

ecology and environment, inc.

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CLOVERLEAF BUILDING 3, 6405 METCALF, OVERLAND PARK, KANSAS 66202, TEL. 913/432-9961

International Specialists in the Environment

MEMORANDUM

RECEIVED

JUL 12 1990

TO:

Darrell Sommerhauser, RPM

THRU:

Philip Dula, FITOM

PREP SECTION

FROM:

Rob Parsons, E & E/FIT-FASP

DATE:

July 10, 1990

SUBJECT:

Hastings Ground Water Contaminations Site FASP documentation.

TDD #F-07-8912-003

PAN #FNEOO96GA

As per your request, the chromatograms and copies of the log book for the Hastings volatile organic analysis are being supplied to you. Attached with this material you will find a copy of the FASP report to replace the report that was destroyed.

The answer to your question, "Why DCA and PCE were reported on the letter of December 22, 1989?" is quite simple. The FASP was informed that the two compounds could possibly be in the samples from Hastings. A qualitative standard was run to determine the retention time and to confirm the detectors were responding to these compounds. The request for analysis given "verbally" to FASP indicated a qualitative assessment of these compounds. Thus, as indicated on the letter of December 22, 1989, the level of response of the detector is "non-detect". The Agency stance was that, since the compounds were not detected, it was not necessary to include them in the report. The EPA only needed to know if DCA or PCE was present in the samples. If you have further questions about the analysis please feel free to contact the FASP chemists, Anne Melia or Rob Parsons.

Attachments: FASP Report

Chromatograms Logbook Copy



VOLATILE ORGANIC ANALYSIS RESULTS HASTINGS GROUND WATER CONTAMINATION SITE HASTINGS, NEBRASKA

HASTINGS, NEBRASKA TDD # F-07-8912-003 PAN: FNEO096GA

Investigation Date: December 20, 1989 Analytical Team: Rob Parsons Report Date: January 8, 1990

DISCLAIMER

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1.0 INTRODUCTION

Two soil samples collected at the Hastings Water Contamination Site (HIPCO)in Hastings, Nebraska, were received at the Ecology and Environment, Inc., Field Analytical Support Program (E & E/FASP) base support facility (BSF) on December 22, 1989. The samples were analyzed as part of a remediation project at the facility. This SI was authorized under Technical Directive Document (TDD) #F-07-8912-003.

The soil samples were analyzed for volatile organics by FASP chemist Rob Parsons. As required by the E & E/FASP, the data are annotated with the data qualifier "F", indicating that FASP methodologies were employed to generate the data. FASP data are not confirmed by mass spectroscopy and, therefore, do not provide the same level of data confidence as Contract Laboratory Program (CLP) data. Therefore, FASP data results are defined as tentatively identified, and qualitative data should be interpreted as estimated quantities. While FASP data are not equivalent to or a replacement for CLP data, the results presented in this report are consistent; all samples were extracted and analyzed utilizing the same procedure.

2.1 FASP METHODOLOGY FOR VOLATILE ORGANICS

All samples were analyzed utilizing SW846, EPA 601 and 602 and current FASP (draft) methods. All FASP method quality control including initial, continuing, and final calibration were met.

A volatile organic standard containing trichloroethene (TCE) and trichloroethane (TCA) was used for instrumental calibration. The detection limit for the analysis of soil was 10 $\mu g/Kg$.

All samples were non-detect for TCE, TCA, and all other <u>organic</u> or inorganic compounds not specifically noted.

2.2 VOLATILE ORGANIC ANALYTICAL RESULTS

Table 2-1
Sample Results, Soil
Volatile Organic FASP Analysis
Hastings Water Contamination Site (HIPCO)
Hastings, Nebraska
Sample Activity Series # CS4S2
December 1989

µg/Kg

	001	001Dup	001D
Trichloroethene Trichloroethane	10UF 10UF	10UF 10UF	10UF 10UF

U = The material was analyzed for but was not detected. The associated numerical value is an instrumental detection limit, adjusted for sample weight, extract volume, and sample dilution.

Dup = Sample analyzed is a field duplicate.

F = Data has been generated using FASP methodologies. Analytes are tentatively identified and concentrations are quantitave estimates.

D = Sample analyzed is a laboratory (FASP) duplicate.

Table 2-2 Matrix Spike Results, Soil Volatile Organic FASP Analysis Hastings Water Contamination Site (HIPCO) Hastings, Nebraska December 1989 µg/Kg

=======================================	:222252222222		
	Amount Spiked	Matrix Spike Recovery	% Recovery
Trichloroethene	40.4	41.5	` 103
Trichloroethane	40.4	38.7	96

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E & E Emergency Response Center: (716) 684-8940

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12/20/89	VOA	Rob PARSONS
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Hastings site	14,200	
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TCA -	370007777000	51B -> 5 pl + 100 merts 0
		50 pd + 100 mily 6-
2 >		
	<u> </u>	
		R= .99+5
		m = 2.4450E - 3
	7.RSD = 7.7	b = -1.43+4/f PSP
E/CD:	ICE	
E/CDS	·	R = .9961
E/CD:	RE = 3.5338E-3	R = .9961 M = 3.7053E-3
F/CDS	·	m = 3, 7053E-3
/5/CD \$	RF = 3.5339E-3 S = 2.54/5E-4	m = 3, 7053E-3
[5/C]) \$	RF = 3.5339E-3 5 = 2.54/5E-4 2.RSD = 7.6 TCE	m = 3,7053E-3 L = -1,97/C
E/CDS	RF = 3.5339E-3 S = 2.54/5E-4 2.850 = 7.6	m = 3,7053E-3 L = -1,97/C
F/CDS	$\overline{RF} = 3.5339E - 3$ $S = 2.54/5E - 4$ $2.850 = 7.6$ \overline{TCE} $\overline{RF} = 3.9030E - 3$	m = 3,7053E-3 L = -1,97/C
E/CDS	$\overline{RF} = 3.5339E - 3$ $S = 2.54/5E - 4$ $2.850 = 7.6$ \overline{TCE} $\overline{RF} = 3.9030E - 3$	m = 3.7053E - 3 $b = -1.9716$ $R = .9959$ $m = 4.08.20E - 3$
E/CDS	$ \overline{RF} = 3.5339E - 3 $ $ S = 2.54/5E - 4 $ $ 2.850 = 7.6 $ $ \underline{TCE} $ $ \overline{RF} = 3.9030E - 3 $ $ S = 1.7553E - 4 $	m = 3.7053E - 3 $b = -1.9716$ $R = .9959$ $m = 4.08.20E - 3$
E/CDS	$ \overline{RF} = 3.5339E - 3 $ $ S = 2.54/5E - 4 $ $ 2.850 = 7.6 $ $ \underline{TCE} $ $ \overline{RF} = 3.9030E - 3 $ $ S = 1.7553E - 4 $	m = 3.7053E - 3 $b = -1.9716$ $R = .9959$ $m = 4.08.20E - 3$
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		ETCD - TCA	3.46	1 ''			17717
	ļ	TEE	5.19				13562
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	} }	ERD-TCH	3.68				273/6
		TCG	5.19				68654
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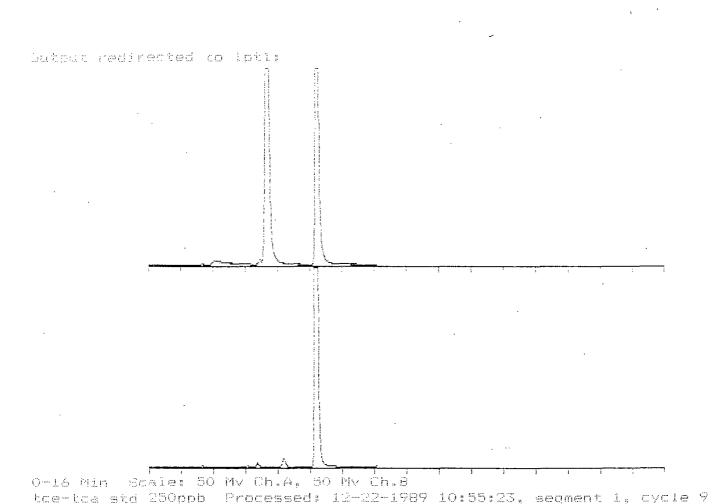
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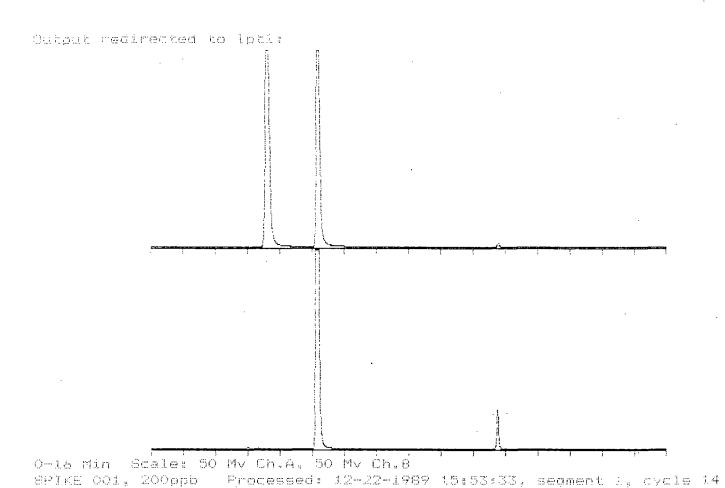
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TOTAL AMOUNT = 423,0825

1.64 1.04 1.02

PIP Spike 4.9517



****** AREA PERCENT REPORT *****

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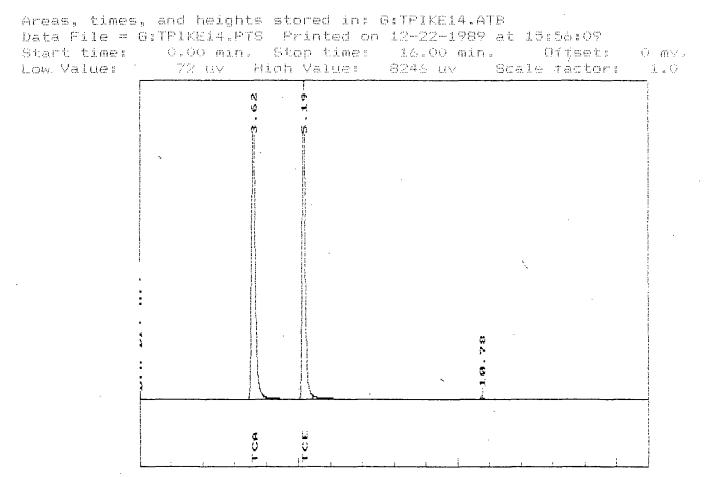
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# Sample Name: SPIKE 001, 200ppb
                                                                                                                                                                          Data File: G:TPIKE14
% Date: 12-23-1969 68:28:29 Method: EVCA
# Interface: 16 Cvcle#: 14 Operator R.P Channel#: 1 Viale: N.A.
% Instrument Type: varian 3400*P&?
                                                                                                                                        Column Type: db-624
                                               Solvent Description:
* Conditions: 400 (polo / air ----> )00//min---> )40 (hold / min)
                                           Detector D: PIN
                                                                                                                                                             Netector 1: ELCD
# Misc. lotorwation:
                                                                                                                                                                                                     10411
Starting Delay: 0.00
                                                                                                                                                       Home times 15.00
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Pr No.	Ret Time	Peak Area			Normalized %	Area/ Helght	
2	3.621 5.186 10.780	52411	52.0090 2 47.6152 2 0.3758 2	8172	1	7.9 6.4 4.4	
Tota	i Area:	110493	Area Reje	m t :	0 One s	ample per	0.102 sec.

```
xxxxx EXTERMAL STANDARD TABLE ***
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4 Sample Wame: SPIKE OO:, 200ppb ·
                               bata file: B: (FlKE)4
* Date: 12-23-1989 88:25:29 Method: BVOA 12-21-1989 14:54:42 # 105
* Interface: 16 Cycle*: 14 Operator R.P Channel#: 1 Vial#: N.A.
* Starting Peak Width: 5 Threshold: J Ares Threshold: 10
* Instrument Type: varian 3400+P&T Column Type: db-624
         Solvent Description:
* Conditions: 400(hold 4 min:--->100/min--->140(hold 2 min)
         Detector O: FID
                                 Detector is ELCD
                                        iotia
Starting Delay: 0.00
                               Ending retention time: 15.00
Area reject:
                               One sample per 0.102 sec.
Amount injected:
                               Dilution factor:
                                               1.00000
Sample Weight:
```

PEAR NOM	RET TIME	PEAK Name	CONCENTRATION in pob	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT B		EF At	% DELTA RET TIME	CONC/AREA
	3.621 T 5.188 T		193.2098 204.5280	48.5772% 51.4228%	57466 52611	7288 8172		_	1	0 0	3.3622E-03 3.8875E-03

TOTAL AMOUNT = 397.7377



m/31

Suious redirected to Intl:

O-16 Min Scale: 50 MV Ch.A, 50 MV Ch.B METHUD BLANK Processed: 12-22-1989 15:18:06, segment 1, cycle 13 RAW DATA SAVED IN FILE 6:BLANK113.PTS Second Channel Stored in 6:CLANK113.PTS

sxxxxxx area percent seport xxxx**x**xx

·宋宗亲宗朱宗朱宗孝宗亲宗亲宗亲宗亲宗,(2一22一1989 15:16:16:50 Version 5.1 家宋孝宗亲宗宗宗宋宗孝宗孝宗孝宗孝宗孝宗孝宗

Pk Nes	How to Til mea	Peak Area	Area 2 % L		. Normalized % .		
 	3.014 5.131 to:/x2	220	34.4434 5 52.3092 6 13.2474 6	1.7 4.4 1.7		8.5 5.0 3.3	
) order	i Armen	420	Area Reje	cts	o One s	ample per	0.102 sec.

Run Time: 16.00

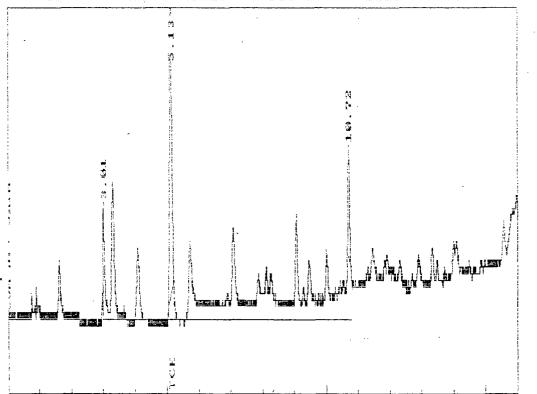
makka Extense. Ettentet tekkak XXXXXXXXXXXXXXXXXX 12-22-1989 15:18:51 Venelon 5.1 DXXXXXXXXXXXXXXXXXXX & Samble Name: METHOD SLANK Data File: G:BLANK113 % Interface: 16 Cyclet: 13 Operator R.F Channelt: 0 Vialt: N.A. % Starting Peak Width: 2 Threshold: .25 Area Threshold: 10 * Instrument Type: Varian S400+P&T - Column Type: db-624 Bolvent Description: T. # Conditions: #VC(hold 4 min)--->10C/min--->14O:hoid 2 min; Oetector O: P:O Detector is ELCO & Misc. Information: 上口电压 # Etarting Delay: 0.00 Ending retention time: 16.00 Area reject: 0 One sample per 0.102 sec. 1,00 Amount injected: Dilution factor: 1.00 Samole Weight: 1,00000

TET TIME	PEAK NAME	CONCENTRATION in eab	NGRMAL 1 ZED CONC	AREA	HEIGHT !	AREA/ HEIGHT	8L - FE		A DELTA BMIT TBR	
 Ì.131		-13.8074	100.0000%	220	44	5.0	 ó	- 2	0	-6.2903E-02

TOTAL AMOUNT = -13.8074 .

.Starting Delay: 0.00

Armae, times, and heights scored in: G:GLANKLIS.ATB
Data File = G:BLANKLIS.Fre Frinted on 12-22-1969 at 15:19:06
Start time: 0.00 min. Stop time: 16.00 min. Offset: U mv.
Low Value: 81 u. High Value: 150 uv Scale factor: 1.0



TRANSMAN AREA PERCENT REPORT RESERVE

1 Samp 4 Date 4 Inte 4 Star	ore Name: ME e: 12-23-198 ertace: 16 tting Poak X	THOO SLAN 19 60:17:5 Cycle#: 11d5h: 5	K) Metho 13 Op lares	d: (era) hol:	SVOA tor R.H d: 1 A	rsion 3.1 %% Vata (11 Channel4: 1 rea Threshold	le: G:CLAN Viai#: : 10	KIIS N.A.	# # #
i los: X	troment Type Scl Mitions: 400	k verian Nest Gesc Mold 9 a	34004P& ription (in)>	T : 100.	(lel) Zman	######################################	624 in)	(*****	** ** ** ** **
4 X X X X 2	:. Informati	.on: (\$******					lpti: ********	× ××××××××××××××××××××××××××××××××××××	¥ ¥
PK No.	Ket Time	Pesk Area	Orea %	9 L	Peak Ht.	Normalized %			
1	5.125	0.44 1	.000.000	1.	48 -	100.000	5.1		
Total	Arosi	(3.4.4)	eraa 8	eje:	=t:	○ One s	ampie oer	0.102	: # @ (

**** EXTERNAL STANDARD TABLE **** Jaum Files GsCLAMKIIS - X & Bample Name: METHOD BLANK / Date: 12-25-1989 87:17:51 Method: 8V0A 12-21-1989 14:54:42 # 106 | s Interface: 16 Cvc/e#: 13 Operator R.P Channel#: 1 Vial#: N.A. # Starting Peak Width: 5 Threshold: L Area Threshold: 10 A Instrument Tyce: Variet J400+P&T Column Lyoes ab-624 Solvent Descriptions: 蒸 * Conditions: 40C(hold 4 min) ---> 10E/min---> 140 hold 2 min) # Setector O. Piv Detector is stdD A Misc. Information: intli Stanting Getavi 0.00 Ending recention time: 15.00 Area reject: 0 One sample per 0.102 sec. $\chi_{\infty}(\mu)$ Dilution factor: 1.00 Amount ingected: Sample Welcht: 3..00000 PEAK RET PEAK CONCENTRATION in HORMALIZED AREA/ REF % DELTA ppb CONC AREA HEIGHT HEIGHT BL PEAK SUM TIME NAME

fCA

48 5,11 1

-3.7829E-02

-9.2334 100.0000% 244

RAME ADJUSTED RET.TIME. REFERENCE PEAK

3.62

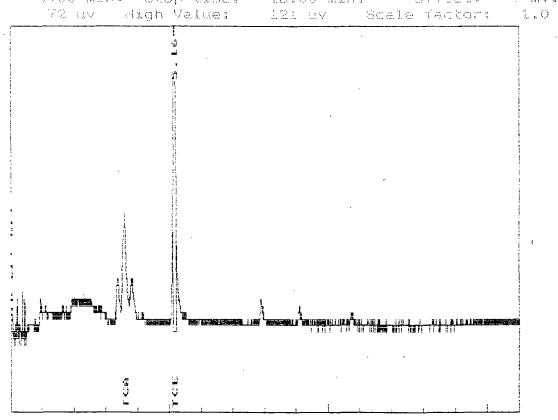
1 5.165 TEE

1704

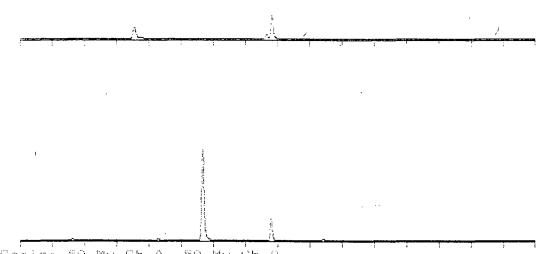
TOTAL AMOUNT = -9,2336

PEAKS NOT FOUND IN THIS RUN

Arcas, izcas, and heights stored in: G:CLANK113.ATB
Oata File - U:CLANK113.PTS Printed on i2-22-1989 at 15:20:39
Start time: 0:00 min- Stop time: 16.00 min. Offet: 0 mv.
Low Value: 72 uv High Value: 12: uv Scale factor: 1.0



Dubput redirected to loti:



O-16 Min Scale: 50 My Ch.A. 50 My Ch.B HIPCO C8482001D - Processed: 12-22-1787 14:38:27, segment 1, cycle 12 RAW DATA SAYEO IN FILE G:H1PCO112.PTS Second Channel Stored in G:IIPCO112.PTS

****** AREA PERCENT REPORT *****

Run Time: 16.00

Mo.	Ret Lime	Peak Area	Area 8 % L	reak Ht.	Normalize %	ed Areaz Height	
,	i sákř	418	3.9602 5	40	5.047	15.5	
71 A 21.1	4.277	ć) ()	0.3850 &	1.4	0.471	4.4	
.3	5.673	12246	78.4729 6	2228	100.000	5.5	
7å.	7.801	2562	16.4139 6	577	20.917	4.4	
	9.399	.120	0.7680 6	29	0.979	4.1	<u>~</u>
Total	Grea:	15606	∖Area Rejo	ecta	0 One	sample per	0.102 sec.

老家主来家家未来来来来来来来来来来来。王显一是22一主中3000。主中3.5003主并,Verretten Bill 医来来来来来来来来来来来来来来来来来来来 % Sample Name: HIPCO 084820010 Pata File: B:BIPCC112 % Obve: 12-25-1989 85:58:53 Method: AVOA | 12-21-:989 14:50:47 | # | 116 | & Interface: 16 Cyclet: 12 Operator R.P Channelt: 0 Vialt: N.A. # Starting Feak Width: 2 Threshold: .25 Area Threshold: 10 A Instrument Type: varien 34:20+P&T Column Type: db-624 3 Solvent Description: % Condition** 400(hold 4 min)--->100/min--->140(hold 2 min) Detector O: PID Oetector t: ELCD # Misc. invermation: Lptis Starting Delay: 0.00 Ending retention time: 16.00 Area reject: One sample per 0.102 sec. 1.00 Amount injected: Uilution tactor: 1.00 Samole Weight: 4.51900

PEAK RET PEAK CONCENTRATION in NORMALIZED AREA/ REF % DELTA NUM TIME NAME ppb CONC AREA HEIGHT HEIGHT BL PEAK RET TIME CONC/AREA

TOTAL AMOUNT = 0.0000

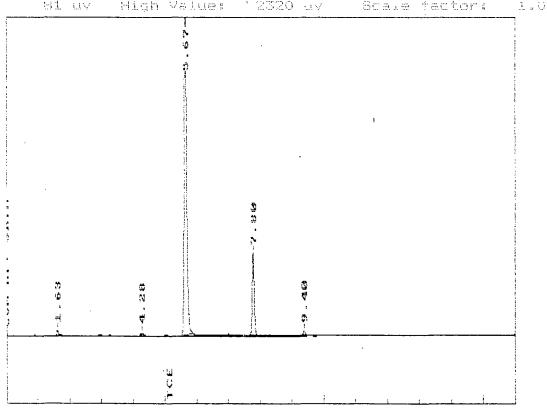
PEAKS NOT FOUND IN THIS RUN

Stanting Dalay: 0.00

NÀME ADJUSTED RET. TIME, REFERENCE PEAK

TOE 5.13 TOE

Areas, times, and heights stored in: G:HIPCO112.ATB that File = G:HIPCO112.PTS frinted on 12-22-1989 at 14:39:29 Start time: 0.00 min. Stop time: 16.00 min. Offset: 0 mv. Low Value: 31 uv High Value: '2320 uv Scale factor: 1.0



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·塞蒂塞太索蒂索来多家喜家来来来来来来来。12-22-1989 14:40:50 Vereion [5:1 东来来来来来来来来来来来来来来来来来来来
* Sample Name: HIPCO CS4820010
                                      Data File: G:[[PC0112
* Date: 12-23-1989 85:50:33 Method: BVOA
# Interface: 16 Ovcle#: 12 Operator R.P Channel#: 1 Via:#: M.A.
* Starting Reak Wioth: 5 Threshold: 1 Area Threshold: 10
% instrument Type: Varien 3400+F&l
                              Column Type: db-624
 Solvent Description:
* Conditions: 40C(hold 4 min)--->10C/min--->14O(hold 2 min)
         Detector O: FID
                                   Detector is ELCD
                                           Louis
1 Misc. Intormation:
Stantibe Delay: 0.00
                                  Run Vime: 16.00
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                     Area a
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                                   Normalized Areas
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                                    62.189
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               503
                    8.6759 2
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                              .107
                                    15.408
    7.820
               3267 56,3071 2
                             6.55
                                    100,000
               5803
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O One sample per

Area Reject:

Total Area:

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xxxxx ExTermal STANDARO TABLE xxxx
* Samble Mame: HIPCO 08482001D
                                   Data Fire: 8:[1PC0112
* Date: 12-23-1989 85:58:33 Method: BVOA | 12-21-1989 14:54:42 | # | 106 |
& Intertace: 16 Ovclet: 12 Operator R.P Channelt: 1 Vialt: N.A.
* Starting Peak Width: 5 Threshold: 1 Area Threshold: 10
3 Instrument Type: verian 3400+P&f
                          Column Type: db-624
 Solvent Description:
* Conditions: 40C(hold 4 min)--->10C/min--->140(hold 2 min)
 Detector O: FlD
                                 Detector is ELCD
* Misc. Information:
                                       15±1:
Ending retention time: 16.00
Stancina Delav: 0.00
Area reject:
                               One sample per 0.102 sec.
Amount injected:
                1.00
                               Ollution factor: 1.00
Sample Weight:
                4,51900
PEAK RET
     PEAX
           CONCENTRATION in #ORMALIZED
                                 AREA/
                                      ñΞF
                                           , % DELTA
NUM TIME NAME
                             HEIGHT HEIGHT BL
                                      PEAK
               -2,4949 100,0000%
1 3,550 TCA
                          2032
                               296 5.9 2
                                      i
                                                  -1.3272E-03
     TOTAL AMOUNT = -2.6969
```

TOE

PEAKS NOT FOUND IN THIS RUN

TOE

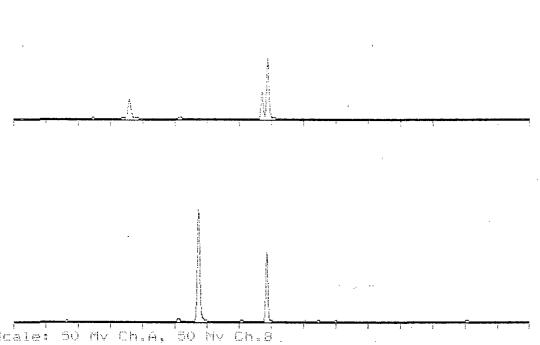
MAME : ADJUSTED RET.TIME. REFERENCE PEAK

5.06

Variant Nimes, and neights stored in: G: (IPCO112.AVB)
Data Fule = D: (IPCO112.PPS) Printed on 12-22-1987 at 14:41:00
Shart time: 0.00 min. Stop time: 16.00 min. Orfset: 0 mv.
LDW Value: 21 uv High Value: 709 uv Scale: factor: 1.0

05452001

Dutput rearrected to lotts



******* AREA PERCENT REPORT ****

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Detector O: FID
Detector 1: ELCO
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Run Time:

16.00

Pk No.	Ret Time	Peak Area	Area %	B I	Peak Ht.	Normalizec %	l Area/ Height	
1	0.763	644	2,5961	5	3	4.09i	80.5	
. N 	1.540	110	0.4447	Ćo.	34	0.701	3.2	
13	5.112	390	1.5720	6	74	2.477	5.3	
-4,	5.732	15748	63.4522	ó	2786	100.000	5.7	
÷	7.067	1.71	0.6875	ά	37	11.084	41 . (5)	
6	7.857	7598	30.6130	ćo.	±707	48.246	4.5	
7	9.457	1,57	0.6345	6,	38	1.000	4.1	
Total	Areat	24819	Area Re	jec	1:: ::	0 One s	sampie per	0.102 s

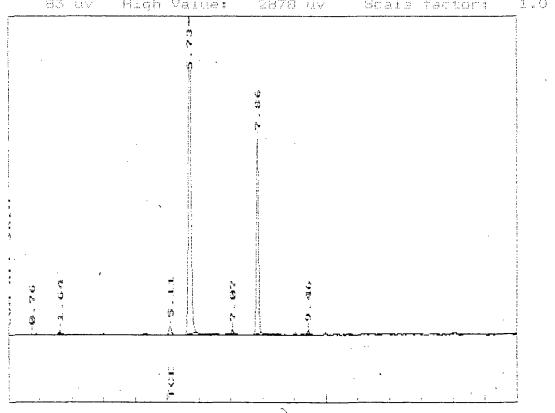
xxxxx EXTERNAL STANDARD TABLE xxxx % Sample Name: HIFCO CS452-001 Osta File: S:HIPCO110 å interrace: 16 Cycle#: 10 Operator R.P Channel#: 0 Viel#: N.A. * Starting Peak Width: 2 Threshold: .25 Area Threshold: 10 4 Instrument Type: varian 3400+P&T Column Type: db-624 Solvent Description: * # Conditions: 40C(hold 4 min)--->10C/min--->14O(hold 2 min) Wetector O: PID Detector 1: ELCD Ж 1pt1: # Misc. Information: Ending retention time: 16.00 Starting Delay: 0.00 Ares reject: 0 One sample per 0.102 sec. 1.400 Amount injected: 1.00 Dilution factor: Samole Weight: 4,90900

PEAK MUH	RET TIME	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF Peak	ł	% DELTA RET TIME	CONC/AREA
. 3	5.112	TCE	-2.7277	100.0000%	390	74	5.3 6	 3		()	-6.9914E-03

TOTAL AMOUNT = -2,7277

Starting Delay: 0.00

Areas, times, and heights stored in: 6:HIPCUIIC.AFB
Data File = 0:HIPCUIIO.PTS Princed on 12-22-1989 at 11:42:55
Start time: 0.00 min. Stoc time: 16.00 min. Gifset: 0 mv...
Low Value: 83 uv High Value: 2878 uv Scale factor: 1.0



SERVER SERVE SERVE SERVER SERV

```
Data File: 0:(1FCG)10 %
a bamble Name: HTPCC 05482-001
% Date: 12-23-1989 80:08:22 Method: BVCA
: Ctarting Feak Width: 5 | Threshold: 1 Ares Threshold: 30
1 Instrument Typer varian IACO+PAT Column Type: db-624
      Bolvent Description:
s Conditions: 40C(hold = min)--->10C/min--->140(hold 2 min)
      Satestor 0: 810 . December 1: 8100
A Hiss / Antorastion:
                             iotli
Standing Dolay: 0.00
                      Rum fimer lo.00
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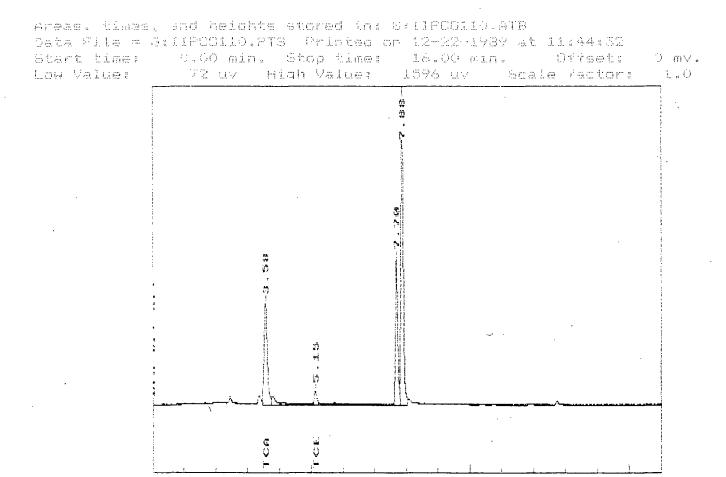
MO.	Ret Time	Peak Area		1	Peak Ht.	Normalized %	Heaght	
1.	3.573	.341.9	23.1728	2.53 .25.	482	44.056	7.1	
e N His	5.145	25 d 2	2,3497	2	2.5	4.467	5.5	
3	7.699	3226	21.8784	2	699	- 41.5995	4.6	
4	7.4385	7761	52.5991	en E	1521	100.,000	121 - 4 121 - 4 JL	,
								 ,

Total Area: 14755 Area Reject: O Une sample per 0.102 sec. ٦.

TOTAL AMOUNT =

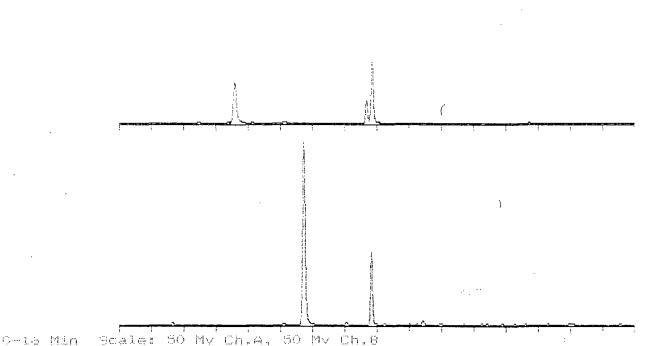
-3.2313

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MARKET EXTERMINED OF TO THE WAR WAR
东京京大英国家来来东京京家来来来来来来。王宝一道第一支的名称,走上王将兵士上野,V667 由主动的。 5。5)北京大家大家中国来源南京军家来来来来来来来来
& Sample Name: HIPCO CS462-001
                                        Wasa File: BillPCOilo
# Joterface: 15 Cycle#: 10 Operator R.P Channel#: I Vial#: N.A. # Starting Peak Width: 5 Threshold: 1 Acea Threshold: 10
Instrument Type: varian 3400+PAT
                                Column Type: do-624
           Solvent Description:
                                                             \mathbb{X}
$ ::and:rions: 400(hald 4 min)--->100/min--->140(noid 2 min)
 Cetector C: PID
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Y Masa, intormation:
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Stanting belay: 0.00
                                   Ending retention times 15.00
                                   Une sample per 0.102 sec.
Arrea reject:
Amount injected:
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                  3. .. (36.)
                  生毒素型()型的()
Samole Welcht:
                                                   % DELTA
PEAK RET
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             CONCENTRATION in
                      NORMALIZED
                                      AREA:
                                            REF
Sum FIME
 1 3.575 TCA
                 -1.4357
                              3417
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                                      7.1.2
                                                   0
                        44.4306%
                                                        -4,1990E-04
 3 5.146 TCE
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                        55.5694%
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                                   63
                                      5.5 2
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                                                   ı)
                                                        -5,1792E-03
```



05452001 Dep Freid Wy herie

Output redirected to latin



HIPCO CS4S2001Dup Processed: 12-22-1989 12:20:52, segment 1, cycle 11' RAW DATA SAVED IN FILE 0:HIPCO111.PTS Second Channel Stored in G:IIPCO111.PTS

****** AREA PERCENT REPORT *****

Detector O: PID Detector 1: ELCD % Misc. Information: Starting Delay: 0.00

Run Time: 16.00

Fk	Ret	Peak	Area	Ð	Pesk	Normalized	
No.	Time	Area	", √a	!	Ht.	ar ∕a .	Height
1	1,649	1641	4.4841	5	64	6.345	25.6
3.1	5,098	212	0.5807	Ó	4.3	0.821	4
75	5.729	25857	70.7025	ó	4545	100.000	5.7
4	77 (0.44.5)	Z67	0.7307	ćο	57	1.034	4 n 7
iii Lii	7.827	7651	20.9491	Ó	1.798	29.630	4.3
<i>(</i> a)	8,243	^{1,2} .44	0.1487	Ċ,	1.6	0.210	3.4
7	9.017	torios colocol	0.0964	P_0	12	0.136	3.0
ϵ	9:421	437	1.1940	Ó	1.00	1.689	4 . 4
$\langle c \rangle$	9.769	151	0.4119	6	37	0.583	4.1
i, ()	11.881	44.44	0.1213	A	15	0.172	3.0
: 1	13.294	29	0.0781	Ò	1.()	0.110	
12	14.050	. 1.51	0.4129	6	23	0.584	6.5
13	1.5.535	32	0.0876	ó	10	0.124	3 m2
Tota	l Armas	365/1	Area R	eje	codos	O One :	sample pe

```
*** EXTERMAL STANDARD TABLE ***
************************ 12-22-1989 12:21:41 Version 5.1 ******************
* Sample Name: HIPCO CS452001Dup
                                        Oata File: G:HIFCO111
* Date: 12-23-1989 81:23:14 Method: AVOA | 12-21-1989 14:50:49 | # | 116 |
# Interface: 16 Cycle#: II Operator R.P Channel#: 0 Vial#: N.A.
* Starting Peak Width: 2 Threshold: .25 Area Threshold: 10
* Instrument Type: varian 3400+P&T
                                Column Type: db-624
           Solvent Description:
* Conditions: 40C(hold 4 min)--->10C/min--->14O(hold 2 min)
         Detector 0: PID
                                     Detector I: ELCD
# Bisc. Intormation:
                                             iptl:
Starting Delay: 0.00
                                   Ending retention time: 16.00
Area resects
               ()
                                   One sample per 0.102 sec.
Amount injected:
                  1. ()()
                                   Dilution factor: 1.00
Samble Weight:
PEAK RET
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             CONCENTRATION in
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                                      AREA/
                                           REF
                                                   % DELTA
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 2 . 5.098 TOE
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                                                        -1.4419E-02
```

TOTAL AMOUNT =

-3.0620

Areas, times. and heights stored in: 0:HIPCDIII.ATB
Oata File = C:HIPCDIII.PTB : Frinted on 12-22-1989 at 12:21:36
Start time: 0:00 min. Stop time: 13.00 min. Offset: 0 mv.
Low Value: 82 uv High Value: 4641 uv State Tactor: 1.0

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BEXXXXX APEA PERCENT REPORT XXXXXX

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宋本朱本宗宋宋宗宋宋宋宋宋宋宋末末末末 1.20m220m11989 1.20m226124 Verreion 5.1 宋宋宗宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋
* Sample Name: HIPEO CS4520010uo
                                    Data File: O: (IPCULL)
x vate: 12-23-1989 W1:23:14 Method: BVOA
* Interface: 16 Cycle#: 11 Operator R.P Channel#: 1 Vial#: M.A.
* Starting Peak Width: 5 Threshold: 1 Area Threshold: 10
# Instrument Type: varian 3400+PbT
                           Column Type: db-624
          Bolvent Description:
                                                       紫
* Conditions: 40C(hold 4 min)--->10C/min--->14C(hold 2 min)
        Detector O: PID
                                 Detector (: ELCD
% Migc. information:
                                         1011:
Starting Delay: 0.00
                                Run Time: 15.00
```

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1,47°°, "	i .3. Hetzi	int to ot	/n L	ra C	√n	russ Light C	
1	2.455	233	1.2542 2	50	2.889	4.7	
-11 h -11 h	3.385	7368	39.6304 2	1026	91.292	Ty refly	
	5.129	223	1.1996 2	.42	2.763	5.3	
4	7.682	2597	14.5052 2	572	33.414	4 . 7	
to to	7.854	8070	43.4106 2	1549	100.000	5.2	
rotai	Area: ·	18591	Area Seje	zt:	o' One	sample per	0.102 sec.

Peak

1...1.4..

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XXXXX HXTERNAL BIANDARD TABLE XXXX
# Sample Name: HIPCO CS452001Dup
                             Data File: G::IPCO111 *
* Date: 12-23-1989 Gl:23:14 Method: 8VOA 12-21-1989 14:54:42 # 106
% Starting Peak Width: S Threshold: L Area Threshold: LO
3 Instrument Type: varian 3400+P&T Column Type: db-o24
        Solvent Description:
* Conditions: 400(hold 4 min)--->100/min--->140(hold 2 min)
                                             .b
t Detector 0: PTD
                          Detector 1: ELCA
& Musc. Information:
                                 letli
Stantino Delav: 0.00
                         Ending retention time: 16.00
Area reject: O
                          One sample per '0.102 sec.
           1.00
Amount injected:
                          Dilution factors 1.00
Sample Weight: . .
             4.51500
PEAK BET PEAK
        CONCENTRATION in MORMALITED
                          AREA/
                               BEF
                                     % DELTA
```

 PEAK
 PEAK
 CONCENTRATION in NORMALIZED
 AREA/
 REF
 % DELTA

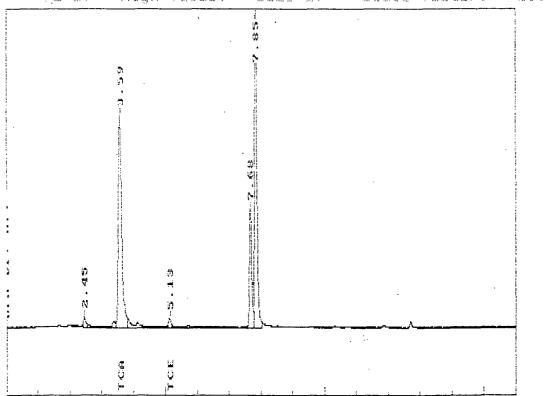
 NUM TIME
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 CONC/AREA

 2 - 3.585 TCA
 1.6794
 -436.4731%
 7368
 1026
 7.2 2
 2
 0
 2.2794E-04

 3 5.129 TCE
 -2.0641
 536.4731%
 223
 42
 5.3 2
 3
 0
 -9.2557E-03

TOTAL AMOUNT = - -0.3848

Areas, times, and heights stored in: G:11FCO111.ATB
Oata file = G:[1FCO111.FTS | Printed on 12-22-1989 at 12:23:40
Start time: 0.00 min. Stop time: 16.00 min. Offset: 0 mv.
Low Value: 72 uv | High Value: 1623 uv | Scale factor: 1.0



POND STD 250 ppb

Output redirected to lptl:

O-16 Min Scale: 50 Mv Ch.A. 50 Mv Ch.B FINAL STD 250ppb Processed: 12-22-1989 16:31:08. segment 1, cycle 15 RAW DATA SAVED IN FILE G:F25015.PTS Second Channel Stored in G:G25015.PTS

****** AREA PERCENT REPORT *****

Pk No.	Ret Time	Peak A re a	Area · %	B	Peak Ht.	Normalize %	d Area/ Height
)	1.647	1393	1.3198		47	1.367	27.6
2	3.342	392	0.3716	Ó	67	0.385	5.7
.5	4.175	1331	1.2609	Ó	185	1.306	7.2
4	5.171	101938	96.5587	έþ	17092	100.000	6.0
5	7.046	295	0.2795	Ó	54	0.289	5.5
ća	3.976	101	0.0957	Ó	27	0.099	3.8
7	10.032	41	0.0388	6	14	0.040	3.0
(-)	10.169	21	0.0198	Ó	8	0.021	2.6
· 9	12.747	50	0.0551	6	1.6	0.057	3.6

Total Area: 105571 Area Reject: 0 One sample per 0.102 sec.

**** EXTERNAL STANDARD TABLE **** * Sample Name: FINAL STD 250ppb Data File: G:F25015 * Date: 12-23-1989 89:43:41 Method: AVOA 12-21-1989 14:50:49 # 116 * Interface: 16 Cycle#: 15 Operator R.P Channel#: 0 Vial#: N.A. * Starting Peak Width: 2 Threshold: .25 Area Threshold: 10 * Instrument Type: varian 3400+F&T Column Type: db-624 Solvent Description: * * * Conditions: 40C(hold 4 min)--->10C/min--->140(hold 2 min) % Detector 0: PID Detector 1: ELCD * Misc. Information: lotis Starting Delay: 0.00 Ending retention time: 16.00 One sample per 0.102 sec. Area reject: 0 1.00 Amount injected: Dilution factor: 1.00

FEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in	NORMALIZED CONC	AREA	нетент н	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	. 5.171	TCE	234,8962	100.0000%	101938	17092	6.0 6	4	0	2.3043E-03

1.00000

TOTAL AMOUNT = 234,8962

Sample Weight:

BARKKAR AREA PERCENT REPURT KARAFA

```
宋京北京宋京宋宋宋宋宋宋宋宋宋宋宋 1.2-22-1989 1.6:33:32 Vension 5.1 354本宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋宋
* Sample Name: FINAL STD 250ppb -
                                     Deta File: 0:025015
* Date: 12-23-1989 89:43:41 Method: 6VOA
* interface: 16 Cvcle#: 15 Operator R.P Channel#: 1 Vial#: N.A.
* Starting Feak Width: 3 Threshold: 1 Area Threshold: 10
* Instrument Type: varian 3400+P&T
                              Column Type: db-624
 Bolvent Description:
# Conditions: 40C(hold 4 min)--->10C/min--->140(hold 2 min)
          Detector 0: PID -
                                   Datactor i: ELCD
% Misc. Information:
                                           lotis
Starting Delay: 0.00
                                  Run Time: 16.00
PM:
                            Peak
    吊曲上
                     area 8
              Peak
                                    Normalized Area/
No.
    Time
              Area
                             Ht.
                                             Height
                    0.0915 2
                                     0.178
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O One sample per

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Area Reject:

63843 47.4288 2

69351

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Total Area:

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EXTERNAL STANDARD TABLE ****
来拿来来来来来来来来来来来来来来来来。 12-22-1989 16:33:33:34 Verbion 5.1 *************************
* Sample Name: FINAL STD 250ppb '
                                    Data File: G:625015
* Date: 12-23-1989 89:43:41 Method: BVOR 12-21-1989 14:54:42 # 100
* Interface: 16 Cycle#: 15 Operator R.P Channel#: 1 Vial#: N.A.
* Starting Peak Width: 5 Threshold: 1 Area Threshold: 10
* Instrument Type: Varian 5400+F&T
                          Column Type: db-624
          Solvent Description:
* Canditions: 400(nold 4 min)--->100/min--->140(hald 2 min)
         Detector O: PlD
                                  Detector is ELCD
* Misc. Information:
                                          lotis
Starting Delay: 0.00
                                Endand retention time: 15.00
Area reject:
              (1)
                                One sample per Olioz sec.
                 1.00
Amount injected:
                                Vilution factors
                                                 1,00
                 1.00000
Sample Weight:
```

 RET TIME	PEAK Name	CONCENTRATION in	NORMALIZED CONC	AREA	HEISHT	AREA/ HEIGHT B	REF L PEAK	% DELTA RET TIME	CONC/AREA
3.675 T 5.199 T		237.2445 250.3743	48.6537% 51.3463%	69351 63843	8271 9617	8.4 6.6		() ()	3.4209E-03 3.9217E-03

TOTAL AMOUNT = 487.6189

Data File = G:G25015.PTS Printed on 12-22-1989 at 16:33:48
Start time: 0.00 min. Stop time: 16.00 min. Offset: 0 mv.
Low Value: 72 uv High Value: 9691 uv Scale factor: 1.0

Areas, times, and heights stored in: 6:625015.ATB

13/2 / 47 Paily sulthantion thather Ender

波·波·波·波·波·罗·· 有种医台 - 产生时间积为 T - 产生的的 T - - 年本家家这家家家

* Sample Name: cce-tca etd 250opb · Data Fale: 0:168 A8 * Date: 12-22-1989 %1:52:39 Method: AVOÁ * Interface: 16 Cyclet: 8 Operator F.S Channelt: C Visit: M.A. * Starting Peak Width: 2 Threshold: .25 Area Threshold: 10 * Instrument Type: varian 3400+P&T Column Type: db-624 Bolvert Description: * Conditions: 40C(hold 4 min)--->10C/min--->140(hold 2 min; Detector O: PID Detector is ELCD * Misc. Information: Starting Delay: 0.00 Run Time: 15.00

Pk No.	Ret Time	Hesk Area	Area **	13 L.	Heak Ht.	Normalized %	Arew/ Heigni
1.	1.625	1942	1,4417	j	25 A	1.820	80.7
7	3.305	437	0.3242	Ó	83	0.409	5.5
Z.	4.094	23670	17,5748	(b)	3505	22,188	5.6
4	5.129	106677	79.2077	άp	18584	100.000	5.7
5	7.067	305	0.2264	Ś	59	.0.,286	5.1
6	7.857	1224	0.9087	ó	259	1,147	4.7
7	9.049	120	0.0890	45	35.22	0.112	3 -8
8	9.447	30	0.0224	ć)	i. <u>i</u> .	0.028	2.5
· P	9.996	i, sido	0.1081	έş	.54	0.137	4.3
10	10,132	5 7	0.0425	á	3.7	0.054	3.4
TT	12.888	7.5	0.544	Ć:		0.069	3.7

Total Area: 134A60 Area Reject: O One sample per 0.102 sec.

```
axxxx HXTERMAL BTANDARD JABLE XXXX
REBERRESESESESESESES LECTED 100:05 Version 5.1 AFRESESESESESESESESESESESESESES
† Eample Name: toe-toe std 200000
                                        Data File: U:/CE A8
* Date: 12-22-1989 81:52:39 Method: AMBA 12-21-1989 14:50:49 # 116
* Intertace: io Cycle#: 6 Uperator R.P Channel#: 0 Vial#: N.A.
* Starting Neak Width: 2 Threshold: .25 Area Threshold: 10
Instrument Type: Varian 3400+PxT
                                Column Type: db-624
           Bolvent Dascription:
 Conductions: 40C(hold 4 min)---/10C/gin---/140(hold 2 min)
          Detector 0: 810
                                     Detector 1: ELCO
% Masc. Intermation:
                                              1 10 to 1 2
Bharting Dalays 0.00
                                   Ending retention time: 16.00
Anes resects
                                   One sample per 0.102 sec.
                  1. . (4)
Amount injected:
                                    Dilution ractor: 1.00
Samole Weicht:
                  1.00000
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PEAK RET
             CONCENTRATION in
                     WORMALIZED
                                     AREA/
                                           REF
                                                   7 DELTA
BHAM PHIS HUM
                                 HEIGHT HEIGHT SL
                                           PEAK
                                                   SET TIME
 4 5,129 TCE
                                                         2.3108E-03
                 246.4833
                      100,0000%
                             108677 18584 5.7 6
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TOTAL AMOUNT =

246.4833

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% Sample Mame: tce-tca =td 250ppc
                                  jeta File: G:UCE jab
* Date: 12-22-1989 51:52:39 Method: SVD4
* Interface: 16 Cycle#: 8 Operator 8.P Channel#: 1 Viait: N.A.
% Starting Peak Width: 5 Threshold: I Area Threshold: 19
# Instrument Type: varian S400+P&F - - Lolumn Type: db-624
        Bolvent Description:
# Conditions: 400(bold 4 sin)--->t00/min--->t40(bold 2 min)
         Detector O: P1D
                                General is ELCO
# Misc. Information:
                                Lotas
Etortana Oplava 0.00
                               For Fime: 16.00
                   Area 8 Feak
                                Normalized Area/
        1 THE 68 P.
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Mo.	Time	Area	% i		Ht.	***	Height	
1	1.733	2313	1.3685 9	2	483	3.1.28	4.8	
	2.137	2905	1.7183 3		485	3.715	do a Ci	
15.	3.373	6770	4.0167 2	2	1117	9.152	6 . i.	
4	3.537	74189	.43.8702 1	2.	763.1	300.000	7.7	
	310	15363	9.0889 1	2	1739	20.,708	8.8	i
45	5.160	65804	38.9295 2	2 1	.01.68	88.697	6 a 6	
7	7.884	1570	0.9878 3	2	304	2,251	5.5	
	•							
Testal	Ayraman s	1.4903.4	Armana Pera	n esem n		mayor China	sa, za znimi i kaj i misaj en	0.102 sec.

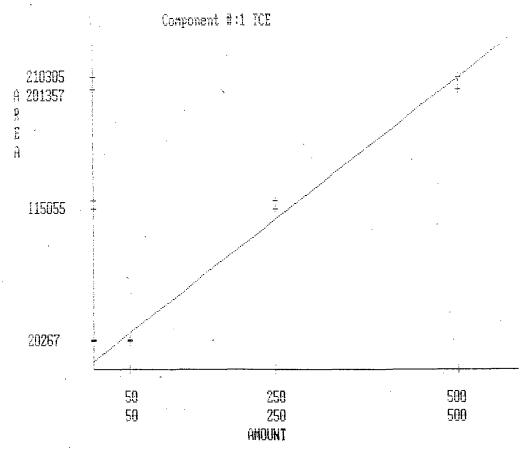
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awakk EXTERNAL STANDARD TABLE WAKK
以家主义共主席京亲来来来来来来来来来来。 1.2-21-1.569 - 1.5 a.O.C.a.L.O. (Vertiendo) - 5 a.L. 家东非常来来来来来来来来来来来来来来来来
& Samole Name: tce-tca std 250opb
                                    vata <u>File: W:UCE A8</u>
/ Oste: 12-72-1989 61:52:39 Method: BVOA 12-21-1989 14:54:42 0 106
s interface: 16 Cycle#: 8 Doerator R.P Channel#: i Visi#: N.A.
s Starting Peak Width: 5 Threshold: 1 Area Threshold: 10
instrument Typer varian 2400+P&T
                             Column Type: db-624
          -Solvent Descriptions
% Conditions: 400(hold 4 min)--->100/min--->140(hold.2 min)
a Detector O: Pib
                                  Detector to SLUD
W misc. Information:
                                          10411
Startung Delay: 0.00
                               * Ending retention time: 15.00
anga nagados T
                                One sample per 0.102 sec.
                 (i.e. (56)
                                 Dilution factor: 1.00
Amount logecteds
Sample Weights
                 1.00000
```

FEAK DUM	RET EMIT	PEAK NAME	CONCENTRATION in	NORMALIZED JONG	AREA	HEIGHT	AREA/ HEIGHT 8L	REF PEAK	% DELTA RET TIME	CONC/AREA
	.3.587 5.163		255,1736 258,3803	49.5878% 50.3122%	74189 65804	9511 10168	7.7 2 5.5 2	4 6	ψ.	3.4395E-03 3.9265E-03

FOTAL AMOUNT = 513,5540

Children ich Macs Ecc-TOA

Hethos AVCA
Sample ATX
Coerator K.F.
Aun date iz-Zi-1987 14/50:47 version: 126
Arinted on 12-21-1985 41 14:55:07
Straight Line fit

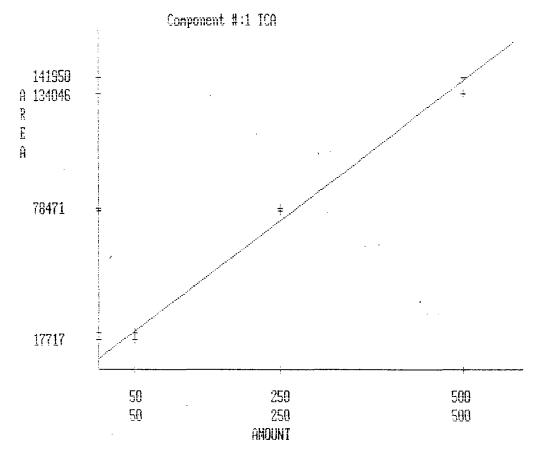


Component L = TCE EXTERNAL STANDARD CALIBRATION

Area Amount	= 4.0 = 2.4450			Am Ar		+ 5.8666E+03 + -1.4344E+01
Y :::	<u>store</u>		'A'.		INTE	ROEPT
/s	500.00	Z	01357			
·	500.00	12	10305			
- 1/2	250.00	1.	15055			
- 1	250.00	<u>i.</u>	21570			
2	50.00		20267			
1.	50.00		21035			

R squared = 0.9891

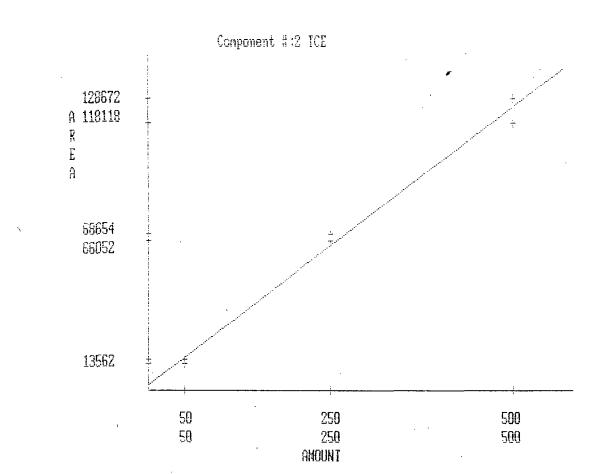
Metood 890A Sample GTX Operator R.P. Run date 12-21-1989 14:54:42 version: 106 Printed on 12-21-1989 AT 14:56:02 Straight Line fit



Component L = TCAEXTERNAL STANDARD CALIBRATION AREA

LEVEL AMOUNT

```
50.00
                      17717
         250,00
                      77316
 *...<u>i</u>.
         250,00
                      78471
 ::::;i
         500.00
                     141950
         500.00
                     134046
         SLOPE
                   + INTERCEPT
        = 2.6989E+02 % Amount
                                     + 5.3212E+03
-mount = 3.7053E-05 }
                            Area
                                    4 -1.9716E+01
P squared = 0.9922
```



Component 2 = TCE EXTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA		
***************************************		A		
1.	50.00	11946		
	$\mathbb{O} \left(\mathbb{O}^{(n)} \cap \mathbb{O} \right)$	13542		
.55	250.00	68654	(
4	250.00	66052	1	
5	500.00	128672		
Ćo	500.00	118118		
Υ	= SLOPE	# X 4	or the transfer of the transfe	

R squared = 0.7919

N. Control of the Con

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Only Californian STD

untour radirected to lot.

0-16 Min Scale: 50 MV Ch.A. 50 MV Ch.B tco-tca std 200ppb Processed: 12-21-1969 14:35:58, seament 1. cycle 8 RAW DATA SAVED IN FILE 0:TCE_A8.PTS Second Channel Stored in 0:UCE_A8.PTS

XXXXXXX AREA PERCENT REPORT XXXXXXX

Starving Delay: 0.00 Run Time: 16.00

nk No.	Ret Time	Peak Area	<i>ia mes m.</i>	Peak Ht.	Normalize %	d Area/ Height	
i i.	1.625	1,574.12	1.4417 :	3 24	1.620	20.9	
M	3.305	437	0.3242 8	5 8 3	0.409	53	
25	$\mathcal{L}_{V-W}^{l}(\mathbb{Q})\stackrel{\mathcal{L}_{W}^{l}}{\longrightarrow} \mathcal{L}_{V}^{l}$	23670	li/.5748 a	5 3606	22.198	ట్ - ట	
1.	11 - 4 - 12 AT	106677	79.2077 8	5 18584	100.000	5.7	
Ö	4.06F	305	0.2264 3	5 50	0.784	# 1.	
()	7.857	1224	0.7087 3	5 259 ¹	1.147	4. 7	
7.7	4.O49	.000	0.0890 8	5 312	0.112	3.8	
5	·哈克森斯罗	.50	V.0224 3	5 1. J.	0.028	2.8	
.9	9 . 99A	144	0.1081 8	5 .54	0.137	4.4.3	
2.0	1. O = 1. 35 A.	5 AV	0,0426 8	5. 1.7	0.054	3.4	
L	12.058	7 17 ×	0.0544 3	, 120	April (Deiny)	in the second	
Echa.	j Armeas	1.346b0	Area Re) ects	o Gme	sample per	0,102 se

KKREK EXTERNAL GTANDARD TABLE KKKK 本名家家家家事家家家家主席本家事者家名事。《见一记主一主·号号》《主传》36台》44年,Vientelten,"bist"。由家集家老家家家家家家家家家家家家 Sample Name: tce-tca std 250ppb Date Frie: U:FOE A8 1 Date: 12-32-1989 81:52:33 Method: AVOA 12-21-1989 13:48:10 # 115 # Interface: 16 Cyclef: 8 Operator A.A. Channelf: 0 Vial#: N.A. # Starting Peak Width: 2 Threshold: .25 Area Threshold: 10 Golvent Description: % Concettens: 400(hotd + min)--->100/min--->140(hotd 2 min) Detector O: PID Detector is ELCS * Disc. lorormation: loti: Starting Delay: 0.00 Ending retention time: 16.00 Anes regects One sample per 0.102 sec. 1.00 Amount injected: Dilution factor: 1.00 Sample Weight: 1.00000

	TER EMIT	PEAK NAME	CONCENTRATION in	NORMALIZED CONC	AREA	HEIGHT H	AREA/ HEIGHT _, BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	.5.129	TCE	247.7459	100.0000%	106677	18584	5.7 6	4	; ()	2.322 4E -03

TOTAL AMBUNT = 247,7459

the particle for the first and the season of the first of

```
* Samp/e Mane: Coé-toa etd 250ppb
                              i)ana Filmi B:UCE 48
# Date: 12-22-1989 61:52:39 Method: EVGA
# Interface: 16 Gycle#: 8 Goerator R.P Channel#: 1 Viol#: N.A.
; Starting Yeak Wigth: 5 Threshold: 1 Area Threshold: 10
z instrument Tymes varian 3400+889
                        Column (vpe: cb-824
        - Solvent Description:
* Conditions: 400(hold 4 cir)--->:00/min--->:40(hoid o min-
        Detector O: PID
                           - Deurotor to ELSC
a Place Commentations
                                  1 0000 200
Checking Delevi 0.00
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Ak No.	Ret 720e	Paak Area	Arwa B % L	Peak Ht.	Mormalized %	Ameer Helcho	
	1.439	2213	1,2585 2	483	T. 4 1 1 8	4.8	
73	2.1.37	2905	1.7193 2	485	3.915	ė.O	
 *		6790	4.0167 2	1.1.1.7	9.152	S.A.	
ļ.	3.587	74189	43.8902 2	9611	100.000	77	
15	3.810	15353	9.0889 2 [°]	1.739	20.708	8.8	
4.7	5.163	65804	38.9295 2	10163	28.697	5.5	_
÷	7.586	1670	0.9878 2	304.		5.5	
fotal	6-4 P** (\$\) AA ()	169084	Area Sede	cta	o One s	ample per	0.102 ss

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www.wiscomens.com.winder.com.winder.com.winder.com.winder.com.winder.com.wide.com.winder.com.wide.com.winder.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.com.wide.co
本国家京苏南京南南区南南区市南京市南南南南 "上层一层美一宝乡一<u>去少疆乡"。江州市《台)()</u> 2000年年史西西,"与一"之,江南南苏南南南南南南南南南南南南南南
3 Geople Mame: Ace-tos and 250ppb
                                                                                                                                   * Cate: 12-22-1789 61:52:39 Method: 8704 12-21-1789 14:07:04 # 105
# Starting Peak Width: 5 Threshold: 1 Area Threshold: 10 .
☼ Instrument Type: varien 3400±P&F - 1 Column Type: db=624
                                     Solvent Description:
家
* Conditions: 40d(hold + min)--->u0C/min--->140(hold Z min)
                                Detector Os PID
                                                                                                                       - December 1: ELSO
# Misc. Information:
                                                                                                                                                     lotin
Stanting Owlass 0:00
                                                                                                                     Ending recention time: 15.00
Area reject: O
Amount injacted:
                                                                                                                     One sample per 0.102 sec.
                                                   1.00
                                                                                                                     Dilution factor: 1.00
Sample Wedgint:
PERK RET
                     REAR
                                          CONCENTRATION in
                                                                          NORMAL1ZED
                                                                                                                       AREA/
                                                                                                                                              SEF
                                                                                                                                                                       : DELTA
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49.0585% 74189

50.9415% 65804 10168

247.3399

155.8330

504,1779

7.7.2

5.5.2

7611

4

ė

3.3339E-03

0 3.9030E-03

4 3,587 TCA

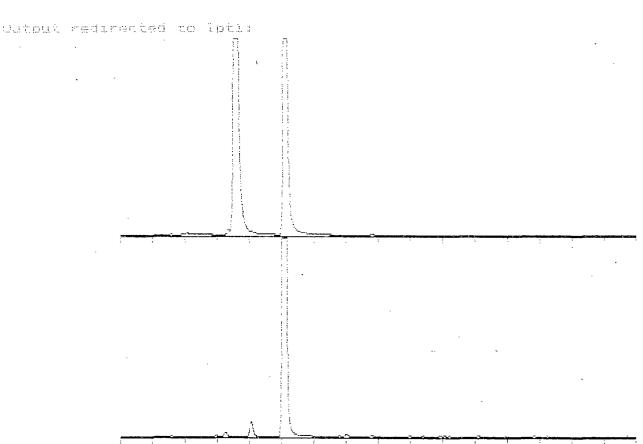
á 5.163 TCE

TOTAL AMBUNT =

Chilip Check 57D

Areas, times, and seconts stored to: 0:ULE_A8.ATR pata Fire = 0,002 A6.878 Printed on 10-21-1989 at 14:38:37 Start time: 0.00 min. Stop time: 16.00 min. Offsets \$ m∨ ₃ Law Value: 72 uv High. Value: 10242 uv Scale factor:

500 PP JOE-TON



O-16 Min Gcále: 50 MV Ch.A. 50 MV Ch.B tce-to: std 500ppb Processed: 12-20-1989 16:55:53, seament 1, cycle / RAW DATA SAVED IN FILE G:TCE A/.FTS Second Channel Stored in W:UCE A/.PTS

****** AREA PERCENT REPORT *****

A Mime. Intormation:

Unime. Intormation:

Unime. Intermation:

Unime. I

Starting Oalav: 0.00 Hun Time: 16.00

P.K	Ret:	Peak	Arma	R	Peak	Normalized		•
Nyou	Cime	Area	7.	i	Ht.	/ n	Height	
	1.569	2127	1,0238	5	2.5	 1.057	92.6	
.23	경하실시간	90	() _ () 4433 j	6	973.475 211.411	0.045	4 1.	
1.2 1.15		510	0.2934	455	108	0.303	5.6	
\mathbb{A}^{n}_{p}	4.065	2634	1,2666	6	368	1.308	7.1	1
	5.081	201357	96.8204	Ċэ	32150	100.000	6.3	
-5-	7.007	\$OO	0.1925	6	70	0,199	5.7	
.7	7.738	133	0,0640	6.5	33	0,066	4.0	
÷	E 9779	1.45	0.0698	6.7	37	0.072	3.7	•
Sep.	Wally II	39	o.oley	Ó	1.3	0.020	$S_{-s}(0)$	
149		80	0.0386		2.10	0.040	3.7	
1.1.	10.059	92	0.0394	do	23	0.041	to an Notae and	
) 2	10.197	47	0.0235	45	1.5	0.024	3.3	
1.5	LL-101	7.7	0.0380	Ó	22	0.039	3.5	
3.4	12.811	141	0.0680	6		0.070	4.1	
Front a	d Arwar	207776	Area (8)	e i e	er for	O One :	sample one	0.102 900.

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asagagagagagagagagaga tu-20-1969 log56s40 version s.l $saasagagagagagagagagagag
& Semple Wanner toomica etd 500ppb
                               Data Fale: D:JUE A7
r internace: io Cyclet: / Operator R.P Channelt: C - Vialt: N.A.
# Starting Feak Width: 2 Threshold: .25 Area Threshold: 10
Solveni Cescription:
□ Conditions: 400(hold 4 min;--->100/min--->140(hold 2 min)
Z Cetector 0: PlD
                            Cetestar is (dCl)
# Mareca Informacion:
                                    机造电压 医
Starting Delay: 0.00
                           Ending retention time: 15.00
Anea rejects
                           One sample per 0.102 sec.
Amount injected:
                           Dilution factor: 1:00
               1.00000
Sample Himlight:
PEAK RET PEAK
                             AREA/
          CONCENTRATION in MORNALIZED
                                  REF
                                       % DELTA
HIM TIME NAME
                  CONC
                          HEIGHT HEIGHT BL
                                  PEAK
                                       RET TIME
          anb
                       AREA
```

201357 32150 6.3 6

1.0000E+00

TOTAL AMOUNT = 201357,4840

201357,4840 100,0000%

5 5.081 782

Areas, times, and hetonts stored in: 0:TCE_A7.ATB
Data File = U:TUE_A7.PTS Printed on 12-20-1987 at 16:56:35
Start time: 0:00 min. Store time: 16:00 min. Striset: 0 mv.
Low Value: S2 uv High Value: 32250 uv Scale factor: 1.0

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文家里求多公里身家在家里家庭家事来家家的,其他一定O一手写写的,并在《BB·CB Dennesting Fig. 1 人名多罗斯索克克雷索尔里塞斯塞尔塞克雷塞尔
y Sample Mame: toe-toa std 500opp
                                     Data File: 8:UCE AZ
* Date: 12-21-1789 42:33:05 Method: 8VDA
* Interface: 16 Eycle#: 7 Operator A.P Channei#: 1 Vial#: M.A.
* Starting Yeak Width: 5 Threshold: 1 Area Threshold: 10
# Instrument Type: Varian 3400+F&T
                             Column Type: do-624
          Solvent Description:
& Constitions: 400(hold 4 min)--->t00/min--->t40(hold 2 min)
y Detector O: 910
                                   - Secentor is ELCO
a misc. Inhormations
                                            totis
Starting Uplay: 0.00
                                  Run Time: 16.00
```

ek No.	Ret Tine	Peak Area	Area %	i	Feak Ht.	Normalized %	Area/ Height	
1	1.583	153	0.0605		48	0.114 -	5.2	
2.	3.354	4,60	0.2408	13	131	0.492	5.1	
25	3.570	134046	52.7974	2	15272	100.000	S : 63	
: .	55 a 1 (2) 2	118178	46.6913	2	17164	68.116	5.9	4

lotal Area: 202778 Area Reject: 0 One sample per 0.102 sec.

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REPRESENTED TO THE FOREST TO THE PROPERTY OF T
会集团的风景中的基本的基本的电影中的一直是一层的一直使进步。例如1550mm,以进行电影中心。他们在一大的的基本的身体的大学的基本来来来来来来来来。
9 Bamble Mame: tog-tog etd 500cot
                                                                                                                                   Data Hales W. WCE 67
# Starting Peak Width: 5 | Ihreshold: 1 | Area Threshold: 10
* instrument fype: varian 5400+P&T - Column Type: db-624
                                     Solvent Description:
* Conditions: 40C(hold 3 min)--->10C/man--->14O(bold 2 min)
                                  Detector 0: PID
                                                                                                                       Cetector is ELCO
* Miss. Informations
                                                                                                                                                     inti.
Ending retention time: 16.00
Starting Delay: 0.00
Area rejecti
                                                                                                                    One sample per 0.102 sec.
                                                           1.00
Amount insected:
                                                                                                                    Dilution factor: 1.00
                                                             1.00000
Samole Weight:
```

PEAK HUH	FET TIME	PEAK NAME	CONCENTRATION in ppb	MORMALIZED	AREA	HEISHT	AREA/ HEIGHT BL	FEF PEAK \	% DELTA RET TIME	CONC/AREA
-	3.570 T		134046.3120 118118.4840	53.1582% 46.8418%	134046 118118		18.3 2 6.7 2	i)	-2.191 0	1.0000E+00 1.0000E+00

TOTAL AMOUNT = 252164.7970

500 PM TOR- 70A

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dutput redirected to lotis
Unit redirected to lotis
Lucout redirected to lotis
```

0-15 Min Scale: 50 My Co.A. 50 My Ch.B toe-toe sid 500ppb Processed: 12-20-1989 16:/5:29, segment 1, cycle o SAW CATA SHVEO IM FILE OLICE AC.PTS Second Channel Stored in G:UCE_AC.PTS

xxxxxxx AREA PERCENT REPORT *****

```
    Semple Name: ice-tca sid 500ppo
    Data File: G: ICE_A6
    Oste: 12-21-1989 41:12:18 Method: AVUA
    Interface: 15 Cycle#: 5 Operator R.P Channel#: 6 Visi#: N.A.
    Starting Pask Widto: 2 Thrachold: 25 Area Thrachold: 10
```

en Non	Pet Time	Peak Amaa	Area %	19 L	Pmak Ht.,	Normalize No	d Ares/ Height	
.l.	1 . 8/202	1980	0.4307	632 1.17	76	0.943	51 (D) (13 52 (Z) (2)	
11.	3 4 34.43	4.25	0.1994	÷Б	co (8)	0.102002	Para Li	
.5	50 a 4 55 3	210305	98.7349	Ó	25369	300.000	8.3	
. 2.	Daniel (1988)	115	0.0540	50)	130	0.055	*** **********************************	
63	18 m (Y / T)	(# <u>)</u>	0.0405	di.	22.1	0.043	4.4	
C.7	14.1435	33	0.0155	ć.)	1.0	O.Olo	all a dil	
	ARESTA	70	0.0327	ú.	2 19	0.033	3 . Z	•
Teta	l entities	213021	Area 8	mje	C	0 Une	sample per	olioz séc.

RESERVED ETANDARD TABLE WERE aasaasaasaasaasaasa 12-20-1989 lawlawlE Version 5.1 saaasaasaasaasaasaasaa 2 Sample Games Costica ace 500ppb Qeta File: DiTCE As * o name: language agripage agripage meridan methodi AMOA language language asiperés e la las a interrace: 16 Ovciet: 6 Operator 6.8 InShhelf: 0 Vialt: 0.A. 4 Starting Peak Midth: 2: Threshold: .25 Area Threshold: 10 % Instrument Type: Yarian S400+P&T - Column Type: db-624 Molvent Description: \$ Conditions: 40C(botd 4 min)--->10C/min--->1.40(bold 2 min) Jeteckor O: P1D Detector 1: ELUD t Orac, (oronaejon: lotic Starting belay: 0.00 Ending retention times 16.00 One sample per | 0.102 sec. Parks a lime great to j. . ()() Amount injected: Diletzon Tactor: 1.0000 Sample Weight: FEAK RET PEAK CONCENTRATION in WORMALIZED AREA/ REF % DELTA BMAR BMET MUME RET TIME HEIGHT HEIGHT BL FEAK

210305,0310 100,0000% 210305 25369 8.3 6

1.0000E+00

TOTAL AMOUNT = 210305.0310

5 5.153 TCE

REPARKE AREA PERCENT REPORT EXXERSE

```
    Sample Name: tce-tca std 500ppb

                                     Data File: 0:UCE_A6
* Date: 12-21-1989 41:12:18 Method: SVOA
l'Interface: 15 Cyclef: 6 Coeracor R.F Channell: 1 - Ylaif: N.A.
A Starting Feak Width: 8 Threshold: 1 Area Threshold: 10
& Instrument Type: varian 34004F87
                              - Calumn Types db-624
          Solvent Description:
% Conditions: 400(hold 4 min) --->100/min--->140(hold 2 min)
         Jetector O: 200
                                  Detector is ELDD
% Miss. Intormation:
                                           Intla
食富斯辛富泰尔斯塞森高高高来以高基尔富富来来高速率来来来来来来来来,这些大家,我也是是这个人,这些不是这个人,我们也不会不是一个人,我们也不会不是一个人。
Starting Delay: 0.00
                                 Run Time: 15.00
```

No. T	i.me	Area	No.	t	F14:	Normalizec %	Height		I-
).624 4.658	43468 98480	16.0624 36.3904			.,	3-6 7.3		·
S S		128672 - 276520			-		9.0 .mpie per	0.102	

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RAGAR EXTERNAL BRANCARD TABLE KAKKE
今唐书等最弟《老者集书的文集集录集集集》(1911—201—201—2<del>19日</del>伊、王岳李庆区十年倍(Meshelfish) 的。王、中国和墨索莱岛英族英国英语基本基本基本基本基本
a Samble Mamer Ocentra Still 500pp
                                     oata files bullo Ao
a cates its-si-1969 alsib:18 Mathed: 690A liz-20-1969 (A:15:07 4 live
x uniertace: 16 Cyclet: 3 - Operator R.P Channelt: 1 - Viait: N.H.
* Starting Peek Width: 5 | Ihreshold: | Area Threshold: 10
i jnstrument Tyce: verian 34004P&f
                            Column Evpe: db-624
          - Solvant Description:
3 Conditions: 400/hote 4 many--->100/min--->140(hold 2 min)
        Setector O: PID
                                  -vetector ): XLLD
9 Hisc. invermation:
                                    i teri:
Stanting Delay: 0.00 . .
                                 Endina retention time: 15.00
Armes resents
                                 One sample per 0.10% sec.
Amount injected:
                                 Oilution factor:
                                                   L.OO
                 1.00000
Segreta Wertches
```

PEAX WH	TER	PEAK NAME	CONCENTRATION in ppb	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA SET TIME	CONC/AREA
_	7.658 5.187	_	58 479. 7730 128672.1800	43.3541% 56.6459%	98480 128672			2 3	0 0	1.0000E+00 1.0000E+00

TOTAL AMOUNT = 227151.7530

0-15 Min Scale: 50 MV Lh.A. 50 MV Ch.B tce-tca std 50ppb Processed: 12-18-1989 16:08:35. segment 1. cycle U RAW DATA SAVED IN FILE 0: FCE A2.PTS | Second Channel Stored in C: UCE_e2.Pls

****** AREA PERCENT REPORT ****

* Sample Name: tce-tca std 50pob Data File: 6:00E az # Date: 12-18-1789 17:02:34 Method: AVDA a intertace: 16 Cyclet: 2 Operator R.P Channelt: 0 Viale: M.M. x Starting Peak Width: 2 Threshold: .25 Area Threshold: 10 * Instrument Type: Varian 3400+P&T Column Type: db-624 Solvent Description: # Conditions: 40C(hold 4 min)--->LOC/min--->L40(hold 2 min) Detector 0: PID Detector 1: ELCD * Misc. Information: lot1:

Starting Delay: 0.00 Run Time: 16.00

Pk No.	Ret Time	Peak Area	Area %	B	Peak Ht.	Normalized	Area/ Height	
1.	1.576	435	2.0128	5	27	2.067	16.1	
.22	3.188	1.36	0.6275	Ó	33	0.647	4.2	
3	4.993	21035	97.3576 \	6	3757	100.000	5.6	
Total	Area:	21605	Area R	eje	ct:	0 One s	ampie per	O.102 sec.

ga a a a a <u>e e e e e e e e e e e e e e e</u>	masc rable w	aK 346 346 346
/********************* 12-18-1989 16:06:10) Version S.i. akakkakkakkak	*****
X. Sample Name: tce-tca std 50opb * Pate: \k-18-1989 \kappa 17:02:34 Method: AVO		
X setentace: 16 Oycle#: 2 Operator	R.P Channel#: 0 Vial#: N	J.A. W
2 Branking Frak Width: 2 Threshold: .		#
- 医室内室内溶水溶液溶液溶液溶液溶液溶液溶液溶液溶液溶液溶液溶液溶液溶液溶液	************************************	*******
1 instrument Type: varian 3400+PAT	Column Type: 25-624	12.5 12.5
2 Solvent Description:		*
A Conditions: 400(hold 4 min) >100/min	>140(hoid 2 mim)	*
A Jetector Ob Plo	Datector is ELCD	%
a sisc. Intormation:	. ipt1:	ж ж
- 表示表示:京中本家文本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本本	**************************************	******
Starting Delay: 0.00	Ending retention time:	16.00
Armerican medical contract ()	One sample per 0.102 :	5 69 CC .
Pagent unjected: 1.00	Disution factor:	L.00
Sample Weight: L.00000		
FRANCE RET REAK CONCENTRATION IN MORMALIZED	AREA/ REF % DELTA	
1708 TIME GAME pab 1 COMC AREA	HEIGHT HEIGHT BL FEAR RET TIME	CONC/AREA

70791 4M00NT = 0.0000 .

****** AREA PERCENT REPORT *****

Takakakakakakakakakakakaka 12-16-15-15-15-15-15-15-15-15-15-15-15-15-15-	6	* * *
z Samoie Wame: boe-boa sin Yoppb // // // // // // // // // // // // //		W(
* Date: 10-18-1987 17:02:34 Method: 8/0A		\mathcal{K}
3 interface: 15 Oycle#: 2 Operator R.P Channel#: 1	à a	**
& Starting Yeak Width: t Threshold: 1 Area Threshold: 10		龙
· 大汉东北汉王立立京汉汉京市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市市	****	CX #
3 Instrument Type: Varien 3400+P&T - Column Type: db-624		145
Folvent Description:		26
& Conditions: 408(hold + min)>108/min>140(bolo 2 min)		<i>3</i> .
3 Detector 0: 270 Detector 1: EL:00		7.
* Misc. Information: lptl:	*	W
· 南京家店家庭园家市家庭园家庭园家庭园家园园园园园园园园园园园园园园园园园园园园园园园	****	(%
Starting Delay: 0.00 · Run Time: 16.00		

Maria Maria	Ket Time	Paak Amea	Area B X L	Normalized	Arma/ Height	
****	2.459 5.022		54.3926 0 45.6074 2	 100.000 83.848	7 - 12 Av. (21	
locai)) PT 69 (%) \$	26193	Acea Gejer	0 Ume sa	Woje per	orioz secr

tokokoko eletelenel e	MANDARD MABLE XXXX
	5:07:38 Version b.1 S#xxxxxxxxxxxxxxxx
3 Sample Name: tce-tca std 50ppb	Oata File: G:UCE AZ *
	d: BVOA 12-05-1989 16:39:58 # 102 *
# Interface: 15 Cycle#: 2 Cos	erator R.P Channel#: i Viai#: N.A. #
* Starting Peak Width: 5 Thres	•
- 主字宣表区记录内证字还本字记录序记录字字字字或译文字字字字字字表文字	京京京京家家东京市市东京市市大学大学大学大学大学大学大学大学大学大学大学大学大学大学大学
3 Instrument Type: Varien 3400*P&	·
Solvent Description	• •
s Conditions: 400(hold 4 min)>	100/man>140(hoid 2 min) *
2 Seceptor 0: 210	Detector 1: ELCD %
% Hisc. Information:	liptia x x
- \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞塞
	Ending retention time: 16.00
	üne sample per 0.102 sec.
Amount injected: 1.00	· ·
Sample Weight: 1.00000	
	'
FEAK RET PEAK CONCENTRATION IN MORMALIZED	AREA/ REF % DELTA
NUM TEME MAME gob EGNO	AREA HEIGHT HEIGHT BL PEAK RET TIME CONC/AREA
··	

TSTAL AMSUNT = 0.0000

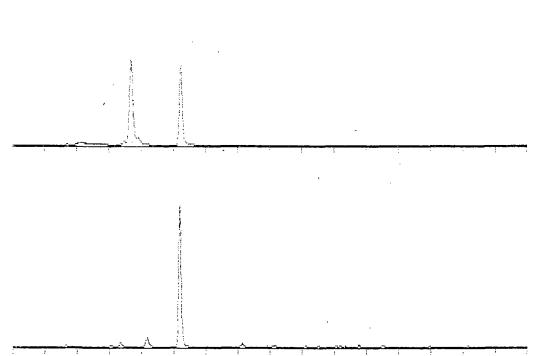
PEAKS NOT FOUND IN 1478 AUN

MAME ADJUSTED RETITIME. REFERENCE PEAK COL4 COL4

Areas, times, and heights stored in: 0:UCE_A2.ATB
Cata File = 6:UCE_A2.PTS Printed on 12-18-1989 at 16:07:30
Start times: 0.00 min. Stop time: 16.00 min. Offset: 0 mv.
Tow Value: 72 uv high Value: 2060 uv Scale factor: 1.0

50 MB TEA-TEE.

manipación restriction divorción o produc-



0-15 Min Scale: 50 MV Ch.A. 50 MV Ch.B tce-tca sto 50ppb | Processed: 12-20-1989 09:36:38, segment 1, avole 3 RAW DATA SAVED IN FILE 0:10E_A3.PT5 | Second Channel Stored in 0:UCE_A3.PT8

THE RESIDENCE OF THE PROPERTY OF THE PROPERTY

		:					
Prk Norv	Reit Vilme	Peak Area	Area %	13 L.	Paak Ht.	Normalized X	Area/ Height
	0.774	1270	5.1075	5	1.2	5.267	97.7
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1 m 11 2 12 14	5.3	0.2112	ć.	1.7	0.259	3.1
ij.	3.0MO	7.9	0.5156	6	20	0.568	4.0
4.4	3.357	499	2,0064	Ø	90	2:462	5.6
	4.12()	1563	6.176412	4.77-	62 GA 15	7.11	7.0
do.	8.198	20267	91.4954	75	3546	100,000	3.7
7	7.131	4.52	1.8592	ép.	79	2.281	5.3
/	7.902	28 -	0.1107	Ó	(r)	0.136	3.3
9	9.103	1.53	0.6152	vi.)	38	0.755	4
20	9.305	88	0.2719	Ó	19	0.334	3.5
Ji.	10.062	<u> </u>	0.4196	Ó	25	0.515	24 - 2 - 3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
九章	10.191	67	0.2711	5	20	0.333	3.4
3.43	10.769	172	()。台学生主	Ś	4.4.	0.848	3.49
1,4	12.962	85	0.3406	(2)	e igazene e in alin	0,418	0.8
To ba	i. Tamwee s	24869	Area R	eje		o One s	ampie po

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waxxxxxx elxitetrophl. Sithmaterophic table in xxxx
与这个音乐文字等多文字文字等写文字等文字,主义一是O一主中册字(Ofris7:23 Venteion 形。i 网络家女女女女女女女女女女女女女女女女女
# Sample Mame: toe-tos std 50ppb
                                r Pata File: GiTGE AS
/ Date: 12-71-1989 27:54:49 Method: AVOA | 12-16-1989 15:00:44 | # | 113
# Interface: 16 Cvcle#: 3 ' Operator H.P Chennel#: 0 Viat#: N.A.
* Starting Peak Width: 2 Threshold: 25 Area Threshold: 10
2 Instrument Type: Varian 3400+847
                               Column Free: db-624
                                                            罴
         - Bolvent Description:
% londitions: 40C(hold 4 min)--->10C/min--->140(hold 2 min)
         Detector O: FID
                                    Detector is ELCD
                                             1:5611
% Masc. (oformation:
Starting Delay: 0.00
                                   Ending retention time: 16.00
Amea meject:
                                   One sample per 0.102 sec.
Amount injected:
                 J. ., (20
                                   Dilution factor:
Bampie Weights
                  J.,00000
PEAK RET
            CONCENTRATION in
                      NORMALIZED
                                     AREA/
       PEAL
                                          REF
                                                  % DELTA
                                HEIGHT HEIGHT BL
```

TOTAL AMOUNT =

0.0000

```
ZEZEFER ZEK PREKCENT KEPERT BEKKEK
```

```
* Sample Name: toe-toa std 50mmb
                             Data Flie: 0:UCE eJ
3 Date: 12-21-1989 27:54:49 Method: 8VDA
* Interface: 16 Cycle#: S Operator R.P Channei#: L Viai#: M.A.
1 Starting Frak Width: 5 Threshold: 1 Area Threshold: 16
i Instrument Type: verian 3400:P&T - Column Type: db-524
 Solvent Description:
V Conditions: 400(bold 4 min)--->100/min--->140(bold 2 min)
 betector of P10
W Misc. intermation:
                                 16714
Starting Delay: 0.00
                         - Run Time: 16.00
```

No.	Time .	Area	и/ . и	<u>!</u>	Ht.	6 2 a	Height
1	2.137	774	2.2861	2	6 5	5.705	11.9
즟.	3.458	599	1.7710	2	1.00	4.419	6.0
125	3.665	_r 7174	21.1982	20	2009	52.697	3.6
₫. 	3.687	7410543	31.1534	2	2164	77.738	A (I)
:	3.902	1190	3.5167	2.	1.75	9.775	6.1
ė,	5.221	13562	40.0747	412	2060	.tooooo	6.0

Peak

學核

Total Area: 33842 Area Reject: 0 One sample per 0.102 sec.

Area 8 Peak Mormalized Area/

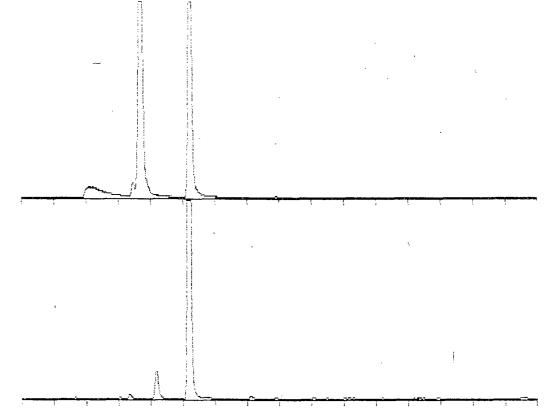
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REPARED TO THE WAR TO THE FOREST TO THE FORE
京京京京京京京京京京京区市区 A TRANSPORT OF STORM OF STORM OF STORM OF STORM OF STORM OF THE STO
3 Sample Name: toa-toa std 50ppb
                                                                                                                                                                                                                         Data File: 6:00E AS
x bate: 12-21-1989 27:54:49 Method: BVOA | 12-05-1989 16:59:58 | # | 102
% (ntarface: 15 Cycle#: 3 Operator R.P Channel#: 1 Vist#: N.A.
4 Starting Peak Widtn: 5 Threshold: 1 Area Threshold: 10
% Instrument Type: Varian S400+P&T
                                                                                                                                                                             Column Type: db-624
# Solvent Description:
                                                                                                                                                                                                                                                                                                                                           W.
$ Conditions: 40C(hold 4 min)--->10C/min--->140(hold 2 min) 
                                                      Detector 0: P(D
                                                                                                                                                                                                    - Detector I: ELCO
* disc. Information:
                                                                                                                                                                                                                                                      lotia
Starting Delay: 0.00
                                                                                                                                                                                               Ending retention time: 16.00
                                                                                                                                                                                               One sample per 0.102 sec.
Acea resect:
                                                                                    ()
                                                                                                 j. "()()
Amount insected:
                                                                                                                                                                                                Dilution factor: 1.00
Sample Weight:
                                                                                                    1.00000
PEAK RET
                                                                     CONCENTRATION in
                                     PEAK
                                                                                                                          NORMALIZED
                                                                                                                                                                                                           AREA/
                                                                                                                                                                                                                                           REF
                                                                                                                                                                                                                                                                                 % DELTA
 NUM TIME
                                                                                                                                 CONC
                                                                                                                                                               AREA
                                                                                                                                                                                   HEIGHT HEIGHT BL
                                                                                                                                                                                                                                          PEAK
                                                                                                                                                                                                                                                                                 RET TIME
                                                                                    apb
     5 .3.902 CCL4
                                                                                         4,2152 100.0000%
                                                                                                                                                                   1190
                                                                                                                                                                                        195 5.1 2
                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                 3.54188-03
```

TOTAL AMOUNT =

4.2152

750 ppm

juinut redirected to loti:



O-to Min Scale: 50 My Ch.A. 50 My Ch.8 tce-tca atd Zb0ppp Processed: 12-20-1989 10:18:55. segment 1. cycle 4 RAW DATA BAVED DN FILE G:TCE P4.F:8 Second Channel Stored in G:UCE_A4.PT8

REPORT REPORT REPORT REPORT

Starting Delay: 0.00 Run Time: 16.00

File	Ret	Pesk	Area	E	Feak	Normalized	Area/
Mo,	fames	Area	9 / / 9	i	Ht.	% .	Height
1.	14037	1966	1.5111		14	1.517 1.	40.4
	3.04E	48	0.0368	ćο	1.4	0.039	3.5
15	3.350.		0.8961	65	37	O # 24 22 4	5.9
44.	4.179	5029	3.8650	<u> 6</u> 5	692	4., 1.345	7.3
b	5,195	121570	93.4379	Ġ	19703	100.000	6.2
Ġ	7.112	. 353	0,2715	éo.	59	0.291	6.0
7	7.88 6	104	0,0800	6	25	0.085	4.3
(3)	9.078	139	0.1066	Ć)	25.25	0.114	$\mathcal{L}_{r=0}^{2}$ \mathbb{Z}_{r}^{2}
φ	9.472	4()	0.0311	(5)	1.12	0.033	3.3
<u>j</u> ()	10.023	88	0.0677	6	21	0,072	21. 2°)
11	10.158	6,5	0.0498	Ġ	19	0.053	3.3
1.2	10.292	44	0.0335	Ó	1.3	0.036	3,4
1.3	1.1.a.196	. 32	0.0242	Ċ	1.2	0.026	,2 , 7
1.4	32.910	1.14	0.0888	/s	. 28	0.095	4.2
figta	i piema a		Area R	eeji ee	omine	O . Ume s	ample cer

```
**** EXTERNAL STANDARD TABLE ****
家来常常在来说《宋本来来来来来来来来来》。主是一是O一主写图写,主意《主写》中40 Verreion 5. 主 "成家来来来来来来来来来来来来来来来来来来来
% Sample Name: tce-tca std 250ppb
                                   Data File: USICE A4
Y Date: 12-21-1989 29:19:17 Method: AVOA | 12-18-1989 15:00:44 | # | 113
x Starting Peak Width: 2 Threshold: .25 Area (hreshold: 10
* Instrument Type: varian 3400+P&T
                            Column Tyne: db-624
 Solvent Vescriptions
                                                      家
\star Conditions: 400(hold 4 min)--->100/min--->140(hold 2 min)
 Setector O: PID
                                Detector 1: ELCD
                                        loti:
# Misc. Information:
Starting Delay: 0.00
                               Ending ratention time: 16.00
                               One sample per O.102 sec.
Area rejects :
            ()
                i. . ()()
Amount injected:
                               Oilution factor:
Sample Weight:
                1.00000
      PEAK
           CONCENTRATION in
PEAK RET
                                 AREA/
                   NGRMAL1ZED
                                      REF
                                            % DELTA
           ըրե
MUM TIME
                             HEIGHT HEIGHT BL
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TOTAL AMOUNT =

0,0000

RRREA PERCENT REPORT REARKE

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本本本本的本本本本本本本本本本本本本本本 12-20-1909 10:21:21 Veneton 5.1 本本本本本本本本本本本本本本本本本本本本本本本本本本
* Sample Mame: tce-tca std 250opb
                                    Data File: G:UCE A4
* Date: 12-21-1989 29:19:17 Method: BVOA
* Interface: 16 Cycle#: 4 Operator R.P Channel#: 1 Vial#: N.A.
* Starting Feak Width: 5 Threshold: 1 Area Threshold: 10
* Instrument Type: varian 3400+P&T
                             Column Type: db-624.
  Solvent Description:
* Conditions: 40C(hold 4 min)--->10C/min--->14O(hold 2 min)
         Detector O: FID
                                  Oetector La ELCO
* Ausc. Intormation:
                                          lotia
Starting Delay: 0.00
                                Run Time: 16.00
```

Pk Mo.	Ret Time	 Peak Area	Area %	B !	Peak Ht.	Normalized %	Area/ Height
i 2. 3	2.111 3.465 3.681	2377 2507 77316	1.7058 1.6600 51.1844	2	275 389 9017	3.333 3.243 100.000	9.4 6.5 8.6
4	5.214	58654	45.4498	2	9458	88.796	7.1

Total Area: . 151055 Area Reject: 0 One sample per 0.102 sec.

is a a a a be not the following the second of the contract of 这家来来来来来来来来来来来来来来来来。主皇一皇〇一王989、王〇王2王王22、Verneton, E.J. 李太宗来来来来来来来来来来来来来来来来来 Data File: 6:UCE 04 \$ Sample Name: toe-toa std 250ppb % Date: 12-21-1989 29:19:17 Method: BVDA | 12-05-1989 16:39:58 | # | 102 * Interface: 15 Gycle#: 4 Goerator R.,P Channel#: 1 Vial#: M.A. % Starting Peak Width: 5 Threshold: 1 Area Threshold: 10 † Instrument Type: Varian 3400+P&T Column Type: db-624 Solvant Description: 28 # Gonditions: 400(hold 4 min)--->100/min--->140(hold 2 min) Oetector O: PIO * Misc. Intormation: lotis Starting Delay: - 0.00 Ending retention time: 16.00 Area reject: 0 One sample per 0.102 sec. Amount injected: 1.00 Dilution factor: Sample Weight: 1,00000 PEAK RET PEAK CONCENTRATION in NORMALIZED AREA/ NUM TIME HEIGHT HEIGHT BL RET TIME

REFERENCE PEAK

CCL4

TOTAL AMOUNT =

MAME

(701.4

PEAKS NOT FOUND IN THIS RUN

ADJUSTED RET.TIME.

3.85

Arese, times, and heights stored in: 0:UCE_A4.ATB
Data File = 0:UCE A4.PTS Printed on 12-20-1989 at 10:21:35
Start rime: 0.00 min. Stor time: 14.00 min. Offset: 0 mv.
Low Value: 72 uv High Value: 9733 uv Scale factor: 1.0

250 PM

dubout redirected to iptl:

0-15 min Scale: 50 My Ch.A. 50 My Ch.B tce-tca std x50opo Arocessed: 12-20-1989 11:00:44, segment 1. cycle 5 RAW CAYA SAVEC IN FILE G::CE_A5.FTS | Second Channel Stoned in G:UCE_A5.FTS

और और अंद्र अंद्र और किर और और PERCENT REPORT 360 360 360 360 360 360 360 360

```
********************* 12-20-1989 11:01:28 Version 5.1 ***************
å Sample Name: toe-toa std 250ppo
                                      Data File: G: (CE_A5
& Date: 12-21-1989 30:42:56 Method: AVGA
* Interface: .15 Cycle#: 5 Operator R.F Channel#: 0
* Starting Peak Width: 2 Threshold: .25 Area Threshold: 10
à Instrument Type: Varian 3400+P&T
                               Column Type: db-624
```

Run Times 16.00

*Stanting Delay: 0.00

rk No.	Ret Fime	Peak Area	Area %	£	Peak Ht.	Normalized %	Area/ Height	
<u></u>	1.455	1929	1.5997		7.3	1.677	87.7	
2	S.OZS	රා රා	0.0545	Ó	LE	0.057	Daine	
.5	3.339	553	0.4586	άs	· LOS	0.481	5.5	
72.	4.106	2150	1.7824	40	24.5	1.868	And the Co	
-5	5.170	115055	95,4049	ćσ	19799	100.000	5.8	
, ditt	2.024	331	0.2745	ćo	ω Ω	0.298	5 . 3	
7	7.845	42	0.0345	Æ:	1,13	0.036	M = 20	
5.3	9.024	1,23	0.1017	65	31	0.107	3. 9	
47	9.420	34	0.0285	æ	1.2	0.030	3.0	
ĹO	9,969	4.7	0.0367	Ó	Lä	() = ()41	3 a C	
1.1.	10.100	64	0.0532	έŋ	20	0.056	3.2	
1.33	10,244	31	0.0427	65	1.6	0.045	3,3	
J. 35	11.130	.3.3	0.0272	45	1. 1.	0.028	2.9	
1, 4	12.545	A de Car La dia Car	0.0987	5	$I_{i}^{\prime\prime}(i_{i})_{i,j}^{\prime\prime}$	0.108	4.0	
Contra	l Areas	120596	Aree C	m 1 er	ent to s	O One e	ample per	o.to2 sec.

```
rrretario de la compansión de la compans
& Sample Name: Scenica std 250ppb
                                                                                                                                    Data File: Usi(E A5
y Date: 12-21-1787 30:42:56 Method: AVCA | 12-16-1787 (5:00:44 | # | 113
v interfaces is Gyslet: 3 - Uperator R.P Channeit: 0 - Visit: M.A.
* Starting Peak Width: 2 | Threshold: .25 Area Threshold: LU
* Enstrument Type: varien 5400+P&T
                                                                                                  Column Pyde: ab-824
     Solvent Description:
% Conditions: 40C(hold 4 min)--->10C/min--->14O(hold 2 min)
7 Detector Or Plb
                                                                                                                          Datector 1: ELCO
Y Misc. Incommetion:
                                                                                                                                                       igotta
Starting Delay: 0.00
                                                                                                                    Enging recention time: 18.00
                                                                                                                    One sample per 0.102 sec.
Periode in exilencial
                                                            L.OO .
Amount Injected:
                                                                                                                    Dilution factor:
                                                             1.00000
Sample Weights
                                                                                                                                                                      % DELTA
REAK RET
                       PEAK
                                         CONCENTRATION in
                                                                          MORMALIZED
                                                                                                                        AREA/
                                                                                                                                             REF
                                                                                                             HEIGHT HEIGHT BL
```

TOTAL AMOUNT =

0.0000

******* AREA PERCENT REPORT ****

```
3 Sample Name: tce-tca std 250ppb
                          Data File: 8:00E_A5
& Date: 12-21-1989 30:42:56 Method: BVOA
a Interface: i6 Cycle#: 5 Operator R.P Channel#: 1 Vial#: N.A.
* Starting Peak Width: 5 Threshold: 1 Area Threshold: 10
Solvent Description:
# Conditions: 400(hold 4 min)--->100/min--->140(noid 2 min)
      Detector Of PIO
& Misc. Information:
                              ipti.
Starting Delay: 0.00
                       Run Cime: 16.00
```

Pk	Net	Peak	Area	Ð	Feak	Mormalized	Arma/	
Plo.	lime	FA 6 無 19	*/ /=	<u>l</u>	ş-(dr ,	7.	Height	
<u>:</u>	2.118.	977	0.6678	2	74	1.245	13.2	
2.	3.436	0.50	0.5682	2	142	1.060	5.9	
25	3.650	78471	53.6253		9226	100.000	8.5	
.ij.	5.192	66052	45.1387	2	10251	34.174	5.4	
normal day at the		a Wile torior a			:		:	er en

**** EXTERNAL STANDARD TABLE **** Data File: G:UCE A5 3 Sample Name: toe-toa std 250cob ? Date: 12-21-1989 50:42:56 Method: BVOA | 12-05-1989 16:39:59 | 4 | 102 * Startino Peak Width: 5 Threshold: 1 Area Threshold: 10 % Instrument Type: varian 3400+P&T Column Type: ob-624 # Solvent Description: * Conditions: 400(hold 4 min)--->100/min--->140(hold 2 min) » Detector 0: PID ر Detector 1: ELCD # Misc. Informations ipti: Ending retention time: 16.00 starting Delay: 0.00 Area reject: . O One sample per 0.102 sec. j.,()() Amount anjected: Dilution factor: 1.00 Sample Weight: 1,00000 PEAK RET PEAK CONCENTRATION in NORMALIZED AREA/ REF % DELTA HUH TIME HEIGHT HEIGHT BL

REFERENCE PEAK

CCL4

TOTAL AMOUNT =

NAME

CCL4

PEAKS NOT FOUND IN THIS RUN

0.0000

ADJUSTED RETATIME.

3.85