**U.S. Department of the Interior**
**NATIONAL BIOLOGICAL SERVICE**
**Midwest Science Center**
**Organic, Biological and Physiological Chemistry**
**4200 New Haven Road, Columbia, Missouri 65201**

Final Laboratory Report FY-96-30-30

# GC/HRMS ANALYSES of NON-*ortho*-CHLORO-SUBSTITUTED POLYCHLORINATED BIPHENYLS in DUCKS and TREE SWALLOWS, TREE SWALLOW EGGS, and INSECTS from the Hudson River Area

**WORK UNIT #30096**

September 20, 1996

Submitted by:

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Approved By:

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To: Ms. Anne Secord
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**Subject:** Measured concentrations of non-*ortho*-chloro-substituted polychlorinated biphenyls (PCBs) in ducks and tree swallows, tree swallow eggs, and insects from the Hudson River Area. 1995.

**Sample History:** These samples are part of the study to track the movement of PCDDs, PCDFs, and dioxin-like PCBs. Birds, bird eggs, and other food-chain samples were collected from four primary sampling sites and another control site and were received from Anne Secord. Eggs had been weighed within a day of collection and were used as egg fresh weights. The samples were assigned individual data-base identification numbers and the descriptions were entered into a sample log. Labels on the sample containers were checked and reconciled with the packing list. Samples were stored frozen at -20°C in their original containers until sample processing began.

**Analytical Preparation Methods Summary:** The eggs were prepared according to MSC SOPC 5.143 (1). The samples were blended, and an aliquant (typically 10 g) was homogenized with three-to-four times its weight of anhydrous sodium sulfate.

Additional 18 quality control samples were also prepared and spiked: three samples in triplicate, three procedural blanks, one chicken egg (matrix) blank, two bluegill (matrix) blanks, one chicken egg spike, two bluegill spikes, and three positive control carp samples (6806, Saginaw Bay, Michigan). Approximately 10-g aliquants of the samples were homogenized with three times their weight of

Table 1. Non-o-Chloro-Substituted PCBs (pg/g) in Birds, Bird Eggs, and Insects from the Hudson River

August 8, 1996
Work Unit 30096

GC/MS Sets: N30PCB and N31PCB
Dates: 7/23/96 and 8/15/96

| NFCR Number: | Submitter Number: | Sample Description: | GC/MS Run No. | Non-o-Polychlorinated Biphenyls: Tetra: 3,4,4',5-TCB (81) | Tetra: 3,3',4,4'-TCB (77) | Penta: 3,3',4,4',5-PeCB (126) | Hexa: 3,3',4,4',5,5'-HxCB (169) |
|---|---|---|---|---|---|---|---|
| 12402-A | HUDWDA-4 | 2 Wood Duck Hen Composite, Replicate A, Near Special Area 13/Saratoga N.H. Park,25 g | 30-29 | 240 | 7,200 | 151 | 6.3 |
| 12402-B | HUDWDA-4 | 2 Wood Duck Hen Composite, Replicate B, Near Special Area 13/Saratoga N.H. Park,25 g | 30-30 | 238 | 7,310 | 160 | 6.6 |
| 12402-C | HUDWDA-4 | 2 Wood Duck Hen Composite, Replicate C, Near Special Area 13/Saratoga N.H. Park,25 g | 30-31 | 239 | 7,360 | 157 | 6.5 |
| 12403 | HUDMLE-4 | Mallard Egg Composite, Saratoga N.H. Park, 10 g | 30-32 | 1,100 | 15,400 | 476 | 8.4 |
| 12404 | HUDMLA-3 | 2 Mallard Hen Composite, Near Saratoga N.H. Park, 25 g | 30-34 31-3 | 6,400 | 46,000 | 2,020 | 15 |
| | | Tree Swallow Eggs, Chicks, and Adults: | | | | | |
| 12405 | TS-E100 | 3 Nest Egg (Tree Swallow) Composite, Lock 8, Reference Site, 10 g | 30-35 | 2,900 | 50,200 | 2,340 | 34 |
| 12406 | TS-C100 | 3 Nest Tree Swallow Chick Composite, Lock 8, Reference Site, 10 g | 30-36 | 700 | 12,400 | 376 | 8.4 |
| 12407 | TS-A100 | Tree Swallow Adult Female, Lock 8 Reference Site, 10 g | 30-37 31-4 | 16,000 | 220,000 | 5,900 | 120 |
| 12408 | TS-E204 | 1 Nest Tree Swallow Egg Composite, Remnant Site 4, Nest 204, 2.51 g | 30-39 31-14 | 17,000 | 220,000 | 4,820 | 32 |
| 12409 | TS-C204-5 | Tree Swallow 5-day old Chick Composite, Remnant Site 4, Nest 204, 7.32 g | 30-40 31-6 | 6,900 | 120,000 | 1,740 | 8.4 |
| 12410 | TS-C204-10 | Tree Swallow 10-day old Chick Composite, Remnant Site 4, Nest 204, 10 g | 30-41 31-8 | 21,000 | 230,000 | 3,440 | 9.1 NQ |
| 12411 | TS-C204-15 | Tree Swallow 15-day old Chick Composite, Remnant Site 4, Nest 204, 10 g | 30-42 31-9 | 36,000 | 480,000 | 5,950 | 16 NQ |

Table 1. Non-o-Chloro-Substituted PCBs (pg/g) in Birds, Bird Eggs, and Insects from the Hudson River

August 8, 1996
Work Unit 30096

GC/MS Sets: N30PCB and N31PCB
Dates: 7/23/96 and 8/15/96

| NFCR Number: | Submitter Number: | Sample Description: | GC/MS Run No. | Non-o-Polychlorinated Biphenyls<br>Tetra:<br>3,4,4',5-TCB (81) | <br><br>3,3',4,4'-TCB (77) | <br>Penta:<br>3,3',4,4',5-PeCB (126) | <br>Hexa:<br>3,3',4,4',5,5'-HxCB (169) |
|---|---|---|---|---|---|---|---|
| | | Insects: | | | | | |
| 12396 | HUDBUG 2 | Odonates, Remnant Site 4, 9.44 g | 30-19 | 1,470 | 25,600 | 650 | 10 |
| 12397 | HUDBUG 3 | Odonates only, Special Area 13, 10 g | 30-20 | 230 | 10,800 | 376 | 6.8 |
| 12398 | HUDBUG 4 | Odonates only, Saratoga Natl Historic Park, 10 g | 30-21 | 53 | 3,600 | 96 | 4.8 |
| 12436 | HUDBUG-1M | Insect Mouth Sample, Lock 8, Ref. Site, 0.17 g | 30-74<br>31-34 | 550 | 7,200 | 430 NQ | 100 ND |
| 12437 | HUDBUG-2M | Insect Mouth Sample, Remnant Site 4, 2.08 g | 30-75 | 6,180 | 92,800 | 1,250 | 8 ND |
| 12438 | HUDBUG-3M | Insect Mouth Sample, Special Area 13, 2.9 g | 30-76 | 1,760 | 35,200 | 430 | 6 ND |
| 12439 | HUDBUG-4M | Insect Mouth Sample, Saratoga N.H. Park, 0.51 g | 30-77<br>31-35 | 200 | 1,900 | 160 | 40 ND |
| | | Duck and Duck eggs: | | | | | |
| 12399 | HUDWDE-1 | Wood duck egg composite, A Remote Area, 10 g | 30-22 | 10 | 160 | 21 | 3.7 |
| 12400-A | HUDWDE-2 | Wood duck egg composite, Replicate A, by Remnant Site 4 and Special Area 13, 10 g | 30-24 | 1,400 | 20,300 | 430 | 6.8 |
| 12400-B | HUDWDE-2 | Wood duck egg composite, Replicate B, by Remnant Site 4 and Special Area 13, 10 g | 30-25 | 1,390 | 20,700 | 428 | 7.5 |
| 12400-C | HUDWDE-2 | Wood duck egg composite, Replicate C, by Remnant Site 4 and Special Area 13, 10 g | 30-26 | 1,380 | 20,350 | 426 | 6.4 |
| 12401 | HUDWDA-3 | Adult Wood Duck Hen (eggs are HUDWDE-2), Near Remnant Site 4/Special Area 13, 25 g | 30-27 | 430 | 3,450 | 207 | 2.2 |

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Final Laboratory Report FY-97-30-01

# CONGENER-SPECIFIC ANALYSIS OF POLYCHLORINATED BIPHENYL RESIDUES IN TREE SWALLOW CHICKS, EGGS AND OTHER BIOTA FROM THE HUDSON RIVER, W.U. 30096

November 25, 1996

Submitted By:

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Chromatography

and

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Subject: Results of the congener-specific PCB analysis of tree swallow chicks, eggs and other biota from the Hudson River.

**Sample History:**

The purpose of this study is to determine whether migratory birds can accumulate detrimental levels of PCBs from various areas along the Hudson River. The indicator species chosen was the Tree Swallow (Tachycineta bicolor). Eggs, pre-fledgling chicks and adult tree swallows have been assessed for contaminant concentrations. Additionally, other biota were analyzed--insects which are the food of the tree swallows and two species of ducks. Higher burdens of PCBs in the chicks than those in the eggs represent local accumulation. Studies have indicated that pre-fledgling chicks can accumulate contaminants from sediment via consumption of adult midges, an emergent insect that comprises a large proportion of their diet. Since these midges spend their larval stages in sediment and emerge as breeding adults that do not feed, the contaminants that they contain must be derived from the sediment.

## Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)

| Sample Name | Field ID | Sample Matrix | Grams Extracted | % Lipid | 004,010 | 007,009 | 006 | 005,008 | 019 | 018 | 017,015 | 024,027 | 016,032 | 029 | 026 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | Insect | 9.44 | 3.6 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 3.46 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12397 | HUDBUG-3 | Insect | 10.00 | 5.6 | 4.63 | < 0.85 | < 0.85 | < 0.85 | 6.40 | 2.63 | 2.74 | < 2.33 | 2.97 | < 0.85 | < 2.33 |
| 12398 | HUDBUG-4 | Insect | 10.00 | 4.0 | 11.42 | < 0.85 | < 0.85 | < 2.33 | < 2.33 | < 2.33 | 3.49 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12399 | HUDWDE-1 | Wood Duck Egg Composite | 10.00 | 14.9 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12400 A | HUDWDE-2 | Wood Duck Egg Composite | 10.00 | 15.0 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 19.07 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |
| 12400 B | HUDWDE-2 | Wood Duck Egg Composite | 10.00 | 15.2 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 16.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |
| 12400 C | HUDWDE-2 | Wood Duck Egg Composite | 10.00 | 14.8 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 16.69 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |
| 12401 | HUDWDA-3 | Adult Wood Duck Hen | 25.00 | 1.4 | 4.58 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12402 A | HUDWDA-4 | Two Wood Dk. Hen Composite | 25.00 | 3.4 | 3.20 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | 7.19 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12402 B | HUDWDA-4 | Two Wood Dk. Hen Composite | 25.00 | 3.4 | 2.75 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 6.49 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12402 C | HUDWDA-4 | Two Wood Dk. Hen Composite | 25.00 | 3.4 | 2.82 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | 7.38 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12403 | HUDMLE-4 | Mallard Egg Composite | 10.00 | 13.7 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 4.02 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |
| 12404 | HUDMLA-3 | Two Mallard Hen Composite | 25.00 | 4.1 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12405 | TS-E100 | Tree Swallow Egg Composite | 10.00 | 8.9 | 3.66 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 2.33 | 4.67 | < 2.33 | 2.36 | < 0.85 | 2.76 |
| 12406 | TS-C100 | Tree Swallow Chick Composite | 10.00 | 5.1 | 5.93 | < 0.85 | < 0.85 | < 0.85 | 3.64 | 3.17 | 5.68 | 2.36 | 6.02 | < 0.85 | 4.30 |
| 12407[a] | TS-A100 | Tree Swallow Adult Female | 10.00 | 8.3 | < 2.33 | < 0.85 | < 0.85 | 4.13 | 6.06 | 41.22 | 49.59 | 3.64 | 36.91 | 3.21 | 22.01 |
| 12408[a] | TS-E204 | Tree Swallow Egg Composite | 2.51 | 7.2 | 11.06 | 2.33 | < 2.33 | 14.28 | 16.98 | 154.42 | 151.01 | 13.24 | 111.43 | 10.47 | 110.39 |
| 12409 | TS-C204-5 | Tree Swallow Chick Composite | 7.32 | 2.9 | 19.11 | 8.34 | 2.37 | 21.58 | 25.28 | 282.73 | 146.54 | 15.15 | 216.89 | 10.95 | 84.32 |
| 12410 | TS-C204-10 | Tree Swallow Chick Composite | 10.00 | 7.1 | 115.15 | 30.46 | 33.19 | 240.43 | 89.33 | 1405.74 | 1090.05 | 51.72 | 1072.33 | 45.01 | 373.56 |
| 12411 | TS-C204-15 | Tree Swallow Chick Composite | 10.00 | 9.5 | 75.33 | 13.78 | 7.89 | 128.49 | 115.79 | 895.07 | 1145.48 | 126.81 | 1361.52 | 71.39 | 782.68 |
| 12412 | TS-E227 | Tree Swallow Egg Composite | 4.14 | 7.7 | 11.75 | 4.16 | 3.20 | 31.89 | 16.81 | 207.43 | 156.12 | 14.23 | 155.57 | 12.37 | 134.21 |
| 12413 | TS-C227-5 | Tree Swallow Chick Composite | 10.00 | 4.1 | 17.52 | < 2.33 | < 2.33 | 6.84 | 31.79 | 298.81 | 183.48 | 13.83 | 124.90 | 6.80 | 73.91 |
| 12414 | TS-C227-10 | Tree Swallow Chick Composite | 10.00 | 7.6 | 47.76 | 8.17 | 10.31 | 68.63 | 70.60 | 758.03 | 603.80 | 32.34 | 437.58 | 27.36 | 272.03 |
| 12415 | TS-C227-15 | Tree Swallow Chick Composite | 10.00 | 10.5 | 119.82 | 29.13 | 27.25 | 251.51 | 129.33 | 1237.56 | 1464.92 | 79.22 | 1533.33 | 56.14 | 608.68 |
| 12416 | TS-E313 | Tree Swallow Egg Composite | 5.48 | 5.7 | 271.36 | 4.77 | 5.35 | 50.02 | 27.63 | 81.59 | 75.38 | 10.14 | 85.80 | 6.04 | 75.54 |
| 12417 | TS-C313-5 | Tree Swallow Chick Composite | 10.00 | 3.6 | 46.99 | < 2.33 | < 2.33 | 9.52 | 27.74 | 138.18 | 103.46 | 13.38 | 92.81 | 3.19 | 38.33 |
| 12418 | TS-C313-15 | Tree Swallow Chick Composite | 10.00 | 7.6 | 115.98 | 4.49 | 4.77 | 35.30 | 57.94 | 194.29 | 159.16 | 28.24 | 230.54 | 8.39 | 114.75 |
| 12419 | TS-E340 | Tree Swallow Egg Composite | 3.50 | 4.9 | 15.68 | < 2.33 | < 0.85 | 4.09 | 9.76 | 12.17 | 11.54 | 4.15 | 19.47 | < 2.33 | 21.42 |
| 12420 | TS-C340-15 | Tree Swallow Chick Composite | 10.00 | 8.7 | 35.87 | < 2.33 | 3.36 | 13.20 | 25.26 | 125.13 | 159.29 | 19.50 | 167.33 | 6.24 | 107.94 |
| 12421 | TS-E337 | Tree Swallow Egg Composite | 3.83 | 7.0 | 25.47 | < 2.33 | < 2.33 | 10.92 | 7.42 | 27.08 | 44.85 | 7.18 | 87.60 | < 2.33 | 31.64 |
| 12422 | TS-C337-15 | Tree Swallow Chick Composite | 10.00 | 9.5 | 102.44 | 7.34 | 9.67 | 66.43 | 89.55 | 376.94 | 440.62 | 47.35 | 337.72 | 16.80 | 163.53 |
| 12423 | TS-C339-5 | Tree Swallow Chick Composite | 10.00 | 5.2 | 44.55 | 3.12 | 3.12 | 13.35 | [illegible]39 | 154.45 | 101.96 | 12.14 | 137.61 | 3.46 | 53.27 |
| 12424[a] | TS-C339-10 | Tree Swallow Chick Composite | 10.00 | 5.7 | 138.08 | 5.49 | 7.66 | 36.75 | 64.66 | 232.61 | 188.52 | 22.22 | 218.95 | 10.03 | 108.28 |
| 12425 | TS-C339-15 | Tree Swallow Chick Composite | 10.00 | 6.2 | 310.67 | 16.39 | 20.68 | 119.48 | 131.49 | 374.42 | 453.53 | 51.63 | 528.79 | 32.77 | 260.61 |
| 12426 | TS-S315 | Tree Swallow (salvaged) | 7.97 | 4.3 | 22.37 | < 0.85 | < 0.85 | < 2.33 | 31.99 | 104.89 | 68.74 | 19.59 | 81.98 | 4.57 | 61.85 |
| 12427 | TS-A322 | Tree Swallow Adult Female | 10.00 | 7.1 | 24.69 | < 0.85 | < 0.85 | < 2.33 | 55.27 | 21.39 | 34.33 | 33.02 | 53.39 | 19.62 | 47.89 |
| 12428 | TS-E411 | Tree Swallow Egg Composite | 4.11 | 7.5 | 92.48 | < 0.85 | < 2.33 | 6.21 | 17.30 | 12.23 | 20.62 | 9.19 | 18.94 | < 2.33 | 21.03 |
| 12429 | TS-C411-15 | Tree Swallow Chick Composite | 10.00 | 7.3 | 115.37 | < 2.33 | < 2.33 | 15.09 | 62.45 | 32.48 | 40.79 | 24.95 | 65.78 | 2.36 | 51.17 |
| 12430 | TS-E421 | Tree Swallow Egg Composite | 4.52 | 8.0 | 30.61 | < 0.85 | < 0.85 | < 2.33 | 7.90 | 3.90 | 9.40 | 5.35 | 8.07 | < 0.85 | 7.58 |
| 12431 | TS-C421-15 | Tree Swallow Chick Composite | 10.00 | 6.2 | 29.65 | < 0.85 | < 0.85 | 2.35 | 21.81 | 7.01 | 11.06 | 14.67 | 24.80 | < 2.33 | 33.95 |
| 12432 | TS-E426 | Tree Swallow Egg Composite | 3.15 | 8.3 | 55.77 | < 2.33 | < 2.33 | 3.05 | 12.94 | 6.57 | 7.64 | 7.47 | 13.37 | < 2.33 | 12.67 |
| 12433 | TS-C426-15 | Tree Swallow Chick Composite | 10.00 | 7.1 | 34.56 | < 0.85 | < 2.33 | 4.28 | 23.67 | 11.17 | 18.50 | 13.19 | 33.53 | < 2.33 | 36.27 |
| 12434 | TS-E500 | Tree Swallow Egg Composite | 10.00 | 6.8 | 37.63 | < 0.85 | < 0.85 | 2.68 | 10.26 | 4.79 | 10.70 | 8.65 | 15.23 | < 2.33 | 12.04 |
| 12435 | TS-C500 | Tree Swallow Chick Composite | 10.00 | 6.8 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 2.33 |
| 12436[a] | HUDBUG-A | Insect Mouth Sample & Insect | 0.17 | — | < 0.85 | 20.21 | 9.02 | 6.17 | < 0.85 | 4.28 | 11.25 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12437 | HUDBUG-B | Insect Mouth Sample | 2.08 | 3.9 | 30.35 | 9.86 | 5.35 | 66.73 | 22.98 | 293.00 | 253.04 | 18.50 | 313.84 | 20.71 | 124.86 |
| 12438 | HUDBUG-C | Insect Mouth Sample | 2.90 | 3.1 | 96.15 | 2.85 | 3.37 | 15.96 | 24.68 | 105.99 | 95.96 | 9.99 | 92.44 | 2.69 | 32.98 |
| 12439[c][d] | HUDBUG-D | Insect Mouth Sample | 0.51 | — | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12440 | TS-EITH | Tree Swallow Egg Composite | 6.07 | 7.1 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12511 A | TS-CITH | Tree Swallow Chick Composite | 10.00 | 7.2 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12511 B | TS-CITH | Tree Swallow Chick Composite | 10.00 | 7.5 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12511 C | TS-CITH | Tree Swallow Chick Composite | 10.00 | 7.9 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |

WDE = wood Duck Egg
WDA = Adult
MLE = Mallard Egg

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analyzed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g

## Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)

| Sample Name | Field ID | 025 | 031 | 028 | 028,033 | 053 | 051 | 022 | 045 | 046 | 052 | 043 | 049 | 047 | 048 | 044 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | 4.20 | 3.84 | 76.38 | < 0.85 | < 0.85 | < 0.85 | 7.54 | < 0.85 | < 0.85 | 16.46 | < 0.85 | 38.22 | < 0.85 | 104.30 | 7.59 |
| 12397 | HUDBUG-3 | < 2.33 | 3.23 | 31.75 | < 2.33 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | 14.11 | < 0.85 | 16.98 | 24.41 | 3.32 | 5.08 |
| 12398 | HUDBUG-4 | < 2.33 | < 2.33 | 19.96 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | 12.64 | < 0.85 | 16.47 | 16.94 | < 2.33 | 2.35 |
| 12399 | HUDWDE-1 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12400 A | HUDWDE-2 | < 0.85 | 11.95 | 219.78 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 24.04 | < 0.85 | 27.77 | 159.37 | 5.84 | < 0.85 |
| 12400 B | HUDWDE-2 | < 0.85 | 12.23 | 197.39 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 23.12 | < 0.85 | 26.91 | 155.29 | 4.01 | < 0.85 |
| 12400 C | HUDWDE-2 | < 0.85 | 10.79 | 200.32 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 21.91 | < 0.85 | 25.46 | 148.45 | 2.85 | < 0.85 |
| 12401 | HUDWDA-3 | < 0.85 | < 2.33 | 10.41 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 2.88 | < 0.85 | < 2.33 | 2.38 | 8.16 | < 0.85 |
| 12402 A | HUDWDA-4 | < 0.85 | < 2.33 | 38.83 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 4.92 | < 0.85 | 5.14 | 24.47 | < 2.33 | < 0.85 |
| 12402 B | HUDWDA-4 | < 0.85 | 2.44 | 38.06 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 5.06 | < 0.85 | 5.23 | 25.08 | < 2.33 | < 0.85 |
| 12402 C | HUDWDA-4 | < 0.85 | < 2.33 | 40.35 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 5.27 | < 0.85 | 5.32 | 25.16 | 2.75 | < 0.85 |
| 12403 | HUDMLE-4 | < 0.85 | 6.86 | 145.12 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 16.56 | < 0.85 | 13.19 | 69.89 | < 2.33 | < 2.33 |
| 12404 | HUDMLA-3 | < 2.33 | 12.39 | 269.91 | 2.69 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 19.32 | < 0.85 | 9.41 | 180.72 | 22.08 | 2.71 |
| 12405 | TS-E100 | 5.00 | 87.09 | 318.49 | < 2.33 | 10.13 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | 440.82 | < 0.85 | 284.74 | 153.80 | 50.71 | 11.17 |
| 12406 | TS-C100 | 3.48 | 23.63 | 89.76 | < 2.33 | 11.60 | 2.83 | 5.35 | < 0.85 | < 2.33 | 125.43 | < 0.85 | 117.24 | 64.37 | 11.72 | 43.29 |
| 12407(a) | TS-A100 | 30.66 | 426.71 | 1438.01 | 23.32 | 60.49 | 11.79 | 19.51 | 4.61 | 4.63 | 2428.59 | 4.58 | 2084.19 | 1111.19 | 170.57 | 118.66 |
| 12408(a) | TS-E204 | 91.66 | 565.50 | 1632.90 | 69.78 | 161.40 | 47.63 | 71.69 | 20.00 | 31.55 | 2949.35 | 17.57 | 2230.95 | 1289.65 | 208.64 | 538.12 |
| 12409 | TS-C204-5 | 60.85 | 414.39 | 1040.49 | 129.23 | 96.17 | 42.42 | 146.84 | 61.75 | 29.33 | 1114.79 | 24.85 | 1048.72 | 611.44 | 303.65 | 586.71 |
| 12410 | TS-C204-10 | 325.63 | 1467.69 | 5807.26 | 951.29 | 256.86 | 116.84 | 698.91 | 173.23 | 78.13 | 4125.12 | 31.61 | 4571.99 | 1609.58 | 2157.88 | 1969.58 |
| 12411 | TS-C204-15 | 779.47 | 5871.02 | 10662.47 | 446.59 | 957.00 | 328.48 | 992.95 | 117.75 | 119.09 | 9044.76 | 32.60 | 9602.52 | 4884.44 | 1957.37 | 3720.55 |
| 12412 | TS-E227 | 85.93 | 1167.58 | 2608.70 | 137.57 | 106.91 | 34.65 | 122.20 | 20.95 | 36.13 | 2616.52 | 22.34 | 2200.18 | 1384.81 | 197.34 | 530.40 |
| 12413 | TS-C227-5 | 42.69 | 699.22 | 934.46 | 62.72 | 108.55 | 38.93 | 87.19 | 65.15 | 37.64 | 1130.04 | 14.98 | 962.40 | 624.70 | 240.50 | 627.99 |
| 12414 | TS-C227-10 | 231.33 | 1435.94 | 4092.68 | 410.92 | 317.40 | 75.96 | 410.73 | 109.29 | 71.59 | 3164.14 | 35.95 | 3640.87 | 1989.70 | 605.24 | 1656.11 |
| 12415 | TS-C227-15 | 604.24 | 3241.78 | 9052.58 | 13.93 | 1338.59 | 185.24 | 1088.54 | 146.06 | 119.28 | 7837.98 | 32.38 | 8323.76 | 3324.00 | 3363.15 | 3788.02 |
| 12416 | TS-E313 | 51.06 | 412.09 | 978.96 | 54.91 | 51.65 | 10.94 | 60.84 | 5.99 | 4.14 | 925.61 | < 0.85 | 650.16 | 754.29 | 156.68 | 122.37 |
| 12417 | TS-C313-5 | 88.42 | 126.92 | 377.43 | 45.16 | 68.80 | 25.01 | 80.06 | 36.09 | 16.47 | 574.16 | 12.62 | 681.98 | 368.41 | 204.42 | 286.05 |
| 12418 | TS-C313-15 | 104.82 | 825.62 | 2284.77 | 88.16 | 144.65 | 52.98 | 309.82 | 33.13 | 30.79 | 1620.07 | 10.93 | 2496.31 | 1571.63 | 311.15 | 1028.20 |
| 12419 | TS-E340 | 17.61 | 710.10 | 1695.53 | 34.47 | 53.74 | 14.01 | 14.27 | < 2.33 | < 2.33 | 1916.57 | 4.34 | 1218.41 | 961.50 | 133.63 | 91.63 |
| 12420 | TS-C340-15 | 94.02 | 451.15 | 1667.36 | 76.74 | 131.63 | 45.43 | 131.98 | 19.40 | 25.51 | 2056.71 | 2.33 | 2163.43 | 1287.05 | 200.88 | 619.85 |
| 12421 | TS-E337 | 21.92 | 361.69 | 1015.11 | 22.44 | 59.96 | 9.69 | 21.61 | 2.48 | 3.00 | 1039.33 | < 2.33 | 678.69 | 441.36 | 29.15 | 76.36 |
| 12422 | TS-C337-15 | 190.30 | 1171.35 | 3611.61 | 161.24 | 287.54 | 82.06 | 416.28 | 82.76 | 73.54 | 2827.94 | 12.78 | 3593.56 | 2160.12 | 711.30 | 1605.89 |
| 12423 | TS-C339-5 | 60.34 | 185.44 | 647.28 | 42.95 | 45.03 | 20.68 | 113.63 | 35.46 | 14.87 | 665.02 | 6.21 | 823.62 | 516.04 | 166.35 | 322.56 |
| 12424(a) | TS-C339-10 | 86.10 | 612.49 | 1611.06 | 157.53 | 92.44 | 41.24 | 246.84 | 40.73 | 22.66 | 1305.34 | 13.28 | 1606.54 | 980.67 | 320.02 | 640.62 |
| 12425 | TS-C339-15 | 209.10 | 994.99 | 3469.67 | 642.68 | 132.49 | 70.27 | 56.46 | 71.95 | 39.20 | 2741.17 | 21.44 | 3244.95 | 1669.27 | 1146.36 | 1112.23 |
| 12426 | TS-E315 | 66.34 | 513.40 | 1656.61 | 15.92 | 108.13 | 40.37 | 87.34 | 30.87 | 28.73 | 1812.42 | 7.44 | 1914.25 | 1154.73 | 226.02 | 717.07 |
| 12427 | TS-A322 | 52.12 | 2280.15 | 9042.74 | 69.26 | 136.40 | 42.43 | 19.51 | 4.38 | 6.70 | 10597.12 | 5.76 | 11348.72 | 7826.87 | 124.62 | 197.19 |
| 12428 | TS-E411 | 11.22 | 135.02 | 345.60 | 2.58 | 47.13 | 5.61 | 7.16 | < 2.33 | < 2.33 | 750.32 | 4.39 | 598.70 | 421.96 | 10.97 | 42.72 |
| 12429 | TS-C411-15 | 15.90 | 61.27 | 95.59 | 3.90 | 46.46 | 16.56 | 9.38 | 4.32 | 3.01 | 262.34 | < 2.33 | 249.84 | 207.52 | 25.45 | 61.60 |
| 12430 | TS-E421 | 4.79 | 54.16 | 138.96 | < 2.33 | 22.03 | 2.86 | < 2.33 | < 0.85 | < 0.85 | 281.94 | < 0.85 | 199.58 | 160.06 | 7.38 | 14.27 |
| 12431 | TS-C421-15 | 11.66 | 67.26 | 68.42 | < 0.85 | 37.55 | 11.32 | 3.99 | < 2.33 | < 2.33 | 262.14 | 2.34 | 233.60 | 122.99 | 30.03 | 53.98 |
| 12432 | TS-E426 | 9.59 | 129.67 | 360.94 | < 0.85 | 24.65 | 3.54 | 4.50 | < 0.85 | < 2.33 | 1016.53 | < 0.85 | 634.34 | 402.84 | 474.67 | 21.98 |
| 12433 | TS-C426-15 | 10.59 | 59.96 | 93.62 | 2.53 | 45.39 | 13.53 | 5.54 | < 2.33 | < 2.33 | 243.58 | < 2.33 | 208.85 | 193.93 | 15.23 | 55.80 |
| 12434 | TS-E508 | 7.21 | 38.67 | 105.27 | < 2.33 | 20.97 | 4.82 | 2.96 | < 0.85 | < 0.85 | 206.79 | < 0.85 | 152.10 | 96.60 | 5.72 | 19.79 |
| 12435 | TS-C500 | < 0.85 | 3.87 | 8.52 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 25.27 | < 0.85 | 22.47 | 15.26 | 3.94 | 2.45 |
| 12435(c) | HUDBUG-A | 24.81 | < 2.33 | 19.40 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 18.08 | < 0.85 | 11.65 | 27.68 | < 0.85 | 6.18 |
| 12437 | HUDBUG-B | 122.99 | 446.21 | 1192.50 | 375.62 | 141.43 | 43.51 | 316.47 | 66.17 | 18.87 | 1298.62 | 12.89 | 1411.52 | 758.06 | 494.68 | 633.86 |
| 12438 | HUDBUG-C | 24.61 | 215.11 | 535.56 | 36.69 | 43.31 | 17.35 | 99.44 | 30.46 | 9.50 | 433.70 | 5.73 | 556.28 | 302.17 | 131.95 | 265.94 |
| 12439(c)(d) | HUDBUG-D | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12440 | TS-EITH | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 2.97 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 |
| 12511 A | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12511 B | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12511 C | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analysed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g

## Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)

| Sample Name | Field ID | 042 | 041 | 064 | 040 | 067 | 063 | 074 | 070,076 | 066 | 095 | 091 | 056,060 | 092 | 084 | 101 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | 77.66 | < 2.33 | 6.09 | 2.71 | < 2.33 | 22.43 | 213.83 | 9.06 | 50.97 | 10.86 | 2.74 | 35.84 | 3.81 | < 2.33 | 24.61 |
| 12397 | HUDBUG-3 | 7.59 | 2.70 | 3.87 | < 2.33 | < 2.33 | 9.56 | 96.80 | 9.44 | 38.33 | 5.63 | < 2.33 | 17.17 | 2.63 | < 2.33 | 12.46 |
| 12398 | HUDBUG-4 | 7.94 | < 0.85 | 2.34 | < 0.85 | < 0.85 | 4.85 | 37.85 | < 2.33 | < 0.85 | 4.19 | < 2.33 | 5.42 | 2.57 | < 0.85 | 8.07 |
| 12399 | HUDWDE-1 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12400 A | HUDWDE-2 | 4.44 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | 36.18 | 208.98 | 8.68 | 7.83 | 7.59 | < 2.33 | 36.51 | 30.51 | < 0.85 | 23.61 |
| 12400 B | HUDWDE-2 | 4.59 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | 35.21 | 188.93 | 8.92 | 7.30 | 8.73 | < 2.33 | 35.30 | 29.83 | < 0.85 | 22.63 |
| 12400 C | HUDWDE-2 | 4.02 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | 33.71 | 193.11 | 8.24 | 7.16 | 7.16 | < 2.33 | 33.63 | 28.45 | < 0.85 | 21.51 |
| 12401 | HUDWDA-3 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 7.42 | 39.86 | < 2.33 | 3.08 | 8.80 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 2.33 |
| 12402 A | HUDWDA-4 | 11.34 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 7.87 | 36.50 | < 2.33 | 24.65 | 4.12 | < 0.85 | 4.44 | 5.61 | < 0.85 | 4.51 |
| 12402 B | HUDWDA-4 | 12.17 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 6.04 | 37.48 | < 2.33 | 26.68 | 3.96 | < 0.85 | 4.40 | 5.82 | < 0.85 | 4.51 |
| 12402 C | HUDWDA-4 | 13.68 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 6.43 | 39.26 | < 2.33 | 27.80 | 4.29 | < 0.85 | 4.80 | 6.19 | < 0.85 | 4.74 |
| 12403 | HUDMLE-4 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | 30.13 | 148.18 | 10.06 | 5.57 | 2.45 | < 2.33 | 27.16 | 9.76 | 2.55 | 13.05 |
| 12404 | HUDMLA-3 | 15.55 | < 2.33 | 2.36 | < 0.85 | < 0.85 | 115.33 | 656.38 | 17.66 | 34.32 | 6.92 | 3.83 | 88.09 | 28.11 | < 2.33 | 42.30 |
| 12405 | TS-E100 | 69.64 | 7.46 | 58.07 | 3.69 | 6.13 | 45.92 | 198.62 | 198.36 | 946.67 | 66.89 | 39.03 | 98.12 | 53.66 | 24.34 | 212.52 |
| 12406 | TS-C100 | 66.21 | 11.84 | 28.59 | 5.99 | 4.92 | 13.00 | 79.67 | 63.34 | 5.95 | 13.45 | 12.22 | 36.06 | 14.69 | 5.77 | 73.65 |
| 12407(a) | TS-A100 | 112.37 | 80.70 | 12.49 | 22.47 | 56.16 | 203.89 | 1344.69 | 1681.80 | 1088.52 | 1175.43 | 297.34 | 412.03 | 254.56 | 16.80 | 1128.12 |
| 12408(a) | TS-E204 | 378.09 | 296.00 | 414.63 | 60.69 | 75.89 | 259.60 | 1536.80 | 1289.15 | 983.71 | 543.22 | 256.54 | 370.82 | 291.52 | 94.70 | 778.98 |
| 12409 | TS-C204-5 | 662.22 | 274.64 | 361.06 | 107.40 | 58.12 | 122.55 | 799.79 | 649.94 | 1417.38 | 235.46 | 116.41 | 401.94 | 96.13 | 66.77 | 508.59 |
| 12410 | TS-C204-10 | 2416.12 | 1361.77 | 748.89 | 379.41 | 160.08 | 281.37 | 2430.34 | 3412.50 | 4176.54 | 1731.91 | 393.29 | 1334.77 | 393.53 | 266.19 | 1412.40 |
| 12411 | TS-C204-15 | 6273.49 | 2619.93 | 2755.57 | 377.87 | 540.94 | 591.48 | 5459.39 | 46.97 | 456.02 | 507.83 | 627.77 | 2563.63 | 436.09 | 274.04 | 2793.04 |
| 12412 | TS-E227 | 1019.41 | 230.79 | 498.24 | 111.33 | 62.89 | 240.77 | 1436.25 | 1560.06 | 129.11 | 238.62 | 218.04 | 697.74 | 204.56 | 69.96 | 629.21 |
| 12413 | TS-C227-5 | 603.94 | 173.24 | 271.93 | 95.85 | 41.99 | 66.14 | 595.88 | 539.72 | 409.60 | 512.56 | 90.72 | 178.98 | 88.57 | 65.01 | 339.55 |
| 12414 | TS-C227-10 | 2616.22 | 767.09 | 1032.51 | 230.47 | 199.41 | 256.45 | 2235.88 | 2407.47 | 152.00 | 277.16 | 237.11 | 1009.22 | 199.53 | 149.87 | 1231.20 |
| 12415 | TS-C227-15 | 3947.64 | 2163.52 | 2497.96 | 520.29 | 427.61 | 529.78 | 4506.71 | 6325.41 | 5778.59 | 4084.79 | 472.15 | 2199.95 | 712.06 | 370.55 | 2579.06 |
| 12416 | TS-E313 | 377.46 | 64.67 | 215.01 | 28.65 | 34.20 | 233.83 | 929.98 | 689.60 | 825.90 | 304.96 | 636.64 | 220.97 | 627.65 | 11.10 | 357.83 |
| 12417 | TS-C313-5 | 423.50 | 92.61 | 198.39 | 77.93 | 33.24 | 76.68 | 402.77 | 279.06 | 241.98 | 144.77 | 75.16 | 116.75 | 61.01 | 50.80 | 271.16 |
| 12418 | TS-C313-15 | 1648.65 | 936.37 | 831.88 | 133.55 | 60.70 | 211.79 | 1560.19 | 1351.90 | 101.94 | 171.06 | 154.34 | 690.09 | 186.74 | 88.48 | 1040.54 |
| 12419 | TS-E340 | 334.52 | 101.90 | 407.55 | 18.02 | 28.28 | 185.64 | 956.47 | 1142.78 | 61.18 | 305.17 | 141.35 | 332.44 | 176.55 | 6.19 | 530.44 |
| 12420 | TS-C340-15 | 851.15 | 202.93 | 584.68 | 90.46 | 91.69 | 196.52 | 1455.51 | 1239.25 | 1531.11 | 1185.78 | 181.86 | 463.82 | 272.32 | 87.20 | 1024.62 |
| 12421 | TS-E397 | 272.23 | 45.31 | 210.64 | 10.18 | 23.80 | 78.81 | 582.32 | 632.04 | 44.26 | 56.68 | 66.32 | 201.12 | 67.99 | 19.36 | 376.59 |
| 12422 | TS-C337-15 | 2505.06 | 530.81 | 1155.75 | 285.36 | 161.71 | 290.00 | 2344.62 | 1792.62 | 142.49 | 321.28 | 233.98 | 985.35 | 234.93 | 119.92 | 1356.21 |
| 12423 | TS-C339-5 | 939.57 | 132.01 | 275.51 | 72.28 | 36.19 | 73.74 | 523.04 | 452.99 | 319.82 | 413.77 | 73.57 | 178.43 | 77.80 | 48.12 | 359.93 |
| 12424(a) | TS-C339-10 | 1107.80 | 274.16 | 506.62 | 114.99 | 71.40 | 111.94 | 1109.94 | 1145.41 | 76.97 | 145.20 | 114.59 | 546.05 | 112.12 | 69.56 | 666.47 |
| 12425 | TS-C339-15 | 1859.25 | 678.54 | 885.93 | 225.72 | 150.95 | 276.20 | 2075.55 | 2372.45 | 2297.47 | 1979.37 | 334.54 | 994.20 | 406.07 | 174.72 | 1192.21 |
| 12426 | TS-S315 | 1118.09 | 209.32 | 599.17 | 114.57 | 77.45 | 194.16 | 1334.67 | 1072.45 | 92.16 | 161.99 | 184.13 | 595.03 | 175.80 | 98.93 | 992.42 |
| 12427 | TS-A322 | 1461.84 | 184.16 | 2402.94 | 68.39 | 136.38 | 1267.98 | 9979.43 | 5447.82 | 687.27 | 872.89 | 1219.98 | 2986.40 | 653.58 | 53.78 | 6444.07 |
| 12428 | TS-E411 | 88.01 | 26.38 | 84.86 | 3.58 | 15.48 | 65.40 | 260.19 | 239.78 | 21.74 | 91.01 | 73.75 | 86.67 | 107.70 | 12.19 | 345.65 |
| 12429 | TS-C411-15 | 77.17 | 39.47 | 46.63 | 12.01 | 11.45 | 27.63 | 109.02 | 106.62 | 165.87 | 44.26 | 36.39 | 36.83 | 39.55 | 18.43 | 120.71 |
| 12430 | TS-E421 | 34.66 | 10.65 | 27.12 | < 2.33 | 5.29 | 23.70 | 98.72 | 79.50 | 7.99 | 20.97 | 22.63 | 28.85 | 30.75 | 10.44 | 100.57 |
| 12431 | TS-C421-15 | 55.37 | 35.04 | 47.87 | 7.13 | 11.09 | 24.28 | 95.73 | 93.40 | 72.47 | 72.28 | 40.59 | 35.28 | 46.73 | 16.29 | 129.56 |
| 12432 | TS-E426 | 92.98 | 11.88 | 104.15 | 9.82 | 15.68 | 98.93 | 336.61 | 306.04 | 268.28 | 67.87 | 98.37 | 142.19 | 187.34 | 4.13 | 350.88 |
| 12433 | TS-C426-15 | 67.00 | 33.10 | 41.23 | 6.47 | 10.13 | 22.56 | 96.06 | 98.10 | 7.32 | 35.14 | 30.88 | 39.06 | 96.26 | 13.92 | 115.96 |
| 12434 | TS-E500 | 35.51 | 15.36 | 28.69 | 4.04 | 5.42 | 16.06 | 63.21 | 68.58 | 92.55 | 29.61 | 23.48 | 23.00 | 27.39 | 2.89 | 85.90 |
| 12435 | TS-C500 | 3.57 | < 2.33 | 9.42 | < 0.85 | < 0.85 | 2.37 | 9.51 | 9.33 | 10.34 | 10.13 | < 2.33 | 8.54 | 2.94 | < 2.33 | 11.88 |
| 12436(c) | HUDBUG-A | < 0.85 | < 2.33 | 3.24 | < 0.85 | < 0.85 | < 0.85 | 8.49 | 12.44 | < 0.85 | 22.02 | < 0.85 | 2.78 | 4.86 | 7.08 | 36.20 |
| 12437 | HUDBUG-B | 941.09 | 350.96 | 421.65 | 120.32 | 102.48 | 123.78 | 613.09 | 1281.64 | 710.08 | 378.72 | 140.82 | 417.83 | 105.26 | 67.98 | 595.59 |
| 12438 | HUDBUG-C | 406.04 | 64.17 | 195.46 | 57.25 | 27.32 | 45.59 | 377.87 | 352.99 | 25.16 | 44.35 | 44.25 | 185.02 | 42.48 | 23.29 | 237.12 |
| 12439(c)(d) | HUDBUG-D | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12440 | TS-EITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | 7.27 |
| 12511 A | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |
| 12511 B | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |
| 12511 C | TS-CITH | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 |

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analyzed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g

## Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)

| Sample Name | Field ID | 099 | 119 | 083 | 097 | 087 | 136 | 110 | 082 | 151 | 135,144,124 | 147 | 107 | 123,149 | 118 | 134 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | 88.41 | < 2.33 | < 2.33 | 21.45 | 11.66 | < 0.85 | 14.09 | 4.23 | < 2.33 | < 2.33 | < 0.85 | 3.66 | 11.55 | 56.81 | < 0.85 |
| 12397 | HUDBUG-3 | 29.12 | < 0.85 | < 0.85 | 4.46 | 5.71 | < 0.85 | 3.65 | < 2.33 | < 2.33 | < 2.33 | < 0.85 | 3.26 | 3.64 | 36.08 | < 0.85 |
| 12398 | HUDBUG-4 | 13.57 | < 0.85 | < 0.85 | 2.52 | < 2.33 | < 0.85 | 3.90 | < 0.85 | 2.60 | < 0.85 | < 2.33 | < 2.33 | 3.15 | 12.04 | < 0.85 |
| 12399 | HUDWDE-1 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 |
| 12400 A | HUDWDE-2 | 114.47 | 4.08 | < 0.85 | < 0.85 | 5.66 | < 0.85 | 11.17 | < 0.85 | 6.70 | 4.66 | 4.32 | 9.51 | 15.85 | 112.26 | < 0.85 |
| 12400 B | HUDWDE-2 | 111.22 | 3.80 | < 0.85 | < 0.85 | 6.15 | < 0.85 | 10.70 | < 0.85 | 6.46 | 4.84 | 3.96 | 9.62 | 15.43 | 108.75 | < 0.85 |
| 12400 C | HUDWDE-2 | 105.76 | 3.46 | < 0.85 | < 0.85 | 5.88 | < 0.85 | 10.36 | < 0.85 | 6.21 | 3.63 | 4.24 | 8.59 | 14.84 | 104.58 | < 0.85 |
| 12401 | HUDWDA-3 | 16.75 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | 30.65 | < 0.85 |
| 12402 A | HUDWDA-4 | 23.06 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 2.70 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 2.33 | 2.53 | 21.18 | < 0.85 |
| 12402 B | HUDWDA-4 | 23.20 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 2.40 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | 2.45 | 21.10 | < 0.85 |
| 12402 C | HUDWDA-4 | 24.26 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 3.27 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | 2.71 | 22.62 | < 0.85 |
| 12403 | HUDMLE-4 | 120.30 | < 2.33 | < 0.85 | < 2.33 | 7.42 | < 0.85 | 8.82 | < 0.85 | < 2.33 | < 2.33 | 2.68 | 9.58 | 10.14 | 89.16 | < 0.85 |
| 12404 | HUDMLA-3 | 389.95 | 5.68 | < 0.85 | < 2.33 | 26.82 | < 2.33 | 24.11 | < 0.85 | 7.51 | 4.02 | 24.01 | 33.87 | 27.32 | 446.45 | < 0.85 |
| 12405 | TS-E100 | 142.11 | 7.51 | < 0.85 | 16.36 | 61.13 | 3.43 | 117.28 | < 2.33 | 10.75 | 15.53 | 6.48 | 27.05 | 74.44 | 253.58 | < 0.85 |
| 12406 | TS-C100 | 54.48 | 2.56 | 2.62 | 26.29 | 30.16 | < 0.85 | 43.36 | 7.02 | 3.59 | 4.24 | < 2.33 | 7.97 | 15.84 | 70.01 | < 0.85 |
| 12407(a) | TS-A100 | 745.86 | 46.01 | 12.60 | 85.97 | 413.22 | 21.60 | 577.04 | 16.63 | 54.89 | 62.56 | 23.94 | 84.22 | 263.15 | 629.69 | < 2.33 |
| 12408(a) | TS-E204 | 632.00 | 40.47 | 30.23 | 205.77 | 279.09 | 16.02 | 439.88 | 52.45 | 54.03 | 95.63 | 20.09 | 110.63 | 316.97 | 557.00 | < 2.33 |
| 12409 | TS-C204-5 | 340.79 | 20.26 | 33.51 | 210.69 | 262.47 | 9.77 | 378.91 | 84.12 | 21.40 | 35.68 | 4.15 | 41.84 | 121.87 | 368.01 | 4.02 |
| 12410 | TS-C204-10 | 926.34 | 38.25 | 74.63 | 532.51 | 643.40 | 21.91 | 882.17 | 230.08 | 43.04 | 97.50 | 12.39 | 87.99 | 291.34 | 752.98 | 15.16 |
| 12411 | TS-C204-15 | 2147.27 | 82.14 | 149.29 | 1173.68 | 1356.14 | 40.26 | 1939.25 | 343.75 | 87.73 | 175.16 | 24.09 | 205.82 | 451.42 | 1666.03 | 68.13 |
| 12412 | TS-E227 | 716.57 | 40.45 | 24.46 | 169.17 | 345.77 | 15.40 | 656.60 | 56.98 | 49.37 | 76.77 | 20.46 | 88.40 | 212.71 | 755.15 | 4.48 |
| 12413 | TS-C227-5 | 244.31 | 13.39 | 26.63 | 126.15 | 149.05 | 6.98 | 168.53 | 60.49 | 15.07 | 28.31 | 6.13 | 36.07 | 67.51 | 174.67 | 4.38 |
| 12414 | TS-C227-10 | 887.00 | 34.01 | 66.06 | 517.69 | 566.02 | 20.24 | 822.36 | 174.21 | 42.24 | 75.06 | 11.50 | 89.17 | 183.60 | 630.14 | 14.07 |
| 12415 | TS-C227-15 | 1794.21 | 63.15 | 114.67 | 1089.48 | 1216.32 | 35.79 | 1495.04 | 367.84 | 77.70 | 127.35 | 15.32 | 69.10 | 372.64 | 1542.66 | 16.01 |
| 12416 | TS-E313 | 335.37 | 25.51 | 9.91 | 66.00 | 238.07 | 9.56 | 179.42 | 22.47 | 25.34 | 48.93 | 22.68 | 117.45 | 187.05 | 463.03 | 6.38 |
| 12417 | TS-C313-5 | 219.75 | 11.84 | 24.17 | 98.25 | 115.40 | 4.30 | 157.24 | 52.28 | 14.61 | 23.13 | 5.35 | 39.15 | 61.13 | 150.82 | 4.11 |
| 12418 | TS-C313-15 | 785.09 | 30.39 | 53.48 | 424.58 | 452.34 | 13.48 | 684.88 | 138.31 | 45.18 | 64.30 | 13.31 | 75.21 | 168.68 | 751.15 | 6.81 |
| 12419 | TS-E340 | 442.29 | 29.88 | 5.10 | 126.02 | 208.26 | 16.57 | 407.82 | 11.29 | 33.90 | 50.41 | 12.39 | 60.88 | 179.28 | 452.26 | < 2.33 |
| 12420 | TS-C340-15 | 710.27 | 33.85 | 53.32 | 300.88 | 405.39 | 14.43 | 581.83 | 78.17 | 56.79 | 76.80 | 13.17 | 66.02 | 148.41 | 578.24 | 7.19 |
| 12421 | TS-E337 | 302.26 | 16.64 | 3.36 | 64.70 | 141.97 | 2.96 | 264.62 | 12.36 | 17.79 | 25.18 | 6.20 | 38.85 | 65.23 | 299.45 | < 0.85 |
| 12422 | TS-C337-15 | 1065.11 | 51.09 | 90.62 | 572.93 | 599.33 | 23.18 | 891.22 | 169.93 | 75.05 | 94.06 | 12.95 | < 2.33 | 196.78 | 937.56 | 13.72 |
| 12423 | TS-C339-5 | 255.52 | 11.48 | 23.93 | 138.83 | 153.75 | 4.41 | 208.00 | 47.71 | 17.24 | 24.85 | 6.56 | 33.98 | 82.78 | 252.26 | 5.68 |
| 12424(a) | TS-C339-10 | 527.05 | 22.63 | 41.97 | 273.19 | 305.14 | 8.63 | 450.00 | 94.34 | 30.87 | 52.71 | 9.24 | 56.57 | 153.07 | 518.55 | 8.12 |
| 12425 | TS-C339-15 | 880.68 | 43.33 | 73.28 | 459.52 | 546.94 | 22.59 | 745.11 | 192.43 | 62.75 | 66.00 | 16.32 | 85.19 | 208.29 | 792.39 | 16.80 |
| 12426 | TS-E315 | 732.56 | 31.07 | 58.90 | 353.67 | 416.46 | 13.22 | 623.63 | 101.93 | 49.19 | 68.40 | 13.87 | 97.89 | 228.34 | 800.04 | 11.25 |
| 12427 | TS-A322 | 5912.37 | 236.00 | 43.41 | 344.12 | 2286.91 | 54.45 | 3743.11 | 42.88 | 221.79 | 341.24 | 93.40 | 786.29 | 1315.51 | 6773.42 | 3.34 |
| 12428 | TS-E411 | 270.58 | 17.56 | 4.47 | 34.38 | 84.44 | 7.17 | 166.63 | 5.73 | 31.24 | 29.36 | 12.09 | 30.39 | 126.33 | 236.88 | < 0.85 |
| 12429 | TS-C411-15 | 95.83 | 5.86 | 6.11 | 30.28 | 39.22 | 4.24 | 68.39 | 7.85 | 12.32 | 11.10 | 4.83 | 11.07 | 36.00 | 77.89 | 3.81 |
| 12430 | TS-E421 | 94.37 | 6.21 | < 2.33 | 8.92 | 22.99 | < 2.33 | 46.65 | < 2.33 | 8.07 | 8.07 | 5.28 | 11.04 | 35.39 | 85.67 | < 0.85 |
| 12431 | TS-C421-15 | 98.78 | 6.22 | 7.02 | 35.27 | 42.71 | 4.39 | 66.14 | 7.00 | 16.16 | 13.19 | 5.48 | 10.89 | 47.92 | 40.56 | < 2.33 |
| 12432 | TS-E426 | 325.89 | 20.27 | < 2.33 | 21.32 | 82.60 | 6.10 | 174.40 | 2.89 | 24.73 | 28.54 | 15.95 | 38.87 | 132.38 | 170.27 | < 0.85 |
| 12433 | TS-C426-15 | 95.66 | 6.19 | 5.65 | 30.58 | 35.76 | 4.11 | 67.02 | 7.36 | 12.28 | 11.01 | 5.28 | 12.54 | 40.97 | 85.11 | < 2.33 |
| 12434 | TS-E500 | 62.09 | 3.66 | < 2.33 | 14.63 | 23.16 | 2.80 | 44.19 | 3.24 | 6.20 | 7.65 | 2.98 | 7.58 | 28.84 | 89.37 | < 0.85 |
| 12435 | TS-C500 | 7.34 | < 0.85 | < 0.85 | < 2.33 | 3.30 | < 0.85 | 4.95 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 2.33 | 3.84 | 6.10 | < 0.85 |
| 12436(c) | HUDBUG-A | 21.80 | 12.02 | < 0.85 | 6.61 | 20.05 | < 0.85 | 32.79 | 2.71 | 9.85 | 2.80 | < 0.85 | < 2.33 | 20.08 | 24.33 | < 0.85 |
| 12437 | HUDBUG-B | 406.21 | 16.09 | 38.47 | 246.23 | 286.93 | 8.96 | 331.30 | 108.74 | 20.33 | 36.62 | 5.13 | 44.30 | 104.84 | 199.35 | 6.42 |
| 12438 | HUDBUG-C | 205.13 | 8.73 | 17.34 | 106.02 | 106.66 | 2.43 | 159.03 | 36.69 | 8.11 | 12.54 | 3.62 | 20.59 | 37.93 | 107.83 | 2.67 |
| 12439(c)(d) | HUDBUG-D | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12440 | TS-EITH | 3.78 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 2.93 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 5.08 | 6.98 | < 0.85 |
| 12511 A | TS-CITH | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 |
| 12511 B | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 |
| 12511 C | TS-CITH | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 |

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analyzed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g

## Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)

| Sample Name | Field ID | 114 | 131,122 | 146 | 153 | 132 | 105 | 141 | 179 | 137 | 176 | 130 | 138 | 158 | 129 | 178 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | 7.98 | < 0.85 | 12.05 | 33.05 | < 2.33 | 45.72 | < 2.33 | < 0.85 | 2.77 | < 0.85 | 3.68 | 26.24 | 9.61 | < 2.33 | < 0.85 |
| 12397 | HUDBUG-3 | 3.57 | < 0.85 | 6.50 | 19.61 | < 2.33 | 18.96 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | 7.53 | < 2.33 | < 0.85 | < 0.85 |
| 12398 | HUDBUG-4 | < 0.85 | < 2.33 | 5.78 | 9.68 | < 0.85 | 6.55 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | 11.97 | < 0.85 | < 0.85 | < 2.33 |
| 12399 | HUDWDE-1 | < 0.85 | < 0.85 | < 0.85 | 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 2.39 | < 0.85 | < 0.85 | < 0.85 |
| 12400 A | HUDWDE-2 | 7.91 | 2.91 | 18.94 | 42.83 | < 2.33 | 53.00 | < 2.33 | < 0.85 | 4.26 | < 0.85 | 4.21 | 60.46 | 4.53 | < 0.85 | 5.03 |
| 12400 B | HUDWDE-2 | 7.69 | 2.58 | 18.18 | 41.64 | < 2.33 | 52.16 | < 2.33 | < 0.85 | 4.00 | < 0.85 | 3.73 | 59.22 | 4.85 | < 0.85 | 4.56 |
| 12400 C | HUDWDE-2 | 7.37 | 2.41 | 17.39 | 40.04 | < 2.33 | 49.81 | < 2.33 | < 0.85 | 3.83 | < 0.85 | 3.52 | 56.20 | 4.07 | < 0.85 | 4.46 |
| 12401 | HUDWDA-3 | 2.75 | < 0.85 | 6.66 | 22.18 | < 0.85 | 19.09 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 20.90 | < 2.33 | < 0.85 | < 0.85 |
| 12402 A | HUDWDA-4 | < 2.33 | < 0.85 | 5.14 | 11.34 | < 0.85 | 8.54 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 13.26 | < 2.33 | < 0.85 | < 2.33 |
| 12402 B | HUDWDA-4 | < 2.33 | < 0.85 | 5.10 | 11.37 | < 0.85 | 8.15 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 13.18 | < 2.33 | < 0.85 | < 2.33 |
| 12402 C | HUDWDA-4 | < 2.33 | < 0.85 | 5.40 | 12.05 | < 0.85 | 8.77 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 14.06 | < 2.33 | < 0.85 | < 2.33 |
| 12403 | HUDMLE-4 | 8.02 | < 2.33 | 19.05 | 64.22 | < 0.85 | 72.89 | < 0.85 | < 0.85 | 3.05 | < 0.85 | < 2.33 | 62.10 | 5.63 | < 0.85 | 8.44 |
| 12404 | HUDMLA-3 | 26.35 | 4.78 | 64.69 | 189.19 | 5.20 | 194.16 | 2.64 | < 0.85 | 18.33 | < 0.85 | 13.36 | 298.81 | 21.20 | < 0.85 | 17.27 |
| 12405 | TS-E100 | 19.23 | 3.89 | 45.51 | 112.75 | 18.75 | 159.13 | 10.54 | 2.64 | 21.98 | < 0.85 | 19.77 | 192.62 | 22.01 | < 2.33 | 10.07 |
| 12406 | TS-C100 | 5.49 | < 2.33 | 9.04 | 24.08 | 5.94 | 37.40 | 4.05 | < 0.85 | 3.73 | < 0.85 | 3.03 | 35.31 | 3.63 | < 2.33 | < 2.33 |
| 12407(a) | TS-A100 | 49.05 | 11.42 | 110.70 | 358.33 | 139.69 | 342.91 | 52.76 | 16.47 | 58.03 | 5.64 | 57.05 | 577.44 | 64.07 | 13.68 | 24.57 |
| 12408(a) | TS-E204 | 56.03 | 9.14 | 86.39 | 183.52 | 129.68 | 172.71 | 51.39 | 16.60 | 48.52 | 2.81 | 45.78 | 317.55 | 55.92 | 15.78 | 19.36 |
| 12409 | TS-C204-5 | 22.69 | 9.14 | 29.24 | 102.20 | 72.78 | 240.63 | 22.96 | 16.57 | 18.60 | 2.38 | 18.51 | 169.13 | 20.87 | 14.50 | 4.48 |
| 12410 | TS-C204-10 | 66.35 | 24.51 | 51.29 | 157.83 | 171.95 | 124.69 | 65.59 | 4.73 | 35.88 | < 2.33 | 36.56 | 311.18 | 40.70 | 31.61 | 7.21 |
| 12411 | TS-C204-15 | 117.95 | 39.20 | 80.30 | 320.83 | 240.54 | 5143.66 | 117.53 | 62.20 | 73.53 | 4.96 | 65.39 | 617.43 | 75.16 | 16.59 | 2.94 |
| 12412 | TS-E227 | 51.10 | 10.20 | 78.62 | 177.19 | 119.89 | 487.10 | 52.22 | 6.06 | 38.87 | 3.78 | 38.87 | 333.19 | 41.46 | 13.16 | 16.04 |
| 12413 | TS-C227-5 | 16.46 | 5.65 | 22.55 | 53.40 | 44.25 | 60.00 | 20.68 | < 0.85 | 14.51 | < 0.85 | 12.77 | 93.16 | 16.42 | 9.51 | 2.33 |
| 12414 | TS-C227-10 | 55.20 | 16.94 | 47.27 | 151.61 | 122.06 | 468.18 | 50.44 | 20.57 | 31.95 | 3.14 | 30.51 | 287.77 | 36.95 | 8.27 | < 2.33 |
| 12415 | TS-C227-15 | 68.24 | < 0.85 | 65.22 | 301.71 | 199.80 | 765.74 | 64.92 | 7.38 | 59.99 | 5.68 | 58.09 | 564.09 | 68.48 | 51.89 | 11.50 |
| 12416 | TS-E313 | 64.88 | 13.49 | 135.43 | 243.08 | 49.33 | 241.93 | 31.29 | 6.40 | 51.78 | 3.38 | 87.20 | 435.29 | 69.79 | 6.55 | 34.76 |
| 12417 | TS-C313-5 | 18.01 | 3.48 | 30.85 | 65.71 | 34.72 | 57.75 | 15.21 | 4.96 | 15.53 | < 0.85 | 16.29 | 114.83 | 20.27 | 9.43 | 6.98 |
| 12418 | TS-C313-15 | 50.31 | 19.87 | 56.80 | 169.74 | 87.81 | 414.29 | 48.36 | 4.24 | 30.49 | < 2.33 | 33.14 | 316.84 | 37.09 | 23.48 | 10.63 |
| 12419 | TS-E340 | 33.56 | 6.05 | 62.88 | 156.75 | 76.46 | 307.52 | 29.80 | 8.12 | 25.13 | 3.88 | 28.35 | 218.46 | 30.31 | 12.04 | 10.16 |
| 12420 | TS-C340-15 | 33.99 | 11.79 | 66.90 | 170.63 | 99.38 | 54.39 | 36.40 | 8.24 | 37.66 | < 2.33 | 37.19 | 294.14 | 41.45 | 26.27 | 11.69 |
| 12421 | TS-E337 | 25.01 | 9.00 | 41.30 | 104.99 | 22.09 | 196.21 | 16.93 | < 2.33 | 16.03 | < 0.85 | 18.13 | 179.69 | 18.59 | 6.57 | 6.76 |
| 12422 | TS-C337-15 | 55.37 | 24.64 | 80.40 | 199.98 | 135.92 | 485.45 | 52.02 | 7.60 | 50.49 | < 0.85 | 47.74 | 366.78 | 39.61 | 45.24 | 9.50 |
| 12423 | TS-C339-5 | 15.29 | 4.91 | 25.79 | 63.32 | 31.61 | 89.57 | 15.65 | 4.20 | 12.60 | < 0.85 | 13.42 | 117.47 | 14.75 | 8.51 | 4.13 |
| 12424(a) | TS-C339-10 | 37.90 | 15.64 | 40.71 | 103.53 | 67.67 | 290.74 | 38.10 | 3.13 | 22.24 | < 2.33 | 24.91 | 195.28 | 26.15 | 17.64 | 7.34 |
| 12425 | TS-C339-15 | 33.06 | 22.22 | 72.91 | 209.22 | 160.70 | 237.15 | 53.76 | 11.04 | 42.46 | 2.38 | 43.56 | 362.05 | 39.61 | 34.97 | 9.15 |
| 12426 | TS-S315 | 48.97 | 11.71 | 71.10 | 188.05 | 76.36 | 441.22 | 52.29 | 5.22 | 36.94 | 2.57 | 36.56 | 342.95 | 46.50 | 26.51 | 13.00 |
| 12427 | TS-A322 | 497.12 | 24.40 | 515.56 | 1544.65 | 563.40 | 3603.32 | 304.77 | 90.53 | 239.84 | 12.64 | 312.74 | 2863.80 | 313.15 | 59.76 | 120.63 |
| 12428 | TS-E411 | 17.20 | 7.47 | 49.90 | 128.23 | 43.95 | 116.05 | 19.08 | 3.58 | 16.76 | < 2.33 | 19.56 | 198.42 | 16.00 | 3.76 | 13.57 |
| 12429 | TS-C411-15 | 5.27 | < 2.33 | 14.59 | 36.86 | 15.64 | 36.55 | 5.46 | 2.73 | 4.66 | < 0.85 | 5.38 | 59.21 | 4.07 | < 2.33 | 4.07 |
| 12430 | TS-E421 | 5.73 | 3.59 | 21.77 | 47.80 | 11.26 | 41.89 | 6.53 | < 0.85 | 6.25 | < 0.85 | 6.50 | 70.95 | 5.99 | < 2.33 | 4.13 |
| 12431 | TS-C421-15 | 5.57 | < 0.85 | 16.06 | 37.78 | 19.51 | 36.61 | 6.30 | 3.01 | 5.10 | < 0.85 | 5.63 | 55.77 | 4.55 | 2.51 | 4.38 |
| 12432 | TS-E426 | 22.08 | < 2.33 | 55.42 | 137.08 | 37.59 | 162.35 | 17.07 | < 2.33 | 21.62 | < 2.33 | 22.60 | 209.90 | 21.70 | < 2.33 | 13.57 |
| 12433 | TS-C426-15 | 6.35 | 4.45 | 23.84 | 41.25 | 16.65 | 41.71 | 6.22 | < 2.33 | 5.11 | < 0.85 | 6.83 | 64.18 | 4.22 | 2.91 | 4.84 |
| 12434 | TS-E500 | 3.86 | < 2.33 | 13.34 | 34.03 | 14.72 | 25.07 | 4.74 | < 2.33 | 4.56 | < 0.85 | 4.96 | 53.00 | 5.06 | < 2.33 | 3.67 |
| 12435 | TS-C500 | < 0.85 | < 0.85 | < 2.33 | 6.26 | < 2.33 | 2.89 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 6.06 | < 0.85 | < 0.85 | < 0.85 |
| 12436(c) | HUDBUG-A | < 0.85 | < 0.85 | 4.24 | 26.37 | 17.21 | 10.60 | 7.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 45.71 | 4.78 | < 0.85 | < 0.85 |
| 12437 | HUDBUG-B | 18.16 | 11.74 | 21.38 | 72.59 | 74.54 | 222.52 | 23.98 | 7.62 | 16.40 | < 2.33 | 13.73 | 135.20 | 14.84 | 14.06 | 2.77 |
| 12438 | HUDBUG-C | 12.56 | 3.21 | 11.25 | 36.61 | 19.63 | 96.69 | 9.81 | < 0.85 | 8.04 | < 0.85 | 5.73 | 70.29 | 7.67 | 5.76 | < 2.33 |
| 12439(c)(d) | HUDBUG-D | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12440 | TS-EITH | < 0.85 | < 0.85 | 4.55 | 12.04 | < 2.33 | 2.81 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | 14.05 | < 2.33 | < 0.85 | < 2.33 |
| 12511 A | TS-CITH | < 0.85 | < 0.85 | < 0.85 | 3.14 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 3.25 | < 0.85 | < 0.85 | < 0.85 |
| 12511 B | TS-CITH | < 0.85 | < 0.85 | < 0.85 | 3.00 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 3.13 | < 0.85 | < 0.85 | < 0.85 |
| 12511 C | TS-CITH | < 0.85 | < 0.85 | < 0.85 | 3.02 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 3.24 | < 0.85 | < 0.85 | < 0.85 |

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analysed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g

## Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)

| Sample Name | Field ID | 182,187 | 183 | 128 | 167 | 185 | 174 | 177 | 171,202 | 156 | 173 | 157,201 | 172 | 197 | 180 | 193 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | 6.29 | 2.74 | 4.63 | 2.72 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 12.23 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 10.67 | < 0.85 |
| 12397 | HUDBUG-3 | 7.05 | < 2.33 | 4.80 | < 2.33 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 8.71 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 5.72 | < 0.85 |
| 12398 | HUDBUG-4 | 6.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 2.91 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 |
| 12399 | HUDWDE-1 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 |
| 12400 A | HUDWDE-2 | 16.74 | 5.19 | 18.50 | 3.34 | < 0.85 | < 2.33 | 3.89 | < 2.33 | 6.16 | < 0.85 | 3.11 | < 2.33 | < 0.85 | 14.30 | < 2.33 |
| 12400 B | HUDWDE-2 | 15.85 | 4.66 | 17.29 | 3.09 | < 0.85 | < 2.33 | 3.70 | < 2.33 | 6.14 | < 0.85 | 2.97 | < 2.33 | < 0.85 | 13.66 | < 2.33 |
| 12400 C | HUDWDE-2 | 15.12 | 4.22 | 16.90 | 2.98 | < 0.85 | < 2.33 | 3.56 | < 2.33 | 7.73 | < 0.85 | 2.77 | < 2.33 | < 0.85 | 13.18 | < 2.33 |
| 12401 | HUDWDA-3 | 7.77 | 2.57 | 6.89 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 4.43 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 10.23 | < 0.85 |
| 12402 A | HUDWDA-4 | 5.85 | < 2.33 | 4.02 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 4.76 | < 0.85 |
| 12402 B | HUDWDA-4 | 5.65 | < 2.33 | 3.99 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 4.73 | < 0.85 |
| 12402 C | HUDWDA-4 | 6.05 | < 2.33 | 4.21 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 5.02 | < 0.85 |
| 12403 | HUDMLE-4 | 18.02 | 5.90 | 25.19 | 4.33 | < 0.85 | < 0.85 | < 2.33 | < 2.33 | 12.38 | < 0.85 | 4.37 | < 2.33 | < 0.85 | 16.82 | < 2.33 |
| 12404 | HUDMLA-3 | 152.76 | 31.57 | 78.15 | 17.20 | < 0.85 | 4.26 | 21.91 | 14.21 | 22.66 | < 0.85 | 14.08 | 6.09 | < 0.85 | 68.19 | 8.92 |
| 12405 | TS-E100 | 55.39 | 19.73 | 53.96 | 15.16 | < 0.85 | 6.29 | 13.41 | 8.67 | 33.24 | < 0.85 | 3.79 | 4.68 | < 0.85 | 71.74 | 4.70 |
| 12406 | TS-C100 | 6.92 | 3.02 | 10.22 | 2.64 | < 0.85 | < 2.33 | < 2.33 | < 2.33 | 6.90 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | 9.72 | < 0.85 |
| 12407(a) | TS-A100 | 121.62 | 58.01 | 140.97 | 38.59 | 5.12 | 38.67 | 46.25 | 25.67 | 60.79 | < 2.33 | 31.71 | 13.18 | < 0.85 | 160.50 | 12.45 |
| 12408(a) | TS-E204 | 89.05 | 34.40 | 132.72 | 25.86 | 2.94 | 28.43 | 27.79 | 16.32 | 62.88 | < 2.33 | 10.04 | 5.71 | < 0.85 | 103.22 | 8.03 |
| 12409 | TS-C204-5 | 28.82 | 11.91 | 57.27 | 9.28 | < 2.33 | 12.11 | 10.10 | 5.76 | 27.76 | < 0.85 | < 2.33 | 2.54 | < 0.85 | 41.63 | 5.27 |
| 12410 | TS-C204-10 | 40.51 | 22.44 | 101.92 | 16.93 | 2.87 | 23.02 | 16.26 | 6.93 | 51.08 | < 2.33 | 17.93 | 3.91 | < 0.85 | 68.75 | 8.14 |
| 12411 | TS-C204-15 | 84.55 | 37.05 | 188.07 | 32.50 | 7.73 | 50.66 | 33.99 | 17.92 | 94.71 | < 2.33 | < 2.33 | 7.88 | < 0.85 | 98.57 | 19.45 |
| 12412 | TS-E227 | 61.80 | 34.72 | 120.46 | 20.02 | 3.16 | 24.22 | 26.87 | 14.42 | 56.15 | < 2.33 | 5.39 | 5.18 | < 0.85 | 101.08 | 13.21 |
| 12413 | TS-C227-5 | 16.28 | 8.45 | 39.08 | 7.63 | < 2.33 | 7.02 | 6.65 | 3.41 | 16.62 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | 28.11 | < 2.33 |
| 12414 | TS-C227-10 | 38.43 | 20.29 | 78.02 | 16.63 | 3.18 | 19.79 | 15.17 | 7.68 | 48.12 | < 0.85 | < 0.85 | 3.93 | < 0.85 | 57.97 | 9.42 |
| 12415 | TS-C227-15 | 65.36 | 37.63 | 139.43 | 27.97 | 5.13 | 37.65 | 26.73 | 11.40 | < 2.33 | < 2.33 | 29.10 | 6.62 | < 0.85 | 82.69 | 5.37 |
| 12416 | TS-E313 | 177.39 | 67.41 | 197.40 | 54.73 | < 2.33 | 13.02 | 62.24 | 33.97 | 111.42 | < 2.33 | 11.29 | 15.63 | < 0.85 | 132.17 | 24.44 |
| 12417 | TS-C313-5 | 29.38 | 11.63 | 48.32 | 9.83 | < 0.85 | 5.71 | 10.62 | 5.31 | 23.80 | < 0.85 | 4.87 | 2.74 | < 0.85 | 39.74 | 3.34 |
| 12418 | TS-C313-15 | 50.04 | 23.42 | 98.93 | 16.33 | < 2.33 | 14.39 | 16.54 | 8.14 | 45.74 | < 0.85 | 18.50 | 4.46 | < 0.85 | 65.45 | 3.89 |
| 12419 | TS-E340 | 50.06 | 20.10 | 80.78 | 13.49 | < 2.33 | 14.33 | 17.08 | 9.00 | 33.61 | < 2.33 | 3.32 | 4.08 | < 0.85 | 84.16 | 7.83 |
| 12420 | TS-C340-15 | 56.47 | 24.83 | 50.12 | 19.67 | 2.94 | 19.92 | 20.40 | 9.76 | 52.73 | < 2.33 | 4.53 | 5.39 | < 0.85 | 52.49 | 3.56 |
| 12421 | TS-E337 | 34.61 | 14.66 | 51.77 | 10.02 | < 2.33 | 8.64 | 11.42 | 5.38 | 25.05 | < 0.85 | 10.19 | 2.93 | < 0.85 | 43.85 | 2.75 |
| 12422 | TS-C337-15 | 65.38 | 32.36 | 93.99 | 24.78 | 4.08 | 25.07 | 24.88 | 12.22 | 51.10 | 2.54 | 21.07 | 6.48 | < 0.85 | 70.14 | 9.58 |
| 12423 | TS-C339-5 | 24.12 | 9.19 | 38.52 | 6.87 | < 0.09 | 6.31 | 7.34 | 2.70 | 16.25 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | 29.46 | 4.06 |
| 12424(a) | TS-C339-10 | 34.55 | 16.02 | 71.09 | 11.80 | < 2.33 | 12.09 | 12.20 | 5.64 | 32.17 | < 0.85 | 11.99 | 3.07 | < 0.85 | 52.07 | 2.65 |
| 12426 | TS-C339-15 | 67.76 | 30.40 | 101.58 | 21.79 | 3.09 | 26.61 | 26.17 | 13.34 | 30.64 | < 2.33 | 16.63 | 6.26 | < 0.85 | 82.35 | 10.02 |
| 12425 | TS-S315 | 64.16 | 31.71 | 76.61 | 22.99 | 2.84 | 17.36 | 23.22 | 11.21 | 67.72 | < 2.33 | 15.20 | 5.91 | < 0.85 | 96.17 | 5.01 |
| 12427 | TS-A322 | 523.20 | 203.99 | 921.87 | 125.95 | 18.65 | 127.77 | 205.99 | 89.58 | 427.52 | 7.94 | 140.38 | 47.88 | < 2.33 | 700.76 | 36.79 |
| 12428 | TS-E411 | 62.64 | 20.00 | 46.62 | 10.20 | < 2.33 | 12.81 | 18.20 | 7.74 | 22.52 | < 0.85 | 9.81 | 3.97 | < 0.85 | 64.32 | 3.46 |
| 12429 | TS-C411-15 | 15.75 | 3.58 | 13.12 | 2.66 | < 0.85 | 3.72 | 4.17 | < 2.33 | 5.84 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 11.46 | < 0.85 |
| 12430 | TS-E421 | 23.16 | 7.35 | 16.83 | 4.11 | < 0.85 | 4.73 | 5.55 | 3.02 | 9.45 | < 0.85 | 3.63 | < 2.33 | < 0.85 | 25.15 | < 2.33 |
| 12431 | TS-C421-15 | 20.96 | 3.47 | 14.42 | 2.92 | < 0.85 | 4.40 | 4.41 | < 2.33 | 5.98 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 11.23 | < 2.33 |
| 12432 | TS-E426 | 55.75 | 16.84 | 56.97 | 12.44 | < 2.33 | 12.42 | 16.97 | 8.14 | 25.39 | < 0.85 | 3.25 | 3.78 | < 0.85 | 52.11 | 4.60 |
| 12433 | TS-C426-15 | 19.59 | 4.11 | 14.64 | 3.14 | < 0.85 | 4.00 | 4.97 | < 2.33 | 7.53 | < 0.85 | 2.91 | < 2.33 | < 0.85 | 13.65 | < 2.33 |
| 12434 | TS-E500 | 20.78 | 5.51 | 12.68 | 3.27 | < 0.85 | 4.97 | 4.33 | 2.60 | 5.91 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | 16.52 | < 2.33 |
| 12435 | TS-C500 | 3.45 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 2.50 | < 0.85 |
| 12436(c) | HUDBUG-A | 13.58 | < 0.85 | 4.63 | < 0.85 | < 0.85 | < 0.85 | 2.88 | < 2.33 | 2.46 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 12.49 | < 0.85 |
| 12437 | HUDBUG-B | 17.28 | 8.54 | 43.87 | 6.54 | < 2.33 | 10.57 | 6.93 | 3.55 | 18.46 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | 25.23 | < 2.33 |
| 12438 | HUDBUG-C | 9.85 | 3.72 | 29.19 | 3.03 | < 0.85 | 2.61 | 3.76 | < 2.33 | 9.26 | < 0.85 | 2.94 | < 2.33 | < 0.85 | 15.57 | < 0.85 |
| 12439(c)(d) | HUDBUG-D | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 |
| 12440 | TS-EITH | 9.60 | 2.89 | 2.90 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | < 2.33 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | 15.63 | < 0.85 |
| 12511 A | TS-CITH | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 2.33 |
| 12511 B | TS-CITH | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 2.33 |
| 12511 C | TS-CITH | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 2.33 |

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analyzed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g

*Table 1. Congener Specific PCBs (ng/g) – Hudson River Samples (WU30096)*

| Sample Name | Field ID | 191 | 200 | 170,190 | 196 (b) | 189 | 196,203 | 189 | 208,195 | 207 | 194 | 205 | 206 | 209 | Total cPCBs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12396 | HUDBUG-2 | < 0.85 | < 0.85 | 4.84 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 1085 |
| 12397 | HUDBUG-3 | < 0.85 | < 0.85 | 4.38 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 509 |
| 12398 | HUDBUG-4 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 240 |
| 12399 | HUDWDE-1 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 5 |
| 12400 A | HUDWDE-2 | < 0.85 | < 0.85 | 7.07 | < 0.85 | 3.63 | 3.20 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 1410 |
| 12400 B | HUDWDE-2 | < 0.85 | < 0.85 | 6.60 | < 0.85 | 3.76 | 3.07 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 1341 |
| 12400 C | HUDWDE-2 | < 0.85 | < 0.85 | 6.51 | < 0.85 | 3.71 | 2.94 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 1300 |
| 12401 | HUDWDA-3 | < 0.85 | < 0.85 | 4.64 | < 0.85 | 2.81 | 2.49 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 250 |
| 12402 A | HUDWDA-4 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 280 |
| 12402 B | HUDWDA-4 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 289 |
| 12402 C | HUDWDA-4 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 306 |
| 12403 | HUDMLE-4 | < 0.85 | < 0.85 | 6.37 | < 0.85 | 3.92 | 4.24 | < 0.85 | < 2.33 | < 0.85 | 2.38 | < 0.85 | < 0.85 | < 0.85 | 1118 |
| 12404 | HUDMLA-3 | 3.43 | < 0.85 | 39.57 | < 2.33 | 29.87 | 19.03 | < 2.33 | 8.92 | < 2.33 | 16.62 | < 2.33 | 11.60 | 2.62 | 3966 |
| 12405 | TS-E100 | 2.65 | < 0.85 | 31.75 | < 2.33 | 14.95 | 13.96 | < 2.33 | 5.21 | < 0.85 | 9.75 | < 2.33 | 10.13 | 3.38 | 4561 |
| 12406 | TS-C100 | < 0.85 | < 0.85 | 4.32 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 1411 |
| 12407(a) | TS-A100 | 4.36 | < 2.33 | 70.63 | 2.59 | 39.61 | 37.58 | 3.81 | 12.15 | 2.45 | 28.27 | 2.62 | 16.65 | 4.61 | 22225 |
| 12408(a) | TS-E204 | 3.49 | < 2.33 | 59.27 | < 2.33 | 23.99 | 21.04 | < 2.33 | 7.80 | < 2.33 | 16.51 | < 2.33 | 12.81 | 3.32 | 22920 |
| 12409 | TS-C204-5 | < 2.33 | < 0.85 | 20.32 | < 2.33 | 8.38 | 8.62 | < 0.85 | 2.54 | < 0.85 | 6.15 | < 0.85 | 4.56 | < 0.85 | 15832 |
| 12410 | TS-C204-10 | < 2.33 | < 2.33 | 32.41 | < 0.85 | 10.07 | 10.28 | < 2.33 | 2.90 | < 0.85 | 7.17 | < 0.85 | < 0.85 | < 0.85 | 55626 |
| 12411 | TS-C204-15 | 6.07 | < 2.33 | 51.60 | < 0.85 | 19.32 | 20.42 | 2.45 | 5.95 | < 2.33 | 15.39 | < 2.33 | 10.32 | < 2.33 | 94409 |
| 12412 | TS-E227 | 4.51 | < 2.33 | 49.25 | 2.97 | 22.58 | 21.14 | < 2.33 | 6.76 | < 2.33 | 14.58 | < 2.33 | 7.98 | 2.52 | 24690 |
| 12413 | TS-C227-5 | < 0.85 | < 0.85 | 13.43 | < 0.85 | 4.85 | 4.76 | < 0.85 | < 2.33 | < 0.85 | 3.44 | < 0.85 | < 2.33 | < 0.85 | 11486 |
| 12414 | TS-C227-10 | 2.76 | < 0.85 | 29.10 | < 0.85 | 8.68 | 9.71 | < 2.33 | 2.76 | < 0.85 | 7.31 | < 0.85 | 4.07 | < 0.85 | 39460 |
| 12415 | TS-C227-15 | 3.72 | < 2.33 | 53.28 | < 0.85 | 14.87 | 15.89 | < 2.33 | 4.27 | < 0.85 | 11.13 | < 0.85 | < 0.85 | < 0.85 | 98280 |
| 12416 | TS-E313 | 9.59 | < 0.85 | 100.30 | < 2.33 | 60.86 | 49.32 | 3.95 | 17.73 | 3.68 | 43.20 | 2.86 | 37.10 | 9.08 | 14139 |
| 12417 | TS-C313-5 | < 2.33 | < 0.85 | 19.30 | < 0.85 | 7.84 | 6.76 | < 0.85 | < 2.33 | < 0.85 | 5.22 | < 0.85 | 3.12 | < 0.85 | 7622 |
| 12418 | TS-C313-15 | < 2.33 | < 0.85 | 35.00 | < 0.85 | 11.87 | 11.40 | < 2.33 | 3.18 | < 0.85 | 8.70 | < 0.85 | < 0.85 | < 0.85 | 26116 |
| 12419 | TS-E340 | 2.56 | < 0.85 | 31.07 | 2.50 | 15.18 | 12.82 | < 2.33 | 4.29 | < 0.85 | 9.34 | < 0.85 | 7.82 | < 2.33 | 15174 |
| 12420 | TS-C340-15 | 2.58 | < 0.85 | 40.96 | < 2.33 | 13.91 | 13.81 | < 2.33 | 3.68 | < 0.85 | 10.56 | < 0.85 | 4.41 | < 0.85 | 23519 |
| 12421 | TS-E337 | < 2.33 | < 0.85 | 19.83 | < 2.33 | 11.37 | 9.30 | < 0.85 | 3.19 | < 0.85 | 6.99 | < 0.85 | < 0.85 | < 2.33 | 8917 |
| 12422 | TS-C337-15 | 3.72 | < 0.85 | 32.73 | < 2.33 | 14.25 | 14.66 | < 2.33 | 4.08 | < 0.85 | 11.67 | < 0.85 | 6.10 | < 0.85 | 37856 |
| 12423 | TS-C339-5 | < 0.85 | < 0.85 | 13.84 | < 0.85 | 6.02 | 5.21 | < 0.85 | < 2.33 | < 0.85 | 3.76 | < 0.85 | < 2.33 | < 0.85 | 9658 |
| 12424(a) | TS-C339-10 | < 2.33 | < 0.85 | 23.60 | < 0.85 | 8.79 | 7.86 | < 2.33 | < 2.33 | < 0.85 | 5.82 | < 0.85 | < 0.85 | < 0.85 | 19160 |
| 12425 | TS-C339-15 | 3.56 | < 2.33 | 34.85 | < 2.33 | 17.80 | 15.91 | < 2.33 | 4.96 | < 0.85 | 12.29 | < 0.85 | 8.51 | < 2.33 | 39945 |
| 12426 | TS-E315 | 2.90 | < 0.85 | 44.14 | < 0.85 | 16.53 | 16.45 | < 2.33 | 4.92 | < 0.85 | 12.78 | < 2.33 | 4.97 | < 2.33 | 21289 |
| 12427 | TS-A322 | 26.57 | 6.19 | 322.07 | 7.99 | 166.36 | 122.53 | 14.27 | 39.86 | 8.11 | 95.87 | 9.10 | < 2.33 | 10.76 | 113822 |
| 12428 | TS-E411 | < 2.33 | < 0.85 | 24.17 | < 0.85 | 17.21 | 14.04 | < 2.33 | 4.63 | < 0.85 | 8.47 | < 0.85 | < 0.85 | 2.35 | 8150 |
| 12429 | TS-C411-15 | < 0.85 | < 0.85 | 5.70 | < 0.85 | 3.42 | 2.59 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 3068 |
| 12430 | TS-E421 | < 0.85 | < 0.85 | 10.38 | < 0.85 | 6.10 | 5.46 | < 0.85 | < 2.33 | < 0.85 | 3.45 | < 0.85 | < 0.85 | < 2.33 | 2135 |
| 12431 | TS-C421-15 | < 0.85 | < 0.85 | 5.76 | < 0.85 | 3.82 | 2.71 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | 2512 |
| 12432 | TS-E426 | < 2.33 | < 0.85 | 26.49 | < 2.33 | 14.47 | 12.92 | < 2.33 | 4.52 | < 0.85 | 7.85 | < 2.33 | 7.60 | 2.69 | 7379 |
| 12433 | TS-C426-15 | < 0.85 | < 0.85 | 6.39 | < 0.85 | 4.05 | 3.11 | < 0.85 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 2456 |
| 12434 | TS-E600 | < 0.85 | < 0.85 | 7.58 | < 0.85 | 5.78 | 5.02 | < 0.85 | < 2.33 | < 0.85 | 3.13 | < 2.33 | 4.04 | 3.15 | 1605 |
| 12435 | TS-C500 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 197 |
| 12436(c) | HUDBUG-A | < 0.85 | < 0.85 | 2.71 | 10.28 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 7.68 | 5.52 | 573 |
| 12437 | HUDBUG-B | < 0.85 | < 0.85 | 12.30 | 2.63 | 4.62 | 4.35 | < 0.85 | < 2.33 | < 0.85 | 3.91 | < 0.85 | 7.45 | < 0.85 | 17743 |
| 12438 | HUDBUG-C | < 0.85 | < 0.85 | 6.87 | < 0.85 | < 2.33 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 0.85 | 6828 |
| 12439(c)(d) | HUDBUG-D | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | 0 |
| 12440 | TS-EITH | < 0.85 | < 0.85 | 3.88 | < 0.85 | 3.48 | 2.33 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | < 0.85 | < 2.33 | 103 |
| 12511 A | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 6 |
| 12511 B | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 5 |
| 12511 C | TS-CITH | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 0.85 | < 2.33 | < 0.85 | 6 |

(a) GC Replicate Average
(b) A contaminate has biased this congeners concentration.
(c) Not analyzed for lipid.
(d) ND for whole sample.

MDL = 0.85ng/g
MQL = 2.33 ng/g