater than 10%, a matrix effect exists, and the matrix standard curve was used to calculate recoveries.

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Recoveries were calculated on a point-to-point basis by comparing the relative chromatographic response of the spiked feed extracts to matrix standards. The recoveries from the lowest to the highest concentration were 98.5, 98.6, 98.2, and 99.9% respectively. The average recovery was 98.90% with a standard deviation of 0.7%.

The limit of detection (LOD) is defined as three times the standard deviation of the blank or three times the standard deviation of the lowest concentration if there is no blank response. The LOD was found to be 0.7 ppm in feed for Aroclor 1260.

The limit of quantitation (LOQ) is defined as ten times the standard deviation of the blank or ten times the standard deviation of the lowest concentration if there is no blank response. The LOQ was found to be 2.5 ppm in feed for Aroclor 1260.

CONCLUSIONS

The MPE results indicate that the method is suitable for the analysis of Aroclor 1260 in feed. The precision, as measured by the standard deviation of the triplicate preparations of the lowest and highest standards, was acceptable with RSD's of less than 10%. The accuracy, as measured by the relative error of each standard, was acceptable with RE's of less than 10%. The average recovery of the feed spikes was greater than 90% with minor differences in concentration. The limit of quantitation was greater than 20% below the concentration of the lowest standard. There was an observed matrix effect and it was necessary to prepare the working standards in blank feed extract to compensate for the difference.

Dose Stability Study for Analysis of Aroclor 1260 in Rodent Feed

METHOD

A 50 ppm blend was prepared for stability analysis. Samples were removed and sealed in amber glass bottles for use in the stability study. Three samples were removed from each storage temperature on all study days as shown in Table B-11. A 5 g portion was removed from each sample, extracted and analyzed using the method described in this Appendix. The stability study was conducted for a 45 day period at three temperatures, -20°C, 5°C and room $(\sim 25^{\circ}C)$. Study day 0 was the day on which the blend was prepared.

Study Day	Sample Identification	Storage Conditions	
0	Day 0	No storage	
7	Day 7	Room Temperature, 5 and -20°C	
15	Day 15	Room Temperature, 5 and -20°C	
28	Day 28	Room Temperature, 5 and -20°C	
45	Day 45	Room Temperature, 5 and -20°C	

TABLE B-11. STABILITY STUDY DESIGN

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A four point standard curve, which ranged in final concentration from approximately 2.00 to $3.98 \ \mu g/mL$, was prepared on each analysis day. The concentrations of the samples were calculated using the standard curve, the chromatographic response ratios of the samples, and their dilutions and weights.

RESULTS

The result for each time point was compared to the day 0 value. The results are shown in Table B-12.

Sample	Concentration (µg/mL)		Average Concentration (µg/mL)	% Time 0	
Time 0	2.68	2.68	2.69	2.68 ± 0.01 (s)	$100 \pm 0.2(s)$
Day 7 (-20)	2.72	2.72	2.78	$2.74 \pm 0.04(s)$	$102.2 \pm 1.3(s)$
Day 15 (-20)	2.68	2.69	2.70	$2.69 \pm 0.01(s)$	$100.4 \pm 0.4(s)$
Day 28 (-20)	2.63	2.62	2.53	$2.60 \pm 0.06(s)$	$96.6 \pm 2.1(s)$
Day 45 (-20)	2.57	2.57	2.63	$2.59 \pm 0.04(s)$	$96.6 \pm 1.3(s)$
Day 7 (5)	2.69	2.70	2.73	$2.71 \pm 0.02(s)$	$101.1 \pm 0.8(s)$
Day 15 (5)	2.74	2.67	2.75	$2.72 \pm 0.05(s)$	$101.5 \pm 1.6(s)$
Day 28 (5)	2.69	2.63	2.58	$2.63 \pm 0.06(s)$	$98.1 \pm 2.1(s)$
Day 45 (5)	2.56	2.56	2.59	$2.57 \pm 0.02(s)$	$95.9 \pm 0.6(s)$
Day 7 (RT)	2.75	2.76	2.77	$2.76 \pm 0.01(s)$	$103.0 \pm 0.4(s)$
Day 15 (RT)	2.69	2.72	2.72	$2.71 \pm 0.02(s)$	$101.1 \pm 0.6(s)$
Day 28 (RT)	2.62	2.64	2.65	$2.64 \pm 0.02(s)$	$98.5 \pm 0.6(s)$
Day 45 (RT)	2.64	2.62	2.56	$2.60 \pm 0.04(s)$	$97.0 \pm 1.6(s)$

TABLE B-12. DOSE STABILITY RESULTS

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CONCLUSIONS

B-65

The pooled relative standard deviation for the method was 1.06%. This precision is artificially low and does not allow the use of classical statistical techniques to determine confidence limits. Stability analysis results indicate that Aroclor 1260 is stable within the limits specified by the protocol for 45 days at -20°C, 5°C, and room temperature.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

Summary: Duplicate samples from each dose batch are extracted with hexane: accetone (1:1 v/v). The extract is diluted with hexane and analyzed by gas chromatography (GC) with electron capture (EC) detection. Dose concentrations are calculated by comparison of peak response ratios of the samples to a regression line constructed from the peak response ratios of spiked feed standards and their concentrations.

Purpose: To determine the concentration of Aroclor 1260 in rodent feed.

<u>Samples:</u>	Pre Administration	Mix Date:
	Post Administration	Mix Date:

Materials:

1.	Aroclor:	
	Lab control #:	_
	Lot #:	
	Date received in lab:	
	No expiration date given	
	Store @ Room Temperature	

2. Hexane Company: Lot #: Date received: Expiration Date: Store @ Room Temperature

3.	Acetone
	Company:
	Lot #:
	Date received:
	Expiration Date:
	Store @ Room Temperature

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: ______ Date of work: ______

4. OCN (o-chloronaphthalene) Lab #:______ Company:______ Lot #:______ Date received: Expiration Date:______ Store @ Room Temperature

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5. Purina Rodent Feed Lab control #:_____ Lot #:_____ Date received in lab:_____ Expiration Date:_____ Store @ Room Temperature

6. Weight set: Serial Number:______ Last Calibration date:______ Calibration due:

7. 50 mL Centrifuge Tubes

8. Volumetric Pipets, Class A (Various sizes)

9. Volumetric Flasks, Class A (Various sizes)

10. Gelman 0.45μ filters or equivalent

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

11. Doses, Homogeneity, & Cross-contamination Sample

A. Doses

Dose Level (ppm)	Batch #	Lab Control #
25	1260-	
25		
50	1260-	
50		
100	1260-	
100		

B. Homogeneity

Dose Level (ppm)	Sampling Location	Batch #	Lab Control #
	Top Left		
	Top Right	1260-	
	Bottom		

C. Cross-contamination Sample

Batch	Lab Control
#	#
1260-	

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work:

Received in lab o	on
Stored at	degrees C.
Storage location	Revco freezer (X-34641)

Equipment:

 GC System: GC: Hewlett Packard 5890 Gas Chromatograph (X/SN_____) Autosampler: HP 7673 injector (X/SN_____) Integrator: Peak Pro

 Analytical column: Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, cat #

- 3. Sartorius Model R160P Analytical Balance, X46037
- 4. Top Loading Balance:_____(X/SN____)

5. Centrifuge: IEC Centra 7 (X/SN_____), or equivalent

6. Wrist Action Shaker, Burrell Model 75, or equivalent

Procedure:

Note:

1. Weights, dilutions, and final volumes of solutions may be altered as necessary provided the correct final concentration is achieved.

2. Extract and IS may be added to the flask in any order.

3. Dosed feed must be weighed accurately to at least the nearest 0.0001 g (0.1mg). The blank feed must be weighed to an accuracy of at least 0.01 g.

4. The acceptable ranges for the weights are ± 0.02 g for doses and 0.1 g for blank feed.

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Battelle Study No. SC920192 Chronic Toxicity and Oncogenicity Report

ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

Preparation of Extraction Solvent (Hexane:Acetone:(1:1 v/v))

Add _____mL of hexane to _____mL of acetone. Shake well to mix.

Preparation of Internal Standard Solutions:

Balance calibration: Balance used: _____(X/SN____)

Weight used Balance reading (g)

- Internal Standard Stock Solution: Accurately weigh 50 ± 5 mg (to at least the nearest 0.1 mg) of o-chloronaphthalene (OCN), transfer it to a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this solution is ~0.50 mg/mL. Actual Weight (mg):______ Actual Concentration (mg/mL):
 - A. Working Internal Standard (IS) Preparation: Pipet 10.0 mL of the internal standard stock solution into a 100-mL volumetric flask, dilute to volume with hexane, and shake well to mix. The final concentration of this working internal standard (IS) solution is $\sim 5.0 \ \mu g/mL$. Actual Concentration ($\mu g/mL$):_____

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Date.	

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work:

Preparation of Stock Standards and Blank:

1. Stock Solution A Preparation: Tare a 50-mL beaker and into it accurately weigh 30 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1260 (May be heated to aid in transfer). Transfer it into a 50-mL volumetric flask, dilute to volume with hexane and shake well to mix. The final concentration of this solution is ~0.60 mg/mL.

Actual Weight (mg):___

The second

Actual Concentration (mg/mL):

2. Stock Solution B Preparation: Tare a 50-mL beaker and into it accurately weigh 25 ± 3 mg (to at least the nearest 0.1 mg) of Aroclor 1260 (May be heated to aid in transfer). Transfer it into a 50-mL volumetric flask, dilute to volume with hexane and shake well to mix. The final concentration of this solution is ~0.50 mg/mL.

Actual Weight (mg):_____ Actual Concentration (mg/mL):_____

3. Spiking Standards Preparation: Make dilutions the Stock Solutions as specified in the following table.

Stock	Vol. of Stock (mL)	Final Volume (mL)	~ Spiking Std Conc.(µg/mL)
A	5	100	30
В	5	100	25
A	2	50	24
В	2	50	20

4. Weigh 5 ± 0.2 g of blank feed into five 50-mL centrifuge tubes and spike with 5.0 mL of the appropriate Spiking Standard as specified in the following table. (Spike the blank with 5.0 mL hexane.)

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: ______
Date of work: ______

Balance calibration: Balance used:______(X/SN_____)

Weight used

Balance reading (g)

~Final Working Std Conc* (μg/mL)	Blank Feed Wt (g)	Spiking Std Used (μg/mL)	Vol Spiked (mL)	Vol of hex:ace (mL)	Actual Working Std Conc (µg/mL)
3.0		30	5.0	20.0	
2.5		25	5.0	20.0	<u> </u>
2.4		24	5.0	20.0	
2.0		20	5.0	20.0	
Blank		-	-	20.0	

* Final Std Conc.- Concentration of the solution analyzed following extraction and dilution.

- 5. Evaporate the hexane from the spiked standard using a gentle stream of nitrogen. Stir the feed occasionally to aid in the evaporation, (Make sure the hexane has evaporated entirely before adding the 20.0 mL of hexane: acetone (1:1) extracting solvent.)
- 6. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.
- 7. Shake on a wrist action shaker for ~ 30 minutes.
- 8. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.

9. Pipet 4.0 mL of each standard extract into separate 10-mL volumetric flasks containing 1.0 mL of working IS (50.0 μ g/mL), dilute to volume with hexane, and shake well to mix.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

- 10. Cross-contamination Standard Preparation: Pipet 0.5 mL of the 2.0 μ g/mL standard extract into a 10-mL volumetric flask, dilute to volume with blank feed extract, and shake well to mix. Pipet 4.0 mL of the diluted std extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix. The final concentration of this solution is ~0.10 μ g/mL.
- 11. Blank+IS Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 12. Blank Preparation: Pipet 4.0 mL of the blank extract into a 10-mL volumetric flask, dilute to volume with hexane, and shake well to mix.
- 13. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

Preparation of Samples:

1. Weigh the amounts of dosed and blank feed, as shown in the following table, into 50-mL centrifuge tubes.

Dose Conc (ppm)	~Dose Wt (g)	~ Blank Feed Wt (g)	Batch #	Sample Wt A (g)	Blank Feed Wt A (g)	Sample Wt B (g)	Blank Feed Wt B (g)
Cross-con. Sample	5.0	0	1260-		NA		NA
25	5.0	0	1260-		NA		NA
50	5.0	0	1260-				
100	2.5	2.5	1260-				

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: ______ Date of work: ______

Dose Conc (ppm)	Wt. of Dose (g)	Wt. of Blank Feed (g)	Sampling Location	Sa Wt. A (g)	Bl Wt. A (g)	Sa Wt. B (g)	Bl Wt. B (g)	Sa Wt. C (g)	Bl Wt. C (g)
			Top Left						
			Top Rt						
			Bottom						

2. Pipet 20.0 mL hexane: acetone into each centrifuge tube and seal.

3. Shake on a wrist action shaker for ~ 30 minutes.

- 4. Centrifuge the tubes for ~ 5 minutes at a setting of 1500 rpm to clarify the extract.
- 5. Pipet 4.0 mL of the 25 ppm extract into individual 10 mL volumetric flasks containing 1.0 mL of working IS (50.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 6. Pipet 2.0 mL of the 50 ppm and 100 ppm extracts plus 2.0 mL of blank extract into individual 10 mL volumetric flasks containing 1.0 mL of working IS (1.0 μ g/mL), dilute to volume with hexane, and shake well to mix.
- 7. Filter an aliquot of each solution into an autoinjector vial using a Gelman 0.45 μ filter.

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work:

Analysis:

- 1. Column Treatment: Inject 10 μ L of the 2.5 μ g/mL standard with the column temperature set at 325°C and a run time of ~10 minutes.
- Inject at least four system suitability samples at the beginning of the run. Calculate the peak response ratio ((Sum of 1260 Components A-E)/IS) for each injection. The % relative standard deviation of the replicates should be ≤10%.

Evaluate the peak symmetry of 1260 Component E by calculating the peak asymmetry A_S , using the formula where $A_S = b/a$ where a is the distance before peak center at 10% of the total peak height and b is the distance after the peak center at 10% of the peak height. The peak symmetry should be ≤ 3 .

Use the retention times of 1260 Component B and 1260 Component C to calculate the resolution, R, between the two. The formula for resolution is $R=(t_2-t_1)/((w_1+w_2)/2)$, where w is the peak width at baseline and t is the retention time. The units for w and t must be identical. The value of R should be ≥ 2.0 .

- 3. If any of these criteria is not met notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation before proceeding.
- 4. Make single injections of standards, blank, and samples using the following system.
- 5. The following conditions should be used but may be modified to maintain acceptable chromatographic performance and response.

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SC920192 Aroclor 1260

Analyst: ______ Date of work: ______

Column	Supelco, SPB-5 fused silica capillary column, 30 m X 0.53 mm, 3.0 film thickness, or equivalent.
Carrier Gas	P ₁₀ (Argon:methane 9:1)
Carrier Flow Rate	~45 mL/min Actual FlowmL/min.
Detector	⁶³ Ni Electron Capture Detector
Detector Temperature	300°C Actual Temperature°C.
Injector Temperature	250°C Actual Temperature°C.
Oven Temperature	170°C programmed increase at 2°C/min to 300°C with a 12 minute final hold. Actual Program (if different)
Injection Volume	$2 \ \mu L$ Actual Inj. Vol. μL .
Retention Times (RT)	
Component A	~25.9 min. Actual RTmin.
Component B	~28.0 min. Actual RTmin.
Component C	~30.2 min. Actual RTmin.
Component D	~35.9 min. Actual RTmin.
Component E	~38.4 min. Actual RTmin.
Internal Standard	~3.3 min. Actual RTmin.

Note: Use hexane to rinse the GC syringe between injections to prevent the syringe from sticking after a few injections.

Loading Order

SS = system suitability = $\mu g/mL$ standard. Drift = $\mu g/mL$ standard. All conc. in nominal $\mu g/mL$.

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SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

Sample Description	Run #	Sample Description	Run #
			· · ·
		· · · · ·	
	<u></u>		· · · · · · · · · · · · · · · · · · ·
			: :

QC'd By: Date:

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work:

Calculations:

- 1. Calculate the peak response ratio ((Sum of 1260 Components A-E)/IS) for er ch injection.
- 2. Calculate the linear regression equation relating peak response ratios of the feed standards (y-axis) to 1260 concentration (x-axis) in μ g/mL in the final dilution with internal standard. Omit the blank.
- 3. Calculate the correlation coefficient. If it is less than 0.99, repeat the preparation and analysis of the standard curve. Also calculate the slope and y-intercept of the line.
- 4. Using the peak response ratios of the samples and the regression equation, calculate the concentration of 1260 in μ g/mL in the final dilution for each dose. Divide this value by the weight of the feed aliquot in grams and multiply by the combined dilution factor to obtain the 1260 concentration in μ g/g (ppm) in the dose.
- 5. For each dose, calculate the average concentration in $\mu g/g$ and the E/O. If the E/O is less than 0.9 or greater than 1.1, analyze additional aliquots.
- 6. For Pre Administration, if the sample concentration differs from target by more than 15% at the low, 10% at the other concentrations, or the peak response ratio of the Cross-contamination Sample is greater than that of the Cross-contamination Standard, notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.
- 7. For Post Administration, if the sample concentration differs significantly from the Pre Administration values notify the Laboratory Manager or the Manager of Bioanalytical Chemistry and Dose Preparation immediately.

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SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

Results:

1. Chromatography Analysis:

Peak Symmetry:_____ Resolution:______ % RSD of System Suitability replicates:______

2. See chromatograms (# _____ to # ____), Lotus 123 spreadsheets, and Harvard Graphics plot.

Comments:

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ANALYTICAL METHOD DOSE ANALYSIS OF AROCLOR 1260 IN RODENT FEED VERSION 1.2 APRIL 08, 1993

SC920192 Aroclor 1260

Analyst: _____ Date of work: _____

Disposal:

Samples discarded in dose analysis lab room 6233 as hazardous waste on , by _____.

All samples and solid waste disposed of separately, tagged as PCB in hexane: acetone (1:1).

Written By:

Wendy M. Miller

Date

Approved By:

Steven W. Graves

Date

Approved By:

Arthur C. Peters

Date

Version 1.2 revises version 1.1 to increase the concentration of IS for improved chromatography.

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RESULTS OF ANALYSES FOR CROSS-CONTAMINATION

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Mix Date	Results
1-19-93	Pass
6-29-93	Pass
12-13-93	Pass
5-31-94	Pass
10-17-94	Pass

AROCLOR-1016

AROCLOR-1242

Mix Date	Results
1-26-93	Pass
7-6-93	Pass
12-20-93	Pass
6-6-94	Pass
10-24-94	Pass

AROCLOR-1254

Mix Date	Results
1-29-93	Pass
7-12-93	Pass
12-28-93	Pass
6-13-94	Pass
10-31-94	Pass

AROCLOR-1260

Mix Date	Results
2-2-93	Pass
7-19-93	Pass
1-3-94	Pass
6-20-94	Pass
11-7-94	Pass