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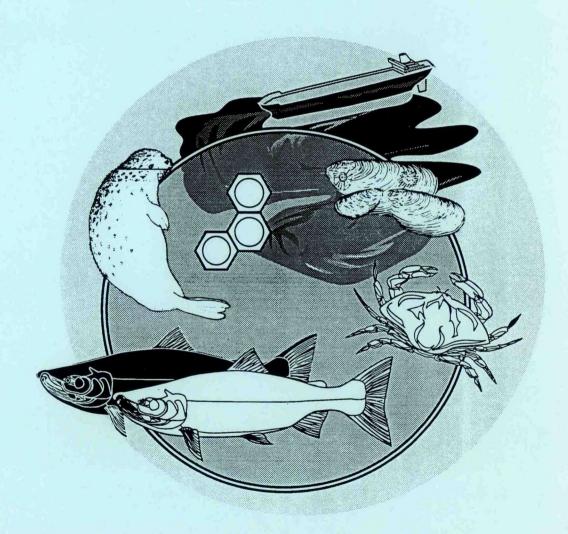
NOAA Technical Memorandum NMFS-NWFSC-13



Volume II:

Supplemental Information Concerning a Survey of Alaskan Subsistence Fish, Marine Mammal, and Invertebrate Samples Collected 1989-91 for Exposure to Oil Spilled from the *Exxon Valdez*

October 1993



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

NOAA Technical Memorandum NMFS

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Supplemental Information Concerning a Survey of Alaskan Subsistence Fish, Marine Mammal, and Invertebrate Samples Collected 1989-91 for Exposure to Oil Spilled from the *Exxon Valdez*

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EXECUTIVE SUMMARY

The Exxon Valdez ran aground on Bligh Reef, Prince William Sound, Alaska on March 24, 1989, spilling millions of gallons of Prudhoe Bay crude oil (PBCO). During the weeks following the spill, large amounts of oil flowed towards southwestern Prince William Sound, and as a result, many shorelines were oiled. The spreading of spilled oil raised concerns of native Alaskans that their subsistence seafoods (fish, marine mammals, and invertebrate organisms) were contaminated by the spilled petroleum. At the request of native Alaskans, a study was conducted as a cooperative effort among NOAA, Exxon, and the Alaska Department of Fish and Game to assess the degree of contamination of subsistence organisms by PBCO. In this study, edible flesh of fish, marine mammals, and shellfish from 22 native subsistence food collection areas and from two reference areas (Angoon and Yakutat) were analyzed for aromatic compounds (ACs). Vertebrates can readily biotransform ACs to metabolites that are concentrated in bile for excretion. This process greatly limits the accumulation of ACs in tissues such as edible flesh. Thus, for fish and marine mammals, bile was first analyzed for the presence of fluorescent aromatic compounds (FACs) as an indication of exposure to petroleum.

Based on the concentrations of FACs in bile, it was evident that pink salmon, halibut, and Pacific cod from the Chenega area had been exposed to ACs during 1989, as were pink salmon from Tatitlek, Kodiak, and Old Harbor. The bile method was useful because it quickly identified those fish that were relatively unexposed to ACs and, therefore, of less immediate interest for analysis by the more detailed method for ACs in tissue.

As expected, most fish muscle samples were not contaminated with ACs (<10 ng/g). In fact, the highest concentration of ACs found in muscle samples of fish caught during this study was 100 ng/g in a pink salmon caught near Kodiak (city) in 1989. In contrast, two samples of smoked salmon obtained from Tatitlek and Old Harbor contained 23,000 and 8,100 ng/g ACs, respectively.

Bile and tissue samples were collected from 33 harbor seals and 10 sea lions in 1989 and 1990. As with fish, the concentrations of FACs in bile of harbor seals varied considerably. Nine of the 12 bile samples with the highest concentrations of

FACs were from animals collected in 1989 that were visibly oiled. With two minor exceptions, samples of muscle, liver, and kidney from harbor seals and sea lions, as well as blubber from sea lions, were not contaminated (<10 ng/g) with ACs. Samples of blubber from 12 of the harbor seals were minimally contaminated (10 to 99 ng/g), and samples of blubber from 4 harbor seals were moderately contaminated with ACs (100 to 1,000 ng/g).

Invertebrates from most of the sampling areas were not contaminated or were minimally contaminated by ACs (<100 ng/g). Therefore, results are presented for only those few stations where higher concentrations of ACs were found. Molluscs from some stations at the Chenega, Windy Bay, Kodiak, and Old Harbor sampling areas were moderately or highly contaminated (>100 ng/g) with ACs. For example, some of the mollusc samples from 4 of the 12 stations in the Chenega area (CHE1, CHE7, CHE10, CHE24) were moderately or highly contaminated with ACs. Mollusc samples from Windy Bay stations WNB1 and WNB3 contained concentrations of ACs as high as 18,000 ng/g; 34 of 106 invertebrate samples contained concentrations of ACs greater than 100 ng/g. The only two stations on Kodiak Island where mollusc samples had mean concentrations of ACs (by year for individual species) greater than 100 ng/g (moderately or highly contaminated) were KOD3 and OHA4. Most of the mollusc samples (26 of 30) from station KOD3 (located on Near Island about 1/4 mile from Kodiak's boat harbor) were moderately or heavily contaminated with ACs (>100 ng/g). Station OHA4 was adjacent to the village of Old Harbor near the boat harbor, and the concentrations of ACs in molluscs collected at this site in 1989 and 1990 were just within the moderately contaminated category or lower.

Aromatic compounds were present in molluscs at concentrations high enough to evaluate in terms of temporal trends only at some stations. For example, the concentrations of ACs declined significantly with time in mussels at:

1) Chenega stations CHE9 and CHE10 (1990 to 1991), and 2) at the combined Windy Bay stations WNB1/WNB3 (1989 to 1991). The degree of contamination of invertebrates from WNB1 and WNB3 stations varied with sampling year and by species. Specifically, some of the mussel samples from Windy Bay station WNB1 (1989) and from WNB3 (1990) were highly contaminated (>1,000 ng/g), whereas the concentrations of ACs in mussels from these stations in 1991 were minimally to moderately contaminated (10 ng/g to 1,000 ng/g). The decline in concentrations

of ACs in these molluscs probably related to decreased exposure which resulted from weathering of the spilled oil at the particular stations. The concentrations of ACs in molluscs at some other stations did not decline significantly with time. For example, the concentrations of ACs in butter clams from Kodiak station KOD3 did not consistently decline over four sampling periods during 1990.

The relative concentrations of the hundreds of different ACs in various petroleums and petroleum products can vary considerably. The patterns of these concentrations can be useful for purposes of comparison. The patterns of some ACs (phenanthrenes and dibenzothiophenes) in selected mollusc samples from Chenega area stations CHE1 and CHE10 and Windy Bay stations WNB1 and WNB3 were similar to that of weathered PBCO. Because the overall patterns of ACs in molluscs did not exactly match that of PBCO, other observations were also important in considering sources. For example, following the spill, oil was observed in the area of station CHE1 and at CHE10, a tar mat about 1 m wide extended the length of the beach at the high tide line. Also, stations WNB1 and WNB3 were observed to be moderately to heavily oiled. Thus, based on the patterns of ACs in molluscs and the known proximity of the spilled oil to these areas, oil from the Exxon Valdez may have been the source of ACs in mollusc samples from CHE1, and most likely was the source of ACs in mollusc samples from CHE10, WNB1, and WNB3. The patterns of ACs in selected samples from Kodiak Island stations KOD3 and OHA4 were also similar to those for mollusc samples from CHE1, CHE10, WNB1, and WNB3. However, the presence of naphthalenes in the patterns was more prominent in the samples from KOD3 and OHA4 than in the Chenega and Windy Bay samples. This finding implies exposure of the KOD3 and OHA4 molluscs to a less weathered source of ACs. Therefore, the ACs in molluscs from KOD3 and OHA4 are suspected to be from a local continuing source of petroleum. Additional support for this conclusion includes: 1) KOD3 and OHA4 were near active boat harbors which could be a source of ACs, 2) the spilled oil was not observed to impact these areas, and 3) the concentrations in molluscs at KOD3 did not continually decline over four samplings during 1990. Based on patterns, PBCO was probably a minor source of the ACs in mollusc samples from station CHE7. The pattern of ACs implied that the source of these compounds in selected molluscs from CHE7 was due to exposure to creosote (perhaps from the creosoted pilings located near the sampling station) and/or products of combustion. Based on the patterns of ACs in selected

samples, PBCO was probably not a source, or only a minor source of the ACs in molluscs from Tatitlek station T1. More likely, the source of the ACs in mollusc samples from T1 was products of combustion processes.

Interestingly, of the ACs found in fish muscle, unsubstituted ACs predominated, which was probably due to the more rapid metabolism of alkylated ACs than of unsubstituted ACs by fish liver. Conversely, molluscs, which have little ability to metabolize ACs, had both alkylated and unsubstituted ACs, and the patterns of ACs in molluscs more closely resembled that for petroleum components. Furthermore, in the blubber samples from harbor seals with elevated concentrations of ACs, the concentrations of alkyl-substituted ACs were similar to or greater than the concentrations of the corresponding nonsubstituted ACs. This pattern is similar to what was found in PBCO and molluscs, and generally the opposite of what was observed in fish.

In conclusion, the finding of elevated concentrations of FACs in some bile samples from fish and marine mammals was clear evidence of their exposure to petroleum. Generally, ACs were not found in muscle tissue of fish, harbor seals, and sea lions. Some harbor seal blubber samples did contain ACs; however, the concentration of ACs in most blubber samples was less than 100 ng/g. Smoked salmon contained higher concentrations of ACs (8,000 to 20,000 ng/g) than any of the untreated subsistence samples. The concentrations of ACs were less than 100 ng/g in approximately 90% of the more than 1,000 mollusc samples from 80 sampling beaches. The concentrations of ACs were elevated in some mollusc samples (as high as 18,000 ng/g), and the concentrations of ACs exceeded 1,000 ng/g in 24 samples.

The results to date provide important information on the level of contamination of subsistence fish, shellfish, and marine mammals from fishing areas of native Alaskan villages in and near Prince William Sound. In an advisory opinion, the Food and Drug Administration has indicated that little risk is involved in the consumption of the nonsmoked subsistence foods studied. Subsistence food gatherers were advised not to collect or consume food if oil was observed to be present. The results also show that in future oil spills, shellfish tissues should be given the highest priority for analysis, whereas rapid screening of bile from fish and marine mammals should be sufficient to provide information on level of exposure.

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INTRODUCTION

The material contained in this volume supplements NOAA Technical Memorandum NMFS-NWFSC-12, Volume I: Survey of Alaskan Subsistence Fish, Marine Mammal, and Invertebrate Samples Collected 1989-91 for Exposure to Oil Spilled from the *Exxon Valdez*. We have repeated the Executive Summary from Volume I in the preliminary pages for an overview of the study covered.

Six sections cover the following subjects:

- A. Concentrations of Metabolites of Fluorescent Aromatic Compounds in Fish Bile;
- B. Concentrations of Aromatic Compounds in Edible Tissue of Fish;
- C. Concentrations of Metabolites of Fluorescent Aromatic Compounds in Bile from Marine Mammals;
- D. Concentrations of Aromatic Compounds in Edible Tissues of Marine Mammal Samples;
- E. Concentrations of Aromatic Compounds in Invertebrate Samples; and
- F. Quality Assurance.

* * * * *

SECTION A

CONCENTRATIONS OF METABOLITES OF FLUORESCENT AROMATIC COMPOUNDS (FACs) IN FISH BILE

Explanatory notes for Tables A-1 through A-20

* The Lab no. for aromatic compounds (ACs) column is provided for cross referencing the field sample and bile sample with the results for analysis for ACs by gas chromatography/mass spectrometry.

Samples collected by the Alaska Department of Fish and Game are noted by ** in front of sample number; other samples were collected by Dames and Moore.

FACs_{NPH} and FACs_{PHN} represent the compounds that fluoresce at naphthalene and phenanthrene wavelengths respectively. Units are ng FACs equivalents per g bile.

IBR = Insufficient amount of bile received to perform analysis.

‡ indicates that the sample was not selected for analysis for ACs.

Table A-1. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Angoon (reference area).

Field / Bile		0	FACs	FACs	Protein	Lab no. *	Date collected
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	conected
13PAH-043	AGN3	Chinook salmon	9,900	1,700	5.0	60-321	Aug-89
13PAH-050	AGN3	Chinook salmon	11,000	1,600	2.0	60-321	Aug-89
13PAH-052	AGN3	Chinook salmon	3,400	920	3.0	60-321	Aug-89
13PAH-011	AGN3	Coho salmon	14,000	2,700	4.0	60-319	Aug-89
13PAH-041	AGN3	Coho salmon	4,700	640	2.0	60-230	Aug-89
13PAH-042	AGN3	Coho salmon	12,000	1,500	8.0	60-230	Aug-89
13PAH-044	AGN3	Coho salmon	9,600	2,000	2.0	60-230	Aug-89
13PAH-045	AGN3	Coho salmon	6,300	2,000	3.6	60-319	Aug-89
13PAH-051	AGN3	Coho salmon	7,200	1,600	3.2	60-323	Aug-89
13PAH-046	AGN3	Pink salmon	10,000	1,600	3.0	60-229	Aug-89
13PAH-047	AGN3	Pink salmon	15,000	2,400	0.8	60-229	Aug-89
13PAH-048	AGN3	Pink salmon	63,000	12,000	1.0	60-229	Aug-89
13PAH-049	AGN3	Pink salmon	9,100	1,700	1.0	60-320	Aug-89
13PAH-055	AGN3	Pacific cod	12,000	1,900	4.0	60-322	Aug-89
13PAH-040	AGN3	Halibut	2,600	430	1.8	60-228	Aug-89
13PAH-053	AGN3	Halibut	6,100	880	3.0	60-228	Aug-89
13PAH-054	AGN3	Halibut	6,700	920	4.0	60-228	Aug-89

Table A-2. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Yakutat (reference area).

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-808	YAK6	Sockeye salmon	24,000	2,500	3.5	60-3081	Jun-90
13PAH-809	YAK6	Sockeye salmon	25,000	3,000	3.5	60-3082	Jun-90
13PAH-810	YAK6	Sockeye salmon	31,000	3,400	5.0	60-3083	Jun-90
13PAH-811	YAK6	Sockeye salmon	29,000	2,700	4.2	60-3084	Jun-90
13PAH-812	YAK6	Sockeye salmon	IBR	IBR	IBR	60-3085	Jun-90
13PAH-813	YAK6	Sockeye salmon	73,000	8,900	11.8	60-3063, 3070	Jun-90
13PAH-814	YAK6	Sockeye salmon	39,000	4,500	7.9	‡	Jun-90
13PAH-815	YAK6	Sockeye salmon	140,000	8,400	19.0	‡	Jun-90
13PAH-816	YAK6	Sockeye salmon	51,000	5,000	12.1	‡	Jun-90
13PAH-817	YAK6	Sockeye salmon	49,000	6,700	14.7	‡	Jun-90
13PAH-818	YAK6	Sockeye salmon	31,000	3,000	7.9	‡	Jun-90
13PAH-805	YAK6	Halibut	21,000	1,800	0.8	‡	Jun-90
13PAH-806	YAK6	Halibut	30,000	2,200	0.7	‡	Jun-90
13PAH-807	YAK6	Yellowfin sole	21,000	1,800	0.9	‡	Jun-90
13PAH-786	YAK7	Chinook salmon	11,000	1,000	1.4	‡	Jun-90
13PAH-787	YAK7	Chinook salmon	30,000	2,300	5.1	‡	Jun-90
13PAH-798	YAK7	Pacific cod	140,000	10,000	30.7	‡	Jun-90
13PAH-797	YAK7	Halibut	21,000	2,000	0.7	60-3069	Jun-90
13PAH-799	YAK7	Halibut	35,000	2,900	6.1	‡	Jun-90
13PAH-800	YAK7	Halibut	22,000	1,900	1.1	‡	Jun-90
13PAH-826	YAK8	Chinook salmon	34,000	3,200	11.3	‡	Jun-90
13PAH-827	YAK8	Chinook salmon	21,000	1,600	2.2	‡	Jun-90
13PAH-824	YAK8	Sockeye salmon	15,000	1,100	3.9	‡	Jun-90
13PAH-819	YAK8	Halibut	57,000	3,500	19.0	60-3064	Jun-90
13PAH-820	YAK8	Halibut	26,000	2,000	12.1	60-3065	Jun-90
13PAH-821	YAK8	Halibut	32,000	1,400	1.5	60-3066	Jun-90
13PAH-822	YAK8	Halibut	23,000	1,800	1.6	60-3067	Jun-90
13PAH-823	YAK8	Halibut	26,000	2,000	0.7	60-3068	Jun-90

Table A-3. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Tatitlek.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
Bampie no.	Dutuon	Special			A STATE OF THE STA		
13PAH-001	TAT2	Pink salmon	15,000	1,100	12.0	60-1	Jul-89
13PAH-037	TAT3	Pink salmon	270,000	70,000	111.0	60-134, 139	Aug-89
13PAH-038	TAT3	Pink salmon	320,000	95,000	104.0	60-135	Aug-89
13PAH-039	TAT3	Pink salmon	130,000	46,000	81.0	60-136	Aug-89
13PAH-002	TAT3	Rockfish	15,000	3,700	6.0	60-701	Jul-89
**TAT4-1BS	TAT4	Pacific cod	14,000	2,400	2.0	60-2412	Jun-90
**TAT4-1B	TAT4	Pacific cod	320,000	52,000	19.5	60-2396	Mar-90
**TAT4-2B	TAT4	Pacific cod	230,000	34,000	18.3	60-2397	Mar-90
**TAT4-3B	TAT4	Pacific cod	35,000	4,800	5.9	#	Mar-90
**TAT4-4B	TAT4	Pacific cod	140,000	15,000	9.7	60-2398	Mar-90
**TAT4-2BS	TAT4	Rockfish	36,000	5,200	2.1	60-2413	Jun-90
**TAT4-4BS	TAT4	Rockfish	2,300	5,100	1.2	60-2414	Jun-90
13PAH-003	TAT4	Halibut	18,000	3,800	7.0	60-27	Jul-89
13PAH-009	TAT6	Halibut	26,000	3,800	1.6	60-132	Aug-89
13PAH-010	TAT6	Halibut	58,000	6,100	6.4	60-132	Aug-89
13PAH-161	TAT7	Coho salmon	48,000	8,400	9.0	60-451	Aug-89
13PAH-162	TAT7	Coho salmon	87,000	20,000	29.0	60-363	Aug-89
13PAH-163	TAT7	Coho salmon	91,000	20,000	11.4	60-363	Aug-89
13PAH-164	TAT7	Coho salmon	110,000	31,000	12.8	60-363	Aug-89
13PAH-165	TAT7	Coho salmon	48,000	9,300	10.0	60-451	Aug-89
13PAH-166	TAT7	Coho salmon	88,000	23,000	14.0	60-364	Aug-89
13PAH-167	TAT7	Coho salmon	150,000	45,000	10.8	60-364	Aug-89
13PAH-168	TAT7	Coho salmon	73,000	15,000	16.8	60-362	Aug-89
13PAH-169	TAT7	Coho salmon	49,000	10,000	10.2	60-362	Aug-89
13PAH-170	TAT7	Coho salmon	41,000	9,500	6.0	60-362	Aug-89
13PAH-171	TAT7	Coho salmon	74,000	19,000	18.6	60-448	Aug-89
13PAH-172	TAT7	Coho salmon	46,000	6,500	10.8	60-448	Aug-89

Table A-4. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Chenega Bay.

Field / Bile			FACS	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-004	CHE2	Pacific cod	120,000	62,000	8.0	60-23	Jul-89
13PAH-029	CHE2	Pacific cod	IBR	IBR	IBR	60-151	Aug-89
13PAH-030	CHE2	Pacific cod	150,000	33,000	9.8	60-149	Aug-89
13PAH-230	CHE2	Pacific cod	160,000	55,000	12.6	60-487	Aug-89
**CHE2-1BS	CHE2	Pacific cod	97,000	24,000	4.3	60-2405	Jun-90
**CHE2-2BS	CHE2	Pacific cod	67,000	13,000	5.9	60-2406	Jun-90
**CHE2-3BS	CHE2	Pacific cod	66,000	12,000	3.7	60-2407	Jun-90
**CHE2-4BS	CHE2	Pacific cod	56,000	9,700	4.0	60-2408	Jun-90
**CHE2-5BS	CHE2	Pacific cod	45,000	7,200	6.0	60-2409	Jun-90
**CHE2-1B	CHE2	Pacific cod	47,000	4,800	6.5	‡	Feb-90
13PAH-032	CHE2	Rockfish	97,000	24,000	1.8	60-150	Aug-89
13PAH-005	CHE2	Halibut	12,000	4,100	3.0	60-28	Jul-89
13PAH-033	CHE2	Halibut	77,000	18,000	3.2	60-130	Aug-89
13PAH-034	CHE2	Halibut	31,000	5,800	1.2	60-130	Aug-89
13PAH-035	CHE2	Halibut	48,000	13,000	1.2	60-131	Aug-89
13PAH-036	CHE2	Halibut	34,000	6,100	1.0	60-131	Aug-89
13PAH-231	CHE2	Halibut	8,400	2,500	6.8	60-485	Aug-89
13PAH-232	CHE2	Halibut	10,000	2,500	1.0	60-485	Aug-89
13PAH-233	CHE2	Halibut	6,300	1,400	1.4	60-485	Aug-89
13PAH-024	CHE3	Pink salmon	45,000	7,500	2.6	60-137	Aug-89
.13PAH-025	CHE3	Pink salmon	26,000	3,200	0.6	60-137	Aug-89
13PAH-026	CHE3	Pink salmon	79,000	14,000	IBR	60-138	Aug-89
13PAH-027	CHE3	Pink salmon	45,000	9,800	1.4	60-138	Aug-89
13PAH-028	CHE3	Pink salmon	29,000	4,100	1.2	60-138	Aug-89
13PAH-791	CHE3	Pink salmon	44,000	6,100	27.7	60-1763	Jul-90
13PAH-795	CHE3	Pink salmon	130,000	19,000		60-1764, 1769	Jul-90
13PAH-802	CHE3	Pink salmon	180,000	26,000		60-1765, 1770	Jul-90
13PAH-804	CHE3	Pink salmon	80,000	14,000	25.5	‡	Jul-90
13PAH-829	CHE3	Starry flounder	27,000	5,900	7.2	‡	Jul-90
13PAH-173	CHE4	Pink salmon	490,000	180,000	29.0	60-454	Aug-89
13PAH-174	CHE4	Pink salmon	620,000	270,000	40.0	60-455	Aug-89
13PAH-215	CHE4	Pink salmon	150,000	77,000	40.0	60-465	Aug-89
13PAH-216	CHE4	Pink salmon	1,300,000	330,000	38.0	60-466	Aug-89
13PAH-217	CHE4	Pink salmon	300,000	99,000	18.0	60-467	Aug-89
13PAH-218	CHE4	Pink salmon	190,000	87,000	35.0	60-468	Aug-89
13PAH-219	CHE4	Pink salmon	530,000	240,000	47.0	60-469	Aug-89
13PAH-220	CHE4	Pink salmon	630,000	240,000	38.0	60-470	Aug-89
13PAH-221	CHE4	Pink salmon	730,000	360,000	38.0	60-471	Aug-89
13PAH-222	CHE4	Pink salmon	340,000	140,000	25.0	60-472	Aug-89
13PAH-223	CHE4	Pink salmon	690,000	270,000	39.0	60-473	Aug-89
13PAH-224	CHE4	Pink salmon	240,000	86,000	IBR	60-452	Aug-89
	· · · · ·		210,000	30,000	12.10	00 132	

Table A-5. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Chenega Bay.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
bumpie no.	Button	0,000			A STATE OF THE PARTY OF THE PAR		
13PAH-225	CHE4	Pink salmon	600,000	280,000	36.0	60-474	Aug-89
13PAH-226	CHE4	Pink salmon	1,800,000	700,000	41.0	60-453, 456	Aug-89
13PAH-227	CHE4	Pink salmon	290,000	120,000	33.0	60-483	Aug-89
13PAH-228	CHE4	Pink salmon	760,000	290,000	46.0	60-484	Aug-89
13PAH-229	CHE4	Pink salmon	300,000	59,000	34.0	60-484	Aug-89
**CHE5-1B	CHE5	Greenling	12,000	2,000	3.1	#	Feb-90
**CHE5-2B	CHE5	Rockfish	10,000	7,400	3.3	#	Feb-90
13PAH-330	CHE5	Rockfish	65,000	12,000	4.3	60-1106	Mar-90
13PAH-331	CHE6	Greenling	43,000	6,900	4.0	60-1107	Mar-90
13PAH-343	CHE8	Pacific cod	96,000	13,000	7.7	60-1479	Apr-90
13PAH-788	CHE12	Halibut	IBR	IBR	6.3	‡	Jul-90
13PAH-790	CHE13	Pacific cod	35,000	6,400	8.5	. ‡	Jul-90
13PAH-828	CHE13	Pacific cod	13,000	2,300	4.0	‡	Jul-90
13PAH-789	CHE13	Ling cod	16,000	2,600	2.3	60-2451	Jul-90
13PAH-830	CHE14	Rockfish	9,100	3,600	1.6	60-2452	Jul-90
13PAH-832	CHE14	Rockfish	7,400	320	2.5	‡	Jul-90
13PAH-833	CHE15	Ling cod	30,000	2,800	1.7	60-2438	Jul-90
13PAH-834	CHE16	Yellowfin sole	34,000	3,800	2.3	60-2425	Jul-90
13PAH-835	CHE16	Yellowfin sole	860	140	10.5	#	Jul-90
13PAH-837	CHE17	Coho salmon	71,000	6,400	27.9	‡	Jul-90
13PAH-838	CHE17	Coho salmon	76,000	7,700	9.1	‡	Jul-90
13PAH-839	CHE17	Coho salmon	57,000	5,300	8.3	‡	Jul-90
13PAH-840	CHE17	Coho salmon	41,000	4,500	5.7	‡	Jul-90
13PAH-842	CHE17	Pink salmon	31,000	3,100	10.5	‡	Jul-90
					-	. 1	

Table A-6. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Port Graham.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-006	PTG2	Halibut	29,000	4,400	8.0		Jul-89
13PAH-853	PTG2	Rock sole	790	120	77.9	‡ ‡	Jul-89 Jul-90
13PAH-858	PTG3	Chum salmon	140,000	13,000	11.4	60-2423	Jul-90 Jul-90
13PAH-859	PTG3	Chum salmon	95,000	11,000	14.2		Jul-90 Jul-90
13PAH-860	PTG3	Chum salmon	41,000	3,800	11.8	‡ ‡	Jul-90 Jul-90
13PAH-236	PTG3	Coho salmon	25,000	6,300	4.8	60-538	Sep-89
13PAH-237	PTG3	Coho salmon	9,500	1,600	4.0	60-538	Sep-89
13PAH-007	PTG3	Pink salmon	28,000	6,500	8.0	60-2	Jul-89
13PAH-020	PTG3	Pink salmon	89,000	17,000	5.6	60-148	Aug-89
13PAH-021	PTG3	Pink salmon	IBR	IBR	IBR	60-156	Aug-89
13PAH-022	PTG3	Pink salmon	IBR	IBR	IBR	60-156	Aug-89
13PAH-023	PTG3	Pink salmon	200,000	58,000	46.0	60-133	Aug-89
13PAH-234	PTG3	Pink salmon	79,000	28,000	17.2	60-537	Sep-89
13PAH-235	PTG3	Pink salmon	120,000	24,000	29.0	60-537	Sep-89
13PAH-239	PTG3	Pink salmon	IBR	1BR	IBR	60-537	Sep-89
13PAH-862	PTG3	Pink salmon	64,000	8,100	20.3	60-1767	Jul-90
13PAH-863	PTG3	Pink salmon	42,000	4,200	24.1		Jul-90 Jul-90
13PAH-864	PTG3	Pink salmon	46,000	6,400	18.7	‡ ‡	Jul-90 Jul-90
13PAH-865	PTG3	Pink salmon	46,000	4,000	11.5	+ ‡	Jul-90 Jul-90
13PAH-866	PTG3	Pink salmon	59,000	8,800	20.5	+ ‡	Jul-90 Jul-90
**PGEB-1	PTG3	Pacific cod	54,000	8,300	6.1	60-2393	Mar-90
**PGEB-3	PTG3	Rock flounder	50,000	9,300		60-2394, 2399	Mar-90 Mar-90
**PGEB-4	PTG3	Rock flounder	71,000	6,900	11.4	±	Mar-90
13PAH-238	PTG5	Halibut	15,000	1,100	0.7	60-486	Sep-89
13PAH-334	PTG6	Greenling	37,000	4,800	1.9	60-1099	Mar-90
13PAH-335	PTG6	Greenling	35,000	3,800	1.9	60-1100	Mar-90
13PAH-336	PTG6	Greenling	49,000	5,800	2.5	60-1101	Mar-90
13PAH-337	PTG7	Rock sole	29,000	1,700	IBR	60-1101	Mar-90
13PAH-338	PTG7	Rock sole	72,000	7,800	3.1	60-1102	Mar-90 Mar-90
13PAH-339	PTG7	Rock sole	77,000	16,000	8.7	60-1103	Mar-90 Mar-90
13PAH-340	PTG7	Rock sole	20,000	5,000	4.8	60-1104	Mar-90 Mar-90
13PAH-854	PTG11	Greenling	44,000	5,600	2.7	60-2444	Mar-90 Jul-90
13PAH-855	PTG11	Greenling	48,000	5,700	14.2	±	
J. 111-033	11011	Graning	40,000	5,700	14.2	+	Jul-90

Table A-7. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Windy Bay.

Field / Bile Sample no.	Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
13PAH-845	WNB5	Pink salmon	43,000	7,300	12.2	‡	Jul-90
13PAH-847	WNB5	Pink salmon	460,000	22,000	16.9	60-2453, 2459	Jul-90
13PAH-850	WNB5	Pink salmon	110,000	22,000	24.3	‡	Jul-90
13PAH-852	WNB5	Pink salmon	220,000	41,000	19.5	60-1766, 1771	Jul-90

Table A-8. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Kodiak.

Field / Bile	Ctation	Si	FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-071	KOD5	Pink salmon	47,000	4,100	IBR	60-189	Aug-89
13PAH-072	KOD5	Pink salmon	93,000	13,000	6.6	60-188	Aug-89
13PAH-073	KOD5	Pink salmon	IBR	IBR	IBR	60-629	Aug-89
13PAH-075	KOD5	Pink salmon	250,000	35,000	9.6	60-166, 195	Aug-89
13PAH-076	KOD5	Pink salmon	69,000	10,000	17.8	60-188	Aug-89
13PAH-077	KOD5	Pink salmon	60,000	9,400	11.2	60-188	Aug-89
13PAH-078	KOD5	Pink salmon	47,000	6,700	6.2	60-189	Aug-89
13PAH-079	KOD5	Pink salmon	110,000	18,000	IBR	60-187	Aug-89
13PAH-240	KOD5	Pink salmon	290,000	250,000	64.0	60-488, 489	Sep-89
13PAH-241	KOD5	Pink salmon	490,000	430,000	77.0	60-490, 492	Sep-89
13PAH-242	KOD5	Pink salmon	330,000	230,000	49.0	60-539, 540	Sep-89
13PAH-992	KOD5	Pink salmon	220,000	39,000	19.1	60-1812	Aug-90
13PAH-993	KOD5	Pink salmon	150,000	23,000	5.8	60-1813	Aug-90
13PAH-994	KOD5	Pink salmon	90,000	8,900	12.1	‡	Aug-90
13PAH-995	KOD5	Pink salmon	400,000	58,000	12.0	60-1814	Aug-90
13PAH-996	KOD5	Pink salmon	88,000	8,200	36.7	‡	Aug-90
13PAH-074	KOD5	Sockeye salmon	IBR	IBR	IBR	60-194	Aug-89
13PAH-080	KOD6	Halibut	IBR	IBR	IBR	60-193	Aug-89
13PAH-243	KOD6	Halibut	19,000	6,000	0.8	‡	Sep-89
**KOD6-2SB	KOD6	Rock sole	11,000	900	9.8	‡	May-90

Table A-9. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Chiniak.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-157	CHI5	Chum salmon	13,000	2,200	10.0	60-280	Aug-89
13PAH-159	CHI5	Chum salmon	67,000	7,900	19.0	60-280	Aug-89
13PAH-160	CHI5	Chum salmon	11,000	2,100	5.4	60-280	Aug-89
13PAH-149	CHI5	Pink salmon	210,000	120,000	65.0	60-261, 288	Aug-89
13PAH-150	CHI5	Pink salmon	30,000	3,700	5.2	60-265	Aug-89
13PAH-151	CHI5	Pink salmon	15,000	820	5.2	60-287	Aug-89
13PAH-152	CHI5	Pink salmon	24,000	1,700	22.0	60-287	Aug-89
13PAH-153	CHI5	Pink salmon	44,000	7,300	15.0	60-265	Aug-89
13PAH-154	CHI5	Pink salmon	99,000	13,000	17.0	60-265	Aug-89
13PAH-155	CHI5	Pink salmon	93,000	20,000	14.0	60-266	Aug-89
13PAH-156	CHI5	Pink salmon	6,700	2,200	10.0	60-287	Aug-89
13PAH-158	CHI5	Pink salmon	57,000	7,200	12.0	60-649	Aug-89
13PAH-148	CHI6	Halibut	11,000	2,400	2.8	60-706	Aug-89
13PAH-257	CHI6	Halibut	25,000	6,200	1.2	60-509	Sep-89
13PAH-246	CHI7	Chum salmon	29,000	13,000	59.0	60-525	Sep-89
13PAH-244	CHI7	Pink salmon	87,000	45,000	56.0	60-580	Sep-89
13PAH-245	CHI7	Pink salmon	120,000	54,000	50.0	60-501	Sep-89
13PAH-247	CHI7	Pink salmon	100,000	52,000	50.0	60-579	Sep-89
13PAH-248	CHI7	Pink salmon	110,000	44,000	80.0	60-579	Sep-89
13PAH-249	CHI7	Pink salmon	130,000	56,000	67.0	60-502	Sep-89
13PAH-251	CHI7	Pink salmon	96,000	55,000	57.0	60-580	Sep-89
13PAH-252	CHI7	Pink salmon	150,000	71,000	59.0	60-503	Sep-89
13PAH-253	CHI7	Pink salmon	77,000	31,000	36.0	60-600	Sep-89
13PAH-254	CHI7	Pink salmon	100,000	45,000	89.0	60-579	Sep-89
13PAH-255	CHI7	Pink salmon	98,000	41,000	66.0	60-580	Sep-89
13PAH-256	CHI7	Pink salmon	84,000	35,000	61.0	60-600	Sep-89
13PAH-262	CHI7	Pink salmon	75,000	40,000	42.0	60-600	Sep-89
13PAH-977	CHI8	Pink salmon	82,000	16,000	23.9	‡	Aug-90
13PAH-978	CHI8	Pink salmon	63,000	4,900	22.1	‡	Aug-90
13PAH-979	CHI9	Pink salmon	67,000	6,300	15.5	‡	Aug-90
13PAH-980	CHI9	Pink salmon	48,000	5,500	9.3	‡	Aug-90
13PAH-981	CHI9	Pink salmon	52,000	6,200	20.7	‡	Aug-90
13PAH-982	CHI9	Pink salmon	43,000	6,900	9.1	‡	Aug-90
13PAH-983	CHI9	Pink salmon	50,000	7,600	16.9	‡	Aug-90
	CHI9	Pink salmon	44,000	5,200	15.8	‡	Aug-90
13PAH-984 13PAH-985	CHI9	Pink salmon	50,000	6,100	11.3	‡	Aug-90
	CHI9	Pink salmon	47,000	6,100	12.2	‡	Aug-90
13PAH-987	CHI9	Pink salmon	55,000	7,500	14.2	‡	Aug-90
13PAH-988		Pacific cod	41,000	5,100	32.8	‡	Aug-90
13PAH-990	CHI10	Yellowfin sole	21,000	2,300	3.6	‡	Aug-90
13PAH-989	CHI10	renowim sole	21,000	2,500	5.0	+	

Table A-10. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Old Harbor.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-017	OHA1	Pacific cod	64,000	17,000	9.0	60-26	Jul-89
13PAH-018	OHA1	Pacific cod	31,000	9,300	5.0	60-26	Jul-89
**OHA1-2BS	OHA1	Pacific cod	36,000	6,000	6.9	‡	Jun-90
**OHA1-3BS	OHA1	Pacific cod	37,000	9,200	10.1	‡	Jun-90
**OHA1-4BS	OHA1	Pacific cod	24,000	3,400	8.8	‡	Jun-90
**OHA1-5BS	OHA1	Pacific cod	61,000	750	18.6	60-2450	Jun-90
13PAH-142	OHA1	Halibut	7,300	1,700	2.6	60-707	Aug-89
13PAH-143	OHA1	Halibut	2,800	480	0.6	60-283	Aug-89
13PAH-144	OHA1	Halibut	2,900	820	1.8	60-283	Aug-89
13PAH-145	OHA1	Halibut	6,400	1,300	1.2	60-283	Aug-89
13PAH-923	OHA2	Chum salmon	51,000	20,000	17.3	60-2424	Aug-90
13PAH-925	OHA2	Chum salmon	93,000	11,000	27.7	‡	Aug-90
13PAH-926	OHA2	Chum salmon	56,000	14,000	24.4	‡	Aug-90
13PAH-929	OHA2	Chum salmon	59,000	19,000	29.2	‡	Aug-90
13PAH-930	OHA2	Chum salmon	62,000	14,000	20.7	‡	Aug-90
13PAH-932	OHA2	Chum salmon	80,000	18,000	24.4	‡	Aug-90
13PAH-933	OHA2	Chum salmon	140,000	29,000	29.8	‡	Aug-90
13PAH-934	OHA2	Chum salmon	89,000	25,000	26.2	‡	Aug-90
13PAH-019	OHA2	Pink salmon	100,000	31,000	13.0	60-11	Jul-89
13PAH-146	OHA2	Pink salmon	170,000	28,000	18.0	60-262	Aug-89
13PAH-147	OHA2	Pink salmon	74,000	14,000	IBR	60-269	Aug-89
13PAH-293	OHA2	Pink salmon	120,000	92,000	77.0	60-541	Sep-89
13PAH-317	OHA2	Pink salmon	130,000	66,000	54.0	60-544	Sep-89
13PAH-318	OHA2	Pink salmon	120,000	66,000	47.0	60-573	Sep-89
13PAH-319	OHA2	Pink salmon	160,000	48,000	41.0	60-573	Sep-89
13PAH-320	OHA2	Pink salmon	110,000	48,000	28.0	60-599	Sep-89
13PAH-321	OHA2	Pink salmon	100,000	59,000	47.0	60-599	Sep-89
13PAH-322	OHA2	Pink salmon	170,000	89,000	36.0	60-545	Sep-89
13PAH-323	OHA2	Pink salmon	190,000	95,000	28.0	60-546	Sep-89
13PAH-324	OHA2	Pink salmon	150,000	71,000	47.0	60-555	Sep-89
13PAH-325	OHA2	Pink salmon	150,000	92,000	51.0	60-556	Sep-89
13PAH-326	OHA2	Pink salmon	170,000	87,000	38.0	60-557	Sep-89
13PAH-327	OHA2	Pink salmon	150,000	74,000	36.0	60-558	Sep-89
13PAH-328	OHA2	Pink salmon	160,000	59,000	33.0	60-559	Sep-89
13PAH-921	OHA2	Pink salmon	51,000	9,200	5.5	60-2421	Aug-90
13PAH-935	OHA2	Pink salmon	110,000	10,000	15.8	60-1762	Aug-90
13PAH-936	OHA2	Pink salmon	65,000	5,300	12.3	‡ -	Aug-90
13PAH-937	OHA2	Pink salmon	180,000	62,000	36.0	60-1815	Aug-90
13PAH-939	OHA2	Pink salmon	120,000	26,000		60-2422, 2429	Aug-90
13PAH-940	OHA2	Pink salmon	88,000	11,000	16.5	‡	Aug-90
13PAH-941	OHA2	Pink salmon	120,000	36,000		60-2422, 2429	Aug-90

Table A-11. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Old Harbor.

Field / Bile Sample no.	Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
13PAH-943	OHA2	Pink salmon	180,000	62,000	40.3	60-2422, 2429	Aug-90
13PAH-944	OHA2	Pink salmon	100,000	19,000	17.8	60-2421	Aug-90
13PAH-945	OHA2	Pink salmon	100,000	21,000	22.0	#	Aug-90
13PAH-946	OHA2	Pink salmon	83,000	11,000	26.7	‡	Aug-90
13PAH-947	OHA2	Pink salmon	210,000	74,000	42.2	60-1809	Aug-90
13PAH-329	OHA2	Pacific cod	29,000	3,200	9.4	60-524	Sep-89
**OHA2-3BS	OHA2	Pacific cod	36,000	5,200	8.9	‡	Jun-90
**OHA2-4BS	OHA2	Pacific cod	48,000	7,300	9.8	. ‡	Jun-90
**OHA2-5BS	OHA2	Pacific cod	18,000	2,300	4.4	‡	Jun-90
**OHA2-6BS	OHA2	Pacific cod	15,000	1,900	4.8	‡	Jun-90
13PAH-916	OHA2	Sablefish	34,000	2,700	3.1	‡	Aug-90
13PAH-917	OHA2	Sablefish	21,000	1,800	3.1	‡	Aug-90
13PAH-919	OHA2	Halibut	20,000	1,900	2.2	‡	Aug-90
13PAH-918	OHA2	Yellowfin sole	8,500	730	1.1	‡	Aug-90

Table A-12. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Akhiok.

Field / Bile Sample no.	Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
13PAH-115	AKH	Pink salmon	IBR	IBR	IBR	60-267	Aug-89
13PAH-116	AKH	Pink salmon	IBR	IBR	IBR	60-267	Aug-89
13PAH-117	AKH	Pink salmon	26,000	8,600	IBR	60-263	Aug-89
13PAH-063	AKH4	Coho salmon	27,000	9,000	6.6	60-560	Sep-89
13PAH-064	AKH4	Coho salmon	52,000	20,000	11.0	60-560	Sep-89
13PAH-065	AKH4	Coho salmon	17,000	3,900	2.2	60-560	Sep-89
13PAH-909	AKH4	Starry flounder	25,000	2,600	11.1	#	Jul-90
13PAH-910	AKH4	Starry flounder	17,000	2,900	1.3	60-2440	Jul-90
13PAH-911	AKH4	Starry flounder	18,000	3,500	0.8	60-2440	Jul-90
13PAH-912	AKH4	Starry flounder	14,000	2,100	0.2	60-2439	Jul-90
13PAH-913	AKH4	Starry flounder	12,000	2,000	0.9	60-2440	Jul-90
13PAH-914	AKH4	Starry flounder	19,000	1,900	3.5	#	Jul-90
13PAH-915	AKH6	Rock sole	16,000	1,900	0.2	60-2441	Aug-90
**AKH9-2BS	AKH9	Pacific cod	46,000	6,200	12.4	‡	Jun-90
**AKH9-3BS	AKH9	Pacific cod	34,000	3,700	26.3	‡	Jun-90
**AKH9-4BS	AKH9	Pacific cod	40,000	5,900	11.6	‡	Jun-90
**AKH9-6BS	AKH9	Pacific cod	88,000	7,500	17.3	‡	Jun-90

Table A-13. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Karluk.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-281	KAR1	Coho salmon	13,000	1,600	2.4	60-562	Sep-89
13PAH-282	KAR1	Coho salmon	32,000	6,600	4.2	60-562	Sep-89
13PAH-283	KAR1	Coho salmon	14,000	1,700	1.1	60-561	Sep-89
13PAH-284	KAR1	Coho salmon	11,000	2,700	7.6	60-561	Sep-89
13PAH-896	KAR1	Pink salmon	25,000	2,400	3.2	‡	Jul-90
13PAH-899	KAR1	Pink salmon	27,000	3,100	14.2	‡	Jul-90
13PAH-900	KAR1	Pink salmon	36,000	7,000	14.8	‡	Jul-90
13PAH-901	KAR1	Pink salmon	32,000	2,400	16.3	‡	Jul-90
13PAH-902	KAR1	Pink salmon	30,000	1,900	27.4	‡	Jul-90
13PAH-903	KAR1	Pink salmon	37,000	7,100	36.1	‡	Jul-90
13PAH-904	KAR1	Pink salmon	42,000	3,400	18.4	‡	Jul-90
13PAH-905	KAR1	Pink salmon	39,000	3,100	20.3	‡	Jul-90
13PAH-906	KAR1	Pink salmon	5,200	1,700	12.2	‡	Jul-90
13PAH-907	KAR1	Pink salmon	67,000	3,600	18.9	‡	Jul-90
13PAH-908	KAR1	Pink salmon	42,000	4,000	11.0	‡	Jul-90
13PAH-881	KAR1	Sockeye salmon	160,000	8,200	14.5	‡	Jul-90
13PAH-882	KAR1	Sockeye salmon	180,000	17,000	22.0	60-1807	Jul-90
13PAH-884	KAR1	Sockeye salmon	95,000	6,500	20.1	‡	Jul-90
13PAH-885	KAR1	Sockeye salmon	180,000	26,000	36.2	60-1808	Jul-90
13PAH-886	KAR1	Sockeye salmon	87,000	9,900	20.1	‡	Jul-90
13PAH-887	KAR1	Sockeye salmon	200,000	12,000	23.2	‡	Jul-90
13PAH-888	KAR1	Sockeye salmon	110,000	5,900	14.7	‡	Jul-90
13PAH-889	KAR1	Sockeye salmon	110,000	8,800	23.5	‡	Jul-90
13PAH-890	KAR1	Sockeye salmon	32,000	2,400	18.5	‡	Jul-90
13PAH-891	KAR1	Sockeye salmon	40,000	2,800	13.7	‡	Jul-90
13PAH-892	KAR1	Sockeye salmon	160,000	8,000	36.7	‡	Jul-90
13PAH-893	KAR1	Sockeye salmon	75,000	4,800	24.4	‡	Jul-90
13PAH-894	KAR1	Sockeye salmon	120,000	7,100	13.9	‡	Jul-90
13PAH-895	KAR1	Sockeye salmon	82,000	5,100	15.0	‡	Jul-90
13PAH-781	KAR1	Dolly Varden	20,000	1,300	1.8	60-1703	May-90
13PAH-782	KAR1	Dolly Varden	23,000	2,900	1.5	60-1704	May-90
13PAH-783	KAR1	Dolly Varden	27,000	2,700	4.3	60-1705	May-90
13PAH-784	KAR1	Dolly Varden	25,000	3,200	2.8	60-1706	May-90
13PAH-785	KAR1	Dolly Varden	38,000	5,900	4.8	60-1707	May-90

Table A-14. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Larsen Bay.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-014	LAB5	Halibut	26,000	9,400	1.1	60-41	Jul-89
13PAH-134	LAB5	Pink salmon	28,000	2,100	4.2	60-281	Aug-89
13PAH-136	LAB6	Pink salmon	IBR	IBR	IBR	60-281	Aug-89
13PAH-130	LAB6	Sockeye salmon	IBR	IBR	IBR	60-653	Aug-89
13PAH-131	LAB6	•	8,300	1,200	22.0	60-264	Aug-89
	LAB6	Sockeye salmon		1,400	14.0	60-264	Aug-89
13PAH-132		Sockeye salmon	8,200			60-282	Aug-89
13PAH-133	LAB6	Sockeye salmon	28,000	4,400	IBR		_
13PAH-135	LAB6	Sockeye salmon	IBR	IBR	IBR	60-653	Aug-89
13PAH-137	LAB6	Sockeye salmon	12,000	1,400	IBR	60-264	Aug-89
13PAH-138	LAB6	Sockeye salmon	IBR	IBR	IBR	60-286	Aug-89
13PAH-139	LAB6	Sockeye salmon	23,000	4,100	5.8	60-282	Aug-89
13PAH-140	LAB6	Sockeye salmon	22,000	1,900	IBR	60-652	Aug-89
13PAH-141	LAB6	Sockeye salmon	20,000	2,800	14.0	60-282	Aug-89
13PAH-879	LAB6	Sockeye salmon	88,000	6,200	10.4	‡	Jul-90
13PAH-092	LAB6	Pacific cod	7,300	1,400	4.0	60-285	Aug-89
13PAH-093	LAB6	Pacific cod	9,100	2,000	6.4	60-285	Aug-89
13PAH-094	LAB6	Halibut	12,000	2,400	4.6	60-708	Aug-89
13PAH-127	LAB6	Halibut	10,000	2,500	6.0	60-284	Aug-89
13PAH-128	LAB6	Halibut	11,000	2,700	4.6	60-284	Aug-89
13PAH-129	LAB6	Halibut	9,100	2,000	2.4	60-284	Aug-89
13PAH-015	LAB7	Pink salmon	190,000	93,000	22.0	60-10	Jul-89
13PAH-016	LAB7	Pink salmon	310,000	160,000	18.0	60-29, 3	Jul-89
13PAH-298	LAB8	Pink salmon	150,000	81,000	76.0	60-504	Sep-89
13PAH-299	LAB8	Pink salmon	100,000	39,000	63.0	60-581	Sep-89
13PAH-300	LAB8	Pink salmon	130,000	42,000	35.0	60-505	Sep-89
13PAH-301	LAB8	Pink salmon	110,000	53,000	40.0	60-581	Sep-89
13PAH-302	LAB8	Pink salmon	51,000	28,000	27.0	60-597	Sep-89
13PAH-303	LAB8	Pink salmon	99,000	42,000	40.0	60-582	Sep-89
13PAH-304	LAB8	Pink salmon	120,000	71,000	30.0	60-543	Sep-89
13PAH-305	LAB8	Pink salmon	160,000	55,000	33.0	60-506	Sep-89
13PAH-306	LAB8	Pink salmon	130,000	110,000	49.0	60-507	Sep-89
13PAH-307	LAB8	Pink salmon	76,000	29,000	27.0	60-594	Sep-89
13PAH-308	LAB8	Pink salmon	98,000	24,000	28.0	60-582	Sep-89
13PAH-309	LAB8	Pink salmon	IBR	IBR	IBR	60-596	Sep-89
13PAH-310	LAB8	Pink salmon	110,000	39,000	42.0	60-581	Sep-89
13PAH-311	LAB8	Pink salmon	100,000	22,000	26.0	60-582	Sep-89
13PAH-871	LAB8	Pink salmon	38,000	3,500	2.6	60-2420	Jul-90
13PAH-872	LAB8	Pink salmon	54,000	5,200	6.6	‡	Jul-90
13PAH-873	LAB8	Pink salmon	28,000	2,800	26.0	‡	Jul-90
13PAH-869	LAB8	Sockeye salmon	92,000	5,700	3.5	60-2427	Jul-90
13PAH-870	LAB8	Sockeye salmon	80,000	4,700	3.9	60-2427	Jul-90
13FAIT-0/U	LADO	Sockeye Saillion	60,000	4,700	3.7	00-2421	341-30

Table A-15. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Larsen Bay.

Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
		,				
LAB8	Halibut	14,000	2,500	0.9	60-520	Sep-89
LAB8	Halibut	22,000	4,700	2.0	60-520	Sep-89
LAB8	Halibut	27,000	6,500	2.8	60-521	Sep-89
LAB8	Halibut	10,000	2,000	0.6	60-521	Sep-89
LAB9	Chum salmon	86,000	6,800	8.6	‡	Jul-90
LAB9	Pink salmon	27,000	2,600	8.0	‡	Jul-90
LAB12	Pacific cod	34,000	5,900	5.1	60-2410	Jun-90
LAB12	Pacific cod	42,000	5,400	11.7	#	Jun-90
LAB12	Halibut	10,000	1,200	2.1	#	Jun-90
	LAB8 LAB8 LAB8 LAB9 LAB9 LAB12 LAB12	LAB8 Halibut LAB8 Halibut LAB8 Halibut LAB8 Halibut LAB9 Chum salmon LAB9 Pink salmon LAB12 Pacific cod LAB12 Pacific cod	Station Species NPH LAB8 Halibut 14,000 LAB8 Halibut 22,000 LAB8 Halibut 27,000 LAB8 Halibut 10,000 LAB9 Chum salmon 86,000 LAB9 Pink salmon 27,000 LAB12 Pacific cod 34,000 LAB12 Pacific cod 42,000	Station Species NPH PHN LAB8 Halibut 14,000 2,500 LAB8 Halibut 22,000 4,700 LAB8 Halibut 27,000 6,500 LAB8 Halibut 10,000 2,000 LAB9 Chum salmon 86,000 6,800 LAB9 Pink salmon 27,000 2,600 LAB12 Pacific cod 34,000 5,900 LAB12 Pacific cod 42,000 5,400	Station Species NPH PHN mg/ml LAB8 Halibut 14,000 2,500 0.9 LAB8 Halibut 22,000 4,700 2.0 LAB8 Halibut 27,000 6,500 2.8 LAB8 Halibut 10,000 2,000 0.6 LAB9 Chum salmon 86,000 6,800 8.6 LAB9 Pink salmon 27,000 2,600 8.0 LAB12 Pacific cod 34,000 5,900 5.1 LAB12 Pacific cod 42,000 5,400 11.7	Station Species NPH PHN mg/ml for ACs LAB8 Halibut 14,000 2,500 0.9 60-520 LAB8 Halibut 22,000 4,700 2.0 60-520 LAB8 Halibut 27,000 6,500 2.8 60-521 LAB8 Halibut 10,000 2,000 0.6 60-521 LAB9 Chum salmon 86,000 6,800 8.6 ‡ LAB9 Pink salmon 27,000 2,600 8.0 ‡ LAB12 Pacific cod 34,000 5,900 5.1 60-2410 LAB12 Pacific cod 42,000 5,400 11.7 ‡

Table A-16. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Port Lions.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-258	PTL3	Coho salmon	16,000	3,300	2.6	60-591	Sep-89
13PAH-259	PTL3	Coho salmon	47,000	12,000	12.2	60-576	Sep-89
13PAH-260	PTL3	Coho salmon	24,000	5,600	4.8	60-591	Sep-89
13PAH-261	PTL3	Coho salmon	16,000	3,100	3.0	60-592	Sep-89
13PAH-286	PTL3	Coho salmon	21,000	6,000	2.6	60-564	Sep-89
13PAH-287	PTL3	Coho salmon	21,000	4,900	3.6	60-577	Sep-89
13PAH-288	PTL3	Coho salmon	49,000	11,000	14.6	60-576	Sep-89
13PAH-289	PTL3	Coho salmon	33,000	5,700	6.4	60-577	Sep-89
13PAH-290	PTL3	Coho salmon	13,000	3,700	3.6	60-577	Sep-89
13PAH-291	PTL3	Coho salmon	28,000	6,500	5.2	60-564	Sep-89
13PAH-292	PTL3	Coho salmon	18,000	4,100	9.2	60-592	Sep-89
13PAH-012	PTL3	Pink salmon	71,000	16,000	3.0	60-6	Jul-89
13PAH-081	PTL3	Pink salmon	130,000	12,000	IBR	60-169	Aug-89
**PTL3-1BS	PTL3	Sockeye salmon	17,000	2,800	5.0	‡	May-90
13PAH-082	PTL3	Halibut	50,000	7,100	1.8	60-170	Aug-89
13PAH-083	PTL3	Halibut	17,000	2,100	0.4	60-170	Aug-89
13PAH-084	PTL3	Halibut	28,000	2,700	6.0	60-170	Aug-89
13PAH-013	PTL5	Halibut	12,000	2,600	0.6	60-21	Jul-89
13PAH-085	PTL7	Pink salmon	IBR	IBR	IBR	60-646	Aug-89
13PAH-086	PTL7	Pink salmon	110,000	14,000	21.0	60-190	Aug-89
13PAH-087	PTL7	Pink salmon	65,000	24,000	48.0	60-190	Aug-89
13PAH-088	PTL7	Pink salmon	110,000	26,000	66.0	60-190	Aug-89
13PAH-089	PTL7	Pink salmon	150,000	26,000	34.0	60-196	Aug-89
13PAH-090	PTL7	Pink salmon	120,000	25,000	42.0	60-196	Aug-89
13PAH-091	PTL7	Pink salmon	140,000	36,000	49.0	60-196	Aug-89
13PAH-095	PTL7	Pink salmon	190,000	25,000	45.0	60-173	Aug-89
13PAH-096	PTL7	Pink salmon	240,000	28,000	37.0	60-167	Aug-89
13PAH-097	PTL7	Pink salmon	120,000	20,000	34.0	60-174	Aug-89
13PAH-098	PTL7	Pink salmon	110,000	21,000	34.0	60-174	Aug-89
13PAH-099	PTL7	Pink salmon	150,000	24,000	IBR	60-168	Aug-89
13PAH-100	PTL7	Pink salmon	160,000	28,000	44.0	60-168	Aug-89
13PAH-101	PTL7	Pink salmon	170,000	27,000	IBR	60-168	Aug-89
13PAH-102	PTL7	Pink salmon	86,000	10,000	23.0	60-174	Aug-89
13PAH-294	PTL8	Halibut	16,000	3,400	3.4	60-522	Sep-89
13PAH-295	PTL8	Halibut	10,000	1,900	1.1	60-522	Sep-89
13PAH-296	PTL8	Halibut	9,500	2,600	0.8	60-523	Sep-89
13PAH-297	PTL8	Halibut	17,000	3,700	1.9	60-523	Sep-89
13PAH-964	PTL9	Pink salmon	55,000	7,100	1.2	60-2442	Aug-90
13PAH-965	PTL9	Pink salmon	53,000	5,000	17.9	‡	Aug-90 Aug-90
13PAH-966	PTL9	Pink salmon	49,000	4,200	12.4	+ ‡	Aug-90 Aug-90
13PAH-967	PTL9	Pink salmon	41,000	3,500	5.2	+ ‡	Aug-90
131 AIT-90/	ILLI	I IIIK SaiillOII	71,000	3,300	3.2	+	Aug-90

Table A-17. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Port Lions.

Field / Bile Sample no.	Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
13PAH-968	PTL9	Pink salmon	38,000	4,300	2.9	60-2443	Aug-90
13PAH-970	PTL9	Pink salmon	37,000	3,800	8.5	#	Aug-90
13PAH-971	PTL9	Pink salmon	33,000	3,000	9.8	#	Aug-90
13PAH-972	PTL9	Pink salmon	41,000	3,800	8.4	‡	Aug-90
13PAH-973	PTL9	Pink salmon	46,000	3,900	18.6	‡	Aug-90
13PAH-974	PTL9	Pink salmon	67,000	6,300	10.4	‡	Aug-90
13PAH-974	PTL9	Pink salmon	67,000	6,300	10.4	#	Aug-90
**PTL9-1BS	PTL9	Pacific cod	29,000	6,900	6.4	60-2411	May-90
**PTL9-3BS	PTL9	Pacific cod	23,000	2,800	4.3	‡	May-90
**PTL9-4BS	PTL9	Pacific cod	30,000	3,600	5.8	‡	May-90
**PTL9-A1B	PTL9	Pacific cod	180,000	8,800	9.9	‡	Apr-90
**PTL9-B3B	PTL9	Pacific cod	55,000	7,300	6.8	60-2395	Apr-90
**PTL9-C2B	PTL9	Pacific cod	39,000	5,600	7.2	‡	Apr-90
**PTL9-D1B	PTL9	Pacific cod	18,000	8,400	8.9	‡	Apr-90

Table A-18. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Ouzinkie.

Field / Bile			FACs	FACs	Protein	Lab no. *	Date
Sample no.	Station	Species	NPH	PHN	mg/ml	for ACs	collected
13PAH-948	OUZ1	Chum salmon	130,000	23,000	8.2	60-2437	Aug-90
13PAH-949	OUZ1	Chum salmon	97,000	13,000	4.1	60-2437	Aug-90
13PAH-950	OUZ1	Chum salmon	68,000	23,000	8.5	60-2437	Aug-90
13PAH-951	OUZ1	Chum salmon	110,000	32,000	20.6	60-2435	Aug-90
13PAH-952	OUZ1	Chum salmon	100,000	19,000	7.4	60-2436	Aug-90
13PAH-954	OUZ1	Chum salmon	140,000	38,000	23.6	60-2435	Aug-90
13PAH-955	OUZ1	Chum salmon	130,000	48,000	16.5	60-1810	Aug-90
3PAH-956	OUZ1	Chum salmon	81,000	20,000	5.0	60-2428	Aug-90
3PAH-957	OUZ1	Chum salmon	69,000	19,000	9.1	60-2436	Aug-90
3PAH-958	OUZ1	Chum salmon	56,000	13,000	6.9	60-2436	Aug-90
3PAH-959	OUZ1	Chum salmon	91,000	37,000	8.7	60-1811	Aug-90
3PAH-960	OUZ1	Chum salmon	52,000	11,000	9.9	60-2435	Aug-90
3PAH-962	OUZ1	Pink salmon	51,000	8,100	6.0	60-2426	Aug-90
3PAH-008	OUZ1	Halibut	21,000	3,800	1.1	60-8	Jul-89
3PAH-110	OUZ3	Halibut	52,000	5,500	1.0	60-171	Aug-89
3PAH-111	OUZ3	Halibut	46,000	4,300	6.2	60-171	Aug-89
3PAH-112	OUZ3	Halibut	72,000	6,100	1.3	60-172	Aug-89
3PAH-113	OUZ3	Halibut	120,000	10,000	2.0	60-172	Aug-89
3PAH-276	OUZ3	Halibut	24,000	5,000	2.4	60-510	Sep-89
3PAH-277	OUZ3	Halibut	23,000	3,800	1.0	60-510	Sep-89
3PAH-278	OUZ3	Halibut	21,000	3,700	0.9	60-519	Sep-89
3PAH-279	OUZ3	Halibut	8,200	1,700	0.3	60-519	Sep-89
3PAH-103	OUZ5	Pink salmon	72,000	9,200	9.0	60-175	Aug-89
3PAH-104	OUZ5	Pink salmon	160,000	15,000	12.0	60-636	Aug-89
3PAH-105	OUZ5	Pink salmon	55,000	3,800	11.0	60-175	Aug-89
3PAH-106	OUZ5	Pink salmon	IBR	IBR	IBR	60-636	Aug-89
3PAH-107	OUZ5	Pink salmon	51,000	9,100	6.4	60-175	Aug-89
3PAH-108	OUZ5	Pink salmon	63,000	6,900	16.0	60-191	Aug-89
3PAH-109	OUZ5	Pink salmon	32,000	3,300	26.0	60-191	Aug-89
3PAH-271	OUZ6	Coho salmon	120,000	39,000	14.4	60-528	Sep-89
3PAH-272	OUZ6	Coho salmon	35,000	11,000	4.8	60-563	Sep-89
3PAH-274	OUZ6	Coho salmon	57,000	15,000	19.0	60-563	Sep-89
3PAH-275	OUZ6	Coho salmon	82,000	23,000	11.2	60-542	Sep-89
OUZH-1BS	OUZH	Pacific cod	30,000	4,400	5.8	‡	May-90
OUZH-2BS	OUZH	Pacific cod	62,000	8,300	11.0	‡	May-90
*OUZH-3	OUZH	Pacific cod	78,000	4,900	15.3	‡	Mar-90
OUZH-3BS	OUZH	Pacific cod	27,000	4,300	22.4	‡	May-90
*OUZH-2	OUZH	Irish Lord	41,000	300	54.2	‡	Mar-90
OUZH-5BS	OUZH	Sculpin	19,000	1,700	7.2	‡	May-90

Table A-19. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Chignik villages.

Field / Bile Sample no.	Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
**CHG4-1BS	CHG4	Pacific cod	26,000	4,400	5.0	‡	Apr-90
**CHG4-2BS	CHG4	Pacific cod	9,200	2,700	62.7	‡	Apr-90
**CHG4-3BS	CHG4	Pacific cod	64,000	7,000	11.0	‡	Apr-90
**CHG4-4BS	CHG4	Pacific cod	50,000	8,700	12.3	‡	Apr-90

Table A-20. Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in fish bile from samples from Perryville.

Field / Bile Sample no.	Station	Species	FACs NPH	FACs PHN	Protein mg/ml	Lab no. * for ACs	Date collected
**PER1-9B	PER1	Greenling	41,000	5,500	5.1	60-2390	Feb-90
**PER1-11B	PER1	Greenling	70,000	6,500	4.3	60-2391	Feb-90
**PER1-8BS	PER1	Greenling	12,000	1,200	4.8	#	Apr-90
**PER1-9BS	PER1	Greenling	17,000	1,600	20.1	‡	Apr-90
*PER1-10BS	PER1	Greenling	29,000	3,500	18.8	#	Apr-90
**PER1-8B	PER1	Irish Lord	72,000	530	25.2	±	Feb-90
**PER1-10B	PER1	Irish Lord	15,000	2,500	1.9	60-2392	Feb-90

SECTION B

CONCENTRATIONS OF AROMATIC COMPOUNDS (ACs) IN EDIBLE TISSUE OF FISH

Explanatory notes for Tables B-1 through B-30

Results on sample extracts were determined by gas chromatography/mass spectrometry (GC/MS) using sequenced selected ion monitoring.

A hyphen (-) indicates that the analyte was not detected above the limit of detection which ranged from 0.02 to 1 ng/g (ppb) wet weight.

Low levels of naphthalene found were often indistinguishable from those in method blanks and were not reported. They are designated by "a."

Some samples were analyzed in replicate as part of the quality assurance (QA) plan—all of the data are included in the tables. Adjacent data columns with an "R" after the Lab no. are replicate analyses of a sample.

Table B-1. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in edible tissue of fish from Angoon.

	Species:	Chinook salmon	Col	Coho salmon	240	Pink salmon	Imon	Pacific cod	Halibut		
۷۷	Site:	AGN3	AUP-89	AGN3	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89		
ACS	Collector: Lab no.:	D&M 321	D&M 230				D&M 320	D&M 322	D&M 228		
naphthalene		а	в	æ	а	а	а	в	в		
C1-naphthalenes		2	1	7	-	1	6.0	0.2	0.2		
C2-naphthalenes		8.0	0.2	0.7	0.2	0.00	1	,	•		
C3-naphthalenes		0.08	1	0.1	,	1	ı	1	1		
C4-naphthalenes		ı	1		,	1	í	3	1		
acenaphthylene			1	ī	,	•		1	j		
acenaphthene	,	1	•	.1	,	1		ı	1		
fluorene		0.3	1	0.1	1	1	1	,	1		
C1-fluorene		1	1	ı	r	1	1	1	1		
C2-fluorene				1	1	1	í	ī	1		
C3-fluorene				1	ı	1	1	i	i		
phenanthrene		2	-	-	1	-	-	0.4	0.2		
C1-phenanthrenes			1	ì	1	•	,		1		
C2-phenanthrenes			•	1	1		1	ſ	1		
C3-phenanthrenes			ı	r		1	ì	1	•		
C4-phenanthrenes		1	1	1	!	1	r	,	ı		
dibenzothiophene		•	•		ï		ı	ı	t		
C1-dibenzothiophenes		1	1	1	1	•	,	ı	ı		
C2-dibenzothiophenes		1	1	•	1	1	1	ı	1		
C3-dibenzothiophenes			' (,	٠,	٠,		' 0	' 5		
Sum of LACs		n ?	7	1	4	4	4	0.0	1.0		
fluoranthene		0.1	r.	r	r	1	1	ı	•		
pyrene		1	1					t 1	' '		
C1-11001anthracene		1	1	,	,	1		,	•		
chrysene		ı	1	j	,	1	t	i	1		
C1-chrysenes/benz[a]anthracenes	¥	ı	1	1	ı	1	1	1	1		
C2-chrysenes/benz[a]anthracenes		.1	,	1	í	1	ı	1	•		
C3-chrysenes/benz[a]anthracenes			1	·	,	•	,	ì	1		
C4-chrysenes/benz[a]anthracenes			'	1	,	1	1	ı	j		
benzo[b]fluoranthene		1	1	1	ī	•	i	ı	,		
benzo[k]fluoranthene		•	1	ı	ı	1	,	í	1		
benzo[a]pyrene			'	•	ı	•	1	ī	'	,	
indeno[1,2,3-cd]pyrene	-	•	•	1	r	1	1	1	1		
dibenz[a,h]anthracene		•	,			1	1	ı	1		
benzo[ghi]perylene		' 6	ī	1	i	1	1	,	' '		
Sum of HACs		1.0		•					-		
sample weight, grams:		5.17	5.09	5.54	4.85	5.58	5.37	5.00	4.97		
										The second secon	

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Table B-2. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Yakutat.

	Species:			Sock	Sockeve salmon	uo			Halibut			Halibut			I
	Site:	YAK6	YAK6	YAK6	YAK6	YAK6	YAK6	YAK6	YAK7	YAK8	YAK8	YAK8	YAK8	YAK8	
ACs	Date collected:	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	
	Lab no.:	3063R	3070R	3081	3082	3083	3084	3085	3069	3064	3065	3066	3067	3068	
naphthalene		В	а	а	a	a	а	а	а	а	В	В	а	В	
C1-naphthalenes		•		£	•	1	•	1		,		1		1	
C2-naphthalenes		•	•	•	1	1	.1	i		1	•	•	1	1	
C3-naphthalenes		9	1	1	•	•	•	1	,	3	7	2	2	1	
C4-naphthalenes		4	0.5	•	•	!	•	1	6.0	7		9.0	•	•	
acenaphthylene		•	•	•		1	1	ì	,	•	,	•	1	•	
acenaphthene		•	•	7	1	1	1	1		•	•	1	•	1	
fluorene		9.0	1	1	•	0.5	0.5	0.4		0.4	,		1		
C1-fluorene		1	9.0	ī	i	٠	'	ţ		0.7	•	•	•	•	
C2-fluorene		-	•	•	•	•	•	ı		8.0		,	•	٠	
C3-fluorene		•		•	,	1	•	,		•	1	1	•	,	
phenanthrene		7	0.7	0.7	0.7	8.0	8.0	9.0	0.5	-	8.0	0.7	1	0.4	
C1-phenanthrenes		-	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.7	9.0	0.5	٠	•	
C2-phenanthrenes		6.0	1	1	•		1		,	0.7	9.0	9.0	•	•	
C3-phenanthrenes		9.0	•	1	ı	1	•	,	,	•	•	•	•		
C4-phenanthrenes		•	•	ı	•	,	1	,	,	1	1	1	1.	•	
dibenzothiophene		0.4	•	•	1	1	1	1	,		•	ı	•	٠	
C1-dibenzothiophenes		0.7	•	ı	•	1		,		0.4		1	٠	•	
C2-dibenzothiophenes		0.8	0.5	•		•	•	,	,	9.0	0.4	1	,	1	
C3-dibenzothiophenes		0.7	í	1	í	1	•	,	ï	1	•	4	•	•	
Sum of LACs		20	4	1	-	7	7	1	7	10	4	4	7	0.4	
fluoranthene		0.7	1	0.4	ı	ť	0.4	,	•	0.4	0.4	0.4	•	•	
pyrene		9.0	•	1	ı	•	•	,		0.4	0.4	•		•	
C1-fluoranthenes/pyrenes		•	•	•	ı.	1	ř	,	,	•	1	1	•	•	
benz[a]anthracene		•	1	1	ï		•	,		1	1	1	•	1	
chrysene			•	ı	1	•	•	ı	,	•	•	,	•	1	
C1-chrysenes/benz[a]anthracenes		•	•	•	•	1	•	,		•	ι	ı	ı	•	
C2-chrysenes/benz[a]anthracenes		1	1	1	1	ĭ	•			r	·		•	1	
C3-chrysenes/benz[a]anthracenes		•	1		•	•	•	1	ï	•		•	1	1	
C4-chrysenes/benz[a]anthracenes		1	1	•	1	1	r	1	1	•	•	•	,	•	
benzo[b]fluoranthene		•	1	1	•		1	,		1	1.	.E	1	1	
benzo[k]fluoranthene		•	1	1	1	1	•	,		1		1	1	1	
benzo[a]pyrene		•	•	•	•	•	•	,		•		1	•	•	
indeno[1,2,3-cd]pyrene		•	•	•	1	1,	•	1		٠	•	•	1	1	
dibenz[a,h]anthracene			•	t	1	١	1	,	,	•	•	1	•		
benzo[ghi]perylene		•	•	•	i	1	1	1	,	•		1	1	1	
Sum of HACs		-	1	0.4		1	0.4			8.0	8.0	0.4	•		
sample weight, grams:		5.05	5.06	5.04	5.08	5.01	4.99	5.01	5.09	2.00	5.00	4.99	5.00	5.01	
		1		1				1	1						I

Table B-3. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Tatitlek.

		-		è	-		ľ	1.5.1		6		١	Ī		Doolegah	
	Species:	Fink salmon	TATA	TATE OF	Fink salmon	TATY		TATY	TATA	TATA	racilic cou	TATA	TATA	TATA	TATA	TATA
	Site:	IA12	Ang 80	Aug 80	Ang 80	Ang 80	Ang 80	[14]					IA14	IA14	Inn-90	Inn-90
ACS	Collector:	D&M	D&M	D&M 130D	D&M D&M	D&M D&M	D&M 153	D&M 701		7			ADFG	D&M 707	ADFG	ADFG
one letter land	Lab no.		N+CI	n 1350	100	130	6	101	77	0,657	1767	8	2117	20,00	6	6
CI_nanhthalenee		d '	s ,	d '	3 1	3 1	3 ,	0.4	5 1	3 1	1	3 1	1 1	0.3		
C2 nonhtholones			,	,	,	,	,	; ,	,	1	1	1	,	,	0.5	,
C2 nonhtholones					1	1			,		1	,	1	1	1	,
C3-naphunalenes																
C4-naphthalenes		1	,	,	1	1	r	,	1	1	,	į		•	•	
acenaphthylene		1	,	í	r	1.	ŗ	1	r	1	1	1	,	1	1	•
acenaphthene		1	'	1	1	1	1	,	1	1	1	•	,	1.	1 1	1
fluorene		1	1	1	ī	1	,	,	•	•	í	1	ř	1	9.0	1.
C1-fluorene		í	'		1	1	,	,	•	1	1	1	•	1	•	1
C2-fluorene		í	1	•	1	1	,	ī	1	1	1	ī	i	1	•	1
C3-fluorene		r	·	ï	ŕ	1	1	1	r	1	1	1	ì	1	,	1
phenanthrene		0.05		•	,	1	,	0.7		1	1	•	,	0.3	-	•
C1-phenanthrenes		,	,1	1	1	1	1		•	1	1	•	ï	1	•	1
C2-phenanthrenes		1	,	•	1	1	í		•	1	1	1	ı		1	1
C3-phenanthrenes		ı	1		1	1	ì	,	1	1	1)		•	ı	ı
C4-phenanthrenes		í	1	1	,	1	ı		1	1	,	ī	ı	,	•	1
dibenzothiophene		ı	1	1	,	1	ı	ī	ı	1	1	r	ı	1	1	1
C1-dibenzothiophenes		1	1	1	1	ï	í	,	1	ı	•	1	ı	1	1	1
C2-dibenzothiophenes			1	1	1	1	ı	ı	1		į	1		1	1	1
C3-dibenzothiophenes		,	1	1	1	ī	ï	1	1	1	1	1	r		•	I.
Sum of LACs		0.1	•	•	•	•		1	•	•	•	•		9.0	7	
fluoranthene		ı	•	1	i	1	1	j	ť	1	1	1	,	•	,	1
pyrene		,	1	1	T	I.	,	1	T.	r	1	•	1	1	-	ī
C1-fluoranthenes/pyrenes		,	1	•	1	•	,	T		1	1	ľ	1	1	ì	1
benz[a]anthracene		,	'	,	1	i	1	1	•	1	í	•	,	'	•	r
chrysene			1	1	1	•	î	1	,	1	t	1	ı	'	•	•
C1-chrysenes/benz[a]anthracenes		,	•	1	,	ï	1		ı		1	1	į	1	,	1
C2-chrysenes/benz[a]anthracenes		ı	'	ı	1	1	1		i	•	1	1	ı	1	i	
C3-chrysenes/benz[a]anthracenes		ī	1	1	1	1	,	ı	ı	1	1		ı	'	1	1
C4-chrysenes/benz[a]anthracenes		1	ı	•	1	,	1	1	1	•	1	1	,	,	,	1
benzo[b]fluoranthene		ī	•	•	1	1	,	í	1	•	1	1	1	1	1	,
benzo[k]fluoranthene		1	•	•	1	•	1.	1	1	1	1	ı	,	'	ſ	1
benzo[a]pyrene		ı	,	1	1	1	,	1	1	1	1	•	ţ	1	•	ī
indeno[1,2,3-cd]pyrene		1	1	1	1		1	,	1	1	1	í	ı	'	•	•
dibenz[a,h]anthracene		ı	'	•	1	,	ı	r	1	•	1	1	ŗ		ť	1
benzo[ghi]perylene		£ i	, ,				, ,					٠.		' '	· -	
Sum of hacs						١									1	
sample weight, grams:		3.83	5.25	5.12	5.40	5.20	4.47	5.27	3.65	4.93	4.79	4.77	5.00	5.19	5.04	5.09

Table B-4. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Tatitlek.

	Species .	Halihiit	Halihut			S	Coho salmon	-			He	mine me	Herring no on segment	pe	Smoked calmon	calmon
		TAT4	TAT6	TAT7	TAT7	TAT	TAT7	TAT7	TAT7	TAT7	TAT8	TAT8	TAT8	TAT8		TAT
ACs	Date collected:	Jul-89		Aug-89						Aug-89	-	Apr-90	Apr-90	Apr-90	0	Oct-89
	Collector:	D&M 27	D&M 132	D&M 362					D&M 450	D&M 451		ADFG 1038R	ADFG 1040R	ADFG 1039	D&M 526R	D&M 527R
naphthalene		B	в	cc	es	e	B	æ	rs	ĸ	ಚ	es	a	в	1,200	1,200
C1-naphthalenes		,		2	2	2	0.3	0.7	0.2	0.2		t	ı	,	800	950
C2-naphthalenes		,		2	2	3	•	0.2	•	7	0.2	9.0	6.0	0.5	930	1,500
C3-naphthalenes		,	,	2	-	2	•	0.2	•		,	,			770	1,400
C4-naphthalenes			,	•	•	0.1	•	•	0.2	,	•	•	,	,	650	1,200
acenaphthylene		,	,	•	•	į	•	1	1			1	1	ı	3,000	3,400
acenaphthene		,	,	-	6.0	-	1		1		,		1	,	280	280
fluorene		,		1	-	7	•	0.2	1	ï	,	1	1	ı	1,800	2,100
C1-fluorene		,	,	0.3	0.3	0.4	,	ī	•		1	,	,	,	940	1,000
C2-fluorene		,	,	•		•	•	•	1	ì	•	1	1	,	1,700	1,400
C3-fluorene		1	ı	1	1		•	ı	1.	,		1	ï	1	260	130
phenanthrene		ı	,	4	2	9	2	3	2	1	•	.1	1	3	5,100	4,600
C1-phenanthrenes		,	,	0.2	0.4	9.0	•	1	•	,	,	1	1	7	1,800	1,400
C2-phenanthrenes		,	,	•	•	•	•	•	•		•	ı	1	1	710	430
C3-phenanthrenes		1			•	•	•	1	1	Ĭ,	•		•	r	220	110
C4-phenanthrenes		,	,	1	•	1	•	ı	1	,	•	.1	.1		4	-
dibenzothiophene		,		-	2	7	0.4	-	0.3	,		1	1	,	4	39
C1-dibenzothiophenes			1	0.1	0.09	0.2	•	1	ī	,		•	1	1	23	56
C2-dibenzothiophenes		,	,	1	•	1	i	1	•	,		1	1	١.	10	=
C3-dibenzothiophenes		ī	ı	1	•	1	•	r	1	ţ		•	ĭ	1	4	3
Sum of LACs				14	15	19	3	S	3	3	0.2	9.0	6.0	9	20,000	20,000
fluoranthene		ı		-	1	2	0.1	0.2	r	,	1	•	ı	22	1,400	820
pyrene		,	1	0.1	r	0.3		1	•	ı	1		1	16	1,000	230
C1-fluoranthenes/pyrenes		,	,	1	•	i		•	1	ı	1	1	1	3	440	250
benz[a]anthracene		1	,	1	1	,	٠	•	•	1	•	1	1	9.0	45	32
chrysene			,	•	•	1	٠	1	1	1	•	•	ì	4	41	29
C1-chrysenes/benz[a]anthracenes				1	·	1	r	•	•	,	1	•		0.2	7	2
C2-chrysenes/benz[a]anthracenes				1	•	í	•	ï	•	,	•	•	•		0.5	0.7
C3-chrysenes/benz[a]anthracenes		1		1	•	í	ì	1	,	ī	1	1	1		0.3	0.3
C4-chrysenes/benz[a]anthracenes			,	1	1		•	1	1	1	•	1.	•	1	•	r
benzo[b]fluoranthene		,	,	1	•	•	•	1	1	ī	1	ı	,	-	16	12
benzo[k]fluoranthene		,	,	í	•	•	•	•	•	,	1	1	1	-	21	16
benzo[a]pyrene		ı		•	•	•	•	•	1	1	•		1	9.0	20	17
indeno[1,2,3-cd]pyrene		ı	,	•	•	1	,	1	,	1	1		1	,	6	∞
dibenz[a,h]anthracene		,	1	1	•	•	,	1	1	ı	1	1	1	1	1	1
benzo[ghi]perylene		ı	1		т.	1			1	,	,	1	1	1	80	7
Sum of HACs				-	-	7	0.1	0.5		-				48	3,000	1,800
sample weight, grams:		3.85	4.99	4.74	5.28	5.25	4.90	5.22	5.07	5.11	5.01	4.95	5.01	4.99	2.09	2.19
		1														

Table B-5. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Chenega Bay.

			CHE2	E2 CHE2	CHE2	CHE2	CHE2	CHE2		CHE2	CHE2 Aug-89		CHE2 Aug-89 A	CHE2
Jul-89 D&M		4 68-gnV						T			Aug-89		Aug-89 /	00
_								ok-unc					0	Aug-89
23	D&M 149	D&M 151		ADFG 2405	ADFG 2406	ADFG / 2407	ADFG 2408	ADFG 2409	D&M 42	D&M 150	D&M 157	D&M 28	D&M 130	D&M 131
В	В	а	а	B	в	В	g	а	ಣ	а	в	a	B	g
•	•	•	•	-	9.0	0.5	8.0	Ŧ	ī	1	,	1	1	1
	•	,	r	1	ï		r	6.0	1	1	1	1	1	•
•	1	•	r	ï	4	1	1	9.0	ı	1	ı	1	1	•
	•	,	1	í	•		í	1	,	1	,	1	1	ì
	1	,	,	1	1	4	ì	1	,	•	,	1	ı	
	1		í	t	•	ť	1	ì	•	1	1	1	í	1
	1	.1	j	1			1	i	•	1	1		1	1
•	1	,	•	,	i	ř	1	į	1	r	t		ï	
	1	1	1	1		•	1	í	1		,	r	•	1
,	,	ī	1	,	1	1	1	ı		1	ı	,	1	•
	1		0.3	,	1.	1	1	,	,	•	1	1	1	1
		t	1		•	,	1	0.5	1	1	,	1	1	1
•	•	1	1	L	ı	r	1	ī	1	1	1	•	1	1
1	•	ı		1	1	•	r	1	,	1	,	1	•	,
	1	1	,	•	1	•	ï	,	,	•	ı		í	•
1	ť	ì	1	1	1	1	.1	,	,	1	1	,	•	1
	ı	1	1	ı	•	•	1	,	,	•	1	1	1	1
1	1	1	ţ	1	ı	ı	1	ı	1	1	ı	1	1	1
ï	•	1	•	1		ř.	1	í	1	1	ı	•	ï	1
•	•	٠	0.3	1	9.0	0.5	8.0	7	•	•		•	•	٠
•	L		ı	•		1	ı	,	•	•	í	1	1	•
1	1	1	1	ı	1		1	-	'	1	1	1	1	1
•	1	1	1	ı	r	1	ſ	ı	1	1	ı	•	•	i.
•	1	1		í	,	•	1	ï	,	·	1	ī	r	1
•	1	1	1	•	,	1	1	r	,	•	,	1	•	1
1	1	1	1)	7	j	1	,	1		1	1		•
1	,	t	1	1	ı		t.	ı	•	1	,	ľ	1	ì
1	•	1	1	1	ī	1	1	τ	'	1	ı	í	ı	1
1	1		1	1	1	,	•	,	,	1	ī	'	,	ī
,	r	1	,	r		•	1	ı	'	1	ı	1	•	1
	•	•	r		•		•	,		1	1	1	1	1
3	1	•	1	i	ı	•	1	1	'	1	i	1	t	1
1		1	•	1	1	ï	1	1	'	1	1	'	1	,
1	•	ı	ī	1	1	ı	1	ï		1	ı	1	1	1
1	,	1	1	1	į	1		. ,	'		ı	'	1	
	1	1	•	•	•	1	1	-					'	'
3.82	4.50	4.62	5.39	5.06	5.05	4.98	5.00	4.97	4.68		4.70	4.14	5.08	5.02
	3.82	3.82 4.50	2	4.50	4.50 4.62 5.39	4.50 4.62 5.39 5.06	4.50 4.62 5.39 5.06 5.05	4.50 4.62 5.39 5.06 5.05 4.98	4.50 4.62 5.39 5.06 5.05 4.98 5.00	4.50 4.62 5.39 5.06 5.05 4.98 5.00 4.97	4.50 4.62 5.39 5.06 5.05 4.98 5.00 4.97 4.68	4.50 4.62 5.39 5.06 5.05 4.98 5.00 4.97 4.68 4.56	4.50 4.62 5.39 5.06 5.05 4.98 5.00 4.97 4.68 4.56 4.70	4.50 4.62 5.39 5.06 5.05 4.98 5.00 4.97 4.68 4.56 4.70 4.14

Table B-6. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Chenega Bay.

		I	١			١				I						
	Species:	Halibut	CHE3	CHE3	CHE3	Pink salmon	dmon CHE3	CHE3	CUE3	CHE3	CUEA	CHEA	Pink salmon	mon CHE4	CHEA	CHEA
ACs	Date collected:				Aug-89	Jul-90	Jul-90	Jul-90	Jul-90	Jul-90	Aug-89	Aug-89				Aug-89
	Collector: Lab no.:	D&M 485		D&M 138	D&M 152	D&M 1763	D&M 1764R	D&M 1769R	D&M 1765R	D&M 1770R	D&M 452	D&M 453R				D&M 465
naphthalene		а	В	а	в	В	а	В	ಹ	а	В	В	g	æ	в	а
CI-naphthalenes			0.4	3	1	1		-	1	ı		0.1	0.2	0.2	1	1
C2-naphthalenes		,	1	3	ı	٠	1	1	,	1	1	1	1	1	,	,
C3-naphthalenes		•	•	2	1	1	•	r	ı		1	•	•	•	1	1
C4-naphthalenes		1	•	1		ı		•	1	ï	1	1	•	90.0	1	•
acenaphthylene		ı	•	•	i	ı	1	•	•	ī		1	•	1	1	
acenaphthene		,	•	•	•	1	,	1		,	1	•	•	,	1	•
fluorene			•	-		1	1	1	1	í	•	,	,	1	•	,
C1-fluorene		1	•	-	1	r	r	•		1	ı	ř	•	1	1	,
C2-fluorene		,	•		•	ı	•	1	1	,	•	1	,		•	,
C3-fluorene		,		•	ı	•	1	1		ī	1	1	•	1	•	
phenanthrene		0.5	0.5	2	1	0.5	-	-	0.4	0.4	0.3	7	2	6.0	0.2	,
C1-phenanthrenes		1	•	-	1	•	•	1	•	,	1	•	•	1	1	ı
C2-phenanthrenes		ı	•		ı	ı	1.		1	ı	1	1	1	1	t	1
C3-phenanthrenes		í	٠	1	1	í		•	1	,	•	1	1	•	i	,
C4-phenanthrenes		,	•	ı	i	ı		1	1	ı	1	1	1	1	1	,
dibenzothiophene			•	3	•	1		1	1	,	1	1	•	í	1	,
C1-dibenzothiophenes		1	١	-	ı	ı		1	1	1	1	1		1	1	•
C2-dibenzothiophenes			•	•	1	•	•	•	•	1	•	1		•	•	
C3-dibenzothiophenes		, !			1	1 (i,	1	1	1	1	١.,	1	,	1	1
Sum of LACs		9.9	6.0	20	•	0.5	-	7	0.4	4.0	0.3	7	7	1	0.5	
fluoranthene		,	i	1	1	ı	0.2	•	•	,	1	1	1	,	1	ı
pyrene		,	•	,	1	í	1	1		ı	1		•	•	1	,
C1-fluoranthenes/pyrenes			•	i.	1	•	1	ì	•	,	1	•	•	1	•	1
benz[a]anthracene		r	ì			•	1	•	ī	,	•	•	•	•	1	·
chrysene			•	•	T.	t	1	•	1	1	1	•	•		•	ı
C1-chrysenes/benz[a]anthracenes		,	•	•	ï	•	•	•	1	,	•	•	1	1	ı	•
C2-chrysenes/benz[a]anthracenes		ı	1	•	•	1	i.		1	ı	•	1	•	1	•	•
C3-chrysenes/benz[a]anthracenes		ı	•	•	•	ì	1	1		ı	•	r	ı	1	1	ì
C4-chrysenes/benz[a]anthracenes		1	1	•	1	1	•	•	1	ı	1		•	•	1	•
benzo[b]fluoranthene			•	1	1	•	•	•	•	,	1	1			1	ı
benzo[k]fluoranthene		,	•	•	•	•		1	1	ı	.1	1		1	1	•
benzo[a]pyrene				1	•		1	ı.	1		•		•	1	•	
indeno[1,2,3-cd]pyrene		,	1	i	•	t	•	1	1	,	•		•	ı	,	
dibenz[a,h]anthracene			1	•	•	•	1	•	1	,	,	·		1	1	•
benzo[ghi]perylene		1 1			٠.	٠.	. 0	٠,	. ,	, ,			,		1	
South of Macs			l	l	١	l		١	1		1		١	1	۱	1
sample weight, grams:		5.36	5.07	5.38	4.47	5.03	5.03	5.01	5.10	5.02	5.01	5.42	5.44	5.08	4.93	5.29

Table B-7. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Chenega Bay.

	Species:	0					Pink salmon	lmon						Ro	Halibut	but
	Site:		CHE4	CHE4	CHEA	CHE4		CHE4	CHE4	CHE4	CHE4	CHEA	CHEA		CHES	CHES
ACs	Date collected: Aug-89		Aug-89 A	Aug-89 /	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89	Mar-90	Oct-90	Oct-90 ADFG
	Lab no.:	466	467	468	469	470	471	472	473	474	483	484	593	-	2360	2361
naphthalene		а	g	ಡ	а	ಜ	а	ಡ	а	а	а	а	а	а	а	а
C1-naphthalenes		1	•	1		1	,	1	•	1	i	,	0.3	ı	0.8	9.0
C2-naphthalenes		1	1	1	•	1	1	1	1,	1	1	1	,		-	1
C3-naphthalenes		1	1	1	•	1	1	•	t	•	1	•	1	1	2	ì
C4-naphthalenes		i	,	1	ı	1	•	•	1	•	1	ı	Ţ		0.5	1
acenaphthylene		,	1	1	1	1	1	1	1	1	,	1	,	,	1	1
acenaphthene		1	1	1	1.	1	1	1	ı		,	1			•	
fluorene		·		1	,	1	1	1	1	ı	1	1	1		1	1
C1-fluorene		•	•	1	1	1	1	1	ı	1	•	1	,	,	1	1
C2-fluorene		1	1	1	7	'	1	1	•	1	•	1	ı	,	1	ī
C3-fluorene		1	1	1	1	1	1	1	1	1	,	•	1		•	1
phenanthrene		0.4	1	1	.1.	•	9.0	1	3	-	0.3	8.0	0.4		1	1
C1-phenanthrenes		í	1	1	1	1	1	1	1	,	1	1	1	•	0.0	1
C2-phenanthrenes		1	1	1	T	1	1	1	ŕ		•	•	í	•		
C3-phenanthrenes		•	1	1	7	1	ı	1	1	•	1	1	ı		1	1
C4-phenanthrenes		1	1	1	1	1	•	1	1	ì	1	,	1	ì	•	1
dibenzothiophene		1	1	1	r	1	1		•	1	1	1	,	i		•
C1-dibenzothiophenes		1.	1	r		1.	t	1	•		•	•	ī		9.0	•
C2-dibenzothiophenes		ı	1	1	r.	ſ	ī	ï	1	ı	1		r	,	1	1
C3-dibenzothiophenes		1	1	1	1	1	1	ſ	1	1		1			1	1
Sum of LACs		4.0	•	•	•	,	9.0	٠	3	-	0.3	0.8	0.7		9	9.0
fluoranthene		•	•	1	1	1	1	1	1	1	ī	1	ı	,	1	1
pyrene		1	1	ī	1	ī	t		•	1	1		,	ı	'	
C1-fluoranthenes/pyrenes		•	1	,	1	1	1	ī	•		1	•	ı		•	•
benz[a]anthracene		ı			1	1	1	ī	1	1	1	1	1		'	1
chrysene		1	•	1	ī	1	ı	1	1	1		1	í	r	'	1
C1-chrysenes/benz[a]anthracenes		1		1	1	1	•	1	i.	1	1	1	ı		'	•
C2-chrysenes/benz[a]anthracenes		ī	1	1	1	•	1	1	1	1	1	1	1	•	'	1
C3-chrysenes/benz[a]anthracenes		•	•		1	1	1	1	1	1	1	1	ţ	,	'	•
C4-chrysenes/benz[a]anthracenes		1	•	1	•	1	1	•	•	1	•	1	1		'	
benzo[b]fluoranthene		,		1	1	1	1	•	,	•	1	1	ı		'	1
benzo[k]fluoranthene		1	1	ı	ľ	1	ı	1	1	f	1	1	ŗ	i	'	1
benzo[a]pyrene		1	•	1	•	1	1	•	1	J	1	1	į.		d.,	1
indeno[1,2,3-cd]pyrene		•	•		1	1	•	1	•	1	1	1	,		•	1
dibenz[a,h]anthracene		•		1	1	1	•	1	1	•	•	•	r			
benzo[ghi]perylene		1		1	E .	1	•	ı	•	t	•	1	1		1	•
Sum of HACS		1	1	1	1	1	1	1		1			١	1		1
sample weight, grams:		5.08	5.01	5.04	5.52	5.67	5.68	5.03	5.48	5.16	5.13	5.42	5.17	5.09	4.97	5.01
				-				-								

Table B-8. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Chenega Bay.

	Species:	Greenling	Pacific cod	Ling cod	Rockfish	Ling cod	Yellowfin sole	
ACe	Site:	CHE6	CHE8	CHE13	CHE14	CHE15	CHE16	
	Collector:		D&M 1479	D&M 2451	D&M 2452	D&M 2438	Ju30 D&M 2425	
naphthalene		В	В	В	в	В	В	
C1-naphthalenes		1	1		•		T	
C2-naphthalenes		1		•	•	i	,	
C3-naphthalenes		,	•	9.0	-	-	1	
C4-naphthalenes		,		,		1	,	
acenaphthylene		1		,	•	r		
acenaphthene		,	ī	,	•	•		
fluorene		ı	,	,	r	,		
C1-fluorene		ı	1			ì	1	
C2-fluorene		ı	·		•	•		
C3-fluorene		1	1	1	1	1	1	
phenanthrene			1			1	1	
C1-phenanthrenes		,	,	•	•	•		
C2-phenanthrenes		1			•	1	,	
C3-phenanthrenes		ï			•	1	,	
C4-phenanthrenes		1	•	,	•		•	
dibenzothiophene		,	•	1		1		
C1-dibenzothiophenes		ı	,	•	r	i	,	
C2-dibenzothiophenes		,		•		1		
C3-dibenzothiophenes					1	•		
Sum of LACs			•	9.0	1	-		
fluoranthene						1		
pyrene		r		•	•	1		
C1-fluoranthenes/pyrenes		1	,	1		i	,	
benz[a]anthracene		,		,1.		•	i	
chrysene				•	•	,		
C1-chrysenes/benz[a]anthracenes		ı	1			•	,	
C2-chrysenes/benz[a]anthracenes		1	•				,	
C3-chrysenes/benz[a]anthracenes		1	1	•		1		
C4-chrysenes/benz[a]anthracenes		ř	1			1		
benzo[b]fluoranthene			1	ı	•			
benzo[k]fluoranthene		1	1	•	•	•	,	
benzo[a]pyrene			•	•		•		
indeno[1,2,3-cd]pyrene			i					
dibenz[a,h]anthracene		ı	•	•	•	í		
benzo[ghi]perylene			, .					
Suill of HACS								
sample weight, grams:	100	2.08	5.15	5.01	5.00	2.00	4.98	
					-			

Table B-9. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Port Graham/English Bay.

		Take Take		III.		-			I		÷		l	l	
*	Species:	DTC2	DIC	Hallbut	Chum Salmon	DTC3 DTC	almon	DTC	DIE	DTC	Pink salmon	umon prc3	PTC3	DALGO	PTC3
ACs	Date collected:	Jul-89	Jul-89	Jul-89	Jul-90	Jul-89	Sen-89				A119-89	A119-89	A119-89	Sen-89	F153
	Collector: Lab no.:	D&M 709	D&M 710	D&M 39	D&M 2423	D&M 93	D&M 538						D&M 156	D&M 537	D&M 1767
naphthalene		ಣ	r	g	а	B	g	B	ಣ	В	B	ಣ	B	ಡ	g
C1-naphthalenes		0.2	0.2	r	2	0.5			1	1	•	1	1	1	1
C2-naphthalenes		ı	r	1	2	ľ	1	1	1	1	1	1	1	1	1
C3-naphthalenes		1	1	1	-	1	ı	1	1		i	,		1	
C4-naphthalenes		1	i	1		1	,	1	ī	1	1	i	1	,	1
acenaphthylene		1	ì			ī		1	ľ	T.	1	1	1	1	1
acenaphthene		1	ì		1		1	1	ï	1	1	1	ı	ı	
fluorene		1	ř		1	1	ı		ı			1	1	1	1
C1-fluorene		,	ı	î	,	,	ı	•	ī	1	1	1	1	1	1
C2-fluorene		1	ī	ı	ı	,	1.	ī	1	i.	i	1	1	ī	1
C3-fluorene		1	ı	1	1	1	1	1	1	1	1	1	1		1
phenanthrene		0.4	0.2	ı	1	0.7	í	ı	-	1	T	1	1	1	1
C1-phenanthrenes		1	r	ı	0.5	,	,	1	i	1	1	í	ı	1	· ·
C2-phenanthrenes)	,	í	ı	1	,	1	í	1	ı	•	1	ī	1
C3-phenanthrenes		ı	ī	,	,	1	,	1	1	1	1	1	1	,	1
C4-phenanthrenes		1	ï	1		1	i	i.	1	1	1	r		ı	1
dibenzothiophene		ï	ī		,	1	,		•	ı	ì	ı	1	r	1
C1-dibenzothiophenes		•	ī	ı	1	1	1	1	1	ı		•	•	1	1
C2-dibenzothiophenes		ŗ	1	ı	1	1	ı	ı.	1	ī	1	1	1	1	1
C3-dibenzothiophenes		1 1	,	ï		٠,	ı	t	١,	i	1	1	1	1	1
Sum of LACs		9.0	4.0		9	-		•	-		•		•	•	•
fluoranthene		1	ī	,	, ,	1	ī	1	ı	ī	1	1	1	1	
pyrene		1	ï	,	0.7	1	ř	1	I.	•	ı	ť	•	•	•
C1-fluoranthenes/pyrenes		1	ı	1	1		1	1	1	1		1	ı	1	1
benz[a]anthracene		1		ı	ı	'	ī	•	•	1		1	1	1	
chrysene		1	i	ī	1	•		1	1	•		•	1	1	1
C1-chrysenes/benz[a]anthracenes		1	1	,	1	1	,	•	ı	1	•	r	1	1	1
C2-chrysenes/benz[a]anthracenes		T	í		i	t	,	•	į	1	r	1	•	1	1
C3-chrysenes/benz[a]anthracenes		į	,	,	1	1		•	1	1	1	1	•	•	1
C4-chrysenes/benz[a]anthracenes		1	,	ı	ï	1	,	•	1	1		1	1	1	1
benzo[b]fluoranthene		•	,	,	1	1	,	1	ı	1	1	1	1	,	1
benzo[k]fluoranthene		1	ı	ı	1	'	1	1	ı	1	1	1	'	1	1
benzo[a]pyrene		1	,	ı	1	'	í.	1	ı	•	•	,	1	,	1
indeno[1,2,3-cd]pyrene		1	ì		1	•	ı	•	1		ſ	1	1	1	1
dibenz[a,h]anthracene		1	1	,	1	,	,		1		1	•	1	1	1
benzo[ghi]perylene		1	í			'	1	1	1	1.	1	ı	1	1	1
Sum of HACs		•			0.7			•	•						'
sample weight, grams:		5.33	5.23	4.61	4.97	4.99	5.16	3.20	5.04	4.53	4.41	4.46	4.87	5.40	5.02
						And a second		The second second		-					

Table B-10. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Port Graham/English Bay.

	Species .	Pink salmon	Pacific cod	Rock sole	alos	Halibut		Graenling		Doct sola	Dia	Dink colmon		I
			PTG3	PTG3	PTG3	PTG5	PTG6	PTG6	PTG6	PTG6	PTG7	PTG7	PTG7	
ACs	Date collected:	Jul-90	Mar-90		Mar-90				Mar-90		Aug-89		Sep-90	
The second secon	Collector: Lab no.:	D&M 1768	ADFG 2393	ADFG 2394R	ADFG 2399R	D&M 486	D&M 1099	D&M 1100	D&M 1101	ADFG 2380	ADFG 2377	ADFG 2378	ADFG 2379	
naphthalene		а	а	а	а	а	в	а	В	а	в	в	B	I
C1-naphthalenes		1		í	ı	,	,	1	,	,	1	•	1	
C2-naphthalenes		•	1	1	,	,	1	1	,	,	1	3.	•	
C3-naphthalenes		1		•	,		1	1	,	1	1	•	,	
C4-naphthalenes		,	,		1		,	1	ı		•	•	,	
acenaphthylene		r	1	r		,	ı	1	,	,	1	•		
acenaphthene		ı		•	1	,	,	1	,		•	•		
fluorene		1		•	,	,	•	1	,		•	٠	,	
C1-fluorene		,	•	•	,	,	1	1	,	ı		,	1	
C2-fluorene		,	1	•	,		1	1	,		•	٠	•	
C3-fluorene		,		r	,		r	1	ï	1	,			
phenanthrene		6.0	,		,	0.2	1	r	,		1	1	1	
C1-phenanthrenes		ı			,	ſ		1	,		•	•	ı	
C2-phenanthrenes		ı	,	•		·	1	•		1	•	•		
C3-phenanthrenes		1		1	ī	ı	•	í	,	1	1	1	1	
C4-phenanthrenes		,	,	•	,	,	ı	1	,			,	,	
dibenzothiophene		ı.			,	,	ī	1	ı	i	,	•	r	
C1-dibenzothiophenes		•	1	•		,	1		,	1	1	•	ı	
C2-dibenzothiophenes		ŕ	1	•	,	1.	1	ı	,	1	•	1		
C3-dibenzothiophenes		, (1	i	1		1	1	ì	r	٠	•	ı	
Sum of LACs		6.0		•		0.5	٠	•			•	•		
fluoranthene		0.7		1			1	1		ī.		,	1	
pyrene		9.0	1	•			r	ď	,		ı		1	
C1-fluoranthenes/pyrenes		,	1	1	1		ı	T	ı		ı	•	,	
benz[a]anthracene		i	1	•			1	•	,			i	ï	
chrysene		1	1		,	,	•	•	1	ı	1	r	1	
C1-chrysenes/benz[a]anthracenes		ı	1	•	,	,	•	1	,	1	•	1	1	
C2-chrysenes/benz[a]anthracenes		,	,		,		ī	ì		1	•	•	i	
C3-chrysenes/benz[a]anthracenes		,	1	ì	ı	ı	ı	1	1	ı	•	•	•	
C4-chrysenes/benz[a]anthracenes		ı	ì	•	ı		r	1	ı	i		•	1	
benzo[b]fluoranthene		,	1	1	,	•	•	1	,		•	,		
benzo[k]fluoranthene		ı	ı	•	,	,	1	1	,	1	ı		1	
benzo[a]pyrene		,	1	1	,		i	1	ı	1	1	1	•	
indeno[1,2,3-cd]pyrene		1		•	,	ı	1	1	ı	,	•	1		
dibenz[a,h]anthracene		,	ı	•	,	,	1	1	1	ı	1	•		
benzo[ghi]perylene		٠,	ı	•		1	i.		,	,	1	r	ī	
Sum of HACs		-	1	1	-	-	1	1			•			ı
sample weight, grams:		5.09	4.97	4.75	4.92	5.54	5.04	5.03	5.20	4.97	5.07	5.06	5.06	
					1	1	١	I						I

Table B-11. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Port Graham/English Bay.

ACs naphthalene C1-naphthalenes		- Cura	PTC7 PT	37	PTG7	
ACs naphthalene C1-naphthalenes	olle.					PTG11
naphthalene C1-naphthalenes	ollected:	Mar-90 Mar-90		Mar-90 N	Mar-90	06-Inf
naphthalene C1-naphthalenes	Collector:	D&M 1102		D&M 1104	D&M 1105	D&M 2444
C1-naphthalenes		а	В	c	ea	ce
		1.	1		1	
C2-naphthalenes		1	1	1	,	
C3-naphthalenes		1		1	ī	0.9
C4-naphthalenes		1	1	,	1	
acenaphthylene		1	1	1	i	
acenaphthene		3	1	í	,	
fluorene		.1	,	i	1	
C1-fluorene		1	1	ï	,	
C2-fluorene		•	.1		i	
C3-fluorene		•	1	ţ	1	
phenanthrene		1	ı	1	ı	
C1-phenanthrenes		1	7	1	1	
C2-phenanthrenes		•	3	1	1	•
C3-phenanthrenes		•		1.	1	
C4-phenanthrenes		1	ı	ť	1	•
dibenzothiophene		1	1	,	ſ	
C1-dibenzothiophenes		•	ı	1	,	
C2-dibenzothiophenes		•	ī	ı	ŗ	·
C3-dibenzothiophenes		1	ī	ī	,	•
Sum of LACs		•				6.0
fluoranthene		•	1	1	1	
pyrene		i.	1	r	,	
C1-fluoranthenes/pyrenes		į	•	£	ï	
benz[a]anthracene		,	1	ī	i	
chrysene		•	•	1.	ı	
C1-chrysenes/benz[a]anthracenes		Þ	1	1	1	•
C2-chrysenes/benz[a]anthracenes)	,	ī	,	
C3-chrysenes/benz[a]anthracenes		•	1	,	,	•
C4-chrysenes/benz[a]anthracenes		•	ı	1	ţ	·
benzofblfluoranthene		'	1	æ	,	
benzo[k]fluoranthene		1	1	1	i	
benzo[a]pyrene		,	,	1	1	
indeno[1,2,3-cd]pyrene		1	•	ı	ī	
dibenz[a,h]anthracene		1		1	7	•
benzo[ghi]perylene Sum of HACs			٠.			
		90,			613	505
sample weight, grams:		4.99	2.17	5.15	5.13	5.05

Table B-12. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Windy Bay.

		١	I	ı	
	Species:		d	lmon	
۷۷	Site:	WNB5	WNB5	WNB5	WNBS In-1-90
	Collector: Lab no.:	D&M 1766R	D&M 1771R	D&M 2453R	D&M 2459R
naphthalene		а	æ	в	ष
C1-naphthalenes		•	1	•	•
C2-naphthalenes		1	1	1	
C3-naphthalenes		•	1	0.5	0.8
C4-naphthalenes		•	1	•	•
acenaphthylene		•	1	•	
acenaphthene		ď	•	•	
fluorene		•		1	
C1-fluorene		•	T		
C2-fluorene		•		1	•
C3-fluorene		1		1	
phenanthrene		•	1	•	
C1-phenanthrenes		,	1	0.5	, in the second
C2-phenanthrenes		•	•	٠	
C3-phenanthrenes		•	1	,	
C4-phenanthrenes		•	٠	•	
dibenzothiophene		•	•	1	•
C1-dibenzothiophenes		1	•	1	
C2-dibenzothiophenes		•	1	1	
C3-dibenzothiophenes		1	•	١,	
Sum of LACs		•	•	-	8°.0
fluoranthene		1	ı		·
pyrene		1	•	1	
C1-fluoranthenes/pyrenes		1	•	ı	
benz[a]anthracene			1	r	
chrysene		Ĺ	•	•	
C1-chrysenes/benz[a]anthracenes		1	•	1	•
C2-chrysenes/benz[a]anthracenes		•		1	
C3-chrysenes/benz[a]anthracenes		ī	•		•
C4-chrysenes/benz[a]anthracenes		1	•	1	
benzo[b]fluoranthene		•	•	1	
benzo[k]fluoranthene		1	1	ı	
benzo[a]pyrene		í	•	ı	
indeno[1,2,3-cd]pyrene		1	1	•	
dibenz[a,h]anthracene		1	1	•	•
benzo[ghi]perylene				٠.	
sample weight, grams:		5.04	5.01	5.04	5.05
		I			

Table B-13. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Kodiak.

	Crowing .	Dockfich	Holibur					1	Dir	Pink salmon		l	١		١	
			KOD2	KOD5	KOD5	KOD5	KOD5	KOD5	KODS	KOD5	KOD5	KOD5	KOD5	KOD5	KOD5	KOD5
ACs	Date collected:	Jul-89 D&M	Jul-89 D&M	Aug-89 D&M	Aug-89 D&M		Aug-89 D&M	Aug-89 D&M	Aug-89 D&M	Aug-89 D&M		Aug-89 D&M	Sep-89 D&M	Sep-89 D&M	Sep-89 D&M	Sep-89 D&M
	Lab no.:	24	4	166R	195R	187	188	189	628R	637R	629	630	488R	489R	490R	492R
naphthalene		а	ca	es	B	cd	æ	ed	g	B	В	g	cs	ಡ	B	B
C1-naphthalenes		ı	,	7	2	3	7	9.0	4	0.0	0.2	1	1	•	1	•
C2-naphthalenes		,	,	14	10	9	1	. 1	∞	0.7	•	6.0	1.	•	1.	•
C3-naphthalenes		1	1	6	9	9	-	0.5	∞	0.5	í	0.7	1	•	1	•
C4-naphthalenes		,	í	0.1	0.1	0.2	.1	1	0.3	1	1	•		•	•	1
acenanhthvlene		,	5	0.1	,		1	•	•	1	•		1	1	1	t
acananthana		,	,	14	6	9	4	0.2	6	3	ī	2	1	•	٠	1
fluorene		. 1		. 15	10	1	. 6	-	12	3	3	2		•	•	•
CI-fluorene		,	ı	3	2	2	0.3	0.3	4	0.5	1	0.5	•	1	1	1
C2-fluorene		1	ı			1	1	•	1	1	1		1	1	•	•
C3-fluorene		,	,	1	•	•	1		1	1	1	1	1	a.	•	0.3
phenanthrene		,	,	37	24	18	10	3	30	12	4	17	0.7	0.5	1	0.7
C1-phenanthrenes		,	,	3	-	2	0.2	1	3	0.4	ı	0.3	1	1	1	1
C2-phenanthrenes			,	•	1	1	•	1	1	1	1	1	1		•	,
C3-phenanthrenes		ı	r	1	1	,	1	ī	. 1	1	1	•	i	1	1	1
C4-phenanthrenes			1		1	,	1	1		1	1	1	r	1	1	•
dibenzothiophene		ı	ı	5	4	3	_	0.5	2	-	0.2	7	1	•	,	•
C1-dibenzothiophenes		,	,	_	9.0	-	,	1	-	1	1	1	,	1	,	
C2-dibenzothiophenes		ï	,	•	1	1	1	1	1	1	•	1	r	1	1	1
C3-dibenzothiophenes		1	r.	•	•		•	1	1		1	1	1	1		١.,
Sum of LACs				110	72	24	22	9	84	22	4	32	0.7	0.5	-	-
fluoranthene		1	i	12	00	2	7	0.2	10	3	0.2	2	1	•	1	1
pyrene		í	,	0.3	1	•		1	0.1	1	1	3		1	•	
C1-fluoranthenes/pyrenes		1.	r	1	•	1		1	•	1	•	1	1	1	•	
benz[a]anthracene		1	,	1	1	1	1	1		1	1		•	1	1	1
chrysene		1	,	0.1	•	1	1	1		•	1	1	1	•	•	í
C1-chrysenes/benz[a]anthracenes			i	ı	1	1	ľ	1	ı	,	•	•	1	1	1	ı
C2-chrysenes/benz[a]anthracenes		ı	,		r	1	1	•	1	1	1	1	1	1	1	•
C3-chrysenes/benz[a]anthracenes		,	1	1	1	1	•	•	•	•	1	1	1	1	•	ı
C4-chrysenes/benz[a]anthracenes		r	i	1	•	•	•	•		1	•	1	ı	1		
benzo[b]fluoranthene		,	1		1	1.	1	•	1	•	1	•	1	1	•	•
benzo[k]fluoranthene		1	,	1	•	1	1	1	1	•	1	1	•	1		•
benzo[a]pyrene		ı	1	1	•	•	,		1		ť	•		•	,	•
indeno[1,2,3-cd]pyrene				1	•	1	1	•	1	1	•	•	1	•	í	1
dibenz[a,h]anthracene		,	,	1	1	•	.1	1	•	1	,	ı	1	1	1	•
benzo[ghi]perylene			•	1.	' ox	' W	' (0 2	. 01	' (*	, 0	' w	٠,			•
Sum of HACS			-									1			١	
sample weight, grams:		4.01	3.22	5.10	5.25	5.00	5.11	5.40	5.03	5.07	5.17	5.36	5.38	5.33	5.35	5.40

40

Table B-14. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples form Kodiak.

	Species:		Pink salmon	non			Sockeve salmon	Dolly Varden	Halibut	but	I
ACs	Site: Date collected:	KOD5 Sep-89	KOD5	KOD5 Aug-90	KODS Aug-90	KODS Aug-90	KOD5 Aug-89		KOD6 Aug-89	KOD6 Sep-89	
	Lab no.:	539R	540R	1812	1813	1814	194	D&IM 94	193	508	
naphthalene		a	а	а	а	a	а	а	а	а	l
C1-naphthalenes		•	•	1	•	6	6.0	0.4	0.1	0.3	
C2-naphthalenes		•	•	-	3	17	6.0	0.07	1	•	
C3-naphthalenes		1	•	-	8.0	17	-	1	.1		
C4-naphthalenes		•	•	r	•	4	,	,	•	•	
acenaphthylene	٠	•	•	1	•	1			•	•	
acenaphthene		•	,	9.0	1	8.0	8.0	1	į	·	
fluorene		•	•	1	0.5	7	2	ı	1	,	
C1-fluorene		1	•	1	-	3	0.4	·	ı	•	
C2-fluorene		1	•	ı	•	7		,	1		
C3-fluorene		'	•		ı	3	1	ı	•	•	
phenanthrene		6.0	3	•	4	7	4	0.7	0.2	9.0	
C1-phenanthrenes		1	•	Ĺ	7	4	0.1	įt	t		
C2-phenanthrenes		•	1	•	T	3			•		
C3-phenanthrenes		٠	•	•	•	,		ı	1	•	
C4-phenanthrenes		•	•	1	•		1	ı.	1		
dibenzothiophene		1		0.4	8.0	3	-	1			
C1-dibenzothiophenes		1	i	0.3	9.0	ю		ī	1	•	
C2-dibenzothiophenes		1	i	,	ı	7		1	•	ć	
C3-dibenzothiophenes		' 6	٠,	٠,		0.2	. ;		' '		
Sum of LACs		0.0		4 ,	13	90	11	1	0.3	6.0	
fluoranthene		1	í	0.0		7 7	0.5	í	,		
pyrene			í	0.7	0.3	4.0		1	1		
C1-fluoranthenes/pyrenes		•	•	•	ı	,	,			,	
benz[ajanthracene		,			1			•			
chrysene		•			1						
C1-chrysenes/benz[a]anthracenes		•	•	1	ı		,	1		,	
C3 chrisenes/henz[a]anthracenes											
C4-chrysenes/henz[a]anthracenes	· ·	•						. ,			
henzolblítionanthene		•	1		,	,	,		•		
benzolkifluoranthene		•		,		,	,				
henzolalnymne					•			,			
indeno[1 2 3_cd]nyrene											
dibone to blood the second									•		
Choenz(a,n)annuacene									•	•	
Sum of HACs				0.8	1	2	0.5				
emon weight grame.		\$ 0.4	5 34	808	4 02	5.01	5.44	86.5	31.3	6 3 0	
sample weight, brains .					1/:-	7:01	TT:0	0.40	7.50	00.0	

Table B-15. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Chiniak.

	 SS	Rockfish	Chum salmon	almon			Pink	Pink salmon				Sockeye salmon	Halibut		Chum salmon
	Site:		CHI5	CHIS	CHIS	CHI5	CHIS	CHIS	CHI5	CHIS	CHIS	CHIS	CHI6	CHI6	CHI7
ACs	Date collected: Collector:	Jul-89 D&M	Aug-89 A	Aug-89 D&M	Aug-89 D&M	Aug-89 Aug-89 D&M D&M	Aug-89 A D&M	Aug-89 A D&M	Aug-89 Aug-89 D&M D&M	Aug-89 / D&M D&M	Aug-89 D&M	Aug-89 D&M	Aug-89 D&M	Sep-89 D&M	Sep-89 D&M
nonhtholono	Lau IIO	67	7007	t 00	A102	N007	507	2007	107	040		100	T	500	343
CI-naphthalenes				0.3	.	0.1	0.5	0.5	0.6	0.8	0.7	0.5	0.4	0.2	
C2-naphthalenes		,	0.4				0.1			0.1	0.1				,
C3-naphthalenes			0.3	1	1	1	0.1	1	ı	0.1	0.1	,	ì	1	ı
C4-nanhthalenes		,		,	1	,	•	1	,	1	,	,	'	i	,
acenaphthylene		,	1	1	ì	i	1	1	,	1	ì		1	1	1
acenaphthene		,		,				,		1	,	,	•	i	,
fliorene		,	9.0	,	1		0.2		1	0.1	0.2		,		,
C1-fluorene		1	1	1	1	•	0.1	1	1	0.2	0.2		'	í	1
C2-fluorene		,	1	i	,	,	1	1	ı	1	ı	1	,	i	1
C3-fluorene		,	1	,	1	1	1	1	1	1	,	ī	1	0.5	1.
phenanthrene		ï	7	0.5	9.0	0.3	7	9.0	_	2	7	0.7	0.4	9.0	0.4
C1-phenanthrenes		1	0.07	,	1	•	1	•	1	1	ı	1	1	,	•
C2-phenanthrenes		1	1	1	•	1	1	1	1	1	1	1	1	,	,
C3-phenanthrenes		1	1	,	1	ı	1	ı	1	ı	1	,	í	,	i
C4-phenanthrenes		ì	ı	,	1	1	.1	ï	ı	1	,	1	1	ı	ì
dibenzothiophene		,	0.3	,	ı.	•	0.1	•	ì	0.5	0.2	1	1	1	
C1-dibenzothiophenes		ī	ı	1	1	1	1	1	1	1	1	1	1	1	, C
C2-dibenzothiophenes			1	,	1	1	į	1	ì	1	,	ı	'	ı	1
C3-dibenzothiophenes		1	1 1	, ,	' •		٠,	٠,		٠,		٠,	' 6		
Sum of LACs			n	œ.	7	4.0		1	7	4	4	-	8.0	-	4.0
fluoranthene			0.2	,	1	1	0.2	1	1	0.2	0.2	i	ì	ı	1
pyrene		1	•		1	1	1	1	1	•	1	ı	1	ī	1
C1-fluoranthenes/pyrenes		ı	1		1	1	•	1	1	t	1	.1	1	i	r
benz[a]anthracene		1	1	1	1	1	1	•	1	ı	ı	1	1	ï	i
chrysene		1	1	ı	ı	1	1	1	ì	1	ı	r	T.	ì	ı
C1-chrysenes/benz[a]anthracenes				ì	1	1	1	ı	1	1	ı	1	1	1	
C2-chrysenes/benz[a]anthracenes		,	1	ı	1		1	•	1	í	1	1	•	î	,
C3-chrysenes/benz[a]anthracenes		í	1	1	1	1	1		ı	1	1	ı.	•	ı	,
C4-chrysenes/benz[a]anthracenes		ı	J.	1	•	•	•	í	1	1	ï	ı	'	1	ı
benzo[b]fluoranthene		1	1	í	1	1	1	1	1	1	ī	ı	'	,	r
benzo[k]fluoranthene		i	1	,	1	'	1	1	1		î	ı	1	1	i
benzo[a]pyrene		,	'	1	1	1	1	1	1	1	ì	1	1	,	ı
indeno[1,2,3-cd]pyrene		ı	1	,	T	1	ľ	ı	1		ı	1		ví	1
dibenz[a,h]anthracene		,	1	1	1	1	1	t	1	1	1	,	1	1	i
benzo[ghi]perylene		1	' '		1	1	' (i		, 6	1	1	,	í
Sum of HACS				-			7.0	1	•	7.0	7.0			-	
sample weight, grams:		4.26	5.23	5.10	5.09	5.43	5.37	4.91	5.01	5.00	5.27	5.05	5.13	5.08	5.26

Table B-16. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Chiniak.

Species: Site: Site: Site: Date collect Collector: Canaphthalenes C2-naphthalenes C4-naphthalenes acenaphthylene acenaphthylene C1-fluorene C2-fluorene C3-fluorene C3-fluorene	C cted: Se : D		8	Pink salmon CHI7 CHI	12 6	CHI7 Sep-89	CHI7	
halene aphthalenes aphthalenes aphthalenes aphthalenes aphthalenes phthylene phthene uorene uorene	cted:						Cen-89	
halene aphthalenes aphthalenes aphthalenes aphthalenes phthalenes phthylene phthene uorene uorene	į							
nes nes nes nes			D&M 1 502				D&M 600	
C1-naphthalenes C2-naphthalenes C3-naphthalenes C4-naphthalenes acenaphthylene acenaphthene fluorene C1-fluorene C2-fluorene C3-fluorene		а	а	а	ಣ	æ	В	
C2-naphthalenes C3-naphthalenes C4-naphthalenes acenaphthylene acenaphthene fluorene C1-fluorene C2-fluorene C3-fluorene		1	í	•	1	•		
C3-naphthalenes C4-naphthalenes acenaphthylene acenaphthene fluorene C1-fluorene C2-fluorene C3-fluorene		ı	,	•	1	•	r	
C4-naphthalenes acenaphthylene acenaphthene fluorene C1-fluorene C2-fluorene C3-fluorene		•	i	ı	•	ī		
acenaphthylene acenaphthene fluorene C1-fluorene C2-fluorene C3-fluorene		1	ì	•	,	1	٠	
acenaphthene fluorene C1-fluorene C2-fluorene C3-fluorene					1	,	ı	
fluorene C1-fluorene C2-fluorene C3-fluorene		,	ı	ı	1	1	1	
C1-fluorene C2-fluorene C3-fluorene		ı	,		,	ı	r	
C2-fluorene C3-fluorene		Ţ	,	1	ı		r	
C3-fluorene		ī	ι	1	j	1	ı	
		,	,	1	•	,	1	
phenanthrene		0.3	0.3	0.3	0.3	1.	0.3	
C1-phenanthrenes			,		1	•	r	
C2-phenanthrenes				ı	í	•	•	
C3-phenanthrenes		1	·	•	1	1	1	
C4-phenanthrenes		,	r	1	1	1	1	
dibenzothiophene		ï	ì	i	•	1	'n	
C1-dibenzothiophenes		1	1		•	•	•	
C2-dibenzothiophenes		ι	•	1	1	1	f	
C3-dibenzothiophenes	,		' (' (' (i	' (
Sum of LACs	0	.3	0.3	0.3	0.3	•	0.3	
fluoranthene		r	ī	ı	1	•	r	
pyrene		í		,	•		•	
C1-fluoranthenes/pyrenes		ı	ı	ŗ	1	1	ī	
benz[a]anthracene			,	·	,	í	1	
chrysene		í	i	į	ı	•		
C1-chrysenes/benz[a]anthracenes		,		,		1	r	
C2-chrysenes/benz[a]anthracenes		ī	٠	1	ı	1		
C3-chrysenes/benz[a]anthracenes		1	ı	ı	ı	1	r	
C4-chrysenes/benz[a]anthracenes		ı	1	•	ı		í	
benzo[b]fluoranthene		,	1	•	í	1	•	
benzo[k]fluoranthene		í	i	•	ı	1	ī	
benzo[a]pyrene		,	•	1	•	1	í	
indeno[1,2,3-cd]pyrene		ı	·	ı	•	•	•	
dibenz[a,h]anthracene		ı	,	ı	1	1	1	
benzo[ghi]perylene Sum of HACs			٠.	٠.	٠.	٠.	٠.	*
sounds weight grams.	\$	5 38	573	5 31	5.17	11.5	98.5	
sample weight, brains .	,		2::				2000	

Table B-17. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Old Harbor.

	Species:	Pacific cod	poo		Halibut		Chum salmon				Pi	Pink salmon	_			
	Site:	OHAI	OHA1	OHAI				OHA2	OHA2	OHA2		OHA2	OHA2			OHA2
ACs	Date collected:		Jun-90			-	Aug-90	Jul-89	Aug-89	Aug-89 /	Aug-89 /	Aug-89 /	Aug-89	Sep-89	Sep-89	Sep-89
	Collector: Lab no.:	D&M 26	ADFG 2450	D&M	D&M 283	707	2424	D&M 11	262	269	270	279	650	541	544	545
nanhthalene		В	а	В	g	а	а	а	В	а	В	а	B	В	а	а
C1-nanhthalenes		1			0.3	0.3	6.0	.t.	0.5	1	0.4	0.3	1		1	ı
C2-naphthalenes		-	1	,	1	1	1	•	1	1	ı	1	0.1	,	ř.	1
C2-naphthalenes		1	_		1	1	1	•	1	ľ	Î	1	1	,	r	1
C1 nonhtholones		,	,	1	•	1	,	,	•	•	1	1		•	1	ï
C4-liapliniatenes				,	,	1	,	,	3	1	,	1	1		,	٠
acenaphinylene										,	- 1	1	,	1	1	,
acenaphthene		•	í	1				' '			. 1	,	0.2	1	,	•
fluorene		1	ı.	'				•					! '	•	,	
C1-fluorene		ſ	í	1	1	1	ı						. 1		1	,
C2-fluorene		t	ï	ı	1						, ,				,	
C3-fluorene		•	,	1	' (' '	, 0	'	' '	٠ -	-	0	"			
phenanthrene		,		•	0.0	0.5	8.0	í.	0.0	1	-	0.0	0			1
C1-phenanthrenes				1	1	1	ı		í	1	1	1	1			
C2-phenanthrenes		Ĭ.	1	1	1	1.	,	i	1	1	í	ı	1	1		1
C3-phenanthrenes		ï		1	1	1	1	1	1	1	1	1	1	1	ı	1
C4-phenanthrenes		1	1	1	•	ī		1	•	1	1	•	' (1	ı	1
dibenzothiophene		1	ì	•	,	•	1	F	1	1	1	•	0.7		•	í
C1-dibenzothiophenes		1	1	1	1	,	1	1	1	r	•	1	1	1	1	1
C2-dibenzothiophenes		£	ι	1	•	1	ı	'	1	1	1	1	1	1	1	i
C3-dibenzothiophenes		•	1	1	1	1	1	1	٠,		٠,	١,	٠,	1	1	1
Sum of LACs		•	1	•	1	0.8	7	•	-	7 7	1	1	4 6	•	•	·
fluoranthene		•	1		1	ı	Ü	1	1	0.1	•	1	0.3	1	ı	ï
pyrene		•		1	1	1	1	1	1	•	1	1	,	•	ı	ı
C1-fluoranthenes/pyrenes		•	i	1	1	1			1	ľ	•	'		•	1	•
benz[a]anthracene		•	1	1		1	ï	1	1	•	ı	ı	1	1	1	
chrysene		T	1	1	1	r.	ì	1	1	1	1	1	•	1	í.	1
C1-chrysenes/benz[a]anthracenes		1	1	1	1		1	,	1	1	1	1			í	1
C2-chrysenes/benz[a]anthracenes		•	1	'	,		,	'	•	1	1	•	,	•	1	1
C3-chrysenes/benz[a]anthracenes		•	1	1	•	1	1	'	•	•	1	1	1	1	1	•
C4-chrysenes/benz[a]anthracenes		•	,	1	1		1	1	,	•	•	1	'	1	1	ı
benzo[b]fluoranthene		1	,	1	'		,	'	1	1	1	•	1	1	1	1
benzolklfluoranthene		1	E	1	•		,	'	•	1	1		•	•	1	1
benzofalpyrene		1			1	1	1	'	•	,	1	•	1	1	1	1
indeno[1,2,3-cd]pyrene		,	,	•		1		'	1	,	1		1	1	1	
dibenz[a,h]anthracene		1	1	1	•		,		,	1	,	1	•	1	•	1
benzo[ghi]perylene		1								, 0			0.3			
Sum of HACS																
sample weight, grams:		3.80	5.00	4.78	4.70	5.15	4.90	3.10	5.38	5.11	4.77	5.52	5.14	5.48	5.56	5.39
		The Real Property lies			The same of the last											

Table B-18. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Old Harbor.

	Species .	١	l	l	١	١	١	D	Dink calmon		l	١		l	l	
	Site:	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2	OHA2
ACs	Date collected:	Sep-89					Sep-89		Sep-89						Aug-90	Aug-90
	Lab no.:	546	555	556	557	558	559	573	598	599 599	1762	1809	1815	2421	2422R	2429R
naphthalene		а	а	а	а	а	В	а	а	В	a	B	B	а	а	а
C1-naphthalenes		•	•	•	1	j	•	1	1	1	,	i	1	•	1	•
C2-naphthalenes		1	•	1	î	1	1	1	1	1	1		1	•	1	1
C3-naphthalenes		•	•	ì	1	1	•	•	•	1	•	1	1	1	1	1
C4-naphthalenes		1	•	•		1	i	ı	1	.1	1	1	•	1	ı	1
acenaphthylene		. 1	r	1	1	1	•	1	•	•	•	0.5	0.3	•	•	
acenaphthene		1			1	•		1	•	1	1		ī	1	1	1
fluorene			•	1	ï	ï	•	ı	í	•	•	1	0.7	1	1	1
C1-fluorene		•	•	i	1	•	í	1	1	1	ī	í	•	ı	•	•
C2-fluorene			,	•	1	1	٠	1	1	ī	•	•	•	•	•	•
C3-fluorene		•		1	•	•	1	•	1	•	.1		1	•	•	1
phenanthrene		•	•	•	ř	•	•	1	0.2	0.2	0.4	1	1	1	1	ı
C1-phenanthrenes		1	1	1	•	•	•		1	1	1		1	•	1	1
C2-phenanthrenes		•	1	•	•	1	1	1	1	1	1	t	1	1	1	1
C3-phenanthrenes		1	•	1	1	,	.1	1	1	ı	•	•	1	1	1	•
C4-phenanthrenes		·	1	1	1	1.	1	1	1	1	1	1	•	•	•	•
dibenzothiophene		•	,	ı	1	1	1	.1	1	1	r	1	1	ı	•	•
C1-dibenzothiophenes		•	ı	1	r	•	1	1	1	1	ı	1	1	1		•
C2-dibenzothiophenes		•	1	•	1	ı	j.	1	i	1	1	1	•	•	í	•
C3-dibenzothiophenes		•	1	1	1	1.	•	•	1	1	1	•	1	1	•	•
Sum of LACs		•	•	•	•	•	•	•	0.5	0.7	0.4	0.5	7	•	•	•
fluoranthene		•	•		1	ı	•	1	•	1	1	9.0	9.0	•	•	i
pyrene		1	•	1	•	1	i.	1	1	1	1	0.4	0.3	1	i	1
C1-fluoranthenes/pyrenes		1	•	•	•	1	•	•	•	4	1	1	1.	•	•	i.
benz[a]anthracene		1	·	Ė	1	ī	1	•		•	•	1		•	•	ï
chrysene		•	•	1	•		•	•	•	•	1	í	•	1	•	•
C1-chrysenes/benz[a]anthracenes		1	1	1	1	1	1	,	1	•	1	1	1	1	1	i
C2-chrysenes/benz[a]anthracenes		•	•	1	ı	ı	1	ľ	•		•		1	•	1	ı
C3-chrysenes/benz[a]anthracenes		1	1	1	t	1	1	1	•	1	1	1	1	1		1
C4-chrysenes/benz[a]anthracenes		•	1	ı		1	1	1	1	I	•	1	•	1	t	•
benzo[b]fluoranthene			•	1)	1	,	1	1	1	1	1	1	1	•	
benzo[k]fluoranthene		1	1		1	1	1	1	1	•	1	1	1	ï	•	1
benzo[a]pyrene		•	•	1	•	1	1	•	ı	1	1	1	1	•	•	r
indeno[1,2,3-cd]pyrene		•	1	1	1	1	1	•	•	•	1	į	1	1	1	1
dibenz[a,h]anthracene		•	•	•	1	1	1	1	1	•	•	1	•	j	1	1
benzo[ghi]perylene		•	•	ī	1	•	ţ	r	1	1	ſ	٠,	' 6	ı	•	i
Sum of HACs		1		1	1	1	1	1	1	1	1	1	0.0			1
sample weight, grams:		5.11	5.34	5.11	5.31	5.30	5.23	5.39	5.36	5.08	4.98	5.03	5.07	4.94	4.92	4.96

Table B-19. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Old Harbor.

	Species :	Dolly Varden	Pacific cod	Pink salmon	mon	Smoked salmon	almon	
	Site .	OHA2	OHA2	OHA5	OHAS	OHA	OHA	
ACs	Date collected:		Sep-89		Aug-90	Oct-89	Oct-89	
	Collector:		D&M 524	ADFG 2363	ADFG 2364	D&M 241R	D&M 244R	
nonhtholana		c	c	6		450	510	
C1-paphthalenes		0.7	1 1		0.5	320	400	
C2-nanhthalenes				0.8	,	410	530	
C3-naphthalenes		,	,	,	,	510	610	
CA-nanhthalanas			,			380	370	
consultations					,	580	640	
acenaphinylene						75	9 5	
acenapmnene				,		710	450	
Illuorene		ı.	ı			340	380	
CI-morene				. 1		740	780	
C2-Inorene						210	190	
phenanthrene		0.7	0.7	,	,	1,800	1,800	
C1-phenanthrenes		,	,	1	1	560	610	
C2-phenanthrenes		,	,	1	,	230	250	
C3-phenanthrenes		,	ı	1.		87	94	
C4-phenanthrenes		ı	ı	1	f	2	7	
dibenzothiophene		1	,	1	ï	14	14	
C1-dibenzothiophenes			,	1	,	11	13	
C2-dibenzothiophenes			1	,	í	9	10	
C3-dibenzothiophenes			1		, ,	0.3	7	
Sum of LACs		1	0.7	0.8	0.5	7,100	7,800	
fluoranthene			1	i	ı	280	310	
pyrene		1	í	8.0	,	200	210	
C1-fluoranthenes/pyrenes			ı	1	1	6	100	
benz[a]anthracene		1	ı	ı	ı	13	14	
chrysene			1	1	ı	23	24	
C1-chrysenes/benz[a]anthracenes		1	,	1	ì	∞	11	
C2-chrysenes/benz[a]anthracenes		ı	ı	1	ı	i.	-	
C3-chrysenes/benz[a]anthracenes		ī	1	1	í	ı	ī	
C4-chrysenes/benz[a]anthracenes			,	1	1	1	1	
benzo[b]fluoranthene			ı		1	9	7	
benzo[k]fluoranthene		1	1	1	1	9	9	
benzo[a]pyrene		ı	r	i	ı	7	9	
indeno[1,2,3-cd]pyrene		ı	1	1	1	3	4	
dibenz[a,h]anthracene		1	ı	1	,	0.5	9.0	
benzo[ghi]perylene		1		' &		3	700	
Sum of HACS		-		0.0		000		
sample weight, grams:		5.29	5.06	4.99	4.98	4.83	5.23	

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Table B-20. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Akhiok.

	Species: So	Sockeye salmon	Coho salmon	Pink salmon	lmon A K HA	Starry flounder	_	Rock sole	
ACs	Date collected:	Jul-89		Aug-89	Aug-89			And Aug-90	
	Lab no.:	Docini 5		263	267		2440	2441	
naphthalene		а	а	а	g	а	а	а	
C1-naphthalenes				-	0.5	٠	,	•	
C2-naphthalenes				1	,	,	1		
C3-naphthalenes		,	1	1	,	-	7	9.0	
C4-naphthalenes		,		•	,	r	,	•	
acenaphthylene		,		•	,	•	1		
acenaphthene		,		0.2	,	•	,		
fluorene			1	0.3	,	•	,		
C1-fluorene		·		1	1	•	1	,	
C2-fluorene				•	ı	ı	1	1	
C3-fluorene		·		•	,	•	ı		
phenanthrene			,	3	-	•	,	•	
C1-phenanthrenes		,	1	•	,	•	,	1	
C2-phenanthrenes		,	•	•	i	•	,		
C3-phenanthrenes	9	•		1	,	•	1		
C4-phenanthrenes		,	i	•	,				
dibenzothiophene				•	,	,	ı		
C1-dibenzothiophenes			ı		,	1			
C2-dibenzothiophenes		ı	,	,	,	•			
C3-dibenzothiophenes				•		٠.		' '	
Sum of LACS				4	٦ ;	-	7	9.0	
fluoranthene		·		0.4	0.1				
pyrene		1			,		,		
C1-fluoranthenes/pyrenes		ı		•			,		
benz[a]anthracene				1	,				
chrysene							,		
C1-chrysenes/benz[a]anthracenes		ı		•	,				
C2-chrysenes/benz[a]antinracenes				1	,		ı	•	
C3-chrysenes/benz[a]anthracenes				•			ı	•	
C4-chrysenes/benz[a]anthracenes				•			ı	,	
benzo[b]fluoranthene				í			,		
benzo[k]iluoranihene		,		1	,		,	ı	
benzo[a]pyrene		•		•	,		i		
indeno[1,2,3-cd]pyrene			,	•		•	,		
dibenz[a,h]anthracene		,		1	,	•			
benzo[ghi]perylene				0.4	0.1				
									1
sample weight, grams:		3.36	5.17	5.23	5.78	5.03	5.04	5.08	
							1		

Table B-21. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Karluk.

							-				D. II.	1		l	
	Species:	Cono Sa	VADI	FINK Salmon	I VADI		VAD1 VAD1	VADI	VADI	KADI	KAPI KAR	-	KARI	KARI	
AC.	ollected:	_	Sep-89	Jul-89				Jul-90						May-90	
		_	D&M 562	D&M				D&M 1808			D&M 1704	D&M 1705	D&M 1706	D&M 1707	
naphthalene		æ	а	es	В	8	g	r	g	B	а	В	В	в	
C1-naphthalenes		•	0.2	1	'	0.3	1	1	0.2	1	1	1	1	·	
C2-naphthalenes		1	1	1		1	0.4	8.0	•	1	t	1	1	,	
C3-naphthalenes		1	ı	•	'	1	0.5	r	1	•	E	1	1	ì	
C4-naphthalenes		1	,	1	0.2	1	1	1	1	1	1	t	1		
acenaphthylene		1	1	ı	•	1	0.2	1	1		1	r	1	•	
acenaphthene		1	ı	1	1	1	1	0.2	1	1	1	1	ī	1	
fluorene		1	ı	1	'		0.4	ı	X.	t	1	t	r	1	
C1-fluorene		1	1	ì	'		,		ï	ı	ı	1	1	1	
C2-fluorene		1	ř	ı	'			1	1	1	ī		1	1	
C3-fluorene		t	ı	r	_		1	1	1	ı	1	1	1	ı	
phenanthrene		0.5	0.3	1	,	0.4	,	1	0.4	1	1	1	ı	1	
C1-phenanthrenes		1	,	1			ı	10	1	1	1	1	•	1	
C2-phenanthrenes		1	,	1	'		•	,	,	•	1	•	1	•	
C3-phenanthrenes		1	ï	•	•		1	1	1	,	1	r	1	1	
C4-phenanthrenes		ī	1	1		1	1	1	1	1	1	1	1		
dibenzothiophene		•	ï	1		,	1	1	•	•	1		1	ı	
C1-dibenzothiophenes		1	1	ı			ı	ı	1	T	1	1	1	ı	
C2-dibenzothiophenes		1	1	,	_		1	1	į	1	1	1	ı	1	
C3-dibenzothiophenes		1 1	. !	ı		' '	1	. ,	1 (•	1	ı	ı	1	
Sum of LACs		0.5	0.5		0.7	0.7	7 7	1 %	9.0	•	•	•	•		
fluoranthene		ï	ř.	1			0.7	0.7	1	1	ī.	1	t	1	
pyrene		1	r	ı			0.5		1	1		1	i	1	
C1-fluoranthenes/pyrenes		ı	ı	ı						1					
benz[a]anthracene						, .	' '							,	
chrysene										1	1				
C1-chrysenes/benz[a]anthracenes		•	1							. ,	, ,				
C2-chrysenes/benz[a]antinacenes															
C3-chrysenes/benz[a]anthracenes														,	
C4-ciii yseiica ociiizla jainina cenes								1	•		1	1	1	,	
benzolbjiluorantnene			,												
benzo[k]fluoranthene		1	r							1	•				
benzo[a]pyrene		1		1				,	'		'				
indeno[1,2,3-cd]pyrene		•		1					1	1	1	1	1	1	
dibenz[a,h]anthracene			1	,		,			1			•	1	1	
benzo[ghi]perylene Sum of HACs		٠.					,1	0.2	٠.	٠.	' '	٠.		٠.	
sample weight, grams:		5.13	5.15	3.43	2.96	5 5.29	5.06	4.98	5.24	5.09	5.03	4.98	5.01	5.03	

Table B-22. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Larsen Bay.

	ı	I			l	I	l	ı	I	ı	Ì	١			I	
	Species:	Halibut		Pink salmon		Sock	Sockeye salmon	u.		O	cod	Halibut	but	F. F.	0	
	Site:	LABS	LAB6	LAB6	LAB6	LABo	LAB6 LAB6		LAB6	LABo	LABo	LABO LABO	LABo	LAB		LAB
ACs	Date collected:	Jul-89	Aug-89	Aug-89	Aug-89	Aug-89	Aug-89 A	Aug-89 A	Aug-89	Jul-89 /	Aug-89	Aug-89	Aug-89	Jul-89	Jul-89	Jul-89
	Collector: Lab no.:	D&M 41	D&M 655	D&M 281	264 264	282			653	704 704	285	284 284	708	10 10	29R	3R
naphthalene		а	а	а	B	В	В	а	а	в	а	а	а	a	а	g
C1-naphthalenes		,	0.3	0.4	2	9.0	0.7	7	6.0	0.2	0.1	0.1	0.2	ï	1	i
C2-naphthalenes		1	,		0.7	0.1	•	0.5	1	•	,	1	,	.1	1	1
C3-naphthalenes		r	1	1	0.1	1	•	90.0	,	i	,	1	1	r	1	ı
C4-naphthalenes		í				1	•	•	,	•	ı	•	1	1	ī	•
acenaphthylene		i	ı	ı	•	•	•	1	1		1		,	1	1	1
acenaphthene		ı			1	•	•	1	ï	,1	1	1	ı	1	0.1	-
fluorene			,		0.8	0.3	0.2	0.5	,	•	1	•		1	0.3	-
C1-fluorene			1		1	•	1	0.2	į	•	1	1.	ī	1	1	1
C2-fluorene		r		T	•	ŗ	1	1	1	•		•	1	•	1	i
C3-fluorene		,		ı	1	1	1	ı.	1	1	r		,	1	1	
phenanthrene			_	7	7	7	-	7	7	0.3	0.2	0.2	0.5	-	12	11
C1-phenanthrenes			1	•	0.1	ı	1	ı	,	1	í	ı	,		•	ı.
C2-phenanthrenes		,		1	•	•	ı	ı	,	1	ı	1	ı	1	,	i
C3-phenanthrenes		1		ı	•	•		•	,	ī	1	r	ī	1	•	ı
C4-phenanthrenes		,	ï		•		1	1	,	1	1		,	1	ı	1
dibenzothiophene		ī	,	ı	0.7	0.4	0.1	9.0	0.5	•	ı		1	r	ı	1
C1-dibenzothiophenes			1	ı	'	•	1	ı	,	ı	,	•	1	1	•	ı
C2-dibenzothiophenes		1	r	ı	1	1	i.	r	ı	r	ı	1	ı		1	1
C3-dibenzothiophenes		í		1	1	• ,	1.	1 -	r				,	٠,	' '	,
Sum of LACs			-	7	9	3	7	9	6	0.5	0.3	0.3	0.7	_	12	13
fluoranthene		,		ı	0.2	1	1	0.1	1	1	1	,	1	•	0.5	0.7
pyrene		,		ı	1	•	1.	1	,	1	,	ı	ŗ	1	i.	1
C1-fluoranthenes/pyrenes		í	,	ı	•	•	1	1	í	1		•	1	•	1	1
benz[a]anthracene		,	ī	1		•	1	ı	,	1	1	ı	ı	1	í	ì
chrysene		,	1		•	1	i.		,	I,	ı	•	1	1	1	1
C1-chrysenes/benz[a]anthracenes		ï		,	•	•	ı	1	r	Ţ	ı	1	,	r	ť	1
C2-chrysenes/benz[a]anthracenes		í	ı			ı	1	ı	i	1		1	,	1	1	ı.
C3-chrysenes/benz[a]anthracenes		1		1	•	1	1	1	í	ï	i	•	ï	r.	,	•
C4-chrysenes/benz[a]anthracenes				1	1	•	î	1	,	•	ı	1	ı	1	í	1
benzo[b]fluoranthene		ı	,	•		1	1	1		1	,	1	ı	,	r	1
benzo[k]fluoranthene		,		1	•	ř	1	t	í	ſ	ı	•	ı	1	•	1
benzo[a]pyrene		1		1	,	1	ī	i	ı	1	,	1	1	1	j.	,
indeno[1,2,3-cd]pyrene		t			•	1		1	,	1	,	1	,	1	•	,
dibenz[a,h]anthracene	4	,			•	•	•	1	,	•	,	1	1	t	1	•
benzo[ghi]perylene			r .		0.2	٠.	٠.	0.1		٠.		٠.		٠.	0.2	0.7
				* * * *	00.		90	;	9.	,	,		, ,	ţ		000
sample weight, grams :		4.46	5.08	4.62	5.99	4.57	4.99	5.13	5.10	5.16	5.47	5.13	5.15	3.47	4.01	3.00

Table B-23. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Larsen Bay.

	Cracios .					Din	Dink colmon	1						Sockette colmon
	Site .	LABS	LABS	LABS	LABS	LABS	I AB8	LABS	LABS	LABS	LABS	LABS	LABS	
ACs	Date collected:									Sep-89	Sep-89	Sep-89	Jul-90	
	Collector: Lab no.:	D&M 504	D&M 505	D&M 506	D&M 507	D&M 543	D&M 581	D&M 582		D&M 595	D&M 596	D&M 597	D&M 2420	D&M 2427
naphthalene		B	в	g	В	В	æ	В	В	а	В	æ	æ	
C1-naphthalenes		1	1	i	,	1	1	1	1	1	0.2	0.2	ī	r
C2-naphthalenes		•	1	•	,	,	1	1	1	1	1	1	,	ı
C3-naphthalenes		í	1	1	•	i	•	•	•	•		,	1.	ı
C4-naphthalenes		1	1		1	1	,	1	0.09	1	•			,
acenaphthylene		1		1		1	1		1	,	1	1	1	
acenaphthene		1	1	,		1	1	1	J	1	1	1	,	
fluorene		1	.1	1	1	1	1	1	1	1	•	•	1	ı
C1-fluorene		1	1	,	1	1	•	1	1	1	1	1	,	ī
C2-fluorene		1	•	1	1	.1	1	1	1	1	1	1	1	1
C3-fluorene			ı	•		.1	£	1	ľ	•	r	1	0.5	ı
phenanthrene		0.3	8.0	0.8	0.5	r	0.2	0.3	6.0	0.2	0.5	0.5	1	
C1-phenanthrenes		•	1	1	1	í	•	1	r	í	.1	1	ı	í
C2-phenanthrenes		1	•	1	1	1	1	•	1		1	•		
C3-phenanthrenes		1	ī	•	1	•	ı	•	1	1	1	1	ı	i
C4-phenanthrenes		1	•	•	•	1	1	1	1	1	1	•	1	ı
dibenzothiophene		r	,	,		1	1	1	1	1	1	•	1	
C1-dibenzothiophenes		1	1	1	1	1	1	1	1	1	1	1	1	,
C2-dibenzothiophenes		r	Ü	1	ı	ı	í	t	•	1.	1	1	ī	i
C3-dibenzothiophenes		1 (1 (1 1	1			٠,		' '	' '	, ,	•
Sum of LACs		0.3	8.0	0.8	0.5	•	0.5	0.3	-	0.5	0.7	0.1	0.5	
fluoranthene		1	1	1	•	1	1	•	0.1	1	1	1	ı	,
pyrene		1	ſ		1	1	1	r	ï	1	1	1	t	
C1-fluoranthenes/pyrenes			•		r		1	ï	1	1	•	•	í	,
benz[a]anthracene		1		1	1	1	ī	1	1	,	1	,	1	,
chrysene		1	1	1	ı	1	1	1	1).	1	•	ï	r
C1-chrysenes/benz[a]anthracenes		1	1		1	ī	1	r	1	1	•	t	1	ì
C2-chrysenes/benz[a]anthracenes		1	1	1	r	Ĺ		r	1	1	,	1	1	
C3-chrysenes/benz[a]anthracenes		•	ı	1	•	1		•	1	1	•	•	ı	ı
C4-chrysenes/benz[a]anthracenes		1	•	•	1	•	•	•	1.	1	•	•	1	•
benzo[b]fluoranthene		1	•	1	1	1	•	,	1	•	1	1	1	,
benzo[k]fluoranthene		•	1	1	ì	•	1	•	1	1	1	1	t	
benzo[a]pyrene		1.	1	1	ı	1	1	1	•	1.	1	•	1 *	•
indeno[1,2,3-cd]pyrene		1	1	1	1		•	1	1	1	•	ï	1	,
dibenz[a,h]anthracene		1	i	1	.1.	1	•	•	1	1	ì	1	,	
benzo[ghi]perylene		1	1		1	1	1	ı	1	ť			ī	1
Sum of HACs		•	•		•	1	'	'	0.1	1		'		
sample weight, grams:		5.40	5.28	5:35	5.27	5.32	5.34	5.33	5.17	5.28	5.24	5.34	4.98	5.00

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Table B-24. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Larsen Bay.

			I		
	Species:			Pacific cod	Pink salmon
		LAB8	LAB8	LAB12	
ACs	ed:		Sep-89	Jun-90	Aug-90
	Collector: Lab no.:	D&M 520	D&M 521	ADFG 2410	
naphthalene		g	а	а	
C1-naphthalenes		0.2	0.2	0.7	0.5
C2-naphthalenes		•	,	'n	1
C3-naphthalenes		ï	,	,	
C4-naphthalenes		1	,		
acenaphthylene		1	1	1	•
acenaphthene		•	,		,
fluorene		•	,		·
C1-fluorene				1	,
C2-fluorene		•	,		
C3-fluorene		•	1	,	,
phenanthrene		0.3	0.4	•	,
C1-phenanthrenes	+	٠			í
C2-phenanthrenes		1	1		ĭ
C3-phenanthrenes		1	,		
C4-phenanthrenes		•	1		
dibenzothiophene		•	,		
C1-dibenzothiophenes		ì	r		•
C2-dibenzothiophenes		•	í		
C3-dibenzothiophenes		1	1		
Sum of LACs		0.5	9.0	0.7	0.5
fluoranthene		1.	,		
pyrene		•	,	1	
C1-fluoranthenes/pyrenes		1	,	ì	
benz[a]anthracene		1	ı		
chrysene		•	í	•	,
C1-chrysenes/benz[a]anthracenes		ī	,	•	
C2-chrysenes/benz[a]anthracenes		•	,	ı	
C3-chrysenes/benz[a]anthracenes		,	1	,	1
C4-chrysenes/benz[a]anthracenes		1	,		
benzo[b]fluoranthene		•	ı	,	
benzo[k]fluoranthene		•	,	,	
benzo[a]pyrene		•	,	1	
indeno[1,2,3-cd]pyrene		1	1		•
dibenz[a,h]anthracene		ī			
benzo[ghi]perylene		• •			
Sum of nACs			T		
sample weight, grams:		5.23	5.42	4.98	5.02

Table B-25. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Port Lions.

				١			I		Г					
	Species:		S	Coho salmon				ca		Dolly Varden Halibut	Halibut	Halibut	Halibut Yellowfin sole	
	Site:	PTL3		PTL3	PTL3		PIL3		PTL3	PTL3		PTL6	PIL6	
ACs	Date collected:	Sep-89	Sep-89	Sep-89	Sep-89 5	Sep-89 5	Sep-89	Jul-89 /	Aug-89	Aug-90	Aug-89	Jul-89	Jul-89	
	Collector:			D&M 577	D&M 578		D&M 502	D&M	D&M	ADFG		D&M	D&M 705	
acompting one	Lab IIO.	500	0/0	110	0/0	177	27.6	0 6	107	3	8	6	6	
Cl nonhtholones		0	3 1			0	90	; ;	0.4	1 1	0.1		0.4	
CI-mapininacines		9				0.0			000		!			
C2-naphthalenes		•	1		1	1.0	,		40.0	1				
C3-naphthalenes		1	1			1		,	ı	ı				
C4-naphthalenes		•	1	1	i			1		ı	1	1		
acenaphthylene		1	•	í	1	•	,	,	i	í		í		
acenaphthene			1	•	ì	ř	,	i		1	,	,	,	
fluorene			1	1	1	•	,	•	0.2	1	1	1		
C1-fluorene		1	1	•	1	1	ï	٠	1		,	ı	,	
C2-fluorene		•	τ	ı	ı	1	r	1	ı	í	,	1		
C3-fluorene		•	•	•	1	1	ī	ī	1	ı	,	,		
phenanthrene		-	9.0	0.2	0.3	2	1	1	7	1	0.2	,	0.4	
C1-phenanthrenes		1	1	1	1	1	1		,	1	,	,		
C2-phenanthrenes		r	1	. 1	1	•	ī	•	,	,	,	,	,	
C3-phenanthrenes		1	1	1	ı	•	,	1	,	r	1	,		
C4-phenanthrenes		,	•			•	ı	1	1	,		ı		
dibenzothiophene		1	•	•	1	0.1	,	1	1	,		ı		
C1-dibenzothiophenes			•	•	1	1	,	1	į	į	,	ı		
C2-dibenzothiophenes			1	,	1	1	,		i	,	1	,		
C3-dibenzothiophenes		1)	1	ï	1	,	•	r	ì	1	•		
Sum of LACs		7	9.0	0.2	0.3	3	7	•	3		0.3		8.0	
fluoranthene		•	1	1	1	0.1	í	r	0.2	e	í			
pyrene		•	1	1	i	1	,	1	τ	1	r	ı		
C1-fluoranthenes/pyrenes		1	1	1		ı	,	1	,	ř	ı	1	ı	
benz[a]anthracene		1	•	ī	r	i.	,	•	1	ï	ī	,	,	
chrysene		1	1	Ţ	1	ī	,	1		i.	,		ī	
C1-chrysenes/benz[a]anthracenes		•	•	1	1	1	ı	1	í	ı		1		
C2-chrysenes/benz[a]anthracenes		1	1	ı	1	1	ı	r	ı	ī	r	ı	ı	
C3-chrysenes/benz[a]anthracenes		•	1	1		1	,	1	,	,	1	ı		
C4-chrysenes/benz[a]anthracenes		1	1	1	1	1		1	1		,	,		
benzo[b]fluoranthene		1	1	r	ı	1	,		,	1.	1	1		
benzo[k]fluoranthene		•	1	•	1	1	,	1	1	1	1			
benzofalpyrene		•	•	1	j	1	,	1	ı	1	1	,	,	
indeno[1,2,3-cd]pyrene		•	•	•	•	•	1	1	,	•		ı		
dibenz[a,h]anthracene		•	•	1	ī	1	ı	1	ı	1	,	ı	,	
benzo[ghi]perylene		1	1	•	,	1	i	1	,		1	1	,	
Sum of HACs				•		0.1			0.2		-	·		
sample weight, grams:		5.26	5.45	5.49	5.10	5.35	5.03	3.06	5.56	5.00	5.51	4.68	5.33	

Table B-26. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Port Lions.

	Species:			Pin	Pink salmon					Halibut	but	Pink salmon	lmon	Pacific cod	poo	
7	Site:	TL7				PTL7		PTL7	PTL7	PIL8			PTL9	PTL9	PTL9	
ACs	Date collected: Au Collector: D	8-89 8-89	Aug-89 D&M	Aug-89 D&M	Aug-89 / D&M	Aug-89 D&M	Aug-89 D&M	Aug-89 D&M	Aug-89 D&M	Sep-89 D&M	Sep-89 D&M	Aug-90 /	Aug-90 D&M	Apr-90 ADFG	May-90 ADFG	
	Lab no.:	167	168	173	174	190	196	646	647	522	523	2442	2443	2395	2411	1
naphthalene		63	B	B	a	В	B	В	B	В	а	В	а	а	а	
C1-naphthalenes		0.2	0.1	1	0.2	•	•	0.5	0.3	1		•		1	8.0	
C2-naphthalenes		,				•	•	1		1		3	,	•	٠	
C3-naphthalenes		1		•	•	•	•	1	,	•	•	3	7	1		
C4-naphthalenes		•	•	•	•	1	1	1	,	1	,	-	ì	•		
acenaphthylene		•	•	•		•		1	,	1	ı		,	1		
acenaphthene		1	•	•	•	•	•		,			•	,	•		
fluorene		•	•	•	1	•	•	1	,	•	,	9.0	,	•	1	
C1-fluorene		•	1	•	1	•	•	1	,	•	,	0.4	,	1	•	
C2-fluorene	1	•	•	•	•	•	1	1	,	•	ı	•		1		
C3-fluorene		1	,	•	•	•	•	•	,	ı	,	•	,		0.7	
phenanthrene		0.2	0.4	•	1	0.3	0.2	0.4	0.5	0.4	9.0	7		1	0.5	
C1-phenanthrenes		•		i	1	1	1	•		1	,	-	,	•	ı	
C2-phenanthrenes		•		•	•	•	•	•	r		1	8.0		•		
C3-phenanthrenes		•	•	•	1	•	•	•		1	£	1		•	•	
C4-phenanthrenes		•	•	1		•	•	•	,	•		•	ï	ı	,	
dibenzothiophene		•		•	•	í	1	1	,	•	,	1	,	•	ι.	
C1-dibenzothiophenes		•	1	•	•	٠	•		,	1	r	0.5	1	1	·	
C2-dibenzothiophenes		1	•	•		•	ï			T	,	•	ı	ī	ı	
C3-dibenzothiophenes		' '	' '	1	٠.	' 6	' 6	' 6	, 6	' '	, ,	' ;		•	٠,	
Sum of LACS		4.	6.9		-	6.5	7.0	6.9	0.0	4.0	0.0	71	4	•	7	
fluoranthene		1	•	•	ı			1		r	,	0.9	ı	1		
pyrene C1 fluoranthenes/nvrenes			, ,							•		0.0		•		
benzíalanthracene		1	•	1			•		,				,	,		
chrysene		•	,	1	•	•	•			•		1	,	ı	1	
C1-chrysenes/benz[a]anthracenes		1	•		i	•	•	•	,	•	,	1	ï	•		
C2-chrysenes/benz[a]anthracenes		•	•	1	•	ı	•	•	ì	•	,	1	,	•	•	
C3-chrysenes/benz[a]anthracenes		1	1	•	1	•	•	ĭ	,	ī	1	1	,	1	,	
C4-chrysenes/benz[a]anthracenes		1	,	1	1	•	•	1	,	1	,	•	,	1		
benzo[b]fluoranthene		•		•	1	1	•	1	,	•			1	1		
benzo[k]fluoranthene		1		r.			1	•	ı	1	,	ì		•	٠	
benzo[a]pyrene		•	•	•		•	•			•	,	,	1	1		
indeno[1,2,3-cd]pyrene		•			•	•		•	,	•		•	ı	1	,	
dibenz[a,h]anthracene		1			•	•	•	ř.	ı	1		•		•		
benzo[ghi]perylene Sum of HACs		٠.	٠.	٠.	٠.	٠.	٠.	٠.		٠.		' 7		٠.	٠.	
sample weight, grams:		5.21	5.82	5.35	5.24	5.14	5.51	5.01	5.05	5.22	5.20	5.04	5.01	4 96	2.00	
Sample morbins Branco											2		2000	200	20.0	

Table B-27. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Ouzinkie.

		l	l					Diet.	1	Malibus		Traffic			Dink colmon	nom.
	Site:	OUZI	OUZI	OUZI	OUZI	OUZI	OUZI	OUZ1	OUZI	OUZI	OUZ3	OUZ3	OUZ3	SZN0	OUZS	OUZS
ACs	Date collected: Au	9-90				1_2	Aug-90		Aug-90	Jul-89				Sep-89		Aug-89
	Collector:						D&M 2437	D&M	D&M 2426	D&M 8		D&M 172	D&M 510	D&M 519	D&M 175	D&M 191
naphthalene		В	а	B	В	а	а	В	а	в	В	а	В	а	æ	g
C1-naphthalenes		1	1	1	ı	1	,		ï	î	0.07	9.0		,	0.2	8.0
C2-naphthalenes		,	6.0	1	1	ī	,	1	,	1	1	1		,	1	0.3
C3-naphthalenes			1	1	2	1	6.0	1	,	i	•	1	í		1	1
C4-naphthalenes		•	1		1	,		1	1	1	•	1	•	ı	•	•
acenaphthylene		•	1	•	•	.1	ï		1	í	r			1	ı	1
acenaphthene		,	1	1	,	. 1	,	1	,		1			,		r
fluorene		0.5	9.0	1		1		1	,	ı	1	1	1	1	1	0.1
C1-fluorene		1	1	1	1	1	,	1	1	,	1	•	1	,		1
C2-fluorene		1	1	1	1	1	,	1	ı	r	1	T.	1		1	ī
C3-fluorene		1	1	1	1	ı		•	,	,	1		1	ï	T	
phenanthrene		1	,	•	-	1		1	ı	1	0.1	0.5	í	0.3	1	7
C1-phenanthrenes		1	9.0	1	1	1	1	1	ı	ı	1	1	ï	,	1	•
C2-phenanthrenes		r	•	1	1	1	0.5	1	1	1	,	1	1	1	,	•
C3-phenanthrenes		1			1	i		ı		ı	1	1	í	,	1	1
C4-phenanthrenes		1	1	1	1	1	ı	1	,	,	,1	ť	1		1	1
dibenzothiophene		ı	1	1	i	1	ï	1	1		r	1	1	r	1	0.2
C1-dibenzothiophenes		•	t	1	1		ı	'	ı	1	1	1	1	ì	1	
C2-dibenzothiophenes		•	1	1	1	•	1	1			1	1	•	ı	í	ı
C3-dibenzothiophenes			1	1	1	1	î	,	1	,			ī	,	٠,	£ g
Sum of LACs		0.5	7	•	3	1	-	•			0.5	-		0.3	1	6
fluoranthene		0.4	0.8	C	1	1	ı	1	í	,	1.	0.1	1	,	•	1
pyrene		0.3	1	i	1	1	1	1	1	ı	1	•	1	1	1	1
C1-fluoranthenes/pyrenes		1	1	1	1	1	i	1		ı	•		1		•	
benz[a]anthracene		1	1	•	ï	1	í.	1		ı	,	1	,	ı	1	1
chrysene		1	1	í	1	1	1	•	1	,	1	•	1		,	1
C1-chrysenes/benz[a]anthracenes		r	1	1	1	1	,	1	,	ı	•	•	1	ı	1	1
C2-chrysenes/benz[a]anthracenes		1	1	1	1	1	ı	1	i	1	1	•		,	1	1
C3-chrysenes/benz[a]anthracenes		ï	1		1	1	ı	1	r	í	f	1	1	ì	1.	ï
C4-chrysenes/benz[a]anthracenes		ı	•		1	1	,	•	1	ī	1	ī	1	í	•	•
benzo[b]fluoranthene		1.	1	1	1	,	1	•	,	1	1	1	1	ı	•	ı
benzo[k]fluoranthene		•	1	1	,	1	,	1	,	ı	'	1	•	1	•	1
benzo[a]pyrene		•	1	1	1	1.	,	•	,	ī	•	ī	1	,	'	1
indeno[1,2,3-cd]pyrene		•	1		1	•	ı	1	í	í	1	1	•	1	1	•
dibenz[a,h]anthracene		1	1	i	T	1	ı		ï	ī	1	1	1	r	ī	1
benzo[ghi]perylene Sum of HACs		0.7	' 7									0.1			٠.	
sample weight, grams :		5.01	4.98	4.96	5.04	5.02	5.01	3.23	4.97	3.22	6.13	5.63	5.07	5.29	4.72	5.21

Table B-28. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Ouzinkie.

		١					I	I		I						
	Species:	0175	0175	Pir OI 175	Pink salmon	0175	01175	0175	01176	01176	9/1/0	Coho salmon	almon OI 176	0176	01176	01776
ACs	Date collected: Aug-89 Collector: D&M Lab no.: 192							Aug-89 D&M 636	Sep-89 D&M 528	Sep-89 D&M 542	Sep-89 D&M 563	Sep-89 D&M 574	Sep-89 D&M 575	Sep-89 D&M 609		Sep-89 D&M 611
naphthalene		B	ಣ	B	B	cs	В	в	8	В	а	В	В	В	В	es
C1-naphthalenes		0.3	1	,	į	•	1	,	0.4	1	0.5	1	1	-	0.7	6.0
C2-naphthalenes		0.3	ī	1		1	,	i	1	1	•	1	1	0.4	1	1
C3-naphthalenes		•	1	1	•		•	,	•	•	1	1	•	0.2	1	ï
C4-naphthalenes		•	ř	•	ı	1	•	·	0.7	1	•	1	ı	•	1	1
acenaphthylene		1		•	•	1	1	,	1	Ť	r	1	•	1	í	
acenaphthene		•	•	1	,	,	1	,	•	1	1	•	1	•	•	•
fluorene		0.4	•	1	1		1	,	1	•		1	1	0.3	•	1
C1-fluorene		•	,	ı	ì	1	r	1	ı	1	1	1	1	1	ı	1.
C2-fluorene		1		•	ı	1	ť		1	1	1	1	1	1	i	1
C3-fluorene		1	1	•	•	•	•		0.3	1	1	1	1	0.3	0.2	9.0
phenanthrene		4	-	-	-	-	6.0	-	3	8.0	-	9.0	9.0	2	-	3
C1-phenanthrenes		•	í	ī	1		•	1	1	1	1	1	1	1	•	,
C2-phenanthrenes		•	,	i	•	•	,	,	0.3	1	1	1	1	•	1	,
C3-phenanthrenes		1	1	1	1	ī	ī		0.7	1		1	-1	•	1	1
C4-phenanthrenes		1	•	1	1	•	1	ı	i.	1	1	•	ī	1	•	
dibenzothiophene		0.2	1	•	ï	1	r	1	•	•	1	ı	•	0.3	ï	0.2
C1-dibenzothiophenes			1	•	1		•	1		1	1	1	•	ï	1	
C2-dibenzothiophenes		1	r	1	1	1	1	ī	0.4	•	1	1	1	•	ı	
C3-dibenzothiophenes		1	•	1	1	1	1			1	1.	1	1	1.	1	
Sum of LACs		S	-	1	1	1	6.0	1	9	8.0	7	9.0	9.0	4	7	S
fluoranthene		0.5	t		1	1	1	ī	1 1	•	1	1	1	0.2	ı	0.4
pyrene			•	•	í	•	ı	,	9.0	1	•	•	1	,	•	
C1-fluoranthenes/pyrenes		1	•	1	1	1	1		1	1	•	1	1	1		
benz[a]anthracene		•	•	1	•	1	1	1	•	•		í	1	•	ı	ı
chrysene			•	ı	·	ı	1	1	•	1	ľ		1	•	•	i
C1-chrysenes/benz[a]anthracenes		1	•	1	i	1	,	,	1	1	1	î.	1	1	•	ı
C2-chrysenes/benz[a]anthracenes		1	•	•	ï	•		r	ı	1	ı.	ı	í	t	1	ı
C3-chrysenes/benz[a]anthracenes		•	•	E	•	1	1		1	1	1	ı	í	1	t	1
C4-chrysenes/benz[a]anthracenes		1		1	1	1	•	ī	•	•	•		1	•	ı	
benzo[b]fluoranthene		•	•	•	1	1	•	1	•	1	•	,	1	•	•	
benzo[k]fluoranthene		1	1	1	1	1	1	ı	1	1		1	1	1	1	ı
benzolalpyrene		1	•	•	ı	•			1		1	i	•	•		
indeno[1,2,3-cd]pyrene			1	ı	1	1		1	ī	1	1	,	1	1		
dibenz[a,h]anthracene		C	1			1	1.	ı	1	,		i	1	1	,	ı
benzolghi]perylene Sum of HACs		0.5		٠.	٠.				0.6			٠.		0.2		0.4
sample weight, grams :		4.73	5.03	5.04	5.11	5.16	5.13	5.03	5.34	5.38	5.28	5.33	5.28	5.22	5.47	5.18

Table B-29. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Ouzinkie.

	Species .	S	Coho salmon	-	Pacific cod	Halibut	hut	
	Site:	OUZ10	0 OUZIO OUZIO	OUZ10	OUZH	9	OUZH	-
ACs	Date collected:	Sep-90		Sep-90	Sep-90	Sep-90	Sep-90	
	Collector: Lab no.:	ADFG 2365	ADFG 2366R	ADFG 2384R	ADFG 2369	ADFG 2367	ADFG 2368	8
naphthalene		в	а	а	а	ಜ		ca
C1-naphthalenes		9.0	8.0	,	6.0	ı	0.0	6
C2-naphthalenes			i	,	-	ī	-	
C3-naphthalenes		•	•	ï	-	1	1	
C4-naphthalenes		•	•	1	,	,		
acenaphthylene		1	1	i	ı			•
acenaphthene		1			1	1		
fluorene		1	•	ī	1	1		
C1-fluorene		£	1	1	i	-(
C2-fluorene			1	1	,	i,		
C3-fluorene		1	1	i	1	1		
phenanthrene		ı	·	1	t	1		
C1-phenanthrenes				ï	ı	1		
C2-phenanthrenes		ï	1	r	1	1		
C3-phenanthrenes		1	1	ï	ı	ī		
C4-phenanthrenes		•	•	,	1	•	3	
dibenzothiophene		1	•	,	1	1		
C1-dibenzothiophenes		1	ı	1	í	1		
C2-dibenzothiophenes			1	ī	i	•		
C3-dibenzothiophenes			1	,	1	ī		
Sum of LACs		9.0	0.8		8	•	e.	3
fluoranthene		•	•		i	i		
pyrene		1	1	ı	ı	10		
C1-fluoranthenes/pyrenes		ī	1	1		ī		
benz[a]anthracene		•	1	1	ı	r		
chrysene		1	J	1	,	1		
C1-chrysenes/benz[a]anthracenes			•	,	ı	'		
C2-chrysenes/benz[a]anthracenes		1	ı	1	1	1		
C3-chrysenes/benz[a]anthracenes		1	1	1	1	1		
C4-drysenes/benz[a]anthracenes		1	•	1	1			
benzo[b]fluoranthene		1	1	1	ı	'		
benzo[k]fluoranthene		1		r	į	1		
benzo[a]pyrene		1	•	1	1	,		
indeno[1,2,3-cd]pyrene		•	•	1	1	1		
dibenz[a,h]anthracene		1	1		1	1		
benzo[ghi]perylene Sum of HACs								A CALL TO THE PARTY OF THE PART
		7		7 00	00.3	603		ç
sample weight, grams:		4.98	2.07	4.93	2.00	2.02	2.00	01

Table B-30. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in fish samples from Perryville.

			ı		I		
	Species:	2	:	Irish Lord	Coho salmon	dmon	
	Site:		PERI	PERI		PER4	
ACS	Date collected:		ADFG	Feb-90 ADFG		Sep-90 ADFG	
	Lab no.:	2390	2391	2392	2375	2376	
naphthalene		ed	æ	es	B	es	
CI-naphthalenes		•	,	,	1	ı	
C2-naphthalenes		1	,	í	1	1	
C3-naphthalenes		•		,	1		
C4-naphthalenes		•	,		•		
acenaphthylene		•	,	,	•	i	
acenaphthene		•		,	,	,	
fluorene			1	,	,		
C1-fluorene							
C2-fluorene							
C3-fluorene		•			'		
- Transferre				,	•	,	
phenanthrene		•	ı	,	•	ı	
CI-phenanthrenes		ř	1	1	1	ţ	
C2-phenanthrenes			,	,	1	•	
C3-phenanthrenes		•	,	,	1	,	
C4-phenanthrenes		,	,		٠		
dibenzothiophene		,	,	,	•	,	
C1-dihenzothionhenes							
C diharacthionhanas					•	,	
Cz-mbenzounopnenes			,	,	r	ı	
C3-dipenzolniopnenes				ı	•		
Sum of LACs		•			•		
fluoranthene		,	,	,		,	
pyrene		•	,		•	r	
C1-fluoranthenes/pyrenes		•	ï	,	•	,	
benz[a]anthracene		•	ı	1		,	
chrysene		1	i			i	
C1-chrysenes/benz[a]anthracenes		•	1		٠	•	
C2-chrysenes/benz[a]anthracenes		•	1			1	
C3-chrysenes/benz[a]anthracenes		•	,	,	٠	,	
C4-chrysenes/benz[a]anthracenes		•	,		,	,	
benzolblfluoranthene		,	,		,	,	
benzofklfluoranthene		•	,	,		,	
henzololusmene					,		
indone [1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,			ı			1	
indeno[1,2,3-cd]pyrene		•	,			¢	
dibenz[a,h]anthracene		,	1		1		
benzo[ghi]perylene		•	,	,	•	i	
Sum of HACs		1	1	-	١	•	
sample weight, grams:		4.84	4.82	4.87	4.98	5.07	
			1		I		

SECTION C

CONCENTRATIONS OF METABOLITES OF FLUORESCENT AROMATIC COMPOUNDS (FACs) IN BILE FROM MARINE MAMMALS

Explanatory notes for Table C-1 and C-2

Samples collected by the Alaska Department of Fish and Game are noted by * after the sample number; other samples were collected by NOAA.

FACs_{NPH} and FACs_{PHN} represent the compounds that fluoresce at naphthalene and phenanthrene wavelengths. Units are ng FACs per g bile.

† indicates that the animal was visibly oiled.

In specimen TS-HS-23F, the "F" denotes the sample is a fetus.

Bile was not collected from harbor seals JT-2, JT-3, JT-4, and JT-5, however, tissue samples were collected and analyzed (Section D).

Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in bile from harbor seals. The prefix for all lab numbers is 60. Table C-1.

sample no. TS-HS-1*† H		FACS	FACS	Protein	Lab no.	Date
	Site	NPH	PHIN	mg/ml	for ACs	collected
	Herring Bay/PWS	200,000	95,000	23.0	1324;1325	Apr-89
TS-HS-10*†	Herring Bay/PWS	38,000	17,000	27.3	1380;1414;1458	Jun-89
TS-HS-11*† H	Herring Bay/PWS	30,000	15,000	21.9	1388;1425;1459	Nun-89
TS-HS-20*	Herring Bay/PWS	000'89	14,000	44.0	1391;1428;1462	Apr-90
TS-HS-24*	Herring Bay/PWS	36,000	5,400	32.4	1405;1440;1474	Apr-90
TS-HS-22* H	Herring Bay/PWS	28,000	4,200	23.3	1393;1430;1464	Apr-90
TS-HS-21* H	Herring Bay/PWS	22,000	4,000	17.0	1392;1429;1463	Apr-90
H +*6-SH-SL	Herring Bay/PWS	4,900	1,300	0.89	1379;1413;1457	Jun-89
HS-HS-8∗‡ B	Bay of Isles/PWS	360,000	210,000	10.4	1322;1323;1449	Jun-89
TS-HS-7∗† B	Bay of Isles/PWS	53,000	36,000	10.9	1378;1397;1412;1424;1448;1477	Jun-89
TS-HS-5*† B	Bay of Isles/PWS	52,000	32,000	13.2	1376;1410;1446	Jun-89
TS-HS-25* B	Bay of Isles/PWS	67,000	12,000	84.4	1406;1441;1475	Apr-90
TS-HS-2*† B	Bay of Isles/PWS	31,000	8,800	12.6	1373;1407;1443	68-unf
TS-HS-4*† S	Seal Island/PWS	46,000	25,000	15.4	1375;1409;1445	Jun-89
TS-HS-3*† S	Seal Island/PWS	2,300	2,700	4.0	1374;1408;1444	Jun-89
V +∗9-SH-SL	Applegate Rocks/PWS	7,000	3,700	16.9	1377;1396;1411;1423;1447;1476	Jun-89
TS-HS-19* A	Agnes Island/PWS	20,000	6,200	21.4	1390;1427;1461	Nov-89
692-HBSL-001 N	New Year Island/PWS	12,000	1,500	44.0	1309;1338;1304;1343	Mar-90
692-HBSL-003 G	Galena Bay/PWS	29,000	2,500	40.6	1313;1347;1308;1345	Apr-90
692-HBSL-002 G	Galena Bay/PWS	17,000	1,100	26.7	1312;1260;1307;1344	Apr-90
TS-HS-23* N	NE Eleanor Island/PWS	110,000	44,000	53.2	1394;1431;1465	Apr-90
TS-HS-23F* N	NE Eleanor Island/PWS	3,300	1,800	55.8	1395;1432;1466	Apr-90
TS-HS-17*† P	Perl Island/Outer Kenai	7,700	2,200	14.1	724;758;793;817	1nl-89
TS-HS-18* B	Big Fort Island/Gulf of AK	1,400	170	14.8	1389;1426;1460	Oct-89
TS-HS-14*+ V	West Amatuli - Barren Islands/Gulf of AK	14,000	8,000	18.5	721;755;779;790	Mu-89
TS-HS-15*	Ushagat Island - Barren Islands/Gulf of AK	11,000	3,000	31.4	722;756;791;815	Jun-89
TS-HS-16*	Ushagat Island - Barren Islands/Gulf of AK	4,400	800	11.4	723;757;792;816	Jun-89
TS-HS-12* P	Perenosa Bay - Afognak/Gulf of AK	5,600	730	16.8	719;753;777;788	Jun-89
TS-HS-13* B	Between Perenosa and Seal Bay/Gulf of AK	7,200	2,200	23.8	720;754;778;789	Jun-89

Concentrations of metabolites of fluorescent aromatic compounds (FACs, NPH for naphthalene, PHN for phenanthrene; ng/g) in bile from Steller sea lions. The prefix for all lab numbers is 60. Table C-2.

sample no	Sie	FACs	FACs	FACs Protein PHN mg/ml	Lab no. for ACs	Date
I	The Needle/PWS	37,000	8,500	30.8	739;744;745;775;805	Jul-89
L	The Needle/PWS	19,000	3,700	0.6	738;743;774;804	Jul-89
I	The Needle/PWS	29,000	3,100	47.5	736;741;772;822	Jul-89
L	The Needle/PWS	31,000	3,000	34.6	737;742;773;823	Jul-89
L	The Needle/PWS	19,000	890	35.9	728;762;771;821	Jul-89
	Chiswell Island/Gulf of AK	4,200	390	7.8	740;776;787;806	Jul-89
692-STSL-001 F	Flat Island/Gulf of AK	38,000	4,600	13.3	1326;1265;1259;1321;1346	Mar-90
7	Ushagat Island - Barren Islands/Gulf of AK	13,000	2,700	39.2	726;760;795;796;819	Jun-89
1	Ushagat Island - Barren Islands/Gulf of AK	45,000	2,100	54.4	727;761;770;820	Jun-89
7	Ushagat Island - Barren Islands/Gulf of AK	18,000	1,200	29.9	725;759;794;818	Jun-89

SECTION D

CONCENTRATIONS OF AROMATIC COMPOUNDS (ACs) IN EDIBLE TISSUES OF MARINE MAMMAL SAMPLES

Explanatory notes for Tables D-1 through D-12

Results on sample extracts were determined by gas chromatography/mass spectrometry (GC/MS) using sequenced selected ion monitoring.

A hyphen (-) indicates that the analyte was not detected above the limit of detection which ranged from 0.02 to 1 ng/g (ppb) wet weight.

Low levels of naphthalene found were often indistinguishable from those in method blanks and were not reported. They are designated by "a."

Some samples were analyzed in replicate as part of the quality assurance (QA) plan—all of the data are included in the tables. Adjacent data columns with an "R" after the Lab no. are replicate analyses of a sample.

In specimen TS-HS-23F, the "F" denotes the sample is a fetus.

The Steller sea lion samples were collected by the Alaska Department of Fish and Game as agents under Marine Mammal Protection Act permit 584 issued to the Alaska Fisheries Science Center, Seattle, WA (T.R. Loughlin).

Table D-1. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	General area:	PWS			PWS			PWS			PWS			PWS		
	Site:	Herring Bay	Bay	He	Herring Bay		He	Herring Bay TS-HS-10		Η̈́	Herring Bay TS-HS-11	^	H	Herring Bay TS-HS-20	_	
	Date collected :	Anr-89 /	Anr-89	Inn-89		Inn-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Apr-90	Apr-90	Apr-90	
ACs	Tissue type:	ber				muscle	blubber	liver	muscle	blubber	liver	muscle	_	liver	muscle	
	Visibly oiled:	Yes		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No.	No	S _o	
	Collector:		ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG 1458	ADFG 1425	ADFG	ADFG 1450	AD -	ADFG	ADFG 1462	
nanhthalene	Lad no. :	C7C1	47CI	95	1317 a	a a	16	1300	a	12	a	a		a	a	
C1 nonhthalanas		31 5	3 1	17	,	,	2		,	19		1	4	1	٠	
C1-liapliniaciics		110	8 0	6		,	'	•	,	6	1	1	,	,	,	
C2 non-the lane		190	2. '	0	1	,	10	1	i	17		,	,	1	1	
CA non-tholones		84		-	j		4	•		. '		,	•	1		
acenanhthylene		,	4	. '	•	1		1	,	1	1	,	1		1	
acenaphthene		1	,	,	1	,	1	•		•	1	1	,	1	1	
fluorene		12	,	3	.1.	ı	1	1	,	1	•		1	1	1	
C1-fluorene		41	,	∞	ı	,	6	1	1	5	1	i	'		1	
C2-fluorene		19	,	,	1	,	1	1	1	1	1	ı	'	1	1	
C3-fluorene		14	,	1	•	,	1	1	,1	1		•	1	1	1	
phenanthrene		47	,	14	1	i	13	•	1	9	•	ī	7	•	•	
C1-phenanthrenes		81	1	6	1	,	34	1	,	7	1	ī	'	•	1	
C2-phenanthrenes		18	,	1	1	,	3	1	1		1	ı	•	1	1	
C3-phenanthrenes			ı	ť		Ť	1	1	1	1	,	1	,	•	1	
C4-phenanthrenes		1	1	1	ı		1	·		1	1	,	' '	•	1	
dibenzothiophene		46	-	7	•	0.7	11	•	,	3	1	,	0.3	t	•	
C1-dibenzothiophenes		75	,		•	ï	37		,	20	•	ı	1	•		
C2-dibenzothiophenes		36	,	•	į	1	6	1	i	1	í	ı	'	1	T.	
C3-dibenzothiophenes		0.8		1 0	ı	, ,	' 6	1	ı	' 6		ı	' '	1	1	
Sum of LACs		800	7	78		0.7	130	•		98			0 -	•	•	
fluoranthene		1	r	00	1	,	-	1		<i>x</i> c			<u> </u>	1	1	
pyrene		1	,	7	1		,			4			•			
C1-fluoranthenes/pyrenes		ı	,			ı		1		0	1					
benz[a]anthracene		' 0	ı	1		i i	1	1		0.0			'			
chrysene		0.0	,	1						1						
CI-chrysenes/benz[a]anthracenes			r	1		,						, ,	_		,	
C2-chrysenes/benz[a]anthracenes			,	'	1		•					,				
C3-chrysenes/benz[a]anthracenes			i	•	1	1	1	,	,	•		1	_			
C4-chrysenes/benz[a]anthracenes				1	•	ı	1	•		1	•					
benzo[b]fluoranthene		•	r	1	1				,		•	ı				
benzo[k]fluoranthene		1	ı	1	•	ı			1	,			'			
benzo[a]pyrene		ı	1	,	,		1			'		,	_	'		
indeno[1,2,3-cd]pyrene		1	1		1	. 0	,	,				, ,	' '	' '		
dibenz[a,h]anthracene		1	,			0.0				'						
benzolghijperylene		0.8		1		0.5	· 1			· ∞			' 72	' '	٠.	
Common of the control				1	1		1			1	ı		000			
sample weight, grams:		3.14	3.10	3.06	3.01	5.09	3.02	2.97	5.10	3.05	3.12	5.11	3.09	3.02	5.09	

Table D-2. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	General area:		PWS			PWS			SMA	Γ		PWS		L	PWS	l
	Site:	Ħ	Herring Bay		H	Herring Bay		He	Herring Bay	,	B	Bay of Isles	S	B	Bay of Isles	s
	Specimen:		_	00	L	~1					,	TS-HS-2			TS-HS-5	
	Tigging time :	Apr-30		Apr-90	Apr-90		Apr-90	Apr-90		Apr-90	68-unf	Jun-89		_	Jun-89	Jun-89
	Visibly oiled.	ragonio	IIVer No	muscle	piupper	liver	muscle	blubber		muscle	blubber	liver	Ē	plq	liver	muscle
	Collector:	ADFG	ADEG	ADEG	ADEG	ADEG	ADEG	ADEC	NO	NO	ADEC	Yes	Yes	Yes	Yes	Yes
	Lab no.:	1429	1392	1463	1430	1393	1464	1440	1405	1474	1407	1373	1443		1376 1376	1446
naphthalene		13	а	а	13	B	a	21	ದ	а	16	а	а	15	æ	B
C1-naphthalenes		4	1	1	9	7	i	21	1	,	3	1	2	2	ı	2
C2-naphthalenes		•	•	,	•	=	,	•	1	,	1	1	1	9.0	1	
C3-naphthalenes		•	•	ì	1	•	,	•	•	,	3	1			,	1
C4-naphthalenes		1	•	,	1	•			r	í	0.7	1	ı	. 2	1	•
acenaphthylene		1.	1	,	١.	1	ı	•	1	,	•	1	ı	í	1	•
fliorepe					٠ -	1			1	,	1	•	ı	r		•
CI-fluorene					- '			•	1		' "		,	' -	•	•
C2-fluorene		1	•			,	. ,			, ,	י ח			4	,	1
C3-fluorene		1	•	,	1		,		,	,		,	,	,		,
phenanthrene		2	•	,	4	0.9		9	•		6	٠		0		' '
C1-phenanthrenes		•	i	i	,	0.5	,	. 1		,	15		0.7	17		,
C2-phenanthrenes		•			•	8.0	,	1	1		-			; '	ı	,
C3-phenanthrenes		•	i.	r	•	1	1	•	1	,	1	,	1	•	•	1
C4-phenanthrenes		' '		,	٠,	ľ	ı	٠,	•	,	1	1	,	1	1	•
dibenzothiophene		0.3	,	,	7		,	3	ì	1	∞ <u>;</u>		1	∞		1
C2-dihenzothiophenes		1 1						1	ı	ı	15	1	8.0	22	1	
C3-dibenzothiophenes				,					,	,	0		,	n	ı	•
Sum of LACs		9	٠		13	15		30			61		10	7.0	• •	' V
fluoranthene		-		,	2	٠	,	3	1	1	7	•		1	1	, ,
pyrene		0.8	•	i	7	•	1	3	r	,	0.3	1		0.4	.1	ı
C1-fluoranthenes/pyrenes				,	•	r	,	١,	1	į	,	1		•	1	ı
chrysene		, ,			. 0	1		n <	1	í	1	1	ı	•	r	
C1-chrysenes/benz[a]anthracenes			•	,	; '		,	٠ ١		~						
C2-chrysenes/benz[a]anthracenes		1	•	,	r		1	1	٠	1	,	,	,	•	1	
C3-chrysenes/benz[a]anthracenes		•	•	,	•	•	,	•	1		•	•	ı	1		•
C4-chrysenes/benz[a]anthracenes		•	•	ı	1	•	1	-1	•	,	1	,	.1	1	•	•
benzo[b]fluoranthene		•	•	i	0.7	•	,	7	•	,	•	1		•	•	•
benzo[k]Iluoranthene		1	•		0.7	1	,	3	٠		1	1	ı	•	0.4	•
benzolalpyrene			r	,	0.7	í	,	7	1	, ,	1.	1		1	•	1
indeno[1,2,3-cd]pyrene							, ;	0 5		9.0	•	•		ì	1	•
henzofohilnervlene							C. O	0 7		10	1	•	r	,	1	•
Sum of HACs		2			7		0.3	39		2.5	. 2			1	0.4	٠.
sample weight, grams:		2.98	2.97	5.06	3.10	3.06	5.03	3.02	3.03	5.00	3.10	3.08	5.01	3.08	3.04	5.07
				1			1			1						

Table D-3. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	-			DIL		Section Sectio			OTHE			STATE	I		97770	
	Celleral area.			rw3				•	CW.		•	FWS		(CMJ	
	Site:			Bay of Isles	Isles			Ba	Bay of Isles		e i	Bay of Isles	s,	× ×	Seal Island	
	Specimen:			13-H3-/	1-0				~			_			IS-HS-3	
	Date collected:	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Apr-90	Apr-90	Apr-90	Jun-89	Jun-89	Jun-89
ACs	Tissue type:	blubber	blubber	liver	liver	muscle	muscle	blubber	liver		blubber	liver	muscle	blubber	liver	muscle
	Visibly oiled:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	%	No	No	Yes	Yes	Yes
	Collector:	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	A	ADFG	ADFG
	Lab no.:	1424R	1412R	1378R	1397R	1477R	1448R	1323	1322	1449	1441	1406	1475	1408	1374	1444
naphthalene		15	14	а	а	а	а	а	а	а	32	а	а	а	а	а
C1-naphthalenes		10	9	1	1	•	-	ı	•	,	24	•		•	•	4
C2-naphthalenes		34	24			0.7	,	16	1	,	•		,	'	1	1
C3-naphthalenes		80	57	t	1	1	ı	32	1	1	•	1	,	,	1	,
C4-naphthalenes		45	24	1	1	. 1	,	21	1	,	1	.1	,	1	1	
acenaphthylene		1	•	1	1	ì		,	1	,	2	1	,		1	1
acenaphthene		1	1	,	1	1	i	,	1	1	1		,	1	1	_1
fluorene		9	4	ι	ı	T	1	2	1	1	1	1	,	,	,	
C1-fluorene		24	22	1	•	1	,	12	1	1	,	1	ı	1	1	ı
C2-fluorene		15	9	1	1	•	ı	0.7	•	ı	1	,	1	1	1	ı
C3-fluorene		33	10	ť	1	1	í	20	1	,	•	•	•			•
phenanthrene		34	37	1		1	ı	24	1	ī	25	1	,	2	1	3
C1-phenanthrenes		63	99	8.0		_	-	19	•	1	1	1	,	2	t	1
C2-phenanthrenes		18	12	1	1	1	1	1	•	,	1	•	,	1		,
C3-phenanthrenes		4	1	1	1	1	,	1	•	ī	1	•	i		•	•
C4-phenanthrenes		•	1	j	t	1	1	t	1	í	•	1		,	1	•
dibenzothiophene		36	38	0.7	ı	0.5	9.0	22	0.4	T		1	ı	3	1	í
C1-dibenzothiophenes		19	71	r	1	7	2	29	ı	1		1	ı	∞	1	1
C2-dibenzothiophenes		38	34	1	1	i.	,	2	1	,	•	1	,	1	1	1
C3-dibenzothiophenes		- ;	1	1	1	11		•	1	,	1	1	ī	1	1	1
Sum of LACs		510	410	7	•	N.	S	210	0.4	_	24	•		21	•	90
fluoranthene		2	8.0	L	1	ř.	i,	t	ì	ı	6	1	ï	5	1	Ė
pyrene		-	9.0	1	1	1	,	1	,		1	1	r	0.4	,	1
C1-fluoranthenes/pyrenes		ı	•		1	1	,	•	1	r	1	1	1	1	1	1
benz[a]anthracene		' '	1	1	1	í	ı	ı		,	' '	1	i	•	1	,
chrysene		0.0	1	1	1	ı	,	ı	į	ı	0	,	,	,	ı	ı
C1-chrysenes/benz[a]anthracenes		ī	1	1	1		1	1.	ı	ı			i	•	1	
C2-chrysenes/benz[a]anthracenes		,	1	•	1	1	,	ı	1		1	1		•	1	1
C3-chrysenes/benz[a]anthracenes		1			1	1		•	ı	,		,	ı	•	1	
C4-chrysenes/benz[a]anthracenes		i	1	1	ı	r	ī	,	í	1		1	i	'	1	1
benzo[b]fluoranthene			1	1	ı	ï	ı	1	1 .	1	1	1	ı	r	1	í
benzo[k]fluoranthene		T.	•	1	1	T.	ı	r	ı	ı	,	1	ı	1	1	1
benzo[a]pyrene		1	1	1	1	•	£	r.	1.	,	1	ľ	i.	1	1	1
indeno[1,2,3-cd]pyrene		1		1	ı	1	r	•	r	ì	_	1	0.3	1	1	,
dibenz[a,h]anthracene		1	1	1	1	t	0.4	•	r	1	1		0.5	1	,	•
benzolghilperylene		. 4	· -		1 1	1 4	, 0	r ,	1	,	. 4		, 0	٠, ٢	1	1
Sum of the ca			1	١							61		0.0	1	١	-
sample weight, grams:		3.01	3.10	3.07	3.01	4.98	5.04	3.12	3.10	2.08	2.95	3.00	5.06	3.03	3.12	5.10

Table D-4. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

		l	07370	I	l	l					١			
	Octional area.	•	rws.				FWS	0				PWS		
	Snecimen ·	χ _Γ	Seal Island TS-HS-4				Applegate Rocks	e Rocks			Agi	Agnes Island	_	
	Date collected:	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	-89	Jun-89	Jun-89	Nov-89 Nov-89 Nov-89	Vov-89	Zov-89	
ACs	Tissue type:		liver	muscle		blubber	liver		muscle	muscle	blubber	liver	muscle	
	Visibly oiled:	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No		No	
	Collector:	ADFG	ADFG 1375	ADFG 1445	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	
naphthalene		14	6,01	C++T	14114	14221	AUCCI	Allei	14 / OK	144 /K	1421	1390	1401	
C1-naphthalenes			3 1	d v	, ,		d	4	d	d (71	7	7	
C2-naphthalenes		י ר		6.0	י ח	† '				7	0			
C3-naphthalenes		•	•	` '		,	- 1		•	. ,				
C4-naphthalenes		•	í	1	1	ı	1	•	- 1	,	,			
acenaphthylene			1	ŗ	1	1	1	•	•	,	•	1	ì	
acenaphthene		1	1	1	1	•	•	•	1	1	•	1		
fluorene			•	í	•	1	•	t	•	ı	1			
C1-fluorene		0.7		,	•	•	1	1	1	,	ř	•	•	
C2-fluorene		•	1	i	•		1	•	•	,	1	1	1	
C3-fluorene		. ,	r	1	1	•	1	1	•	,	•	1	ì	
phenanthrene		3	1	1 (-	7	•	í	•	,	3	1	r	
CI-phenanthrenes		1	•	7 .	1	1		•	1	ť		ı	1	
C2-phenanthrenes		1	•	4 ,	•	•	ı.	¥.	•		•	•	,	
C3-phenanthrenes		ī	•	-	1	i.	1	•	1		1	1	ī	
C4-phenanthrenes			•	,	1		•	•	1	,	1	ī		
dibenzothiophene		m (•	. (1	0.4	•	•	1		0.3	r	ï	
C1-dibenzothiophenes		7	1	7 6		1	•	i	í			1	t	
C2-dibenzothiophenes		r		0.0	1		•	1	•	ı	1		ì	
C3-moenzounopnenes		. 1		. 4	' <	' 4	1	1	1		٠.	ı	,	
fluoranthene		4 '	. ,	9 '	0	0		. ,	•)	4	אר		•	
pyrene				,	,	0.4	,	,	•		۰ -		' 70	
C1-fluoranthenes/pyrenes			•	,	1	. '	1	1	. 1		. ,	,		
benz[a]anthracene		•	ì	,	1	1	1	1	1	,	,	1	. 1	
chrysene		1	1		1	i	•	•	ı	,	1	1		
C1-chrysenes/benz[a]anthracenes		1	1	9.0	1	1	1	1	1		•	1	r	
C2-chrysenes/benz[a]anthracenes		ī	ì	ī	1	•	•	•	•	,	•	r	ī	
C3-chrysenes/benz[a]anthracenes			•	ı	1	•	•	•	•	,	•	ī	ı	
C4-chrysenes/benz[a]anthracenes		•	1		r	r	ï	1	•	,	•	1	ı	
benzo[b]iluoraninene			1	,	•	1	r	ı	•		•	ï		
benzo[k]Iluoranthene			•	ı	t	1	1	ı	1	1	•	1	1	
benzolajpyrene		í.		,	1	•	•	1	•	1	•	•		
indeno[1,2,3-cd]pyrene		ı	1	í	1	•	•	1	1	1		1	ı	
mbenzla,njanuniacene		1		,	•	,	•	•		ï	ř.	•	ı	
Sum of HACs				9.0	9.0	' -	٠.				' m		0.4	
sample weight, grams:		3.15	2.98	4.99	3.01	3.00	3.00	3.13	5.06	5.01	797	2 93	5.08	I
2, 2								2	20.0	2.01	7.7	7:73	2.00	

Table D-5. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	General area:	l	SMd	5		L	SMd	Si		ŀ	SMd		SMd	S	SMd	2
	Cite .		New Veer Island	- Island			ittle Gre	Little Green Island		I ittle	I ittle Green Island	pud	I Green Icland	Leland	I Gman Island	Island
	Specimen .		692, HRSI -001	I stalld			TT-7	CII ISIAIIU		runc	TT.3	anic	L. GIECH E.	Island A	L. GIGGII IS	Island 5
	Date collected .	Mar 00	Mer On Mer On	Maron	Mar	Mar 00	Mar 00	Marion	Marion	Mario	-	Mar 00	Mar On Mar On	Marion	Mar On Mar On	Mar 00
	Date collected:	Mal-yo	Mail-50	Mal-yo	Mar-yo		Mai-90	Mar-yo	Mar-yo			Mar-yo		Mai-yo		Mar-30
ACs	lissue type:	blubber	kidney	liver	muscle	blubber	kidney	liver	liver	blubber	kidney	liver	kidney	liver	kidney	liver
	Collector:	NOAA	NOAA	NOAA	NOAA	2	NOAA	NOAA	NOAA	NOAA	NOAA	NOAA	NOAA	NOAA	2	NOAA
	Lab no.:	1309	1338	1304	1343	1310	1341	1266R	1305R	1311	1342	1306	1340	1371	1339	1372
naphthalene		а	а	а	a	В	B	а	a	а	а	а	В	а	B	B
C1-naphthalenes		t	1.		i	1	1	•		1	r	,	ľ	3	•	3
C2-naphthalenes		1	1	3	ť	7	1	1	3	1	-	3	•	7	0.3	3
C3-naphthalenes		1	1	1	,	7	1	1	1	1	•	ı	1		1	•
C4-naphthalenes		•	1	1	1	1	1	1	1	1	1	1	r	,i	1	1
acenaphthylene		1	į	1	,	0.8	•	1	1	1	•	,	•	,	•	•
acenaphthene		1	1	1	,	1	'	.1	1	1	'	,	1	,	1	•
fluorene		•	,		ī	0.7	1	1	1		1	1	•	1		1
C1-fluorene			•	•	ı	1	•	•	ı	1	•	,	r	ī	1	ī
C2-fluorene			1	1	T	•	1	•	1	.1	•	ı	1	1	1	1
C3-fluorene		,	•	1	ı	1	•	•	1	1	•	,	•	,	•	•
phenanthrene		•	1	1		•	1	•	1	1	•	ï	1	ı	•	,
C1-phenanthrenes		•	1	1	,	•	1	•	,	1	•	,	1	0.5		•
C2-phenanthrenes		1	1	1	,	1	1			1	1	,	1	T	0.2	1
C3-phenanthrenes		ı	•	1	ı	'		•		1	•	,	ī	ı	•	•
C4-phenanthrenes		1	ı	1	ı	•	•	•		1	1	,		1	' (
dibenzothiophene			1	1	1	1	1	•	1	1	1	1	1	,	0.2	•
C1-dibenzothiophenes		1	1	1	ī	'	ı	,	,	1		ı	1		•	,
C2-dibenzothiophenes			ı	1	,	•	1	1		1		, ,		ı	'	1
C3-dibenzothiophenes				٠,		, 4	٠,	٠-	- 4		' -	1 V	٠,	, 4	0.7	٠ ٧
fluoranthene		1		, ,		'	1	0.2	,	1	. '	, ,	,	0.3	, '	0.3
pyrene		1	1		ı	'	1	0.3	1	'	1	,	,	0.2		0.1
C1-fluoranthenes/pyrenes		7	1	1	1	1	1	1	1	1	1	1	'	,	•	•
benz[a]anthracene		•		1	1	'	1	1	1	1	j	1	,	1		1
chrysene			0.2		ı	1	•	1	ı	1	1	,	0.1		0.1	•
C1-chrysenes/benz[a]anthracenes			1	,	ı	r	1		ı	1	1	, ,	1	ı	1	í
C2-chrysenes/benz[a]anthracenes			•	•	1	'	1	1	1	r	i.	-	1	ı	r	ï
C3-chrysenes/benz[a]anthracenes		•	1	r	,	'	1	•	ı	1	1	1	,	ı	'	1
C4-chrysenes/benz[a]anthracenes			1	1	i	,	1			٠.	1	i	'	î	ı	ı
penzo[b]Iluorantnene		•	1	1	ı	1.	1		1	- (•	,	1	' '	•	•
benzo[k]fluoranthene		ſ	1	1	ı	1	ı	1		2	•	,		0.4	•	•
benzo[a]pyrene		•	1	1	1	'		1	ı	1	1	, 6	1	r	1	•
indeno[1,2,3-cd]pyrene		•	1	1	,	1	1	1	ı	ı		0.5	1	1	1	1
dibenz[a,h]anthracene		,	1	1	ı	_	•	1	i	ı		ı	'	,	1	
Sum of HACs		' 7	0.2					0.5		· 6		. =	0.1	0.0	0.1	0.4
sample weight, grams:		3.00	5.07	3.04	5.04	2.99	5.13	3.06	3.02	2.98	5.00	3.01	5.03	3.02	4.99	3.00
Sallipio moterni branco							١		- 1	7.00	?		33.5	1		2

Table D-6. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	General area:		PWS	S			SMd	S			DWC			DWC		I
	Site:		Galena Bav	Bay			Galena Bav	Bav		NFF	NF Fleanor Island	land	NFF	NF Fleanor Island	and	
	Specimen:		692-HBSL-002	L-002			692-HBSL-003	SL-003		I	TS-HS-23	Dimin.	TST	TS-HS-23F	7	
	Date collected:	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	
ACs	Tissue type:	blubber	kidney		muscle	blub	kidney	liver	muscle	blubber	liver		blubber	liver	muscle	
	Visibly oiled:	No.			Š		S _o	S _o	å	Š	%	°N		No	No	
	Collector: Lab no.:	NOAA 1312	NOAA 1260	NOAA 1307	NOAA 1344	NOAA 1313	NOAA 1347	NOAA 1308	NOAA 1345	ADFG 1431	ADFG 1394	ADFG 1465	ADFG 1432	ADFG 1395	ADFG 1466	
naphthalene		B	В	В	В	B	g	g	а	14	g	а		6		I
CI-naphthalenes		1		1	ı	1	•	•		7		,	2	,		
C2-naphthalenes		2	,	3	,	4	0.4	1	,	6.0	1	,	0.3	,	9	
C3-naphthalenes					i	ì	•	•		•	1	1	,	,	, ,	
C4-naphthalenes		•	•	•	1	1	•	•	,	•	•	i	,			
acenaphthylene		•	,	•	1	1	•	•	,	1		1	1	•		
acenaphthene		•		t	1	•	•	٠	,	•	1	1	1	,		
fluorene		•	ı	•		ı	•	•	i	0.7	-1	,	1	,	1	
C1-fluorene		•	·	1	,	1	•	•	ï	•		,	1	1	,	
C2-fluorene		•		•	ı	1	•	•		1	•	1	•	•	1	
C3-fluorene		•	•	1.	,		1	•	1	•	•	,	1	•	1	
phenanthrene		1		i		•	1	1	r	4	•	1	3	1	i y	
C1-phenanthrenes				í.	ı	1	ı		,	-	1	ı	-	•	0.5	
C2-phenanthranes		•		•	1	1	•	•	ı	T.	1		1	•		
C3-pilenanthrenes							1		1	•	1		í	1		
dibenzothiophene		, ,	,		, ,		' '			0.7	1 1		' "	1	í	
C1-dibenzothiophenes		1		٠					,	. '			C.O.	, ,		
C2-dibenzothiophenes			1	1		1	,	ı	ı	ţ	•	,	,			
C3-dibenzothiophenes			1	-	ı	•	1	•	ı	1	•	1	1	•		
Sum of LACs		w.	•	4		4	0.4	-		14	•		10	•	9	
fluoranthene		4	ï	ï	i	1	1	1		-	1		2	,		
pyrene C1 fluomathenes/nurenes		ı	1	ı		' 0	į	1	1	-	•	ı	7	1	1	
CI-modalinenes/pyrenes						0.0				•			•	1	ř	
chrysene										1	ı		1	•		
C1-chrysenes/benz[a]anthracenes		•			,	'				,						
C2-chrysenes/benz[a]anthracenes			1	1	i	,	,	1	,	•	,	,			. ,	
C3-chrysenes/benz[a]anthracenes		,	1	1				1	1	1	1	,	•	,	ı	
C4-chrysenes/benz[a]anthracenes			1	1	î	•	•	1	,	,	1	. •	1	•	1	
benzo[b]fluoranthene		•	1	1	,	1	1		1	1	•	,	,	1	ı	
benzo[k]fluoranthene		•	1	1	ı	1	ı	1		•		,	1			
benzolalpyrene		' 6	•	1	,	1	1	ı	1	•	1	,	ï	ı	í	
indeno[1,2,3-cd]pyrene						1				1	1	,	•	1		
henzolghilnervlene											1	1			í.	
Sum of HACs		5		٠		8.0	•	•		' 7			4		٠ -	
sample weight, grams:		2.98	5.09	3.02	5.12	2.98	5.01	3.01	5.05	3.03	2.98	5.05	3.09	3.06	5.09	I
		1			1											I

Table D-7. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	General area:		Outer Kenai	enai		Gul	Gulf of AK			Gulf of AK	fAK			Gulf of AK	AK	
	Site:		Perl Island	pun		Big F	Big Fort Island	P	W. Am	W. Amatuli Island - Barren Islands	- Barren I	slands	Ushaga	Ushagat Island - Barren Islands	Barren Is	lands
	Specimen:		TS-HS-17	17		TS	TS-HS-18			TS-HS-14	5-14			TS-HS-15	1-15	
	Date collected:	Jul-89	Jul-89	Jul-89	Jul-89	Oct-89 (Oct-89 (Oct-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89	Jun-89
ACs	Tissue type:	blubber	kidney	liver n	muscle	blubber	liver n	muscle	blubber	kidney	liver	muscle	blubber	kidney	liver	muscle
	Visibly oiled:	Light	Light	Light	Light	No	No No	No	Moderate	Moderate	Moderate	Moderate	No	No	S _o	No
	Collector:		ADFG A		ADFG 724	ADFG /	ADFG /	ADFG 1460	ADFG	ADFG	ADFG	ADFG	ADFG 815	ADFG	ADFG	ADFG 722
naphthalene		a	g	g	a	14	a	ea	B	es	g	а	G	B	ed	g
C1-naphthalenes		1		1	,	S	•	,	•	,	1	i		•		٠
C2-naphthalenes		1	•	2	1	1	ī		1	•	1	1	,	1	1	
C3-naphthalenes		1	1	I	1	,	ı	1	•	ı	1	1	1	1	1	•
C4-naphthalenes		1	1	90.0	,	,	.1	1	1	•	1	1	1	•	. *	•
acenaphthylene		1	1	•	,	•	1	ì	,	•	1	1	1	•	1	•
acenaphthene		1	1	•	,	1	•	,	•	•	•		1	1	•	1
fluorene		•	•	,	1	1	1	1	1	1	1	1	1	1	1	
C1-fluorene		•	r	90.0	F	•	•	1	•	1	1		1		•	
C2-fluorene		1	1	1	,	•	ı	,	•	ı	•	1	1	1	1	
C3-fluorene		•	ř.	i,	ï			1	1	1	1	ı	1	1	1	•
phenanthrene		2	ī	1	1	7	i	ī	1	1	1		•	ì	1	1
C1-phenanthrenes		•	1	0.1	ï	1		,	•	ı		,	1 6	•	1	•
C2-phenanthrenes		1	•	9.0	ı	•	1		•	ī	•	,	0.0	•	ī	1
C3-phenanthrenes		1	1		,	•		1	•	i	•		0.4	•	1	•
C4-phenanthrenes		1	1		,	•	1	ı	•		1		0.1	1	1	•
dibenzothiophene				1	1	•		,		1			1	1	•	1
C1-dibenzothiophenes		i.	,						•	1	1		'	1	1	1
C2-dibenzothiophenes		•	ı	7	,	1	1	ı	1	1	1		'	•	1	ı
C3-dibenzothiophenes		٠,	•	' '	,	' 6	1	,	•		•	,	٠,	1	ı	
Sum of LACs		7		0 3						•			700			
fluoranthene		1		4.0	1	- 0	1	ı		1			0.0	1	1	
pyrene C1 fluoranthenes/numnes				0.03	, ,	0.0	1 1		' '				. '		' '	
henzialanthracene			. 1		,	,	1	,		1	•	,	'	•	•	1
chrysene		1	1	1	1	r	1	ı	•	,	1		1	1	1	•
C1-chrysenes/benz[a]anthracenes		,	,	1	,	ī	•	i		1	,	·	'	i	•	1
C2-chrysenes/benz[a]anthracenes		•	1	1	i	•		1	•	1	1			1	1	
C3-chrysenes/benz[a]anthracenes		•	•	0.2	,	•	1	1	•	•	•	1	•		1	1
C4-chrysenes/benz[a]anthracenes		1	1	1,	,		1	í	1	1	•	,	2	1	•	
benzo[b]fluoranthene		1	ı		,	•		,	•	ľ	'	,	1	1	1	1
benzo[k]fluoranthene		1		1		•	1	,	•	1 -	•		•	•		1
benzo[a]pyrene		•	1		,	1	1		•	t	•		'	•	,	1
indeno[1,2,3-cd]pyrene		1	,	1	,			,	1	•	,	ı	'		1	i
dibenz[a,h]anthracene				•		í	í.	ı	1	1	•	•	•	1	•	ſ
benzo[ghi]perylene Sum of HACs			٠.	0.0		' 11			٠.				' 7			
		-		1	1		1	1		1	1	!	1			
sample weight, grams:		3.06	2.08	5.04	5.11	3.02	3.03	5.03	5.03	5.05	5.23	2.07	3.02	5.03	•	5.05

Table D-8. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of harbor seals.

	General area:		Gulf of AK	f AK			Gulf of AK	of AK			Gulf of AK	f AK			
	Site:	Ushaga	t Island - Barr TS_HS_16	Jshagat Island - Barren Islands	slands	Per	Perenosa Bay - Afognak	y - Afogn	ak	Betwee	Between Perenosa and Seal Bay	a and Sea	d Bay		
	Date collected:	Jun-89	Inn-89	Inn-80	Inn. 80	Inn 80	In- 80	J-12	T	J.:- 00	IS-HS-13	5-13			
ACs	Tissue type:	blubber	kidney	liver	muscle	blubber	kidnev	liver	muscle	Jun-69	kidnev	Jun-69	yun-89		
	Visibly oiled:	N _o	No	S	No	No	No.	No	S _C	S.	S	N	No		
	Collector:	ADFG 816	ADFG 792	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG		
naphthalene		B	a	e e	8		007	601	9	0//	69/	457	07/		
C1-naphthalenes					,		3 '	đ '	d 1	4	3	4 (rd		
C2-naphthalenes		٠	,			,		-				۰ ۲			
C3-naphthalenes		•	•	0.2	,		•	. '				. '			
C4-naphthalenes		í	•	•	,	,	•	•	i.	1	•	1	0.4		
acenaphthylene		•	1	•	,	•		0.1		,		0.1	,		
acenaphthene		i	•	•	1	ı	1	•	,	١	1	1	1		
Illuorene C1 A		•	1	1	,	1		•	j,	1	•	ï	r		
C1-Iluorene		1		1	,	•	1	1	r	•	1	•	•		
C2-Iluorene		1		•		•	•	•	,	•	•	•	i		
C3-Illuorene			•	•	ī	•		•		,	•	•	,		
phenanthrene		_	•	' '		7	•	•	,	•	•	•	1		
CI-phenanthrenes		•		0.5		•	•	•		•	1	1	,		
C2-phenanthrenes		•	•	7	1	•	•	9.0	,	•	•	0.2	•		
C3-phenanthrenes		•	•	0.4	1	f	•	ī	,		•	1	1		
differentiation of the second		1	•			٠,	1	1	,	•	,	1	•		
C1_dihenzothionhenes				' -		2	1	•	ı	1	•	•	1		
C2-dihenzothionhenes				0.1			1	٠,	1	1	•	' ('		
C3-dibenzothiophenes			' '				1	7	,	1	ı	8.0	1		
Sum of LACs		1	٠	6		4		· 4				0.1	' "		
fluoranthene		1	•	0.5	1		r	0.3		'		0.2	4.		
pyrene		*	1	0.5	,	1	1	0.2	,	1	,	0.1			
C1-fluoranthenes/pyrenes		•	•	9.0	ì	•	r	1	,	•	•	1	t		
chrysan		•		1		1		1	,	1	•	•	í		
C1-chrysenes/benz[a]anthracenes				0.04			1	•	,		•	•	1		
C2-chrysenes/benz[a]anthracenes			,	0.07	,			' '			,	1	•		
C3-chrysenes/benz[a]anthracenes		•	•	0.7	,	•		٠				0.06	1		
C4-chrysenes/benz[a]anthracenes		•	1	1	,		ı	•	,	1		0.0	,		
benzo[b]fluoranthene		1	•	•		•	•	•	,	,	•	,			
benzo[k]fluoranthene		•			,	٠	1	1	ı		•	1	,		
benzo[a]pyrene		•	•	•	1	•	•	•			1	1	٠,		
indeno[1,2,3-cd]pyrene		•	•	•	ď.	•	1	1	1	. 1	•				
dibenz[a,h]anthracene		,		1		•	ı	•		•	•				
Sum of HACs			٠.	' 7			٠.	0.5				. 4			
. omes the const		200	,,,	20.3	00 3	. 0	:		1				1	I	
sample weight, glains :		3.03	3.21	2.03	5.20	5.04	5.11	2.00	5.16	1	2.06	5.10	5.18		

Table D-9. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of Steller sea lions.

	General oreas		DWG	o			DWC	0			DWC	0		
	City .		The Meedle	والحد			The Macdia	-			The Meedle	2 100		
	Snecimen .		CI 582	edle			or 592	eedle			or sed	edle 84		
	Specimen .	001	. J. 00	700	1		-100	2 1 00	00	201		1 1 00	00.1	
		101-89	68-Inf		7m-89		68-Inr	101-89		68-mr			68-Inc	
ACs		blubber	kidney		muscle	plu	kidney	liver		blubber	kadney		muscle	
	Visibly oiled:		No DIG	ON C	No		No	No	ON C	No	No.	No	ON	
	Collector: Lab no.:	ADFG 821	ADFG 771	ADFG 762	ADFG 728	ADFG 822	AUFG 772	ADFG 741	ADFG 736	ADFG 823	ADFG 773	ADFG 742	ADFG 737	
naphthalene		В	a	а	a	a	a	а	g	а	ಣ	B	ಣ	
CI-naphthalenes		•	1	1		1	1		,	1	1	1	1	
C2-naphthalenes		•	1	ı	,	1	,	1	1	1	•	•	1	
C3-naphthalenes		,	1	1	,	•	1	2	0.3	1	1	•	9.0	
C4-naphthalenes		1	1	0.00	ı	1	1	1	1	.1		1	1	
acenaphthylene		•	1	1	i	1	1	1.	í	1	1	1	i	
acenaphthene		1	1	ı	1	•	1		j.	1	1	•		
fluorene		ı		1	ı	í		ı	ī	ī	1	r.	1	
C1-fluorene		1	1	1	ı	1	1	1	ı	1	t	ı	ī	
C2-fluorene		•	1	1	1	1	1	1	ï	1	1	1	ı	
C3-fluorene		1	•	1	í			•	1	1	1	•	,	
phenanthrene			1	ı	1	į	1	1	1	1	í	1	,	
C1-phenanthrenes		1	1	0.2	ľ	1	r	1	i.	1	r	ć	ı	
C2-phenanthrenes		1	0.09	0.4	1	1	1	1	r	1	1	•	,	
C3-phenanthrenes		1	1	0.5	i	1	•	0.2	1	1	ī	1	,	
C4-phenanthrenes		1	1	0.1	ı	,	1	j	1	1	ī	•	ţ	
dibenzothiophene		1	1	•	1	1	•	1	ı	,	ı	•	,	
C1-dibenzothiophenes		1	1	' (ľ	1	ı	1		1	1	i.	ı	
C2-dibenzothiophenes		1	ı	0.2	ı	i	•	1	ı	1	t	•	1	
C3-dibenzothiophenes		1		٠,	i	1	1	٠,	,	١,	1	•	' '	
Sum of LACs			0.1	10		•	. 000	200	0.3	-	' (0.0	
Illuoraninene		0.0	900	4.0	()		0.00	0.0			7.0	0.0	c i	
pyrene C1-fluoranthenes/nyrenes		1.0	0.00	0.0	()		' '	6.0	. ,		1.0	1.0	. ,	
benzfalanthracene		t	1	. '			,		,	'			- 1	
chrysene			1	1	ī	1	1	1	1		ı	,	ı	
C1-chrysenes/benz[a]anthracenes		,	1	1	1	1	1	1	1	1	9	•	1	
C2-chrysenes/benz[a]anthracenes		1	1	•	1			1	1	,	1	1	,	
C3-chrysenes/benz[a]anthracenes		•	,	0.3	•	1	•	1	,	1	•	•		
C4-chrysenes/benz[a]anthracenes		í	1	i	ı	•	1	1	ı	1	•		,	
benzo[b]fluoranthene		•	1	•	1	1	1	1	ı	ı	1	•	,	
benzo[k]fluoranthene		•	1	t	1	•	ľ	1	ı	1	•	•	í	
benzo[a]pyrene		1	1	1		1	1	1	ı	1	•		ı	
indeno[1,2,3-cd]pyrene		1	•		,	1	t		,	1	•	•	ı	
dibenz[a,h]anthracene			1	1	1	•	ī	•	,	1	1	1	ı	
benzo[ghi]perylene Sum of HACs		9.0	0.1	. T			0.1	. 2			0.3	0.2		
sample weight, grams:		3.05	5.06	5.17	5.16	3.03	5.14	5.04	5.09	3.03	5.05	5.03	5.04	

Table D-10. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of Steller sea lions.

												1			
	General area:		PWS	S				PWS				Gulf of AK	FAK		
	Site:		The Needle	edle			F	The Needle				Chiswell Island	Island		
	Specimen:		SF-585	85				SI-586				S	87		
	Date collected:	Jul-89	Jul-89		Jul-89		Jul-89	Jul-89							
ACs	Tissue type:	blubber	kidney	liver	muscle	blubber	kidney	liver	liver		blubber	kidney	liver	muscle	
	Visibly oiled:	°N	°Z	2°	°Z	°N	Š	Š	S _o	°Z	S _o	No	No	No	
	Collector: Lab no.:	ADFG 804	ADFG 774	ADFG 743	ADFG 738	ADFG 805	ADFG 775	ADFG 745R	ADFG 744R	ADFG 739	ADFG 806	ADFG 776	ADFG 787	ADFG 740	
naphthalene		B	а	g	В	es	B	ದ	ದ	В	æ	æ	в	а	
C1-naphthalenes		•	•	•	1	1	•	•	1	,	.1	1	1	ı	
C2-naphthalenes		٠	ı	•		1	•	•	1	,	1		1		
C3-naphthalenes		•	1	1	1	1	1	-	0.7	6.0	1	•	1	0.7	
C4-naphthalenes		1	1	1		1	ı	,	1		1	1	1	ı	
acenaphthylene		1	1		1	1		•		ī	1	1	1	1	
acenaphthene			1	1		•	•	•	1	,	•		1	i	
fluorene			•	1	,	•	1	•	•		•	1	ı	r	
C1-fluorene		•	•	•	í	•	ı		1	1	,	1	1	i	
C2-fluorene		•	•	•		1	•	•	•	,		t	1	7.	
C3-fluorene		•	•	•	1	•	1	•	1	,	•	ı	1	ı	
phenanthrene		•	,	ì	,	•	•	•	ť	,	•	•	1	1	
C1-phenanthrenes		ī	•	1	,	1	1	1	1		1	ı	1		
C2-phenanthrenes		•	,	•	ï	•	•	1	•	1	•		1	1	
C3-phenanthrenes		•	1	1		1	1	1	1		1	1	1	,	
C4-phenanthrenes		1	1	1	ı	1	1	1	1	,	1	1	1	ı	
dibenzothiophene		•	•	•		j	1	1	1	ı	•	•	1	1	
C1-dibenzothiophenes		ľ	•	1	,	1	1	1	1	i	•	ı	1	·	
C2-dibenzothiophenes		1	•	•	ı	•	•	1	ı	,	1	1	í	ı	
C3-dibenzothiophenes		1	•	٠,		1	•	٠.	' t	, 6	1	ı	ı	· t	
Sum of LACs				- 0	-		. 000	10		6.9		•		1.0	
fluoranthene		7.0	0.07	7.0	1	0.0	0.00	0.5	0.0	ı	0.0	1		ı	
pyrene (1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		•	0.00	1.0				6.0	7.0		1.0				
CI-moranmenes/pyrenes						•	•				,		1	,	
chrysene		1	1		1	,	. 1	1	1	,	1	1	1	·	
C1-chrysenes/benz[a]anthracenes		1	,	1	1	1	•	1	1	1	•		.1	î.	
C2-chrysenes/benz[a]anthracenes		1	1	•	1	1	1	•	1		1	•	•	1	
C3-chrysenes/benz[a]anthracenes		•	1	١	,	!	,	1	1	,	1	•	•	·	
C4-chrysenes/benz[a]anthracenes		1	•	•		ı	•	•	1	,	1	•	1	·	
benzo[b]fluoranthene		•	1	1	,	1	•		1	ï	1	t	•	r	
benzo[k]fluoranthene		•	1	•	1	1	•	•	1	1	1	•	1	ı	
benzo[a]pyrene		•	•	ï	1	•	1	•	1		1	1	1	,	
indeno[1,2,3-cd]pyrene		•	•	1	1	•	1	•	•	1	•	1	1	1	
dibenz[a,h]anthracene		•	•	1		â	,	1	1	1	1	1	1	1	
benzo[ghi]perylene		' 6	' •	' 6	,	' (' •	' '	' '	r	' '	1		ı	
Sum of HACs		7.0	1.0	0.3		6.9	1.0	0.0	0.5		0.0	1	1	-	
sample weight, grams:		3.01	5.09	5.07	5.04	3.04	5.02	5.07	5.02	5.05	3.07	5.06	5.07	5.15	
			١	١			١	١				١	١		

Table D-11. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of Steller sea lions.

				3.				31.0	44.			C	VA 2. 21. O		١	
	General area:		5 4	Cull of An			11.1.	Cull of An	AN	lon do	IL	o Island	Dor	on Island		
	Site:		1	Flat Island	,		Usnaga	Usnagai Island - Barren Islands	Barren IS	lands	CS	Usnagai Island - Dairen Islands	er son	en Island	ø	
	Specimen:		760	100-TS1S-769								•	3L-300			
	Date collected:	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90					Jun-89		Jun-89	Jun-89	Nun-89	
ACs	Tissue type:	blubber	blubber	kidney	liver	muscle	blubber	kidney	liver			kidney	kidney	liver	muscle	
	Visibly oiled:	No	%	Š	S _o	°N	Š	°N	^o Z	2°	Š	S _o	No	S _o	ž	
	Collector:	NOAA	NOAA 1265B	NOAA 1250	NOAA 1321	NOAA 1346	ADFG 818	ADFG	ADFG	ADFG 725	ADFG 819	ADFG 795R	ADFG 796R	ADFG 760	ADFG 726	
nanhthalene	Lab IIO.	B 8	a	a	8	a	e	a	a	a	B	B	B	e	8	
Ol nonhtholones				,		1			1		1	•	1		1	
C1-naphthalenes					-	0.5	1	٠		. 1		1	1	1	,	
C2-maphinaches									1		1	,	1	,	,	
C3-naphthalenes		•								,		1		•	,	
C4-naphtnalenes			•													
acenaphthylene		•	1			ı					. 1					
acenaphthene		•	•			ı										
fluorene		1		1	1	,	•	1	L	,		ı	•			
C1-fluorene		ı	1	1.	•	ı	.1	1	1	,	1	•	1		•	
C2-fluorene			1		1	١.	1	•	t		ı	ı	,	1	•	
C3-fluorene		1		1	1	1		1	1	ı	1	1	1	1		
phenanthrene		1	3	1	1	1	-	1	1	i	•	1	1	1	1	
C1-phenanthrenes		•	1	ı	1	ī	1	1	0.08		1	•	1	1	1	
C2-phenanthrenes		2	•	1	1	1	1	1	1	ı	1	•	1		•	
C3-phenanthrenes		9	12	•	1	ı	ī	•	0.5	Ţ	ī	1	1	1	1	
C4-phenanthrenes		7	1	1	1	i	1		•	1	1	1	1	1	1	
dibenzothiophene		1	•	1	1	1	ï	•	ı	ı	•	•	•	1		
C1-dibenzothiophenes		1	1	1	1	i	Î	Ţ		1	1	1	1	1	1	
C2-dibenzothiophenes		9	1	•	•	1	1	1	9.0	ı	ı	r.	1	1	1	
C3-dibenzothiophenes		•	•	•	1.	1	1	1	0.2	1	,	1	•	•	•	
Sum of LACs		14	15	•	1	0.5	-	•	77			•	•	•		
fluoranthene			7	1	1	į	1	1	0.3	í	0.5		1	1	1	
pyrene		1	2	1	1	ı	1	•	0.3	1	0.4	1	1	.1	1	
C1-fluoranthenes/pyrenes		1		•	•	1	1	1	0.1	ı	1	ı	1	1	r	
benz[a]anthracene		1		•	1	ť	1	•	1	1	ı	1	1	1	1	
chrysene		1	0.2	1		1	ī	ı		1	ı	•	1	1	1	
C1-chrysenes/benz[a]anthracenes		1	1	1	1	r	1	1	0.04	1	•	•	•	•	1	
C2-chrysenes/benz[a]anthracenes		•	1	1	1	E	1	1	1	1	1	•	•	1	1	
C3-chrysenes/benz[a]anthracenes		•	1	1	1	1	T.	1	0.2	ı	•		•	•	1	
C4-chrysenes/benz[a]anthracenes		1	1	,1		,	1	1	•	1	1	1	•	1	ì	
benzo[b]fluoranthene		1	0.3	t	1	,	1	1	1.	ı	£	1	,	1	•	
benzofklfluoranthene		•	0.2	1	1	i	1	•	ı	,	1	•		1	1	
benzofalpyrene		•	0.2	1		1	•	1	1	1	1	•	•	•	1	
indeno[1,2,3-cd]pyrene		1	1	1	1	,	1	•	1	1	'		1	•	1	
dibenz[a,h]anthracene		1	1	•	1	1	•	1	•	ı	'			1	1	
benzo[ghi]perylene		,	1			ı	1	1	1	ı	t	1	•	1	1	
Sum of HACs			S	1	'				6.0		0.0	•	•	•		
. suejaht orame		3.08	3.05	5.07	3.04	5.10	3.00	5.02	5.14	5.05	3.03	5.07	5.01	5.14	5.18	
Sample weight, Brains .			1												1	

Table D-12. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in samples of edible tissue of Steller sea lions.

		l			
	General area:		Gulf of AK	AK	
	Site:	Ushaga	Ushagat Island - Barren Islands	Barren Is	slands
	Specimen:		SL-581		
	Date collected:	Jun-89	Jun-89 Jun-89		Jun-89
ACs	Tissue type:	blubber	kidney	liver	Muscle M.
	Collector:	ADFG		ADFG	ADFG
The second secon	Lab no.:	820	770	761	727
naphthalene		B	а	а	e
C1-naphthalenes		•	•	•	
C2-naphthalenes		•	1	7	0.08
C3-naphthalenes		•	•	0.1	
C4-naphthalenes		•	ī	1	
acenaphthylene		1		90.0	,
acenaphthene		1	1	1	
fluorene		•	ï	1	,
C1-fluorene		•	ì	•	,
C2-fluorene		•	1	1	
C3-fluorene		•	1	1	
phenanthrene		•	1	•	,
C1-phenanthrenes		1	1	0.3	1
C2-phenanthrenes		,	0.1	0.7	,
C3-phenanthrenes		•	•	0.5	
C4-phenanthrenes			ï	1	
dibenzothiophene		1	r	0.1	
C1-dibenzothiophenes		,	ı	٠.	
C2-dibenzothiophenes		•	1		
C3-dibenzothiophenes			' -	7.0	
fluoranthene		0.3	1.0	0.4	'
nyrene		,	1	0.5	•
C1-fluoranthenes/pyrenes			•	0.3	•
benz[a]anthracene		•	T	1	
chrysene		1	r	1	
C1-chrysenes/benz[a]anthracenes		•	•	' 6	
C2-chrysenes/benz[a]anthracenes		1	1	0.04	
C3-chrysenes/benz[a]anthracenes		1		0.3	
C4-chrysenes/benz[a]anthracenes		į	1	1	
benzo[b]fluoranthene		•	1	•	
benzo[k]fluoranthene		1	1	1	
benzo[a]pyrene		í	•	1	1
indeno[1,2,3-cd]pyrene		ı	í	1	2.
dibenz[a,h]anthracene		,	í	ı	· ·
benzolghi]perylene		0.3		. 2	
South of Arthon			l		
sample weight, grams:		3.01	5.13	5.21	5.09

SECTION E

CONCENTRATIONS OF AROMATIC COMPOUNDS (ACs) IN INVERTEBRATE SAMPLES

Explanatory notes for Tables E-1 through E-84

Results on sample extracts were determined by gas chromatography/mass spectrometry (GC/MS) using sequenced multiple ion detection.

A hyphen (-) indicates that the analyte was not detected above the limit of detection which ranged from 0.02 to 1 ng/g (ppb) wet weight.

In some cases, low levels of naphthalene, C1-naphthalenes, and phenanthrene were indistinguishable from those in method blanks and were not reported. They are designated by "a."

Some samples were analyzed in replicate as part of the quality assurance (QA) plan—all of the data are included in the tables. Adjacent data columns with an "R" after the Lab no. are replicate analyses of a sample.

Table E-1. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Angoon (Reference area).

	Species:	Mussel	sel	Chiton	on	Butter clam	Horse clam	me
	Site .	AGNI	AGNI	AGNI	AGNI	AGN2	AGN2	AGN2
ACs	Date collected:		Aug-89	Aug-89	Aug-89	Aug-89		Aug-89
	Collector: Lab no.:	D&M 232	D&M 324	D&M 326	D&M 327	D&M 231		D&M 328R
naphthalene		æ	а	а	В	а	æ	а
CI-naphthalenes		0.3	0.3	9.0	8.0	0.2	0.2	0.4
C2-naphthalenes		,	,	0.07	,	1		•
C3-naphthalenes		•		1	1		ı	
C4-naphthalenes		•	,	•	,	1	•	•
acenaphthylene		1	ı	'	i.	1	•	-
acenaphthene		1	,	1	,	1	1	,
fluorene		•	,	•	,	1	•	1
C1-fluorene		1	,		1	1	1	1
C2-fluorene		1	ı	1	í	,		
C3-fluorene		1	,	,	,	1	•	
phenanthrene		0.3	0.7	0.7	9.0	0.3	0.3	0.4
C1-phenanthrenes		1	,		ï	1	•	,
C2-phenanthrenes		1	,		,	1	•	,
C3-phenanthrenes		1	1	1	,		•	1
C4-phenanthrenes		,	ı	1	,	ı	1	
dibenzothiophene		1	i	1	1	1	1	
C1-dibenzothiophenes		ī	r	1	ı	1		
C2-dibenzothiophenes		•	ı	•	(1	•	
C3-dibenzothiophenes		1	i.	1	1	1		
Sum of LACs		9.0	1	-	1	0.5	0.5	0.8
fluoranthene		ř	0.1	1	1	1	1	
pyrene		1	4	1	1		ï	·
C1-fluoranthenes/pyrenes		ï	í	•	1	3	1	,
benz[a]anthracene		,	,	1	,	,	1	,
chrysene		•	1	1	,	C	•	*
C1-chrysenes/benz[a]anthracenes		ī	ı	1	ī	i	1	
C2-chrysenes/benz[a]anthracenes		1	1	·C	1	ř	•	
C3-chrysenes/benz[a]anthracenes		1	ı	•	ľ		1	,
C4-chrysenes/benz[a]anthracenes		•	ı	•	ı	•	•	•
benzo[b]fluoranthene		1	ï	1	,	1	1	•
benzo[k]fluoranthene		1	ı	1	,	di:	1	r
benzo[a]pyrene		1	1	•	ī	•	•	,
indeno[1,2,3-cd]pyrene			1	•	,	,	1	
dibenz[a,h]anthracene		•	,	•	1	•	r	r
benzolghilperylene		1	, ,	1	ı	1	1	
Sum of HACS		1	1.0	1	-	-		
sample weight, grams:		5.43	5.30	5.28	5.32	5.09	5.32	5.64
THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWIND TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN	The Person Name and Address of the Owner, where the Person Name and Person Nam	The Real Property lies, the least of	Name and Address of the Owner, where	The Real Property lies		THE RESERVE THE PERSON NAMED IN		

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Table E-2. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Yakutat.

	Species:				Mussel		l				Butter clam	clam			Littleneck clam	k clam
ACs	Site: Date collected:	YAK1 Jun-90	YAK1 Jun-90	YAK1 Jun-90	YAK1 Jun-90	YAK1 Jun-90	YAK1 Jun-90	YAK1	YAK1	YAK1	YAK1	YAK1	YAK1	YAK1	YAK1	YAK1
	Collector: Lab no.:	D&M 3033		D&M 3057R	D&M 3036			D&M 3035	D&M 3039	D&M 3040	D&M 3041	D&M 3042	D&M 3048	D&M 3049		D&M 3051
naphthalene		ES.	В	а	а	в	В	а	а	a	B	В	в	а	В	а
C1-naphthalenes			1	1	1	T	1	1.	1	T	1	1	1	ı	1.	1
C2-naphthalenes		0.4	6.0	7	0.5	0.7	0.5	ı	9.0	1	•	1	1	0.5	•	•
C3-naphthalenes		•	•	0.4	9.0	1	•	,	1	•		0.4	J	1	1	1
C4-naphthalenes	,	•	•	0.7		•	•	,	1	•		,	1	1	1	1
acenaphthylene		•	•	1	•	•	•	0.4	1		•	,	1	ı	1	1
acenaphthene		•	•	1	ı	•	1	,	1	1	,	1	ı	r	1	•
fluorene		1	•	0.7	ı	0.5	,	,	1	1	•	1	1	,	,	1
C1-fluorene		•	1	1	0.4	•	•	,	•	1	1	ī	J	ı	,	•
C2-fluorene		•	•	•	1	•	•	í	1	1	•	1	,	,	•	,
C3-fluorene		1		1	1	1	1	,	1	1		1	,	1	•	1
phenanthrene		0.5	9.0	1	0.7	0.7	0.7	0.5	0.7	0.5	0.5	0.5	0.4	9.0	0.5	9.0
C1-phenanthrenes		0.5	•	-	0.5	1	,	,	9.0	1	1	1	1	0.4	•	•
C2-phenanthrenes		1	•	0.7	•	1	•	,	0.4	0.4		,	1		•	1
C3-phenanthrenes		ji.	1	1	1		•		1	1	1	1	1	á	•	1
C4-phenanthrenes		· C	1	•	1	1	1	,	1		1,	•		1	•	1
dibenzothiophene		•	•	1	,	•	•	1	1.	•	•	1	,	,		,
C1-dibenzothiophenes		1	•	•	•	1	1	,	1	•	•	,	1	ı	ı	1
C2-dibenzothiophenes		•	•	•	•	•	1	,	1	Ţ	1	1	1	ì	1	1
C3-dibenzothiophenes		•	1	1	1	1	1		ı	•	1			,	•	•
Sum of LACs		-	7	9	9	3	-	6.0	7	6.0	0.5	6.0	0.4	7	0.5	9.0
fluoranthene		0.4	1	4.0	0.4	0.4	1	,	0.5	1	•	1	1	0.5		0.4
pyrene		1	,	9.0	1	!	•	ı	1	1		1	ı	0.4	1	•
C1-fluoranthenes/pyrenes		•	•	•	•	•	•		î	1		1	1	ī.	i	ī
benz[a]anthracene		1	r	T	1	•	1		1	•	•	ı	1	,		•
chrysene		r	1	1	•	•	1	,	1	1		•	1	ı	1	í
C1-chrysenes/benz[a]anthracenes		Ĺ	•	ı	,	1	1		1	1		ı	1	ı	1	1
C2-chrysenes/benz[a]anthracenes		,	1	1	•	•	ť		1	1	1	, r	1	ı	r	ı
C3-chrysenes/benz[a]anthracenes		•	•	1	1	1	•	,	1	1	•	•	í	ı	•	1
C4-chrysenes/benz[a]anthracenes		•	•	1	•	•	•		1	r	•	1	1	,	•	•
benzo[b]fluoranthene		•		•	•	i	•	ī	ì	1	1	1	•	1	1	ì
benzo[k]fluoranthene		•			•	1	•	,	1	1	•			1	1.	•
benzo[a]pyrene		•	•	1	•	í	T	ı	1	1	•	1	•	1	1	•
indeno[1,2,3-cd]pyrene		,	•	1	•	1	•	,	1	ı	1	1	ř	,	1	1
dibenz[a,h]anthracene	•	1	•	1	•	î	1	,	r	t	r	. "	•	,		,
benzo[ghi]perylene		' 7	K 3	٠,	' <	, 4	1	1		1	1		i	' 6	ı	' •
Sulli of HACS				1		1.0		1		1	1	1		6.0		4.0
sample weight, grams:		5.00	5.03	5.08	5.08	5.02	5.04	5.04	5.02	5.04	5.04	5.00	5.03	5.11	5.00	5.08
								1								

Table E-3. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Yakutat.

										No. of Lot, House, etc., in case, and the case, are the case, and the case, and the case, and the case, and the ca		
	Species .	VAVI	VAVI VAVI	VAVI	VAVI	VAVE	VAVE	Chiton	00 no	VAVE	24476	
ACs	Date collected:	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	Jun-90	YAKS Jun-90	
	Collector: Lab no.:	D&M 3052	D&M 3053	D&M 3054	D&M 3055	D&M 3056		D&M 3077		D&M 3079	D&M 3080	
naphthalene		а	а	а	B	B	В	B	В	g	а	
C1-naphthalenes		1		1	,	1	ı	1		•		
C2-naphthalenes		1)	9.0	,	1	1	•	1	1	,	
C3-naphthalenes		•	•	1	1	0.5	i.	1	,	1	1	
C4-naphthalenes		•	,	5	,	•	•	1	•	T.		
acenaphthylene		•	1	•	,	•	•	1	•	ì		
acenaphthene		1	1	•	£	ı		1	•	1		
fluorene		1	1).	,	1	ı	1	0.4	1		
C1-fluorene		1	1	1	ı	1	1	1	1	•		
C2-fluorene		•	•		ı	1		i	,	1	1	
C3-fluorene		1		1	ı	1	1	ı		1	1	
phenanthrene		0.5	0.5	0.5	9.0	0.5	0.5	0.7	8.0	8.0	9.0	
C1-phenanthrenes		1		•	ī	1	0.4	0.5	9.0	0.7	0.5	
C2-phenanthrenes		•	t	•	1.	ı	1	.1		1	1	
C3-phenanthrenes		•	•	•	1	1		1		1	1	
C4-phenanthrenes		1	1	1	1		1	1		r	f	
dibenzothiophene		•	•	1	1	ï	1	1.	1	1	ī	
C1-dibenzothiophenes		1	ı	1	ı	1	1	1	1	1	T	
C2-dibenzothiophenes		1	1	1	ï	ı	ı		1	,	1	
C3-dibenzothiophenes		1 1	1 1	Ι.,	1	1.	r	1	1	1	r	
Sum of LACs		0.5	0.5	1	9.0	1	6.0	-	7	7	1	
fluoranthene		1	1	ŗ	0.4	1	ı	1	.1	1	1	
pyrene		1	•	1	1	ī	•	ı	1	1	1	
C1-fluoranthenes/pyrenes		1	1	1	,	1	í	ı	1	1	,	
benz[a]anthracene		1	1	•	ı	1	1	t	1	r	r	
chrysene		•	í	1	i	ī	1	1	1	ť		
C1-chrysenes/benz[a]anthracenes		1	1	1	ı	1	1	1	•	1		
C2-chrysenes/benz[a]anthracenes		•	1	r	1	1	1	t		1	í	
C3-chrysenes/benz[a]anthracenes		•	•		ī	1	ı	ì	1	ı		
C4-chrysenes/benz[a]anthracenes		į	1		,	1	1	1	•	,	i	
benzo[b]fluoranthene		1	ı	ı	1	ı	•	,	. '	•		
benzo[k]fluoranthene		I.	T.	1	1	1	1	í	•	•		
benzo[a]pyrene		1.	1	,	,	1	1	ı	ı.	1	,	
indeno[1,2,3-cd]pyrene		•	1	1	ı	r	•	•	ı	,	ı	
dibenz[a,h]anthracene		1	1	1	,	1	•	ï	ı	ı	ı	
benzo[ghi]perylene		ı	r	•	' 6	1	1	1	ı	1	ı	
Sum of HACS		1	•	1	4.0		•	•	1		-	
sample weight, grams:		5.13	5.07	5.08	5.02	5.10	5.02	5.01	5.04	5.04	5.00	

Table E-4. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Tatitlek Village.

	Species .	١	Mussel	l		l	B	Rutter clam			I			Muccel	l	I
	Site:	T	TI	T	T1	T1	I	T	Ξ	T	Ţ	TAT	TAT	TAT	TAT1	TAT
ACs	Date collected: Nov-90	Nov-90	Nov-90	Z	Mar	Mar-90	Mar-90	Mar-90	Jun-90	Jun-90	Jun-90	Jul-89				Apr-90
	Collector:	D&M 2157	D&M 2158	D&M 2159	D&M 840	D&M 917R		D&M 918	ADFG 1596	ADFG 1597	ADFG 1598	D&M 43R	D&M 66R			D&M 1954
naphthalene		а	g	В	B	а	а	а	а	В	а	в	В	а	а	а
C1-naphthalenes		•	1	i	'	1	6.0	1	•	•	i	1		2	2	7
C2-naphthalenes		•	1	1	1	1	•	1	•	•	,	•	·	6.0	4.0	0.7
C3-naphthalenes			•		1	•)	ì	1	1	ı	1	•	0.5	1	9.0
C4-naphthalenes		- ;	0.0	9.0	•	1	•	•	•	1	ı	•	1	1	r	
acenaphthylene		0.4	9.0	į	•	1	1	•	1	1	1		1	1	1	ì
acenaphthene			0.7	' (ī	1	į	ı	1 (1 1	, ,	1	1.	1	1	1
fluorene		9.0		0.5	ï	•		•	0.8	0.7	-	•	1	0.3	i	0.3
C1-fluorene		8.0		3	•		1	1	•	•	í		í	0.3	1	
C2-fluorene		•	0.5		•		•	ï	í	ï	í	t	í	0.5	٠,	٠,
C3-fluorene		•	•		' (' (٠,	٠,	' ;	' (. :			-	-	-
phenanthrene		•	' '	,	7	2 0	7 (13	6	13	r	1	- ,	- 0	7
CI-phenanthrenes		٠,	4 -	٠,		7 (7 (4 (4 ,		1		0.0	1 0
C2-phenanthrenes		4 0	4.0	7 0	1	7 0	7 7	-	0.7	4.0	0.0		•	-	0.7	0.8
C3-phenanthrenes		0.9	-	0.8	•	4.0	4.0	•	•	1	,		1	,	0.3	ı
C4-pnenanthrenes		' '	' '		•	•	•	í	' (1		1		' (1	
dibenzothiophene		4.0	4.0	' '	•	' (' (•	0.7	1	1	•	1	0.3	' (0.3
CI-dibenzothiophenes		0.7	- (0.0	1	0.3	0.3	•		ı	1	•	1	0.8	0.3	9.0
C2-dibenzothiophenes		7 0	7 0	. (1	0.0	0.8	•		ı	į	ī	1	0.8	0.5	0.5
C3-dibenzothiophenes		7 ,	7 '	7,	' (0.4	0.4		' '	1	, ,		1	1	4.0	1
Sum of LACs		13	91	<u>.</u>	7 ,	o ,	6 9	4 (19	12	19	•	•	10	∞	10
fluoranthene		7 (.n.		ς (9 4	× 0×	m (39	26	34	1	í	8.0	9.0	0.7
pyrene C1 flooresthand/pyrene		7 -	v -	-	٠	0 (9 6	7 0	52	7,	77	r	1	1	r	•
C1-Iluoranmenes/pyrenes		0 0		, 0	٠ -	7 4	, v	y. c	0 0	2	4 4		ı			ı
chrysene		0.0	- 0	2	0.5	4 4	n v	4 0	o C	0 00	0 0			.)	t -	1
C1-chrysenes/henzfalanthracenes			1 '			0.4	0.4	1	0.0	000	, ,					
C2-chrysenes/henz[a]anthracenes			•			. '	; '		1.0	4.			. 1	1		
C3-chrysenes/benz[a]anthracenes		1		,	'		•	1	•			•			,	,
C4-chrysenes/benz[a]anthracenes		•	'	ı	•	,	1	1	•	•			•			
benzo[b]fluoranthene		1	2	7		4	4	2	15	6	10	,		•	1	•
benzo[k]fluoranthene		1	2	-	1	-	2	0.5	4	3	4	•		•	1	1
benzo[a]pyrene		1	0.7	1	'	0.5	9.0	0.4	7	1	7	1	,)	1	ı
indeno[1,2,3-cd]pyrene		•	•	í	•	•	,	ı	•	1		,	1	1	•	
dibenz[a,h]anthracene		•	,		•	•	•	1	1		,	,	į	1	1	ι
benzo[ghi]perylene		' 6			' -	' 6	' ;	' (' '	' (, ;		1.	' 6		' 1
Sum of HACS		^	LS	-		17	34	13	OI I	13	1,6	1	1	8.0	9.0	6.7
sample weight, grams:		4.27	4.50	4.99	5.12	5.00	5.04	5.01	5.07	5.04	5.01	5.01	5.10	5.00	5.00	4.99

Table E-5. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Tatitlek Village.

	Crocios .		Muscol	log				B	Butter clam		l			I ittleneck clam	k clam	
	Site .	TAT	TAT1	TATI	TAT	TAT	TAT	TATI	TATI	TAT	TAT	TAT	TAT	TATI	TAT	TATI
ACs	Date collected:	Apr-90	Nov-90		Nov-90	Mar-90	Mar-90		Apr-90	Apr-90	Jun-90	Jun-90	Apr-90	Apr-90	Apr-90	Jun-90
	Collector:	D&M 1955	D&M		D&M 2168	D&M 919	D&M 941		D&M 2034	D&M 2035	ADFG 1594	ADFG 1595	D&M 2052	D&M 2053	D&M 2054	ADFG 1611
naphthalene		a	B	63	В	а	B	B	В	в	В	в	а	а	а	а
C1-nanhthalenes		2	1	1	1	1	1	1	4	1	1	1	1	•	1	1
C2-nanhthalenes		0.1	1	1	,		0.5		3	1	1	ī	,	1	1	- 1
C3-naphthalenes					,	1	•	,	2	6.0	1	,	0.0	1	0.9	1
CA naphthalanas					,	'	1	,	-	,		,	0.6	0.4	0.3	,
24-inapilitiaciies		'		,		1		- 1		,	,	-,	'	, ,		
acenaphunylene									,			,	,		•	,
duorana			0.4	4.0					0.7	0.3	. 1	,				1
Iluorene Ol fuoran			1.0	1.0		-			0.4	? '			•	,	,	,
CI-Illuorene						,			1.0	0.4	•			,	,	
CZ-Iluorene		-											0.4	0.7	0.3	1
C3-Iluorene		-	,			. 0	' (1 V	40		, 0	† '		. '	,
pnenanunrene		0 0			ı		1 0		7	4 0	2.5	2.	-	-	-	()
C1-phenanthrenes		0.0		' '		0.0	0.0		t 4	۰ - ۷			0.7	0.5	2 0	
C2-phenanmrenes		0.0		4.0	1	†.	0.0		0	-				0.0		
C3-phenanthrenes		1	ı.		ı			1	0.0				1	1		
C4-phenanthrenes		•							0	1			. 0	03	. 0	
dibenzounopnene		' '			, ,		, ,		0.0	0.0		,	5.0	9 '	. '	
C1-dibenzothionhenes					-		. 1		-	0.4	. 1	,		•	. 1	
C3-dibenzothionhenes		. '	1	1	,		1		0.3		ı	i	1	•		,
Sum of LACs		9	0.4	2	1	7	4	•	28	10	0.5	0.3	4	4	3	•
fluoranthene		9.0	1	1	í	9.0	-	1	3	1	1	ı	6.0	-	1	0.8
pyrene			•	1	r	1	1	1	1	ı	t	ı	1	1	.1	6.0
C1-fluoranthenes/pyrenes		1	1		ı	í	1	•	1	I.			r		1	
benz[a]anthracene		1		1	ı	' (' '		L	L	1	ı	1	,		1
chrysene		1	1	ı.		0.7	0.4		r	1	•	ı	1	1	ı	ı
C1-chrysenes/benz[a]anthracenes		•		t		1	•	1	1	ı.	ı	1	1	1		1
C2-chrysenes/benz[a]anthracenes		1	,	r	ï	,	1	1	1	ı	í	1	ı			1
C3-chrysenes/benz[a]anthracenes		1	1	1	ı	1	1				ı	ı	'	1	,	1
C4-chrysenes/benz[a]anthracenes		1	1	•	ı	'	1			1	1	1	•	,	1	1
benzo[b]fluoranthene		1	•	•	r	t	1	C.		•	r	r	'	1	1	1
benzo[k]fluoranthene			1	1	r	r	1	1	£	1	r	r	1	•	1	•
benzo[a]pyrene		•	1	1	1	1	1	1	1	1	ı		1	ı	•	ı
indeno[1,2,3-cd]pyrene		1	1	•	ı	'	ı	1	ſ	1			·	1	1	1
dibenz[a,h]anthracene		1	1		ı		1	1	•	i	ı	,	•		f	1
benzolghi perylene		9.0	۱ .			0.8	' 7		, 4	' -			0.9	' =	1	' 14
CONTRACTOR INC.				l					١							
sample weight, grams:		5.00	4.80	4.90	4.90	5.03	5.02	5.09	5.09	5.07	5.08	5.03	4.99	5.05	4.97	5.01
										1						

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Table E-6. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Tatitlek Village.

	Species:		Mussel	el		Bu	Butter clam		Littleneck clam	k clam			Musse	sel		
	Site:	TAT2	TAT2	TATS	TAT5	TATS	TATS	TAT5	TAT5							
ACs	Date collected:	Apr-90		Apr-90	Apr-90		Apr-90	Apr-90	Apr-90	Apr-90	Aug-89	Aug-89	Aug-89	Aug-89		Aug-89
	Collector: Lab no.:	D&M 1956	D&M 1957	D&M 1958	D&M 1959	D&M 2036	D&M 2037	D&M 2106	D&M 2055	D&M 2056						D&M 309
naphthalene		а	B	а	а	в	а	а	а	а	а	а	а	g	В	В
C1-naphthalenes		2	2	2	2	1.	1		•		0.2	0.2	0.2	0.2	0.4	0.1
C2-naphthalenes		9.0	0.3	0.5	8.0	S.	٠,	,	1 (. ,	1	•		,	1	.1
C3-naphthalenes		0.7	•	4.0	9.0	- 0	- :	. ,	7 .	9.0	•	•	•	•	ī	1
C4-naphthalenes		ı	ı	r	,	0.3	0.5	_	-	0.3	' '			•	1.	
acenaphthene			' '						.)		0.0	0.0	0.5	1	i.	
fluorene		0.4			0.3				' '						, ,	
C1-fluorene		0.3	•			0.3	0.3	0.2	ı	,	1	1	ī			
C2-fluorene		0.5	1		0.4	0.4	0.5	0.5	ī	,		1	,	٠	,	
C3-fluorene		-	7	8.0	1	3	3	r	0.5	ŗ	1	t	1	1		
phenanthrene		7.	- 1	- 0	7 .	7 0	7	_	٠,	. (7	7	7	9.0	0.7	8.0
C1-phenanthrenes		- 0	0.7	8.0		- 5	7 (, ,		0.8	•	1		ı.	1	ı
C2-phenanthenes		0.0	4.0	4.0	7.0	-	7	7.0	0.7	6.0	1	1	1			
C4-phenanthrenes								. ,			1 1			. 1		
dibenzothiophene		0.3	1	,	0.3	٠	1	,	0.3		٠	,	1		ì	
C1-dibenzothiophenes		0.8	0.4	0.3	9.0	0.8	6.0	9.0	•		1	ı	1	•	1	
C2-dibenzothiophenes		0.0	1	0.3	0.7	0.7	-	0.7	1		1	1	1	ľ		
C3-dipenzounophenes		' =	, ,	ی '	, e	17	1 .	4. v	' '		٠,٠	' (*	٠, ود	' 0	•	' 0
fluoranthene		9.0	0.4	0.3	0.5	0.7	0.0	0.4	0.7	8.0	0.2	0.1	0.3	'	'	
pyrene		•	í	1	ı	•	r	ŗ	1	1	1	r	1	t	í	
C1-fluoranthenes/pyrenes		1		1			•			1	1	1	•	ì	r	
benzlajanuracene chrysene				1 1				, ,	1 1	,		1	1	1	ı	,
C1-chrysenes/benz[a]anthracenes		•		1	,			. ,				1 1		1 1		
C2-chrysenes/benz[a]anthracenes		•	ĵ	١	,	i	•	,	ı	i		1		ť	f	•
C3-chrysenes/benz[a]anthracenes		ſ	ī	•	,	1	•	,	1	1	1	1	1	1	ı	
C4-chrysenes/benz[a]anthracenes			ı	ı	ı	,	r	i	1		1		•	•	r	ı
benzolkliluoranthene					1 1					, ,		1 1		1 1	1 1	
benzo[a]pyrene		1	ı	1	,	."	•	ī		,	•		1	,		
indeno[1,2,3-cd]pyrene		1	•	•	,	•	٠	,	i		1	1	1	•	•	,
dibenz[a,h]anthracene		•		ï	,	•	•	í	•	,	•	1	•	•		•
benzolghi]perylene Sum of HACs		9.0	0.4	0.3	0.5	0.7	0.9	0.4	0.7	8.0	0.2	0.1	0.3	•	٠.	•
sample weight, grams:		4.99	5.00	5.00	5.06	5.04	5.00	5.02	5.04	4.98	5.04	5.48	5.31	4.47	5.32	4.08

Table E-7. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Tatitlek Village.

	Species: Ch	=	
	Site: TAT5		
ACs	Date collected: Aug-89 Collector: D&M	Aug-89 D&M 357	
naphthalene	ı		
C1-nanhthalenes	,	0.8	
C2-naphthalenes	•		
C3-naphthalenes	•		
C4-naphthalenes			
acenaphthylene			
acenaphthene			
fluorene			
C1-fluorene			
C2-fluorene			
C3-fluorene			
phenanthrene		0.4	
Thomas the Police			
CI-pnenanunenes		•	
CZ-pnenanurenes		r	
C3-phenanthrenes			
C4-phenanthrenes			
dibenzothiophene			
C1-dibenzothionhenes			
C dibenzothionhanes			
Cz-dioenzounopnenes			
C3-dibenzothiophenes			
Sum of LACs		1	
fluoranthene			
pyrene			
C1-fluoranthenes/pyrenes			
henzfalanthracene		,	
chrysene			
C1 chrisenes/henz[a]anthracenes			
C chargenge henzial anthracenes			
Cz-ciii yaciica cente alananacenes			
C3-chrysenes/benz[a]anthracenes			
C4-chrysenes/benz[a]anthracenes		•	
benzo[b]fluoranthene		,	
benzofklfluoranthene			
houselelusium			
cenzolalpyrene			
indeno[1,2,3-cd]pyrene		•	
dibenz[a,h]anthracene			
benzo[ghi]perylene			
Sum of HACs			
sample weight, grams:	5.05	5.27	

Table E-8. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

						1										
	Species:								Mussel							
	Site:	CHEI				CHEI		CHE1	CHEI	CHE1	CHE1	CHEI	CHE1	CHE1	CHE1	CHE1
ACs	Date collected:	Jul-89				Aug-89		Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Jun-91	Jun-91	Jun-91	Jun-91
	Collector: Lab no.:	D&M	D&M 114	D&M 304	D&M 305	D&M 306	D&M 896	D&M 897	D&M 898	D&M 899	D&M 1119	D&M 1120	D&M 2821	D&M 2822	D&M	D&M 2845
naphthalene		В	B	а	В	в	В	B	а	а	В	в	а	B	В	а
C1-naphthalenes		•	0.7	0.5	0.2	0.5	0.2	•	0.2	0.1	,	•	,	. 1		•
C2-naphthalenes		,	0.2	0.2	0.1	0.1	•	١	,		1		1	, 1		-
C3-naphthalenes		0.5	7	7	П	-	•	•	1	1	9.0	0.5	4	4	4	. "
C4-naphthalenes		-	4	3	3	3	•	,	,	-1	0.5	0.7	~	6	· 00	000
acenaphthylene		1	-	1		•		,	,	1	•	,	0.4	, ,	, ,	0.4
acenaphthene		1	•	,	í	,		1	•	ı	,		0.4	0.5		0.7
fluorene			0.5	0.2	0.1	0.3	,	1	•		0.2	0.07	0.7	0.7	- 1	0.6
C1-fluorene		0.2	1	1	-	6.0	•			,	0.2	0.1	2		2	. "
C2-fluorene		3	4	4	3	7	٠	1	,		0.3	-	4	6	0	0
C3-fluorene		0.2	4.0	9.0	7	0.7	0.3	r	•	1	-	3	-	4	S	9
phenanthrene		2	7	S	4	4	8.0	0.4	9.0	0.7	2	2	3	3	7	3
C1-phenanthrenes		18	12	10	6	7	0.1	,	,	,	3	3	4	7	9	7
C2-phenanthrenes		52	53	22	23	15	•	1		•	4	11	4	12	-	11
C3-phenanthrenes		46	53	22	23	14	•	1	1	1	4	17	2	9	9	7
C4-phenanthrenes		0.5	4	3	9	2	r	1	•	•	0.5	5	í	1		. 1
dibenzothiophene		0.5	1	3	7	-	•	1	•	1	0.1	0.00	8.0	-	•	6.0
C1-dibenzothiophenes		10	∞	14	=	S	1	1	•	1	0.5	9.0	2	S	5	S
C2-dibenzothiophenes		40	26	49	42	18	•	,		1	0.05	00	S	12	11	. =
C3-dibenzothiophenes		47	33	26	26	21	٠		•	٠		15	3	6	6	· ∞
Sum of LACs		220	160	200	190	96	1	4.0	8.0	8.0	17	67	41	85	67	85
fluoranthene		S	9	∞	7	9	9.0	7	1	0.5	7	3	S	2	3	2
pyrene		2	3	S	4	3	0.1	-	0.4	1	1	7	7	-	7	-
C1-fluoranthenes/pyrenes		4.0	-	3	3	-	1	1	1	1	-	3	-	9.0	-	7
benz[a]anthracene		•	0.8	-	1	6.0	•	0.2	0.1	1	1	1	0.5	0.5	9.0	0.5
chrysene		∞	4	3	4	7	0.8	6.0	0.8	0.5	3	4	-	6.0	-	-
C1-chrysenes/benz[a]anthracenes		2	3	-	3	0.8	•	ī	ī	1	1	4	•	•	r	1
C2-chrysenes/benz[a]anthracenes		1	-	0.1	_	0.05	•		•	1	0.5	4	1		•	T
C3-chrysenes/benz[a]anthracenes		•		E.	1	•	ŀ	•	•	i	•	-	ī	ī	•	•
C4-chrysenes/benz[a]anthracenes				1	1		•	ı	1	•	•	1	•	1	•	,
benzo[b]fluoranthene		0.1	7	-	7	-	0.7	0.4	3	0.3	7	-	-	9.0	-	0.5
benzo[k]fluoranthene		1	_	0.3	0.7	0.3	0.5	0.2	7	0.2	7	-	0.7	8.0	0.7	0.5
benzo[a]pyrene		1	ī	0.09	0.2	0.1	.6	•	0.08	•	0.4	0.4	,	•	1	
indeno[1,2,3-cd]pyrene			•	•	ĸ	•	•	•	0.2	,	0.5	0.2	0.5	0.5	0.5	٠
dibenz[a,h]anthracene			•	1	•	•	•	1	ī	1	0.04	1	.1	1	•	,
benzo[ghi]perylene		' '	•	' '	1	1	1	1	0.4	,	0.7	0.4		1	•	•
Sum of HACs		20	22	22	26	15	3	S	8	7	15	25	12	7	10	80
sample weight, grams:		5.05	4.61	4.83	5.19	4.49	5.03	5.01	5.05	5.12	5.04	5.03	5.01	5.08	5.01	2.98
	4							I		١	١	l	١			

Table E-9. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Species .							Æ	Butter clam							
	Site .	CHEI	CHEI	CHE	CHEI	CHE1	CHE	CHE	CHEI	CHE1	CHE1	CHE1	CHEI	CHEI	CHE1	CHE1
ACs	Date collected:	Jul-89	Jul-89	Feb-90	Feb-90	Jun-90	Jun-90	Jun-90	Jun-90		Sep-90	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91
	Collector:	D&M 664	D&M	ADFG 944	ADFG 945	ADFG 1599	ADFG 1600	ADFG 1601R	ADFG 1620R		ADFG 2095	D&M 2817	D&M 2818	D&M 2819	D&M 2820R	D&M 2824R
naphthalene		а	B	B	а	a	8	8	а	а	а	g	а	а	B	а
C1-naphthalenes		0.7	0.4	•	,	1	0.2	t	1	ī	ľ	1	•	•	1	1
C2-nanhthalenes		9.0	ī	1	0.1	1	1	.1	0.7	1	1	1	1	3		
C3-naphthalenes		2	0.07	,	1	1	1	.1	,	•	1	0.4	6.0	2	1	1
C4-naphthalenes		0.8	0.06	1	1	,	1	7	1	8.0	1	1	1		1	1
acenanhthylene		1	1		1	1	1	•	•	1	1		1	0.4	1	•
acenaphthene		-1	1	1	0.1	1	1	,		1	,	0.4		0.8	1	0.5
fluorene		ı	1	1	9.0	0.2	,	ı	1		9.0	0.5	0.5	6.0	0.4	6.0
C1-fluorene		1	0.1	.1	0.1	1	•	,	ı		0.5	0.4	1	-	1	1
C7-fliorene		0.1	'	1	1	1	1	ï	1		8.0	1	1	•		1
C3-fliorene		0.8	0.5	,	0.2		1		1	1	•	1	1	•	,	1
phenanthrene		3	7	1	17	9	9	9	9		,	7	7	2	2	2
C1-nhenanthranes		7	3	0.2	00	0.4	0.4	0.2	0.9	1	1	1	2	2	2	7
C2-phenanthranes		10	4	0.3	4	1	1	1	1	2	3	8.0	2	2	-	-
C3-phenanthrenes		7	0.1	•	8.0	1	1	1	1	8.0	6.0	1	1	•	ı	
C4-nhenanthrenes		1	•	1	0.2	•	1	•	1	1		í	1	•	1	•
dibenzothionhene		1	0.2	1	0.1	1	,	1	1		1	ï	1	0.5	1	0.4
C1-dibenzothiophenes		2	8.0	1	0.2		•	1	.1	0.5	0.7	0.4	0.5	9.0	0.5	0.7
C2-dibenzothiophenes		7	3	1	8.0	1	,	ī	•	2	2	0.4	1	1	1	,
C3-dibenzothionhenes		1	1	1	0.3	,	•	1	1	7	3	1	1	1	1	,
Sum of LACs		37	15	0.5	32	7	7	9	6	00	12	9	6	16	9	00
fluoranthene		3	2		44	8	7	00	∞	3	2	3	4	S	3	4
pyrene		1	1	ı	33	3	7	2	3	2	4	2	2	3	2	7
C1-fluoranthenes/pyrenes			1	1	10		1	1	8.0	6.0	-	6.0	1	7	1	1
henzfalanthracene		1	1	1	9	,	1	1	0.7	0.5	6.0	0.8	0.9	-	0.8	0.7
chrysene		9.0	0.3	1	9	0.5	0.3	0.2	-	6.0	1	1	-	2	0.8	0.8
C1-chrysenes/benz[a]anthracenes		1	1		_	1	1	1	1	1	1		•	•	•	•
C2-chrysenes/benz[a]anthracenes		,	1	1		1	1	•	ī	1	1	i.	1	1	1	
C3-chrysenes/benz[a]anthracenes		1	•	1	1	1	1		1	1	1	i		1	•	1
C4-chrysenes/benz[a]anthracenes		1	1	1	1	1		1	1	•	1	1	1	1	1	1
benzolblfluoranthene		1	1	1	9	1	•	1	0.5	0.5	0.0	9.0	0.7	0.8	0.5	0.4
benzolkliluoranthene		1	,	,	3	ı	•	'	1	1	9.0	0.4	0.4	0.0	9.0	0.4
benzofalpyrene		•	,	1	7	1	1	,	1	1	0.8	•	0.4	0.4	1	ţ
indeno[1,2,3-cd]pyrene			1	1	0.8	1	1	i	1	1	-	0.4	0.5	0.7	0.4	ı
dibenz[a,h]anthracene		1	•	1	1	1		,	•	1	•	1	1	1	T	ī
benzo[ghi]perylene		1 10	, 60	()	0.6	12	' 6	10	. 4	4. 8	0.7	0.4 10	. 11	0.0 1 6	' 00	' 6
Soull of HACS		,		۱									ı	ı		
sample weight, grams:		5.07	5.02	4.38	4.27	5.02	5.03	5.12	2.07	5.09	5.07	5.05	5.01	5.01	4.98	5.02

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Table E-10. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

		1														
	Species:				Littleneck clam	k clam				Chiton	ton	Chiton	ton		Mussel	
ACe	Site: Date collected:	Feb. 90	Mar-90	Sep-90	Sen-90	CHE!	CHE!	CHEI	CHEI	Est of	CHEI	CHEIO CHEIO	CHEI0	CHE7	CHE7	CHE7
	Collector:	ADFG		ADFG	ADFG	D&M			D&M	ADFG	D&M	ADFG	ADFG			D&M D&M
	Lab no.:	943	929	2096	2097	2846	2847	2848	2849	1021	963	1613	1614	1530	1536	1537
naphthalene		g	а	B	æ	B	B	B	гa	В	е (B	æ	а	В	а
C1-naphthalenes		•	r	•	•			1	ı	,	7			•	•	1
C2-naphthalenes		0.1	1	1	1	0.8	-	-	0.7	•	0.3	0.7	0.4	7	-	8.0
C3-naphthalenes		1	1	1	1	-	6.0	7	_	1	,	1	1	1		,
C4-naphthalenes		1	•	-	1	1	•	0.5	,	,	ī	1		•		
acenaphthylene		•	•	•	•	•	1	•	,	•	,	•	,		1	•
acenaphthene		•	•	1	•	0.4	•	0.5	,	•	,	1	,	3	1	-
fluorene		0.3	•	0.4	•	0.5	4.0	0.4	0.4	•	,		,	2	7	2
C1-fluorene		•	•	0.4	ť		1	ı	ı		ı	1	,	2	,	,
C2-fluorene		•	•	1	1		1	ï	i	•	0.1	•	,	8.0	,	•
C3-fluorene		1	•	1	1	1	,	•	1	•	-	•	,	•	•	•
phenanthrene		7	•	2	2	2	2	7	7	•	-	•	1	. 52	24	56
C1-phenanthrenes		3	•	2	2	6.0	1	-	-	1	0.5	1	1	12	4	S
C2-phenanthrenes		7	•	7	3	0.5	-	-	8.0	•	0.2	í	ı	17	6	9
C3-phenanthrenes		0.2	1	f		1			í	•				4	,	0.5
C4-phenanthrenes		•	1	7	1	1	,	•	1	•		•	,	9.0	1	1
dibenzothiophene		0.4		1	•	0.4	0.4	1	ā	1		•	ı	4	2	7
C1-dibenzothiophenes		0.2	•	2	-	9.0	1	0.4	9.0	•	1.	•	,	4	-	7
C2-dibenzothiophenes		0.5	•	-	6.0	1	r	0.7	4.0	1	1	1	,	7	8.0	-
C3-dibenzothiophenes		1	•	0.5	1	r	ı	1	1	1	1	1	1	3	0.3	1
Sum of LACs		14	•	11	6	7	7	10	7	•	S	0.7	0.4	110	45	47
fluoranthene		15	•	3	3	3	9	4	4	•	8.0	-	0.7	. 06	38	40
pyrene	j	6	•	-	_	-	3	7	-		9.0	•	r'	40	12	15
C1-fluoranthenes/pyrenes		7	•	0.5	ī	0.5	0.0	1	9.0	•	0.09	•		1	2	3
benz[a]anthracene		-	1	1	ī	4.0	0.7	0.5	4.0	•	0.02	1		14	3	3
chrysene		-	•	7	•	0.5	6.0	0.7	0.5	1	80.0	0.5	0.7	35	7	7
C1-chrysenes/benz[a]anthracenes		•	•		ï	ŗ	,	1	i	1		•	,	14	2	2
C2-chrysenes/benz[a]anthracenes		1	ı	1	1	1	٠	•	,	•		ī		4	r	ı
C3-chrysenes/benz[a]anthracenes			•	1	1	1	•	1	,	•		1		0.5	•	r
C4-chrysenes/benz[a]anthracenes		•		•	•	•	•	•	1	1	0.5	•		4		
benzo[b]fluoranthene		0.7	•	î	1	•	0.4	0.4	,	1	0.1	1	,	56	2	S
benzo[k]fluoranthene		0.4	•		1	•	0.5	0.4	,	•	8.0	1	,	28	4	S
benzo[a]pyreņe			r	i	1	•	0.4	1	1	1	9.0	•		2	-	6.0
indeno[1,2,3-cd]pyrene		ı	ı	1	1	ı	9.0	0.5	4.0	•	,	1		7	2	7
dibenz[a,h]anthracene		•	•	r	1	•	•	•	,	1	,	•	,	2	2	0.7
benzo[ghi]perylene		•	•	•	1	•	0.5	•	,	1		•		7	7	7
Sum of HACs		29	•	9	4	S	14	∞	7	•	2	2	1	290	8 0	98
sample weight, grams:		5.07	5.01	5.00	5.05	5.00	5.00	5.00	5.00	4.39	5.02	5.04	5.02	5.03	5.01	5.05
																1

Table E-11. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Charias .					logony		١	١	I	I	l				
	Species .	-				Mussel							Butter clam	Clam		
	Site:	CHE7	CHEZ	CHE7	CHE7	CHE7	CHE7									
ACs	Date collected:	Apr-90	Jul-90	Jul-90	Jul-90	Jul-90	Jun-91	Jun-91	Jun-91	Jun-91	Feb-90	Feb-90	Feb-90	Apr-90	Apr-90	Apr-90
	Collector:	D&M	ADFG	ADFG	ADFG	D&M		D&M								
nonhtholono	Lau IIU.	0001	6611	1134	6671	06/1	C107	0107	0007	607	747	948	949	1761	7761	1323
inapinualene		đ	9 6	9 6	₹ ,	9 (d	d	d	4	.0	7	7	ਰ (.d	ed (
C1-naphthalenes		i	74	3	_	7	•	•	•	,	1	1	1	0.0	-	7
C2-naphthalenes		7	34	00	0.7	2	3	6.0	1	6.0	2	1	-		ı	-
C3-naphthalenes		7	32	11	1	0.7	1	1	_	7	2	0.0	-	•	•	,
C4-naphthalenes		1	18	00	,	1	•	1	•	,	0.0	0.2	0.4		1	1
acenaphthylene		1	2	0.7	•	1	0.5	0.5	0.4	,	1	0.1	0.2		•	,
acenaphthene		2	53	12	2	2	0.7	6.0	0.7	1	3	7	3	•	,	,
fluorene		4	2	17	7	3	-	0.8	1	_	S	3	4	•	0.5	0.8
C1-fluorene		-	19	00	1	-		1	-	7	4	2	3			,
C2-fluorene			17	00	1	,		1	1	2	2	_ 1	0.9	1	•	•
C3-fluorene			20		ı	•	,	,			2	0.7		,	•	•
phenanthrene		39	340	150	20	27	2	4	7	7	100	55	72	5	9	6
C1-phenanthrenes		6	110	2	2	9	2	-	3	3	61	39	46	2	2	
C2-phenanthrenes		12	96	74	2	9	2	-	3	4	28	14	20	2	2	·
C3-phenanthrenes		3	50	29	3	3	-	1	0.9	2	00	2	4	'	,	9.0
C4-phenanthrenes		1	00	3	1	1	,		•	1		0.7	-	,	•	
dibenzothiophene		3	29	11	1	2	0.5	0.5	1	_	7	0.7	-	,	1	
C1-dibenzothiophenes		3	18	13	0.7	1	0.4	,	-	_	2	2	2	. 1	0.7	6.0
C2-dibenzothiophenes		2	21	12	6.0	0.7	9.0	0.7	3	7	4	7	7	į	'	1
C3-dibenzothiophenes		2	18	11	0.7	1	٠	1	2	3	1	0.4	0.4	0.8	,	
Sum of LACs		84	970	440	43	56	19	10	26	32	230	130	160	11	12	22
fluoranthene		75	530	490	38	52	15	9	15	18	280	160	210	11	13	20
pyrene		28	300	260	10	17	8	7	9	S	230	130	170	9	9	11
C1-fluoranthenes/pyrenes		9	150	120	11	12	9	3	7	6	88	40	2	1	1	7
benz[a]anthracene		7	•	•	1	1	3	7	4	2	43	18	30	7	7	4
chrysene		14	88	120	13	14	2	3	9	∞	33	18	56	3	7	2
C1-chrysenes/benz[a]anthracenes		3	45	46	3	3	7	-	7	4	13	2	7	1	9.0	1
C2-chrysenes/benz[a]anthracenes		0.7	21	15	1	1	,	1	0.5	_	7	0.4	0.5	1		0.4
C3-chrysenes/benz[a]anthracenes		1	7	3	•		r	1	1	1	,	١	•	1	•	•
C4-chrysenes/benz[a]anthracenes		1	0.4	4	•	1	1	•	•	,	1	1	1	6.0	1	0.5
benzo[b]fluoranthene		10	42	57	∞	6	9	3	7	13	30	14	19	3	2	4
benzo[k]fluoranthene		80	43	61	∞	00	9	7	2	10	18	1	11	1	-	3
benzo[a]pyrene		2	20	19	2	7	-	0.5	-	2	19	10	12	1	8.0	7
indeno[1,2,3-cd]pyrene		2	9	00	2	7	3	6.0	2	4	7	4	3	_	0.7	1
dibenz[a,h]anthracene		9.0	2	7	1	1	0.5	,	0.4	0.7	1	0.4	0.3	2	9.0	0.5
benzo[ghi]perylene		3	2	9	7	2	3	6.0	2	4	9	3	3	1	0.7	-
Sum of HACs		160	1300	1200	97	120	58	24	58	84	770	410	260	34	30	55
sample weight, grams:		5.24	5.03	5.10	5.09	5.24	5.08	5.00	2.98	2.98	5.05	5.04	5.05	5.04	5.04	5.13

Table E-12. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Species .	l		B	Butter clam					l	l	Littleneck clam	k clam	l		l	
	Site:	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7	CHE7			CHE7	
ACs	Date collected: Collector:	ADFG	ADFG	ADFG	Jun-91 D&M		Jun-91 D&M	Jun-91 D&M	Mar-90 D&M	Mar-90 D&M	Mar-90 D&M	Mar-90 D&M	Mar-90 D&M	Mar-90 D&M	Apr-90 D&M	Apr-90 D&M	
nanhthalene	Lab no. :	1002	1003	1012 a	2030	1007	2022 a	2633	950	9.51 a	932 a	933 a	1000 a	1001 a	1324 a	1323	
C1-naphthalenes		0.2	0		•				•		•	-	0.2	•	7	2	
C2-naphthalenes				1	1	2	7	-	1	•	٠	1	1	i	2	1	
C3-naphthalenes		ı	1	ı	-	2	3	0.4	•	. 1		1	1		2	•	
C4-naphthalenes		•	1	1	1	7	•			,	1	1	1	t	1	r	
acenaphthylene		1	•	•	1	ı		0.4	1	•	•	1	1	•	•	1	
acenaphthene		0.0	7	6	8.0	6	0.8	8.0	•		r	1	ř		0.0	- ,	
fluorene		2	3	3	1	3	- 0	-	1	•	•	ı	•	•	-	-	
C1-fluorene		•		1	1	ı	6.0	,	•	1				•	4.0	1	
C2-fluorene		•		•	1		•	,			1		1			1	
C3-Illuorene		74	36	20	' '	. 4	' oc		' =	4	' =	101	. 2	000	' =	12	
C1-phenanthrenes		4	6	9	. 60	2	S	4	7		-	1	3	2	2	4	
C2-phenanthrenes		0.4	7	9	3	4	4	3			1	ı	-	8.0	6	9	
C3-phenanthrenes		•	•	1	•	-	9.0	,	1		r	1	1.	1	9.0	6.0	
C4-phenanthrenes		ı	1	1	•	0.8			•	1	•	•	1	0.5	•	1	
dibenzothiophene		0.2	-		-	7	7	6.0	•	1	1.	•	•	ì	0.7	0.8	
C1-dibenzothiophenes		*		-	-	7	7		•	ī	1	1	r	1	2	7	
C2-dibenzothiophenes		•	•	•		0.7	m .	7	•	1	r	1	ı		1	7.	
C3-dibenzothiophenes		' "		' '	8.0	- ;	1 .	, 6	. 5	٠,	, 5	-		' =		7.7	
Sum of LACS		70	4 0	20	22	1 00	200	30	5 5	t (77	7	7	11	33	30	
Huoranthene		25	41	24	12	20	16	15	5 4	6	41	32	8 4	26	17	28	
C1-fluoranthenes/pyrenes		2	12	9	0.7	∞	6	10			'		13	7	4	3	
benzfalanthracene		2	4	3	3	5	5	S	9	6.0	9	9	00	9	4	7	
chrysene		9	10	00	2	7	9	9	2	-	2	9			9	3	
C1-chrysenes/benz[a]anthracenes		•	0.7	-	ï	2	7	7 7	•	•	•	1	0.3	0.2	7 7	0.0	
C2-chrysenes/benz[a]anthracenes			•	1	T.		0.0	4.0	,			•	1	,	0.7		
C3-chrysenes/benz[a]anthracenes						• · · · ·			.)								
C4-cill yelles celle[a]aiiuiiaceiles		4	7	٧.	"	~	9	٧.	2	0.3	2	4	6	3	.3	-	
benzolklituoranthene		. 6	. 50		2	n	3	3	-	0.1	0.8	2	9	2	3		
benzofalpyrene		2	4	7	7	7	2	7	-	1	0.7	1	3	-	3	0.5	
indeno[1,2,3-cd]pyrene		0.2	-	0.8	6.0	-	7	7	0.1	1	•	•	3	0.2	2	-	
dibenz[a,h]anthracene			1		•	•	1,	1 -		•	1		,	1	9.0		
benzo[ghi]perylene		12.0	170	110	0.0	0.0	82	_ ~	0.9	. 85	130	0.3	160	9.0	× 3	70	
SUM OF HACS		170	110	1110	7	7	20	10	150	000	001	201	100	,	10		
sample weight, grams:		5.04	5.00	5.00	5.02	4.99	5.02	5.03	5.13	5.03	5.03	5.02	5.04	5.01	5.01	5.01	

Table E-13. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Chamiae .			l	l		1 344	I ittlenech clam		l	I	l		I	Museal	log
	openes .						THE TAKE	CILCEN CIG	111						culvi	Carro
	Site:	CHE/	CHE/	CHE/	CHE/	CHE/	CHE/	CHE/	CHE/	CHE/	CHE7	CHE	CHE	CHE/	CHES	CHE9
ACs	Date collected:	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Jul-90	Jul-90	Jul-90	Jul-90	Jun-91	Jun-91	Jun-91	Jun-91	Apr-90	Apr-90
	Collector:	D&M 1526	D&M 1527	D&M 1528R	D&M 1545R	D&M 1529	D&M 1777	D&M 1778	D&M 1779	D&M 1780	D&M 2834	D&M 2836	D&M 2837	D&M 3027	D&M 1480	D&M 1481
naphthalene		ES	В	а	ಣ	g	а	В	æ	B	В	В	æ	В	в	В
C1-naphthalenes		4	3	1	•	-	3	7	2	3	1	,	•	1	,	•
C2-naphthalenes		1	•	•	2	1	-	1	-	2	1	1	9.0	'	ï	9.0
C3-naphthalenes			•	,	9.0	1	1	•	0.7	1	0.4	1	1	1	,	•
C4-naphthalenes			1	1	1	-1	1	Y		1	1	1		1	,	1
acenaphthylene		1	•	1		1	0.3	1	•	0.3	1	,	0.4	1	,	•
acenaphthene		1	9.0	6.0	1	9.0	3	2	4	3	1	6.0	2	1	,	
fluorene		1	0.5	1	1	9.0	3	2	4	3	1	6.0	1	8.0	,	1
C1-fluorene		1			1	1	0.7	ı	0.7	0.3	.1	1	1	1	ı	ı
C2-fluorene		1	1	1	1	•	•	1	í	1	ı	1	•	1	,	1
C3-fluorene		1	1	1	1	1	1	1).	•	1	1	1	1	1	1
phenanthrene		11	3.	6	6	4	19	17	26	30	2	2	4	3	,	•
C1-phenanthrenes		2	7	7	3	3	2	4	9	9	3	7	7	2	-	ì
C2-phenanthrenes		2	3	9	9	9	9	4	S	7	2	2	2	1	4	∞
C3-phenanthrenes		1	•	,	0.5	9.0	1	1	•	1		1	1	6.0	3	4
C4-phenanthrenes		•	•	,	•	•	•	•	•	1	•	•	1	'	2	2
dibenzothiophene		0.7	0.4	9.0	9.0	0.4	1	6.0	2	2	6.0	1	1	1		1
C1-dibenzothiophenes		7	1	9.0	0.4	1	7	,	-	1	1	0.7	0.7	1	-	0.4
C2-dibenzothiophenes		1	•	ī	1	r		1	•	0.2	1	0.5	1	'	2	7
C3-dibenzothiophenes		.1.	•	•	1	1	1.	1	1	9.0	1	1	•	1	2	7
Sum of LACs		33	10	21	24	16	4 4	32	25	29	15	14	16	00	18	24
fluoranthene		39	19	29	32	37	13	28	72	87	22	24	24	23	r	1
pyrene		19	7	11	14	13	56	18	27	32	00	6	∞	7		•
C1-fluoranthenes/pyrenes		4		7	7	4	Ξ,	7	∞	6	5	9	2	2		0.4
benz[a]anthracene		9	8.0	0.0	e 1	4	7	7	7	7	7	7	- '	2		. ,
chrysene		9 0	7 7		S	12	9 0	9 0	4 0	50	4 0		3	3	- (7
C1-chrysenes/benz[a]anthracenes		7 4	0.4	0.0	7 6	7 0	0.7	0.3	0.3	0.7	0.8	0.0	1	4.0	7 (7 (
C2-cnrysenes/benzlajanuracenes		0.0	,	1	0.7	0.0		1		1	•	4.0	•	4.0	2	7 -
C3-chrysenes/benz[a]anuracenes		•		1	1	•		,	,	1	1	•	1	1	6.0	
C4-cnrysenes/benz[a]anunracenes		' '		٠,-	' '	' '	' (' (' '	' '	٠ ر	٠.	٠.	١,	1	0.0
penzoloji noraninene		0 0			0 -	0 -	4 (7 -	0.0	0.0	7 .		٠,	1 (•	4.0
benzo[k]Iluoranthene		n (0.0	0.0	4 4	4 (7 -	- -	6.0	0.9	- 1	- 0	- 4	7 1	ı	1
benzolajpyrene		7 (' 90	4.0	4 6	2 (- v	0 2	0.0	0.3	0.7	0.0	0.0	0.7		,
indeno[1,2,3-cd]pyrene		7 0	0.0	6.0	0	7 0	0.0	0.0	7.0	0.3		0.0	0.0	0.0	ī	•
dibenz[a,h]anthracene		0.0		4.0	0.0	0.0	7.0	0.3	' (١,	4.0	١,	' (1 0	1	1
Sum of HACs		90	33	51	77	88	130	97	120	140	49	49	46	46	7	' 00
sample weight, grams:		5.01	5.07	5.20	5.18	5.18	5.04	5.05	4.44	5.03	3.02	3.02	3.00	5.20	5.12	5.01
The state of the s																

Table E-14. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

													ı	١		
	Species:			Mussel								Chiton				
	Site:	CHE9														
ACs	Date collected:	Apr-90	Apr-90	Jun-91	Jun-91	Jun-91	Jun-91	Apr-90	Apr-90	Apr-90	Apr-90	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91
	Collector:	D&M			D&M	D&M	D&M	D&M		D&M						
	Lab no.:	1482	1483	2862	2863	2864	2865	1491	1492	1493	1494	2860	2861	2882	2883R	2884R
naphthalene		а	а	а	а	a	а	а	а	а	а	а	а	а	a	а
C1-naphthalenes		•		•		•	,	•	•	•		•	•	ì	•	1
C2-naphthalenes		1	1	1	1	0.7	9.0	0.5	•	•	•	1	•	•		•
C3-naphthalenes		•	•	1	•	•	,	•	•	•	i	•	1	1	٠	ì
C4-naphthalenes		•	1	•	1	1	,	. (1	•	1	•	1	•	1	1
acenaphthylene			,	,	1	•	,	•	ī	•	1	1	1	1	1	•
acenaphthene		1	1	•	•	٠	ı	•	•		1	1	•	•		1
fluorene		•	٠	•	•	0.4	,	•	•	1	•		ì	- (1
C1-fluorene			•	•	•	•		1	,	,	,	1	1	1	1	•
C2-fluorene		•	1	ı	•	1	,	•	1	1	•	ı	•	•	1	•
C3-fluorene		1	•	r	1	•	,	•	•	•	1	1		•		•
phenanthrene		•	ı	t	•	1	'n	1	•	,	1	0.5	9.0	9.0	0.5	0.5
C1-phenanthrenes		-	7	•	•	0.5	9.0	0.2	1	ï	1	•	1	•	1	0.5
C2-phenanthrenes		S	7	1	ì	ı	0.5	•	1	1	ı	1	r	•	1	•
C3-phenanthrenes		3	7	•	1		,	1	1	ı	.1	ī	1	1	1	1
C4-phenanthrenes		7	2		•	1		•	1	ī	í	1	1	1	1	•
dibenzothiophene			r	1	•	•	,	•	•	•		1	1	•	1	•
C1-dibenzothiophenes		2	0.8	1.	1	•	,	1	1	i		1	1	•	ı	•
C2-dibenzothiophenes		1	3	ì		ı	,	1	•	•	•	1	1	1	ı	•
C3-dibenzothiophenes		2	13	1	•	•			1	1	1	1		1	1	
Sum of LACs		19	33	•		77	7	0.7	•	•	•	0.5	9.0	9.0	0.5	1
fluoranthene		•	-	0.4	0.5	0.4	9.0	•	•	1.	1	•	1	1	•	1
pyrene		1	1 1	ï	1	4.0	1	1		1	1	1	t	1		ŗ
C1-fluoranthenes/pyrenes		1	0.7	1	1	•		r	•	•	1	1	1			
benz[a]anthracene			0.4	1	•	1	,	1	•	•	•	1	1	1	•	1
chrysene		- (7 '	1	•	1			1	•	•	1	1	1		1
C1-chrysenes/benz[a]anthracenes		7	ς ·	1	•	•		•	•	1	ı	1	í		ı	ı
C2-chrysenes/benz[a]anthracenes		3	S	•		•	į.		•	•	1	r	í	1	1	
C3-chrysenes/benz[a]anthracenes		7 0	· 0	•	í	ľ	ı	•	•		1		1	1	į.	ı
C4-chrysenes/benz[a]anthracenes		0.8	- 1	•	•	•		1	1	·	1	1	1	1	ı	1
benzo[b]fluoranthene		0.4	0.7	1	•		,	•	1			1	T.	1	í.	ı
benzo[k]fluoranthene		•	0.4	•	•	1	ı	•	ı	·	•	1	1		í	ı
benzo[a]pyrene			1	•		1	1	1	1	1	1	1	1	1	i	r
indeno[1,2,3-cd]pyrene			•	1	•	ı	,	0.4	1	1	ľ	1	ŗ	1	1	1
dibenz[a,h]anthracene		•	•	1	•	•	1	9.0		•	1		1	ı	•	1
benzo[ghi]perylene		1	1	•	•	•		•	í	1	•	•	•	•	í	•
Sum of HACs		6	19	0.4	0.5	8.0	9.0	1	•	•	•	'		1	'	
sample weight, grams:		5.02	5.10	5.00	5.00	5.07	5.01	5.05	5.00	5.02	5.00	5.00	5.03	5.02	5.02	5.08
		l		١	١	١	1			١						

Table E-15. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

									THE PERSON NAMED IN					2		
	species:						Mussel							Butter clam	clam	
	Site:	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10
ACs	Date collected:	Apr-90	Apr-90	Apr-90	Jun-91	Jun-91	Jun-91	Jun-91	Aug-91	Aug-91	Aug-91	Aug-91	Apr-90	Apr-90	Apr-90	Apr-90
	Collector:	D&M 1512	D&M 1513	D&M 1514	D&M 2878	D&M 2879	D&M 2880	D&M 2881				ADFG		D&M 1496	D&M 1497	D&M 1499
naphthalene		g	B	а	B	а	a	a	a	а	a	B		a	a	a
C1-naphthalenes		1	1		•	- 1	•	1	1	-1		1	1	.1.	1	
C2-naphthalenes		1	2	1	0.4	0.5	0.7	0.9	-	0.5	7	9.0	1	1	1	•
C3-naphthalenes		1	3	3		,	,	1	_	1	0.9	9.0	'	1	1	•
C4-naphthalenes		2	4	6	1	,	1	1	0.9	1				1	1	1
acenaphthylene					,	•	•	•	1	•	•	,		,		٠
acenaphthene		•		1	0.4	0.5				1	•	,			1	1
fluorene		9.0	6.0	1	0.5	1	1	0.4	1	ı	9.0		'	,	,	1
C1-fluorene			0.7	2	1	•	1	ı	0.5	1	0.7	ı	•		,	1
C2-fluorene		2	9	6	1	í	1	1	1		0.5	9.0	'	•	1	í
C3-fluorene		18	16	41	1			r	1	3	0.7	6.0	1	1	1	1
phenanthrene		5	5	21	_	3	8.0	-	1	9.0	-	9.0	1	. 1	1	
C1-phenanthrenes		7	7	32	8.0	2	8.0	1	2	9.0	6.0	0.7	9.0	1	1	0.4
C2-phenanthrenes		59	62	130	1	7	1	7	2	1	2	1	3	3	7	7
C3-phenanthrenes		87	110	240	2	4	2	7	7	2	2	3	2	2	3	1
C4-phenanthrenes		36	54	100	1	3	2	0.7	3	0.8	0.7	7	'	1	9.0	•
dibenzothiophene		0.7	_	2	1	0.4	1	1	1	1	1	,		1	•	1
C1-dibenzothiophenes		9	00	15	0.5	0.7	0.4	9.0	0.4	1	•		-	1	0.7	9.0
C2-dibenzothiophenes		54	9	120	2	7	1	-	3	0.7	9.0	0.7	2	6	3	7
C3-dibenzothiophenes		160	180	360	7	2	3	3	4	-	-	1	9	1	11	9
Sum of LACs		440	520	1100	17	23	12	13	31	7	14	12	15	15	26	12
fluoranthene		14	4	66	0.7	0.7	0.8	_	7	0.4	0.4	0.4	0.5	0.8	-	6.0
pyrene		6	3	29	0.5	9.0	0.4	-	-	•	0.4		0.4	0.4	0.8	0.4
C1-fluoranthenes/pyrenes		12	00	36	0.4	0.0	•	8.0	2	1	0.4	0.4	,	1	9.0	0.4
benz[a]anthracene		4	7	26	1		1	1 -		1 1		()	1	1 ,	•	
chrysene		32	21	78	1	7	-	_	7	0.7	9.0	0.7	2	-	3	6.0
C1-chrysenes/benz[a]anthracenes		28	19	140	7	3	7	_	3	_	-	-	_	_	ω.	_ ,
C2-chrysenes/benz[a]anthracenes		19	16	160	7	3	7	1	3	- ;		7	2	- ;	4	-
C3-chrysenes/benz[a]anthracenes		36	49	99	_	-	0.4	1	2	0.7	0.8	-	0.3	0.4	7	•
C4-chrysenes/benz[a]anthracenes			4 1	9	1 .	1		•	•	1	•	r	1	1		•
benzo[b]fluoranthene		2	2	21	0.4	1	1	•	,	1	1	ï	1	1	0.4	
benzo[k]fluoranthene		. 3	7	14	T.	1	•	r	ľ	t	1	ı	1	1	1	
benzo[a]pyrene		-	1	7		1	j	1	1	1	1	ī		1	í	1
indeno[1,2,3-cd]pyrene		0.5	1	2	1	1	1	•	ı	•	•		'	,	•	
dibenz[a,h]anthracene		0.5	1	7	,	•		•	,	1	•	ï	'	•	•	1
benzo[ghi]perylene		2 5	2,5	333	' 0	' ;	' t	1	•	•	' '		' '	1 1		* •
Sum of HACS		740	700	170	0		-	٥	13	4	n	٥	٩	n	L	n
sample weight, grams:		5.07	5.02	5.05	5.00	4.97	5.06	5.00	5.00	5.01	5.02	5.02	5.11	5.03	5.02	5.01
	The state of the s					The state of the s							-			

Table E-16. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Species:		l			l	B	Butter clam	l	ı	l	l	İ		Littleneck clam	k clam
	Site:	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHE10	CHEIO	CHE10	CHE10
ACs	Date collected:	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Jun-91	Jun-91	Jun-91	Jun-91				Aug-91		Apr-90
	Collector: Lab no.:	D&M 1498R	D&M 1515R	D&M 1500	D&M 1506	D&M 1507	D&M 2850	D&M 2851	D&M 2852	D&M 2853				ADFG 2943	D&M 1508	D&M 1509
naphthalene		а	а	а	а	а	а	a	a	B	а	а	а	а	В	а
C1-naphthalenes			•	•	1	•	•	•	•	1	ī	1		1	•	•
C2-naphthalenes		•	•	•	1	1	1	0.7	0.5	8.0	1	9.0	9.0	ì	1	1
C3-naphthalenes		1	•		•	•	•	1	1	•	4.0	٠	,	0.7	1	
C4-naphthalenes		•	•	1	ı	•	•	•		•	ì	1	1	,		•
acenaphthylene		ī	1	•	•	-(1	1	•	9.0	1	1	,	,	•	
acenaphthene		ı	·	1	,	1		•	1	•	•	1		1	1	•
fluorene		t	1	•	•	,	•	•	•	1	ć	1	1	,	1	ī
C1-fluorene		•	ī	1	,	1		1	,	•	1	i	,1	,		,
C2-fluorene		,	•		,	•	•	•	•	•	4.0	1	•	0.5	,	•
C3-fluorene		1	1	•	1	ţ	1	•	•	•	4.0	1	•	9.0	•	
phenanthrene		•	•	•	•	1	0.4	9.0	9.0	0.7	9.0	0.7	0.5	0.4	•	
C1-phenanthrenes		-	0.5	-	•	-	•	0.7	0.5	9.0	9.0	9.0	9.0	0.7	•	-
C2-phenanthrenes		2	4	2	3	9	•	9.0		9.0	0.7	-	6.0	6.0	1	2
C3-phenanthrenes		2	4	3	-	4		0.5	1	9.0	0.4	9.0	0.4	8.0	1	-
C4-phenanthrenes		•	1	0.5	t	6.0	1	ï	1	1.	1	•	•	,	•	9.0
dibenzothiophene		•		•	•	•	•	1		1			•	,	•	0.3
C1-dibenzothiophenes		1	2	-	0.7	2	i.		1	1	•	•			0.5	-
C2-dibenzothiophenes		2	7	3	7	4		•	ı	1		0.4	0.4	0.7	6.0	-
C3-dibenzothiophenes		7	7		9	13		6.0		0.8	0.5	ı	9.0	8.0	9.0	2
Sum of LACs		14	70	20	14	31	0.4	4	7	S	4	4	4	9	4	13
fluoranthene		- 3	- 0	0.0	ı	r	0.4	0.7	0.4	0.4	0.4	0.5	0.5	0.5	•	•
pyrene		0.0	0.8	0.0	•	' (1	1	1		τ	1	ı	0.4	1	1
C1-fluoranthenes/pyrenes		1	' '	0.7	•	0.0	•	r.		1	ı	•	1	0.5	1	0.3
benz[a]anthracene		' (4.0	٠.	٠.	4.0	' '	' 0		1				. (
chrysene		7 (7 (- (- 0	n (0.5	0.0	0.0	' '	1	0.4	0.4	8.0	-	- ;
C1-cnrysenes/benz[a]anunracenes		7 (7 (7 (0.0	<i>v</i> (•	×.0	0.5	0.0	r	1	•	8.0	0.4	0.4
C2-cnrysenes/benz[a]antinacenes		7 7	7	7 0	0.8	2		-	0.0	0.7	1	ı		- ;		8.0
C3-cnrysenes/benz[a]anthracenes		4.0		0.0	1	6.0	1	ı		1	ı	1	r	0.5	•	0.5
C4-cnrysenes/benz[a]anunracenes		•	' '	' '	' '	' '	ı	1).	1	r	1	i	ı	•	1
benzol b j f luoranthene		•	4.0	0.4	4.0	0.5	1	ı	r		r	1	ı	,	•	•
benzolkjiluoranthene		•	,	1	4.0	•	•	•	1	1	ï	1	ı	r	i	•
benzola]pyrene		,	•		' (1			r		1	1	,	•	1
indeno[1,2,3-cd]pyrene		1	•	•	0.0		1		1	1	1		1	1	1	i
dibenz[a,h]anthracene			•	•		0.5	1	1		1	•	1	•	ī	•	i
benzolgin/perylene Sum of HACs		. 80	. 6	· ∞	0.4 S	12	0.9	' E	' 7	' 7	0.4	0.9	0.9	. 4	٠ =	' E
sample weight, grams:		5.02	5.01	5.09	5.03	5.07	5.00	5.03	4.99	5.05	5.00	5.00	5.01	5.00	5.02	5.03
				l	1	١	1	1		1	1					1

Table E-17. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Species:		ŀ			Littl	Littleneck clam	8						Spot shrimp	hrimp	
	Site .	CHE10	CHE10	CHE10	CHE10	CHEID	CHEID	IE10	CHEID	CHEID	CHEID	CHEIO	CHE11	CHEII	CHEII	CHE11
ACs	Date collected:											Aug-91			Apr-90	Apr-90
	Collector: Lab no.:	D&M 1510		D&M 2854	D&M 2875	D&M 2876						ADFG 3023		D&M 1566R	D&M 1567	D&M 1568
naphthalene		а	ea	а	В	ದ	В	а	B	g	а	а	В	g	а	а
C1-naphthalenes		•	•	3	1	•	•	1	1	ī	,	1	1	1	1	1
C2-naphthalenes			1	5	8.0	0.5		1	1	í	ı	1	•	0.7	2	1
C3-naphthalenes			1	7		1	•	1	1	1	1	1	1	1	1	
C4-naphthalenes		í	,	2	i	1		•	1	ī	i	1		•	1	1
acenaphthylene		1		0.4	•	1	ı	,	1	,	1	1	'	•	•	•
acenaphthene		í		9.0	4.0	1		1	.1	1	1	ı	1	1	1	,
fluorene			1	-	0.7	0.5	1	1		1		ı	1	1	1	1
C1-fluorene		•	,	2	1	ī	1	1	1	1	1	1	r	1	1	1
C2-fluorene		•	ı	2		1	•	1	r	1	1	1	1	1	1	1
C3-fluorene		1	1	1	1	1	t		1	1	1	1	1	1	1	•
phenanthrene		1	1	4	0.4	1	į.	0.4	0.5	9.0	9.0	9.0	1	1	1	•
C1-phenanthrenes		_	1	4	-	0.7	9.0	0.4	0.5	6.0	0.4		'	0.7	2	1
C2-phenanthrenes		3	4	4	7	7	6.0	•	0.8	0.7	0.4	,	•	1	'	•
C3-phenanthrenes		ε,	6	0.7	7	0.5	9.0	1	0.4	1	τ	ì	1	r	1	1
C4-phenanthrenes		- 1	2	1	0.4	1	•	1	1	ī	1	ı	1	•	1	1
dibenzothiophene		0.5	1	8.0	1 1	1	i.	1.	1	1	1	1	1	1	1	•
C1-dibenzothiophenes			. ,	7	0.5		1 .	1	1	1	1	i	6.0	1	9.0	7
C2-dibenzothiophenes		00 0	<u> </u>	e .	7	1	0.4	1	1	1	1	1	1	L	1	1
C3-dibenzothiophenes			n ;	- :	7 ,	' 1	0.0	' (١,	٠,			' (٠,	-	
Sum of LACs		20	15	46	12	so ;	e !	8.0		7	- ;	9.0	6.0	-	2	-
fluoranthene		3	,	n 1	0.0	9.0	0.7	4.0	0.5	0.7	0.5	0.4	•	•	1	•
pyrene		' 0	' '	יי ע	0.5	' -	4.0	•	1	0.5	•	4.0	1	•	1	•
C1-Inoranthenes/pyrenes		0.0	0.7	0	0.0	4.0	4.0	1	(0.0	i ,	1	ľ	ı	1	1
chrysene		' (۰ –	0.7	00	0.7	90			0	' C	. 0				,
C1-chrysenes/benz[alanthracenes		2 7	0.5	0.4	; '	0.4	2.		. '		† '	C: '		'		
C2-chrysenes/benz[a]anthracenes		2	1	0.5	1	0.8	0.5	0.4	0.5	1		1	,		1	1
C3-chrysenes/benz[a]anthracenes		1	8.0	0.5	1	1	1	1	1	1	1	1	'			
C4-chrysenes/benz[a]anthracenes		1	,	1	1	1	1	1		í	1	ı	•		1	ı
benzo[b]fluoranthene		ī	1	1	1	1.	·	1	•		1	ı	•	•	í	•
benzo[k]fluoranthene		r	i	•	1	1	ı	ì	ī	1	T	1			j	1
benzo[a]pyrene		1	•	1	1	•	r	•	1	1	1	1	1	•	1	•
indeno[1,2,3-cd]pyrene		ì	ı	1	1	.1	ľ	1	1	7	1	,	1			
dibenz[a,h]anthracene		1	ï		r	T	T	1	•		1		•	1		•
benzo[ghi]perylene Sum of HACs		. 11	, 4	13	, 4	. 6	. 6	0.8	. 4	3.0	0.9				٠.	
sample weight, grams :		5.01	5.05	5.02	5.00	5.00	5.02	5.03	5.00	5.03	4.97	5.08	5.02	5.03	5.01	5.00
									2	2		1		1		2

Table E-18. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Species: Spo	Spot shrimp	Sp	Spot shrimp		Chiton	Chiton	ŀ		l	l	Chiton	l	l		
		CHE11	CHE18	CHE18	CHE18	CHE19	CHE20	CHE21	CHF21	CHF21	CHF21	CHF21	CHE21	CHF21	CHE21	CHE21
ACs	Date collected:	Apr-90			Jun-91	Jun-91	Jun-91		Jun-91	Jun-91		Aug-91	Aug-91	Aug-91		Aug-91
	Collector:	D&M 1569	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M		ADFG	ADFG	ADFG		ADFG
naphthalene		а	B	a	a	a	a	a	a	a	a	a a	a a	4,704 a	a a	2700M
C1-naphthalenes		,	٠		ı			•	1	1		1				'
C2-naphthalenes			•	•	,	,		1	ı	•	1	•	1	,	0.4	1
C3-naphthalenes		,	•			,		,	1	•	1		1			1
C4-naphthalenes		1	•	1			1	,	•	1	ı	1	1	1	1	1
acenaphthylene				1	,	,	,	•		- 1		•	1	1	•	1
acenaphthene			•	•	,	,	ı	ı		1		1	,	•	•	1
fluorene		,		•	,		•	1	•	1	·	•	•	1	٠	1
C1-fluorene	ý		•		,		,	,	•	•	•		1		•	. 1
C2-fluorene			•	•		ì	,	•	•	1	ì	•	1	•	•	1
C3-fluorene		,	1	,		,	,	•	•	•		•	•	1	1	1
phenanthrene			-	_	-	8.0	,	•	•	1	•	0.5	0.4	0.4	0.5	0.5
C1-phenanthrenes	6		•	1	,			1	t	•	1	•	•	r	•	•
C2-phenanthrenes			1	•		,	,	•	•	1	1	•	•	•	•	•
C3-phenanthrenes	,	,			,	ı		•	•	1	ı	0.8	1	•	1	1
C4-phenanthrenes			ř		,		r	1	•	1	•	. 1	•	•	•	•
dibenzothiophene		1	•	•	1	1	•	1	•	1	•	•	•	•	1	•
C1-dibenzothiophenes		,		•		,	ı	1	1	1	1	•	1		•	,
C2-dibenzothiophenes			1	1	,		,	1	•	1	1	1	1	•	•	1
C3-dibenzothiophenes			٠.	٠.		, 6		1	•	1	1	7,			' (. (
Sum of LACS			-	-	00	0.0		•	•	•	•	2	9.4	4.0	6.0	0.5
nuolammene			0.4	0.4	°. '	. o	, ,		1 1	1 1		.)	1 1			' '
C1-fluoranthenes/pyrenes		,	'		,	,	,		i	1	1	9.0	1			t. '
benz[a]anthracene			1			,	,	ı	,	ī	.1	1	1	,	1	
chrysene			•	r		,	,	•	1	1	1	-	1	1		•
C1-chrysenes/benz[a]anthracenes				•	ı		,	•	į	i	1	-	•	1	,	1
C2-chrysenes/benz[a]anthracenes		·	•		,	ı		1	•	1	•	-	•		•	1
C3-chrysenes/benz[a]anthracenes			ĭ	•	,	,	,		1	1	•	•	1	1	•	1
C4-chrysenes/benz[a]anthracenes			•	•			,	•	•	•	1	1	•	•	1	•
benzo[b]fluoranthene			•	•	,	,	,	•	•	•	1	0.5	1	ı	,	1
benzolkJiluoranthene			1	•	,	1		•	•	ī	1	1	1	•	1	•
benzola]pyrene			•		1		,	•	•	•	1	1.	•	•	•	•
indeno[1,2,3-ca]pyrene				•	,		,	r	•	•	1	1	•	1	•	•
dibenz[a,n]anunacene				1			,		1		ı	1		1	•	
Sum of HACs			1	· -	. 0			٠.	٠.	٠.		, 4			1 - 1	0.4
sample weight orams		5.06	3.01	2.99	3.05		,					5.01	\$ 00	5 00	5.03	8
sample working brains :		2000	20.0	1	20.0							3.01	20.0	3.03	5.03	2.00

Table E-19. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

	Crocioe .	١	l	I	Museo	log		l			I ittlange dam	along A			Mussel	
	aprenes .					100					Linene	A Claim			Deenia	
	Site:	CHE22	CHE22	CHE22	CHE23	CHE23	CHE23									
ACs	Date collected:	Jun-91	Jun-91	Jun-91	Jun-91	Aug-91	Aug-91	Aug-91	Aug-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91
	Collector:	D&M	D&M	D&M				ADFG	ADFG	D&M	D&M	D&M	D&M	D&M	D&M	D&M
	Lab no.:	2890	2891	2892	2893	2953	2954	2955	2956	2866	2867	2868	2869	2894	2895	2896
naphthalene		B	а	а	а	а	а	а	а	а	а	а	а	а	а	а
C1-naphthalenes		•	1	1	0.4	•	.1	1	1	1		1	1	•	,	1
C2-naphthalenes		,	•	1	1	1	1	1	9.0	9.0		1	1	1	•	•
C3-naphthalenes		1	•	1	1	•	•	•	,	0.7	•	1	,	•	1	•
C4-naphthalenes			1	1	1	1	1	1	,	1	•	1	1	'	,	,
acenaphthylene		•	1		1	•	٠	•	,	•	•	,	1	'		•
acenaphthene		ı	1	ı	1	. 1	ī	ī	1	1	•	1	1	1	1	1
fluorene		£	1	1	.1	1.	ı	ı	1	t	1	9.0	1		i	1
C1-fluorene		1	•	1	1	1	ı	1		1	1	1	ì	1	1.	1
C2-fluorene			1	•	1	1	•	1	1	•	•	•	,	,		1
C3-fluorene		1	•	•	•	•	•	1	•	1	1	•	,	'	1	•
phenanthrene		8.0	6.0	0.5	9.0	•	•	•	,	•	,	•	,	0.7	0.5	6.0
C1-phenanthrenes		•	•	,	•	,	0.4	í	1	1	1	1	0.5	'	•	
C2-phenanthrenes		1		•	1	•	1	1		•	1	1	0.4	1	1	,
C3-phenanthrenes		ı	1	1	1	•	ï	•	ī	1	1	•	ı	•		1
C4-phenanthrenes		•		1	1	ı	1	1	1	1	1	1	Ţ	,	1	1
dibenzothiophene				10	1	·	ı	ľ	ř	,	1	•	1	•		t
C1-dibenzothiophenes		1	1	•	,	,	1	1		1		0.5	1	,	,	•
C2-dibenzothiophenes		•	i	•	1	1	1	1	,	1	1	0.7	1		,	•
C3-dibenzothiophenes		1	1	•	•	1	1	ì		•	1	•	,	1	,	•
Sum of LACs		0.8	6.0	0.5	1	•	0.4	•	7	1	•	9	6.0	0.7	0.5	6.0
fluoranthene		1	.1	1	1	0.4	0.5	1	,	9.0	0.4	0.7	0.5	1		•
pyrene		•	1	•	í	1	•	,	,			,	ı	,	i	•
C1-fluoranthenes/pyrenes		•	1	•	•	ı	•	1	1	•	1	•	1	'	•	
benz[a]anthracene		1	1	1	•	1	,	1	1	,	1		t	,	1	1
chrysene		•	1		1	1	1	T	•	1	1	1	ı	•		•
C1-chrysenes/benz[a]anthracenes			1	ı	1	1	r	1	r	1	1	1	1	1	1	1
C2-chrysenes/benz[a]anthracenes		ı	•	1	1	1	1	1	ı	1	1	1		'		1
C3-chrysenes/benz[a]anthracenes		1	1	•	ī	1	1	1	í	1	1	•	t	1	1	ı
C4-chrysenes/benz[a]anthracenes		1	•		1	1	1	1	ı	1	1	•	ı	1	1	1
benzo[b]fluoranthene		1	•	•	•	•				T	1	•	1	1	1	1
benzo[k]fluoranthene		1	1	,	1	•	•	1		•	1	•	ī		1	•
benzo[a]pyrene		•	1	•	1	•	1	,	1	ř	1			'	•	•
indeno[1,2,3-cd]pyrene		1	•	1	1	1	•	,	,	1	1	1	1	•	•	í
dibenz[a,h]anthracene		•	•	•	1	•	1	•	1.		t	•	1	'	T	1
benzo[ghi]perylene		1	í		1	•	1	•	ı	1	•	1	•	1	1	1
Sum of HACs		•	'	'	'	0.4	0.5			9.0	0.4	0.7	0.5	'	'	'
sample weight, grams:		5.07	3.06	3.06	5.00	5.08	5.03	5.03	5.08	5.00	5.04	5.00	5.09	5.00	5.00	5.00

Table E-20. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

			1		I	I	I	I	I	١	I	١			
	Species:			Mussel				Litt					Chiton		
	Site:	CHE23	CHE23	CHE23	CHE23	CHE23	CHE23 (CHE23 (CHE23	CHE23	CHE23	CHE23	CHE23	CHE23	
ACs	Date collected:	Jun-91	Aug-91	Aug-91	Aug-91	Aug-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91	Jun-91	
	Collector:	D&M 2897	ADFG 2967	ADFG 2968	ADFG 2969	ADFG 3024	D&M 2898R	D&M 2899R	D&M 2905	D&M 2906	D&M 2907	D&M 2925	D&M 2926	D&M 2927	
naphthalene		а	В	а	B	а	в	в	В	В	а	а	а	а	
C1-naphthalenes		•	•	•	•		1	•		•	,	•	•	•	
C2-naphthalenes		1	1	7	0.5	,	1	1	1	ī		,	,	1	
C3-naphthalenes		•	•	1	1	ì	1	ì	1	1	,	1	1	1	
C4-naphthalenes			1	1	•	,	1	•	r	r	i	1	E		
acenaphthylene		1	•	0.5	•	,	•	•	•	1.		•	1	,	
acenaphthene		•	•	0.7	•	,	1	1	1	٠	,	1	•	•	
fluorene		1	•	6.0	1	,	•	•	•	1	1	•	,	i	
C1-fluorene		•	1	1	0.4	í		ı	•	1	,		,	1	
C2-fluorene		•	•	6.0	0.5	1			1	•	,	•	1	1	
C3-fluorene		•	•	1	1	1		1		•	,	•	1	1	
phenanthrene		0.7	9.0	-	9.0	0.4	0.5	9.0	0.5	0.7	0.5	0.7	0.4	0.4	
C1-phenanthrenes		•	1	-	0.7	ı		r	1	•	1	1	1	1	
C2-phenanthrenes		•	,	1	•	ı	1	1	1	•		1	•	1	
C3-phenanthrenes		1	•	1	•	i	•	1	1	1	ì	,	1	•	
C4-phenanthrenes		•	1	í	ı	ı	r	•	1	1		Ė	ı	ı.	
dibenzothiophene		1			1	,	•	1	1	r	,	•	•	1	
C1-dibenzothiophenes		,	•	1	•	1	•	1	1	•	,		1	•	
C2-dibenzothiophenes			•	•	1	,		1	•	ı	,	1	•	ć	
C3-dibenzothiophenes		' '		٠,	٠,	, ,	' '	' '	' '	' t	, ,	' '		,	
Sum of LACs		0.7	0.0	× ?	•	4.0	0.5	0.0	0.5	0.7	6.5	0.7	4.0	4.0	
fluoranthene		•	4.0	4.0	1	i		1	ı	í	í	1	1		
pyrene		r	4.0	0.0	•	ı		1	1	1	t	1	1	r.	
C1-Iluoranthenes/pyrenes		1	• 0	0.0	1			,			,		1		
chrisana				,	•	,	,		,	,					
C1-chrysenes/benz[a]anthracenes		•	•	1	•	,	•		,	,		•	1	1	
C2-chrysenes/benz[a]anthracenes				,	٠	,	•	•	•	•				1	
C3-chrysenes/benz[a]anthracenes		,	1	•	1	ì		•	ı	,	,		1	1	
C4-chrysenes/benz[a]anthracenes		1	•	1	1	,	ı	1	1	•	,	i		1	
benzo[b]fluoranthene		1		1	•	1		ı	•	1	,		Î	ī	
benzo[k]fluoranthene		•	•	1	•		•	1	ì	•	ı		1	1	
benzo[a]pyrene		•	•	•	1	,	1	1	•	,	,		•	•	
indeno[1,2,3-cd]pyrene		•	•	1	•	,	•	1	•	•		•	1	1	
dibenz[a,h]anthracene		•	1	,	1		1	1	r	1	ı	ı	1	1	
benzo[ghi]perylene Sum of HACs		٠.	0.8	. 2	٠.		٠.	٠,	٠.		1 1		٠.	٠.	
sample weight, grams:		5.07	5.03	5.00	5.04	5.28	5.00	5.01	4.98	5.00	5.01	3.06	3.03	3.11	
Sample respens from:															

Table E-21. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chenega Bay.

							١	1			
	Species:				Mussel				_	Butter clam	Littleneck clam
	Site:	CHE24 CHE24		CHE24	CHE24 CHE24		CHE24	CHE24	CHE24	CHE24	CHE24
ACs	Date collected:	Jun-91			Jun-91		Aug-91		Aug-91	Jun-91	Inn-91
	Collector:	D&M	D&M			ADFG	ADEG		ADEG	D&M	D&M
	Lab no.:	2910	2911	2912				2959	2966	2908	2909
naphthalene		а	В	В	B	а	В	B	а	а	а
C1-naphthalenes			0.4		•	τ	,	1	1	,	
C2-naphthalenes		1	•	1		1	,	2	,	1	
C3-nanhthalenes								1			
C4-nanhthalenes								14		ı	•
acenanhthylene			8. 8					2			
acciapiningiene		•					,	1			
acenaphthene		ĭ	1	ı	1	•	1	1	,	ì	
Iluorene			•	•	1	1	1	9.0	,	ı	•
C1-fluorene		1	ı		1	0.8	1	3	1	,	•
C2-fluorene		1	1	•	1.	1	1	11	1	ı	
C3-fluorene		1	1	1	,	1	•	12	,	ī	•
phenanthrene		0.4	0.5	0.4	0.4	1	,	1	9.0	0.4	0.4
C1-phenanthrenes		,	ī	1	1	0.7	0.4	7	9.0	1	; '
C2-phenanthrenes		•	1	,	1	0.6	0.4	26)	,	
C3-nhenanthrenes		0.5			,			46			
CA-phenanthrenes		3						35			
dit matti atti						1	•	67			
dibenzotniopnene		1	ı	•	1	1	•	- (1	ì	•
C1-dibenzothiophenes		1	1	1	ï	1	1	e ;	,	1	·
C2-dibenzothiophenes		1	1	1		ı	1	30)	,	
C3-dibenzothiophenes		1	1	1	í	r.	1	51	ī	,	
Sum of LACs		6.0	6.0	0.4	0.4	7	8.0	240	1	0.4	0.4
fluoranthene		1		1	í	0.4	0.4	6.0	0.4	,	•
pyrene		1	1	r	1	0.4	0.4	1	0.5	ì	,
C1-fluoranthenes/pyrenes		1	•	•	1	ī	•	9	,	i	,
benz[a]anthracene		1	1	ï	1	ī	1	1	i	i	1
chrysene		1	1	1	1	ī	1	S	,	1	
C1-chrysenes/benz[a]anthracenes		1	1	1	.1	ī	1	13	-	1	
C2-chrysenes/benz[a]anthracenes		1	1	1	t			15	,	,	
C3-chrysenes/benz[a]anthracenes		r	1	ı	1	•	T	9	,	,	
C4-chrysenes/benz[a]anthracenes		r	1	1	1	1	1	1	1		
benzo[b]fluoranthene		1	1		1	•	1	1	,	1	
benzo[k]fluoranthene		,	1	•	1	•	•	1	,	ı	,
benzofalpyrene		1		1	1	1	,		,	,	-
indeno[1,2,3-cd]pyrene			•	-	,	1	,	,			
dibenzia hlanthracene		,	1		•						
honzolohilnemlene						70					
Sum of HACs		•	•	•	,	† -	· «	4 8	0	. ,	
);		
sample weight, grams:		5.05	5.02	5.00	2.00	4.99	5.00	5.00	2.00	4.98	4.99
The state of the s	The real less in which the real less in										

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Table E-22. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Graham/English Bay.

	Species : Site :	PTG1	PTG1	PTG1				-	Mussel PTG1			PTG1		PTG1		PTG1
ACs	Date collected: Collector : Lab no. :	Jul-89 D&M 45	Aug-89 D&M 115	Aug-89 D&M 116	Sep-89 D&M 337	Sep-89 D&M 338	Sep-89 D&M 339	Feb-90 D&M 880	Feb-90 D&M 881	Feb-90 D&M '882	Feb-90 D&M 883	Feb-90 D&M 2454	Feb-90 D&M 2455	Feb-90 D&M 2456	Feb-90 D&M 2457	Mar-90 ADFG 850
naphthalene		а	B	g	а	а	а	а	а	в	а	а	а	а	а	а
C1-naphthalenes		•	0.3	0.1	0.7	0.7	0.5	£	0.2	•	1.	1	1	•	1	•
C2-naphthalenes			1	r	•	1	•		1	r	1	-	-	-	-	1
C3-naphthalenes		•	1	,	ŕ	r	1	•	•	•	1	8.0	9.0	6.0	6.0	,
C4-naphthalenes		1	1	i	r		•	t	1	•	1		r	1	1	í
acenaphthylene	•	1	-	•	•	•	•	•	1	r	1	ï	í	r	•	1
acenaphthene		1	1	•	r	•	1	•	ı	•	1	1	r	•	1	1
fluorene		•	•	1	t	•	1		ī	r	T	1	1	T	2	1
C1-fluorene		1	•		1	•	1	1	1	•	1	T	-1	1		
C2-fluorene		1	1	i	•	•	•	1	•	1		1	1	1	•	1
C3-fluorene		•	•	1		•	1	1	1	1	1	1	•	1		
phenanthrene		•	3	0.0	0.7	0.8	0.7	, .	0.2	0.3	0.3	1		•		7
C1-phenanthrenes		1	•	•	1	•	•		i	1	1	0.4	0.5	0.5	9.0	
C2-phenanthrenes			•		•	•	•	1	•	•	•	•	1	•	•	
C3-phenanthrenes		1	•	1	•	1	•	ī	10	1	•	ï	í	•	1	•
C4-phenanthrenes		•		•	1	1	ı	ï	1	•	1	1	•	1	i	•
dibenzothiophene			•	1	1	•	1	1	ı	ī	1	•	1	•	ı	ı
C1-dibenzothiophenes		1	1	T	ï	•	•	r	i	•	ī	×	i	i	•	٠
C2-dibenzothiophenes		1	•	1	1	ı	1	•	•	•	•	ı	i	1	i	
C3-dibenzothiophenes			1	•	1	ı	1	ï	1	1	1	•	•	1	ı.	
Sum of LACs		•	4	1	1	7	-	•	4.0	0.3	0.3	7	7	77	4	7
fluoranthene		1	0.4	ť	1	ı	1	1	•	•	ı	0.4	9.0	0.5	0.7	-
pyrene		1	•	•	,	1	1	1	1	1	1	•	ì	1	ì	9.0
C1-fluoranthenes/pyrenes		1		1			•	1	1	1	1	í	•	ť,	r	
benz[a]anthracene				1	1	1	•			ı	•	·	ï			
chrysene		1	î.	ı	r	1		r	r	ı	r	r	•		ſ	1
C1-chrysenes/benz[a]anthracenes		1	•		1		1	r	r	ı.	t.	t	1	r	ı	1
C2-chrysenes/benz[a]anthracenes		1		1	•	•	1	ı	1	1	•	r		ť	1	
C3-chrysenes/benz[a]anthracenes		1	1		•	i		1	r.	1	ı	r	r	ı		ı
C4-chrysenes/benz[a]anthracenes		1		r	•	1		1	1	ī	1	ı	1		1	ı
benzo[b]fluoranthene				•		•	1	ı	1	1	ī	,	1	ť	•	1
benzo[k]IIuoranthene						•	•	•			1	1		ı	1	i
benzo[a]pyrene		1	1	1	•		1	ı	r	1	,		1	1		1
indeno[1,2,3-cd]pyrene		•	•	•	•	1.		•				1	1			
dibenz[a,h]anthracene		1	1		•	1	•		1	1	ı	ï	,	1	1	
benzolghijperylene Sum of HACs			0.4	٠.		٠.	٠.	٠.		٠.	٠.	0.4	9.0	0.5	0.7	' 7
						1										
sample weight, grams:		4.78	2.92	3.77	5.30	5.13	5.35	5.07	5.01	5.01	5.07	2.08	4.99	2.06	4.98	5.00

Table E-23. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Graham/English Bay.

	Species:						Mussel	el						Littleneck clam	k clam	Cockle
	Site:	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1
ACs	ollected:	Mar-90			Mar-90	Mar-90	Jun-90	Jun-90	Jun-90	Oct-90	Oct-90	Oct-90	Oct-90	₹,	Feb-90	Aug-89
	Collector:	ADFG 852	ADFG 853	ADFG 854	ADFG 855	ADFG 1478	ADFG 1718	ADFG 1719	ADFG 1720	ADFG	ADFG	ADFG	ADFG	D&M	D&M	D&M
naphthalene		B	ed	B	a	в	a	a	a	a	a	B	a	S e	3	305 a
C1-naphthalenes		6.0	0.7	8.0	0.4	2	1		-1	C			1	9.0	,	0.2
C2-naphthalenes		1	1	ī	1	6.0	1	•	,	,	,	,	,	0.1	,	
C3-naphthalenes		1		1	í		,	1		,	1	,	,	0.0	,	
C4-naphthalenes		1	1	1	1	1		,	1	,		- 1	,	1 '		
acenaphthylene				1	1			•	,	,		1	,	•	,	
acenaphthene		•	i	1	1	1	ı	1	1	0.4	1	1	1	1	ı	,
fluorene		•	•	1	1	J	,	1	1	0.4	1	0.4	0.4	0.1		,
C1-fluorene		7	1	1	•	1		1	1	,	0.7	0.5	0.8	0.09	,	,
C2-fluorene		i	•	1	1	,	•	ı	r	ı	1	1	1	'	,	,
C3-fluorene		1	1	1		1	1	1	1	£	1		ı		,	ı
phenanthrene		2	7	7	7	•	0.4	0.3	1	í	1		ì	2	,	3
C1-phenanthrenes		1	1	1	1	1	1	•	£	1	r	, I	1	9	1	1
C2-phenanthrenes		0.8	•	1	1	1	1	1	1	•	1	1.	T.	3	3	,
C3-phenanthrenes		1	t)	1	1	ı	1	í	1	1	1	1	3	,	1
C4-phenanthrenes			1 1	ı	•	•	ı	1	1	1	1	1	i	•	,	1
dibenzothiophene		1.	0.0	1	1	' 0			1	1	1	ī	1	0.4	1	'
C1-dibenzothionhenes		ı		1	ı	0.8	1	L	Ĺ	' 0	' 4	ı	1	1	ī	
C3-dibenzothionhenes		-							. 1	0.0	0.0	ı	ı	0.08		•
Sum of LACs		• •	3	3	3	S	0.4	0.3	•	-	-	6.0	-	2.0		' (*)
fluoranthene		1	•	1	6.0	1	ı	1	1	0.4	0.3	0.5	1	9	ı	5
pyrene		1	í	1	1	1	1	1	1	0.4	0.2	0.4	ř	2	ı	3
C1-fluoranthenes/pyrenes			1	1	1	1	1	i.	•	1	1	1	1	0.08	1	
benz[a]anthracene			1	1	1	1 1	1	ı	1	1	1	1	r	0.3	ı	0.5
chrysene			•	•	1	0.5	1	1	•	1	1	1	1	9.0	,	1
C1-chrysenes/benz[a]anthracenes		' '	1	1	1	0.3	•		ı	T	1	•	1	1	ı	,
C2-chrysenes/benz[a]anthracenes		0.5		ı	ī		•	1	1	1	•	r		1	,	•
C3-chrysenes/benz[a]anthracenes		7	1	1	1		1	1	1	1	1	1	ı	,	1	1
C4-chrysenes/benz[a]anthracenes			1	ï	1	' '	1	ı	1	1	ı.	1	r	1	1	
benzo[b]Iluoranthene			1	ï	ı	0.4	i	•	•		1	ï	1	•	,	0.3
benzo[k]Iluoranthene		ı	ı	i.		1	i	1-	1	1	1	1	1	r		•
benzolalpyrene			•	1				í	ı.	1	1	•	1	t	,	•
indeno[1,2,3-cu]pyrene			1	1	•	1	1	•	ı	1	1	1	1	•	ı	,
moenz(a,n)anunacene			1	ı		ŗ	٠.	1	ı	1	1	1	1	ı	ı	ı
Sum of HACs		7		٠.	6.0	'		٠.		0.8	0.5	0.9		. 6		10
sample weight, grams :		5.00	5.01	4.98	5.03	4.96	5.04	5.12	5.03	5.12	5.10	4.31	5 01	\$ 0.5	5.03	5.03
00									,		2	100	7.0.	10.0	2.5	2.00

Table E-24. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Graham/English Bay.

	Species:							Chiton							Limpet	Sea urchin
		PTG1				PTG1				PTG1	PTG1	PTG1	PTG1	PTG1	PTG1	PTG1
ACs	Date collected:	Jul-89	Aug-89	Sep-89	Feb-90	Feb-90	Feb-90		Feb-90]	Feb-90	Fef-90	Feb-90	Feb-90	Mar-90	Feb-90	Feb-90
	Collector: Lab no.:	D&M 75	D&M 121	D&M 359	D&M 1114	D&M 1115	D&M 1116	D&M 1117	D&M 958	D&M 959	D&M 960R	D&M 965R	D&M	ADFG 1017	D&M 2458	D&M
naphthalene		а	а	В	а	а	а	В	В	B	B	В	63	сq	B	в
C1-naphthalenes		0.3	1	0.4	•	•	٠	1	1	r		٠			1	в
C2-naphthalenes		1	•	•	•	•	•	1	•	•		•	٠		-	ı
C3-naphthalenes		•	1	1	1	•	ı	•	1	•	•	1	•		0.8	1
C4-naphthalenes		•	1	•	•	•	•	,	•	•	1	1	1		,	,
acenaphthylene		1	٠	•	1	•	•	1	•	•		1	1	,	•	
acenaphthene		•	•	•	•	1	٠	•	•	ı	1		ı	į	•	1
fluorene		•	•	•	0.1	•	0.2		•	•	1	•		,	,	1
C1-fluorene		1	1	•	1	•	T		•	•	٠	•	•	,	1	ı
C2-fluorene		i	i	1	1	1	٠	1	1	•	ì	•	•	,	•	•
C3-fluorene		•	•	r	•	1	•	ı	1	•		•	•		•	,
phenanthrene		0.4	0.2	0.3	•	,	•	•	1	•	1	1	•		•	В
C1-phenanthrenes			•	•	•	•	0.1	ı	i	1		1	1		0.4	•
C2-phenanthrenes			•		•	•	1		1	1	•	1	1	1	,	,
C3-phenanthrenes			•	,	•		•	•	•	•	ï	1	ľ	1	1	1
C4-phenanthrenes		ī	1	1	r	1	i	•	1	1	•	1	•	1	•	
dibenzothiophene		1	•	•	•	•	•	•	•	•	,	•		,	•	1
C1-dibenzothiophenes		ī	ı.	ı	1	í.	1		1	1		•	1		•	ı
C2-dibenzothiophenes		•	•	•	t	1	•	•		ı	ı	ī.	1	,	1	1
C3-dibenzothiophenes		' '	' (' - 1	,	1	' '		r	r	•	1	1	,	1	1
Sum of LACs		0.7	0.5	0.7	0.1	•	0.3		•	•	•	•	•	,	7	•
fluoranthene		1	•	•		r	0.1	0.5	1	ï	1	1	•		١.	,
pyrene			1	1	•	•	0.5	0.4	ı	ı	1	•	1		1	1
C1-fluoranthenes/pyrenes		1	1	1		í	•	•	1		1	•	•		•	ı
benz[a]anthracene		r	•		1	•	•	1		ı	ī	•	1		•	
chrysene		r		•	•	•	1	•		•			1		1	,
C1-chrysenes/benz[a]anthracenes		r	1	1	•	1	•	•		1	1	1	·		1	ı
C2-chrysenes/benz[a]anthracenes				ı	1	ı	•	1	1	1	1	1	•		1	ı
C3-chrysenes/benz[a]anthracenes		r	t	ı		•	•	ř		•	1		•		•	1
C4-cnrysenes/benz[a]anunacenes		•		1	•	1	1	ı	•	1	•	r	•	,	'	
benzo[b]fluoranthene		1	1	1	1		•	•	1	•	1	•	•		•	,
benzolkJiluorantnene		•		•	•	1	•	1	ı	•	•	•	•		1	1
benzolalpyrene				,		1 -	1	i	1	•		•	•		1	ı
indeno[1,2,3-cd]pyrene				•	•	i	•		1	•	,	•	1	,	•	,
dibenz[a,h]anthracene		•	1	,	1	•	1	1	,	•	1	•	•		•	1
Sum of HACs		٠.	٠.	٠.		٠.	0.3	6.0					٠.		• •	
sample weight, grams:		5.19	5.12	5.09	5.02	5.00	5.00	5.01	5.06	5.08	5.01	5.01	5.05	5.03	5.03	5.03
2																

Table E-25. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Graham/English Bay.

	Species:				Museel	امه				I ittlemed	Ittlened Jonet noved		900	Cod shalled alam		1
										clam	penil-libed		301	Suched C	alli	
	Site:	PTG4			PTG4	PTG4	PTG4	PTG4	PTG4	PTG4	PTG4	PTG4	PTG4	PTG4	PTG4	PTG4
ACs	Date Collected: Jul-89	Jul-89	Aug-89	Aug-89	Aug-89	Mar-90	Mar-90]	Mar-90	Mar-90	Mar-90		_	Mar-90	Mar-90		Mar-90
	Collector: Lab no.:	D&M 46	D&M 117	D&M 118	D&M 119	D&M 900R	D&M 905R	D&M 901	D&M 902	D&M 934	D&M	D&M 1008	D&M 1118	D&M 935		D&M 957
naphthalene		ದ	ಣ	63	B	g	в	а	R	e	e			6	6	2
C1-naphthalenes		•	0.2	0.3	0.00	0.2	,	•						,	-	-
C2-naphthalenes		•	•	,	ı		•	í	,	1	1	,	,	,	0.07	0.08
C3-naphthalenes		•	•	•	•	1	•		,	,	,	•		1	,	,
C4-naphthalenes		1	,	•	٠	,	1		,	,	í	1	,	•		,
acenaphthylene		ť	•	i	•		ì	1			,	'	,		•	,
acenaphthene		1		1	,	•		ı	,	,	0.1	,	•	•	90.0	,
fluorene		•	0.1	•	•		,	•	,		0.2	•	0.2	1	0.4	0.2
C1-fluorene		L	1	•	•	1	•	i	,		ı	•	,		•	
C2-fluorene		٠		ï	•	•	i	•	i	,	1	•	•	,	•	
C3-fluorene		1	•	,		1		•	1	i	ı	'	1	٠	•	
phenanthrene		7	4	3	7	7	2	_	_	-	7	7	2	0.7	3	3
C1-phenanthrenes		•	0.5	0.3	•		•	1	i		0.5	•	0.4		1	9.0
CZ-phenanthrenes		1	0.00	0.1	1		r	1	,	ı	0.7	•	0.1	•	0.3	0.2
C3-phenanthrenes		í				,			,	,	0.5	•	1	1	•	•
diberrathionhene		•	' -	•				1	,	ı	, 0	•	1 1	1		
C1-dibenzothionhenes			1.0					C.	ı		0.05	•	0.05	1	0.5	0.1
C2-dibenzothiophenes			,	,	,	. ,		1- 1	. ,			r	1	ı	0.03	, 000
C3-dibenzothiophenes		,		1		٠	·	1	,			'			0.03	00.0
Sum of LACs		7	2	4	7	7	7	1	1	1	4	7	3	0.7	9	5
fluoranthene		0.07	9	4	2	3	3	2	1	9	ς.	7	7	5	6	∞
pyrene		0.1	7	7	0.5	-	6.0	0.3	0.1	7	=	3	4	7	2	4
C1-morannenes/pyrenes henzfalanthracene			' '	' -		' -		r	ı		~ ~	•	0.8	•	- 0	9.0
chrysene			0.0		0 3	0.0	, ,	0.4	, 0	7 6	٧ ج	' '	4.0		0.7	4.0
C1-chrysenes/benz[a]anthracenes		٠	'			. '	,	. '		, ,	t 0	0.0	0.0		-	6.0
C2-chrysenes/benz[a]anthracenes		1	ì		,	,	r		,	,			•			
C3-chrysenes/benz[a]anthracenes		i	•	·		ı	r	1	,		ì	•		,	٠	٠
C4-chrysenes/benz[a]anthracenes		•	•	•	•	•	r	•	,		,	1	1	1	•	,
benzo[b]fluoranthene		ı	-	0.4	0.2	9.0	0.5	0.3	,	6.0	7	•	0.2		0.5	0.3
benzo[k]fluoranthene		•	9.0	0.1	,	0.2	1	1	,	0.2	0.8	,	0.1	1	0.1	0.2
benzolalpyrene		1			r.		1	r	·	0.3	0.5	•	1	ı	0.03	0.03
indeno[1,2,3-cd]pyrene				1		i i	ı	ı		ı.	0.04	1	1	•	1	•
henzolahilaendene							,		ı		' '	•			•	,
Sum of HACs		0.2	12	, 0	່ ຕ	' 9	, 4	່		. 19	0.1 2.8	10	. 1	, ,	17	. 41
sample weight, grams:		4.72	5 45	517	5 33	5.03	\$ 04	\$ 0.8	\$ 15	00.8	2.10	20.2	10	20.3	3	90.5
in Section of Automation			2	17:0	0.00	0.00	5.5	2.00	5.15	5.09	01.0	40.0	3.01	2.00	5.04	2.09

Table E-26. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Graham/English Bay.

	Species .	Chiton		Snail		١		Chiton		l	Ī	l	Chiton	l	
	Site :	PTG4	PTG4	PTG4	PTG8	PTG8	PTG8	PTG8	PTG8	PTG8	PTG8	PTG8/9 1	PTG8/9 PTG8/9	5TG8/9	
ACs	Date collected:		Mar-90	Jul-89						Mar-90		Mar-90	Mar-90 Mar-90	Mar-90	
	Collector: Lab no.:	D&M 964	D&M 971	D&M 683	D&M 972	D&M 973	D&M 974	D&M 975	D&M 1098	D&M 1121	D&M 1122	ADFG 1721	ADFG 1722	ADFG 1723	
naphthalene		а	а	а	а	а	а	а	а	а	а	В	а	а	
C1-naphthalenes			6.0	-	1	1		•	ı	ı	1	1	1	T.	
C2-naphthalenes		•	0.1	,	1	1		1	1	•	,	1	í	•	
C3-naphthalenes		1	ī		•	•	1	ı	1	•	,	1		ï	
C4-naphthalenes		ř	,	ı	1	•	•	•	1				1	·	
acenaphthylene		•			•	,	•	•	1	•		•	í	•	
acenaphthene		•		,		1	1	•	1			•	•	í	
fluorene		1	•		ī	1	1	1	1	i.	i	•	t		
C1-fluorene		•		,	1	•	•	•	•	í	,	•		1	
C2-fluorene		1			•	1	1	1	1	1	,	•	•		
C3-fluorene		0.0	1		1	•	•	,	1	1				' (
phenanthrene		-	-	7	,	1	•	•	i	1	1	0.4	0.4	0.7	
C1-phenanthrenes		0.09	0.5	,	•	i	•	1	•	1	i	ı			
C2-phenanthrenes		1		,	1	ı	í			ì	,	•	1	1	
C3-phenanthrenes		•	,	,	•		i	•	1	1	,	•	1	1	
C4-phenanthrenes					ï	r	ï		1	1	i	ı	1		
dibenzothiophene		•	í	ï	ř.	1	•	r	1	1	1	Ī	1	1	
C1-dibenzothiophenes		1	,	,	1	1	1	1		•	r	1	1	1	
C2-dibenzothiophenes		1		,	1	•	1	1	•	1	ì	1	•	r	
C3-dibenzothiophenes		٠,	. (, ,	ı		1	i	•	1	,		٠.	' 6	
Sum of LACs		7 .	7 0	2	•				•	•		4.0	1	7.0	
fluoranthene		0.0	8.0	0.0			1	1	1	•		'	•		
pyrene		0.3	0.0	7.0				•	ı	1		•	•		
C1-fluoranthenes/pyrenes		•	0.00									•			
benz[a]anthracene		' 0	7.0	, 0	1	•		1	1	1		•		,	
chrysene		0.09	4.0	0.0		•	•		,			•	,		
C1-chrysenes/benz[a]anthracenes		1	,		1	1	r		1	1	ı	•		1	
C2-chrysenes/benz[a]anthracenes		ı			•				1	1	ī	•			
C3-chrysenes/benz[a]anthracenes		' (ı	ı	ı	1	ï		r	1			•	1	
C4-chrysenes/benz[a]anthracenes		0.3	. ;	r	•	•	1	•	1		ı	•	•		
benzo[b]fluoranthene		0.05	0.5	ı	1	1	1	•	1	1		1	•	,	
benzo[k]fluoranthene		1	0.02		•	•	1	1	1	1	1	•	1	1	
benzo[a]pyrene					•	1	ī	•	•	•		•	1	ı	
indeno[1,2,3-cd]pyrene		r			•	•	•	•	•	•		1	•	1	
dibenz[a,h]anthracene		•		,	•	ī	1	•	1	•	t	ı	1		
benzo[ghi]perylene		٠.	90.0	' (í	1	•	•	•	•	ı	1	1	1	
Sum of HACs		-	3	6.0	•	•	1	•	'	1		'	1	•	
sample weight, grams:		5.03	5.03	5.00	5.04	5.18	5.08	5.05	5.05	5.08	5.04	5.10	5.04	5.20	
, ,		I	1	1	١		١		١						

Table E-27. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Graham/English Bay.

	species:		Chitton	uc					Chiton	no				Kelp	Ь	
	Site:	PTG9	PTG9	PTG9	PTG9	PTG10	PTG10	PTG10	PTG10 PTG10	PTG10	PTG10	PTG10	PTG10	PTG10 PTG10	PTG10	
ACs	Date collected:	Mar-90	Mar-90	Mar-90	Mar-90	Apr-90										
	Collector: Lab no.:	D&M 976	D&M 977	D&M 978	D&M 979	D&M 1244	D&M 1245	D&M 1246	D&M 1247	D&M 1248	D&M 1249	D&M 1250	D&M 1251	D&M 2570	D&M 2571	
naphthalene		а	а	а	а	В	а	а	а	а	а	В	а	В	а	
C1-naphthalenes		•	1	ī	,	1	1	1	1		1	τ	ī	10	∞	
C2-naphthalenes		1	1	1	1	1	0.7	0.7	1	0.7	1	0.9	9.0	19	6	
C3-naphthalenes		•	1	•	1	1	ľ	1	-	1	1	,	,	6	4	
C4-naphthalenes		.1	ì		1	ı		•	•	1	1		ï	1	1	
acenaphthylene		•	1	r	ı	1	9.	1	•	,	1	1	1		1	
acenaphthene		•	1	1	ı	.1	1	1	í	ı	1	1	1	1	·	
fluorene		•	•	1		1	1	1	1	1	•	1	ı	6.0	0.7	
C1-fluorene		•	i	•	1	1	•	•	ı	•	1	1	ï	,	1	
C2-fluorene		•	,	1	1	1	,	•	1	,	1	1	ī	i	Ť	
C3-fluorene		1	•	•	i	,	.1	-1	•	1	•	1	1	1	1	
phenanthrene		•	•	1	ï	1	•	٠	•	1	1	•	1	_	1	
C1-phenanthrenes		1	1	t	1	0.8	8.0	0.7	6.0	0.7	0.5	7	0.5	0.4	0.4	
C2-phenanthrenes			1	1	1	1		•	7	r	ť	1	ï	1	1	
C3-phenanthrenes		•	•	1	ţ	1	1	,	1	1	ï	,	1	1	.1	
C4-phenanthrenes		1	•	1	,	•	,		1	1	Т	ï	ī	1.	1	
dibenzothiophene		,	í	•	,	1	•	1	r	1	1	1	ī	0.4	•	
C1-dibenzothiophenes		•	ī	1	ī	J	1	i	1	1	1	1	ı			
C2-dibenzothiophenes		,	1	1	í	1	•	1	1	•	•	1	ı	1	î	
C3-dibenzothiophenes		1	1	1	ï		1 .	i ,	1	1	1	1	1	1	1	
Sum of LACs		1	•			8.0	7	-	3	-	0.5	6.0	1	41	23	
fluoranthene		1	1	1	1	0.7	1/	r	0.4	0.4	•	0.5	i	0.4	1	
pyrene		ï	r	ı	i	0.5	1	t	0.4			1	ì	1	1	
C1-fluoranthenes/pyrenes		1		1	r	0.4	1	•	0.4		•	1	,	1	i	
benz[a]anthracene		1	r	1	ı	1	1	1	•	•	•	1	,	•	•	
chrysene				í	ı	1	ſ	1	1	1	1		,		1	
C1-chrysenes/benz[a]anthracenes		1	r	1	ı	1	ı	t		•	1	•	1	1	i	
C2-chrysenes/benz[a]anunracenes		1	t	1	ı	1	í.	í	1		1	1	1	1	1	
C3-cnrysenes/benz[a]anumacenes			,	ı	ſ	•	,		1	•	1		,	'	1	
C4-chrysenes/benz[a]anthracenes				t	ı	t	ı	1	1	í	t	1		•	•	
benzolbjiluoranthene		Ē.	r	1	1	t	ı	t		ř.	1	•	,	•	i.	
benzo[k]fluoranthene		ı	ı	ï	ı	ſ	t.	í		•		T	,	1	1	
benzo[a]pyrene		1	ı	1	ı	ï	t	•		•	•	1	,	1	•	
indeno[1,2,3-cd]pyrene		ı	r	1	1	į.		t		1	1	1	,	•	1	
dibenz[a,h]anthracene		1	1	1	1	1	ı	1	1	1	T.	1		•	1	
benzo[ghi]perylene Sum of HACs						' 7		٠.	٠ -	0.4	1 1	0.5		0.4		
amora waight arome.		505	5 00	5.07	5.01	61.8	208	11.5	515	6 10	21.2	20.2	20.2	30 3	4	
sample weight, grams :			3.02	3.07	3.01	3.10	3.00	3.11	5.15	5.10	5.14	2.00	5.05	5.05	5.10	

Table E-28. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

		l	I	ı	I	ı	1				١	١	I			
	Site :	WATE	UAND	MAID!	TOTAL DE	TOTAL DE	2	in men	1						Chiton	
٧٥	Data collected:	Ini on				WINBI			WNBI			WNBI	WNBI	WNBI	WNBI	WNBI
ACS	Collector.	D&M	D&M	De-M	Apr-91	Apr-91	Apr-91	Apr-91	Apr-91	Apr-91		Apr-91	Apr-91	Jul-89	Sep-89	Apr-91
	Lab no.:	47	242	243	2776	2777	2778	2779	2800	2801R	2809R	2802	2803	D&M	360	D&M 2804
naphthalene		а	2	1	а	а	B	B	а	а	а	ಣ	а	8	В	а
C1-naphthalenes		•	16	0.3		1	1	٠	1	1	1	•	,	0.4	9.0	1
C2-naphthalenes		0.3	120	-	0.7			٠	1	•	2	1	i	0.04	0.2	,
C3-naphthalenes		24	340	14	•	1	•	1	•	,	1	0.5	,	,	3	,
C4-naphthalenes		34	260	46	1	•		•	1	•	1	ı	,	0.02	43	,
acenaphthylene		1	0.07	1	•	•		1	1		٠	,	,		•	,
acenaphthene		1	0.5	•	1		1	1	1	,	•	•	,	1	,	1
fluorene	+	•	14	0.4	ī	•		1.	1	1	•	1	,	'	0.2	1
C1-fluorene		10	88	7	•	,	•	,	1	•		1	ï	0.03	4	•
C2-fluorene		81	009	24	•	•	•	•	•		•	1	i	2	86	1
C3-fluorene		78	180	31	•	٠	1	1	1	•	1	1	1	,	17	,
phenanthrene		17	72	9	8.0	0.7	0.7	9.0	8.0		1	2	1	2	2	,
C1-phenanthrenes		140	260	63	8.0	8.0	9.0	0.5	0.7	8.0	8.0	2	-	-	38	9.0
C2-phenanthrenes		240	2400	330	-	-	1	-	-	7	2	3	7	2	380	,
C3-phenanthrenes		740	3700	630	3	-	7	-	7	3	4	9	4	3	1000	,
C4-phenanthrenes		160	086	200	6.0	0.5	9.0	•	8.0	6.0	-	2	_	0.4	310	•
dibenzothiophene		=	70	4	•	1	•	1	•	•	1	0.5	,	0.3	3	•
C1-dibenzothiophenes		100	420	48	0.4	7	•	•	0.4	0.5	0.4	9.0	9.0	0.1	25	ï
C2-dibenzothiophenes		510	2300	310	-	-	7	8.0	1	7	7	2	2	0.7	580	,
C3-dibenzothiophenes		780	3500	620	3	7	7	7	7	2	2	∞	4	0.9	1400	ı
Sum of LACs		3300	00091	2400	12	1	6	9	6	14	15	34	15	13	4000	9.0
fluoranthene		13	47	∞	9.0	0.5	0.7	0.5	0.5	0.5	0.5	2	0.7	0.04	=	i
pyrene		6	26	7	1	1	1	0.4	1	•	0.4	1	0.4	1	22	1
C1-fluoranthenes/pyrenes		89	450	9	1.	1	•	•	1	9.0	0.5	-	0.7	9.0	220	ı
benz[a]anthracene		0.7	10	7		•	•	1	1	0.1	,	•	,	•	S	1
chrysene		110	380	73	9.0	0.4	0.8	0.5	-	-	1	7	0.5	-	220	1
C1-chrysenes/benz[a]anthracenes		160	520	160	0.7	0.5	-	0.4	-	7	-	3	7	9.0	370	1
C2-chrysenes/benz[a]anthracenes		89	009	160	-	0.8	ı	0.2	0.7	7	-	3	7	-	400	
C3-chrysenes/benz[a]anthracenes		0.5	270	52	•	1	1		1	•	•	-	,	0.02	230	£
C4-chrysenes/benz[a]anthracenes			28	2	r	ï	ı	•	1	•	,	•	ı		270	•
benzo[b]fluoranthene		∞	62	15	•	t	•		1	•	•	0.4	1	1	41	1
benzo[k]fluoranthene		•	26	6.0	1	•	•	•	•	•	•	٠	,	•	3	,
benzo[a]pyrene		r	7	7	1	ı	,	•	•	•	ı	1	,	1	9	1
indeno[1,2,3-cd]pyrene		×	3		ı	•	1	•	•	,	,	٠	,	1	3	•
dibenz[a,h]anthracene		•	2	0.5	•	٠	1	•	1	1	•	1	,	•	4	•
benzo[ghi]perylene		•	17	3	1	1	1		1	•	•	•	ı	1	19	•
Sum of HACs		440	2500	550	3	7	2	2	3	9	4	13	9	3	1800	•
sample weight, grams:		4.58	4.93	5.19	5.00	5.00	4.97	5.03	5.00	5.01	5.00	4.99	5.04	5.49	4.98	5.01
						l	l			l	l	l	1	I		1

Table E-29. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species .		Chiton		Snail		l				Museal			1		
	Site:	WNBI	WNBI	WNBI	WNB1	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2
ACs	Date collected:	Apr-91	Apr-91	Apr-91	Jul-89		Mar-90	Jul-90	Jul-90	Jul-90		Apr-91	Apr-91	Apr-91		Apr-91
	Collector:	D&M 2805	D&M 2806	D&M 2807	D&M 684	D&M 888	D&M 889	D&M 1749	D&M 1750	D&M 1751	D&M 1752	D&M 2785	D&M 2786	D&M 2787	D&M 2788	D&M 2808
naphthalene		В	а	а	В	B	В	B	В	8	63	8	а	B	В	а
C1-naphthalenes	1	1	•	ı	1	0.2	1	2	-	1	1	1	1	1	0.7	1
C2-naphthalenes		1	•	1	ı	'	•	1	1	1	1	r	1		.1	
C3-naphthalenes		•	•	,	ï	•	1	•	1		•	ı	1	r	1	1
C4-naphthalenes		•	•	1	3			1	1	1	•	1	1	1	ı	1
acenaphthylene		,	,	1	•		1	1		•		T	1		·	
acenaphthene		1	1	1	1	•	•	1	1	1	1	1	•	1	•	7
fluorene		1	•	0.4	ı	'	1	1	1	1	1	1	1	1	1	-
C1-fluorene		1	r	1	0.3	•	1	ī	1	•	1	1	1	1	1	1
C2-fluorene		1	•	,	16	•	•	1	1	1	,	i	1	ī	1	٠
C3-fluorene		1		,	13	'	1	1	1	ı	1	1	1	1	1	1
phenanthrene		1	•	r.	9	0.0	-	0.8	1	1	-	0.4	0.4	0.4	0.5	∞
C1-phenanthrenes		1	•	0.4	11	_	6.0		1	1	-	1	1	1	T	4
C2-phenanthrenes		•	•		66	9	7	4	4	3	7	1	•	-	1	3
C3-phenanthrenes		1		ŗ	170	18	38	2	3	2	2	1	1	2	1	-
C4-phenanthrenes		•	•	,	40	1	12	ı	1	ı	•	•	1	1	•	•
dibenzothiophene		1	1	r	90.0	'	1	1	1	ï	1	•	1	•	•	0.8
C1-dibenzothiophenes		•	,	,	7	0.0	•	0.8	2	1	0.0	1	1	•		0.4
C2-dibenzothiophenes		1	1	1	24	=	14	1	7	6.0	3	•	•	1	1	0.8
C3-dibenzothiophenes		1	1	,	210	23	43	7	3	3	7	•	1	7	9.0	1
Sum of LACs		•	•	8.0	620	61	120	13	16	10	26	0.4	0.4	9	7	22
fluoranthene		1	1	1		9.0	7	١,	0.8	6.0	0.0	t		•	,	20
pyrene			1	4.0	7;	0.3	- (•	ì	•	١.	١.	•	1	•	- 1
C1-fluoranthenes/pyrenes		ı	1	ı	13	_	7	,		1	1	ı		ı	j	s c
benz[a]anthracene		•	•	1	0.0			' 0	1	' (٠,	(•	' '	t	n (
chrysene			•	ı	39	4 /	0 9	0.8	٠,	0.9		ı	1	4.0	r	7 0
C1-chrysenes/benz[a]anthracenes		4.0		ı	4 %	0	7.1	1	- 1	' t		1	1	•		0.8
C2-chrysenes/benz[a]anunacenes		1	•	1	38	4 4	11	1	0.7	0.7	-	,	1	•		1
C3-chrysenes/benz[a]anthracenes		1	•		10	0.3	-	r	•	t	1	1	•	1	•	1
C4-chrysenes/benz[a]anthracenes		•	'		6.0	' '	1 1	•	1			•	•	î	1.	1.
benzo[b]fluoranthene		•	•	ı	7	0.2	0.7	•	1	•	ı		1	1	i.	-
benzo[k]fluoranthene		1	1	ī	,	•	1	1	1	1		1	•	•	1	1
benzo[a]pyrene		1	1	1	,	1	1	•	•	1		L	•	•	1	1
indeno[1,2,3-cd]pyrene		1	,	ı	,	1	1		1	1	1	1	1	r	1	•
dibenz[a,h]anthracene		1	•	,		•		!	•	ı	1	1		•	t	1
benzo[ghi]perylene		. 4		. 6	0.1	. 7	36	0	, ,	' (' <	1	1	' <	1	, 02
Sum of macs						2	200	0.0	1	7	1		-	4.0	1	10
sample weight, grams:		5.05	5.02	4.99	5.14	5.14	5.01	5.01	5.06	2.06	5.02	4.99	4.98	5.02	4.98	4.78

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Table E-30. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species: Littleneck clam	eck clam							Soft-shelled clam	ed clam						
	Site:	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2	WNB2
ACs	Date collected:	Jul-89	Mar-90	Mar-90		Mar-90	Mar-90		Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90
	Collector: Lab no.:	D&M 666	D&M 1001	D&M 1002	D&M 1003	D&M 1004	D&M 903	D&M 904	D&M 926	D&M 927	D&M 990	D&M 991	D&M 992	D&M 993	D&M 994	D&M 995
naphthalene		В	а	B	B	g	B	B	83	B	В	a	В	B	B	ed
C1-naphthalenes		0.7	•	,	٠	•	0.09	1	•	•	•	1	•	1		.1
C2-naphthalenes		8.0	•	1	•	1	•		1	1	1		1	1	1	1
C3-naphthalenes		7	•		1	•	•	1	1		•	•	1	•	1	1
C4-naphthalenes		13	•	1	٠	•	•	•	•	•	•	•	1	•	•	•
acenaphthylene		,	•	•	•	•	•	•	•	•	•	•	1	,	•	•
acenaphthene			•	•		•	•	•	•	٠	r	1	•	•		•
fluorene		0.2	•	•		•		•	1	•	1	1	•			
C1-fluorene		4	•		•	•	•	1	1		í	•	•	•	•	•
C2-fluorene		19	•	1	,	1		1	ï	1	•	•	•	•	•	•
C3-fluorene		9	•	•	1	1	•	•	1	•	•	1	1	1	•	1
phenanthrene		7	0.1	1	•	1	1	0.2	1	•		•	•	•	•	•
C1-phenanthrenes		43	•	•	•	1	•	1	•	•	•	•	•	•	•	•
C2-phenanthrenes		130	4	•	7	7	0.5	-	7	7	0.3	0.5	0.3	1		•
C3-phenanthrenes		180	13	1	9	25		1	6	35	3	3	7	7	-	•
C4-phenanthrenes		45	1	•	,	1			•	•	•	•	•	,	1	•
dibenzothiophene		2	•	•	•	1	•	•	•		•	•	•	•	•	•
C1-dibenzothiophenes		27	1			r	•	•	1	•	•	•	•	•	í	ı
C2-dibenzothiophenes		120	3	3	-	S	1	•	-	7	*	•	•	•	•	
C3-dibenzothiophenes		220	17	15	9	32	•	1	∞	16	1	1	1	1	i	
Sum of LACs		830	37	18	15	69	9.0	-	20	09	3	4	7	∞	-	•
fluoranthene		4	0.2	0.2	1	•	ı	0.2	r	0.2	1	1	1	r	ï	,
pyrene		6	•	1	1	1	•	0.1	•	'		1	1	1	ı	1
C1-fluoranthenes/pyrenes		20	•	•	•	i	•	1	1		•		1	•	1	•
benz[a]anthracene		0.3	' (' (' (٠,	' (٠,	٠,	٠,	' (ί,	٠,	' (١,	1
chrysene		24	ε .	7	7	4 1	7	3	7	3	7	-	-	7	-	1
C1-chrysenes/benz[a]anthracenes		32	.n.	· 0	7 7	n o	•	' '	•	•		r	•		1	
C2-chrysenes/benz[a]anthracenes		3.5		-	0.5		1	0.0	ı	1	•	ı	í	r	ı.	
C3-chrysenes/benz[a]anthracenes				•	•	•		•	•	1	•	•	•	•	•	1
C4-chrysenes/benz[a]anthracenes			,			•	•		•	1	1	•	•	,		•
benzo[b]fluoranthene		7	1	1	ſ	1	1	0.1	1	1	•	1	•	1	1	•
benzo[k]fluoranthene		,	•	1	r	1	•	1	•	•	•	•	•	1		•
benzo[a]pyrene		1		1	1	1	•	•	•	•	•	•	•	1	1	
indeno[1,2,3-cd]pyrene			•	•	•	•	•	•	•	•	1	•	•	•	•	•
dibenz[a,h]anthracene			1	1	•	•	•	1	•	•	1	•	•	•	•	•
benzo[ghi]perylene		0.1		1 ,	٠.	1	٠,	0.1	. ,	1				'	١.	•
Sum of HACs		130	6	9	4	12	7	4	2	3	2	1	-	7	-	1
sample weight, grams:		5.06	5.00	5.03	5.01	5.01	5.06	5.14	5.10	5.16	5.00	5.03	5.16	5.03	5.11	5.02

Table E-31. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

						1 1 1 1								Marie		
	Species .	WANDS	WAID	WAID	COLVIN	WAND?		WAID	WNIDO	WAND	WAID	WAID	WAND	WINDS	WAID	WNR2
ÿ	Date collected:	In1.90	In1.90	In1.90	In1.90	Anr-01					Anr-01		Mar-90	Mar-90	Mar-90	Mar-90
	Collector:	D&M 1705	D&M	D&M 1708	D&M 1700	D&M D&M					D&M D&M		D&M	D&M	D&M D&M	D&M 086
nanhthalene	Lau IIO.	1170	8	1170	8	6107	6170	8	3	B a	B B	1007	1010	600	600	900
C1-nanhthalenes	,		1		,	1		1	1	,			1	_	9.0	0.8
C2-naphthalenes		2	2	1	1	1	,	1	1	•	,		1	2	9.0	9.0
C3-naphthalenes		1	, ,	1	•				ï	ı	,	1		24	13	80
C4-naphthalenes		1	1	1	1	ı	ľ	1	ı	1	,	1		70	71	35
acenaphthylene		0.3	0.3	t	i	1	1	•	i	1	ı	•	1	1	í	•
acenaphthene			1	1	1	ı	ì	1	1	1	,	1	1	1	1	•
fluorene		0.4	0.4	0.4	0.4		1		1	ř	,	.1	1	9.0	0.2	•
C1-fluorene		0.3	0.3	0.4	•	1	1	1	1	1	,	1	1	. 13	8	7
C2-fluorene		8.0	1	,	i	,	ı	٠	1	,	,	1	•	95	71	2
C3-fluorene		,		1	,	1	1	ı	1	•	í	1	1	88	98	2
phenanthrene		1,	ì	1	1	•	•	1	í	.1		9.0	0.4	∞	2	2
C1-phenanthrenes		6.0	1	1	0.7		·	•	1	•	,	•	,	85	84	62
C2-phenanthrenes		2	3	2	9	1	1	1		1	ı	10	4	430	510	370
C3-phenanthrenes		1	1	_	1		0.4	1			ì	42	18	950	1200	820
C4-phenanthrenes		0.1	1				1	1	•	1	ı	19	6	310	380	340
dibenzothiophene		•	1	1	•	1	A	1		•	ı	1	1	7	4	3
C1-dibenzothiophenes		0.7	0.3	0.2	0.2	1	1	-1	1	•		•	1	89	2	47
C2-dibenzothiophenes		0.0	6.0	-	6.0	1	1	1	1	1	,	6	4	510	260	400
C3-dibenzothiophenes		3	3	3	3	0.4	9.0	1	1	1	0.4	41	18	1100	1400	1000
Sum of LACs		15	12	12	12	0.4	1	•	•	•	0.4	120	53	3800	4500	3200
fluoranthene		0.5	0.5	9.0	0.4	i	0.4)	į		,	9.0	0.2	00	10	7
pyrene		0.3	0.5	0.4	0.3	•	•	•	•	•	,	0.2	1	6	6	∞ ;
C1-fluoranthenes/pyrenes		0.3	0.3	0.3	0.4	1	r	r	ı	ı	1	0.7	0.1	88	100	98
benz[a]anthracene		0.1	0.1	0.2	1	1	1	1	1	t	ı	1	1	4	3	4
chrysene		9.0	9.0	0.0	0.5	•	•	ľ	ī		ı	4	2	82	93	98
C1-chrysenes/benz[a]anthracenes		0.5	0.2	0.3	0.4	•	1		ī	•	1	6	4	210	240	220
C2-chrysenes/benz[a]anthracenes		0.4	0.1	0.2	0.2	1	ι		ı	1		10	6	270	220	250
C3-chrysenes/benz[a]anthracenes		•		1	1	1	1	1	•	1	r	1	0.2	91	150	120
C4-chrysenes/benz[a]anthracenes		0.3	0.1	•	t	•	ı		•	i.	ī	1	1	20	16	15
benzo[b]fluoranthene		0.1	0.2	0.3	0.1	í	í	1	1	1		9.0	1	17	20	17
benzo[k]fluoranthene		1	1	0.4	0.1	1	1	1	•	1	1	'	1	•	•	.1
benzo[a]pyrene		'	•	0.4	0.1		1		•	1	ı	1	1	1	•	ì
indeno[1,2,3-cd]pyrene		0.1	0.1	0.8	0.2	1	•	1	•	T			1	0.3	0.4	0.1
dibenz[a,h]anthracene		0.2	0.2	7	0.4	1		,	1	1	1	1	ï	7	2	1
benzo[ghi]perylene		0.2	0.2	0.5	0.2	•		1	ı	•	ı		1 (2.5		200
Sum of HACs		4	3	7	3	•	0.4					26	10	810	870	820
sample weight, grams:		5.29	5.00	5.00	4.99	5.03	4.98	5.03	4.99	5.02	5.03	5.00	5.00	4.99	5.03	5.04
																The same of the same of

Table E-32. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species:								Mussel							I
	Site:	WNB3						WNB3				WNB3	WNB3	WNB3	WNB3	WNB3
ACS	Date collected:	Mar-90					Apr-90	Apr-90				Apr-90	Jul-90	Jul-90	Jul-90	Jul-90
	Collector: Lab no.:	D&M 887	D&M 986	D&M 987	D&M 988	D&M 989	D&M 1539	D&M 1540	D&M 1541	D&M 1542	D&M 1543	D&M 1544	D&M 1732	D&M 1733	D&M 1734	D&M 1735
naphthalene		а	B	а	а	в	в	а	а	В	в	В	а	в	а	9
C1-naphthalenes		9.0	•	•		•	•	1	1	,			•	1	٠	S
C2-naphthalenes		0.3		•	•	1	2	1	7	0.7	-	1	7	,		12
C3-naphthalenes		6	•	1	•	1	7	-	7	7		9.0	26	9	9	47
C4-naphthalenes		41	1	1	1		2	7	S	4	1	6.0	130	09	53	130
acenaphthylene		•	•		•	•	ı	ı	ı	1	1	1	•	1	•	
acenaphthene		1	•		•	•	ï	•	1	1	1		•	,	ı	1
fluorene		1	•	1	•		9.0	ı		•		,	1	0.4	0.4	7
C1-fluorene		7	r	ı	1	ı	-	1	9.0	0.7	•	ï	12	2	2	16
C2-fluorene		70	1	1	1	,	2	4	9	2	2	_	120	62	59	120
C3-fluorene		78	•	ı	•	•	31	19	•		1	1	150	98	80	130
phenanthrene		9	0.2	•	0.5	•	3	7	7	2	7	7	9	4	4	11
C1-phenanthrenes		72	1	•	•		4	3	S	S	7	7	88	41	42	100
C2-phenanthrenes		410	∞	2	6	S	52	27	48	45	22	20	630	380	370	099
C3-phenanthrenes		890	23	17	30	15	110	25	99	89	24	23	1300	760	700	1200
C4-phenanthrenes		280	•	•	•		53	21	21	28	11	11	420	270	240	370
dibenzothiophene		3	x	1		•	9.0	0.4	9.0	0.5	•	•	2	7	-	∞
C1-dibenzothiophenes		26	1	1	•	•	9	4	7	7	3	3	72	34	34	78
C2-dibenzothiophenes		460	•	•	٠	,	49	56	43	41	16	14	009	350	350	620
C3-dibenzothiophenes		1000	•	•	•	1	160	72	93	90	34	31	1100	069	640	1100
Sum of LACs		3400	31	22	40	20	480	230	300	300	120	110	4700	2800	2600	4600
fluoranthene		∞	0.3	•	0.2	0.2	7	1	7	-	1	1	6	∞	9	6
pyrene		6	•	1	,		-	7	1	-	0.7	0.7	14	6	8	13
C1-fluoranthenes/pyrenes		88	1	1	•	1	7	S	4	2	6.0	9.0	86	52	54	96
benz[a]anthracene		3	1	1.	i	T :	9.0	0.4	0.4	0.5	_	6.0	3	2	2	4
chrysene		73	4	3	4	3	12	∞	10	10	S	4	100	99	62	110
C1-chrysenes/benz[a]anthracenes		200	r	ı	•	•	56	13	14	18	7	9	210	140	130	230
C2-chrysenes/benz[a]anthracenes		220	•	T.	•	1	23	15	13	10	9	∞	210	140	120	240
C3-chrysenes/benz[a]anthracenes		140	1	•	•	•	10	6	9	,	•	•	06	9	27	110
C4-chrysenes/benz[a]anthracenes		14	1	1				1	ı	ı	1	1	10	9	2	11
benzo[b]fluoranthene		16	0.4	0.2	0.4	0.1	7	-	-	-	0.8	8.0	17	12	11	19
benzo[k]fluoranthene		•	1		1	•	r	•	•	1	9.0	0.5	3	7	7	3
benzo[a]pyrene		•	1	•	1	•	•		•	i	ı	1	7	7	-	3
indeno[1,2,3-cd]pyrene		0.4	•	1		1	•	•	,	•	7	•	0.4	•	٠	0.5
dibenz[a,h]anthracene		7	1	1			9.0	9.0	,	1	ı	•	2	6.0	8.0	2
benzo[ghi]perylene		2	•	•	ı	1	0.5	9.0	•	0.5	•	•	9	3	4	9
Sum of HACs		780	2	3	S	3	85	56	51	47	23	22	770	200	460	860
sample weight, grams:		5.02	5.01	5.01	5.16	5.14	5.03	5.05	5.02	4.99	4.99	4.99	5.07	5.01	5.04	5.23
											l			l		I

Table E-33. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species:								Mussel				l		l	
	Site	WNR3	WNR3	WNR3	WNR3	WNR3	WNR3	WNR3	WNR3	WNR2	WNR2	WAIRS	WANDS	WAID	WAND	WANDS
ACs	Date collected:	Jul-90	Jul-90	Jul-90	Jul-90	Apr-91		Apr-91	Apr-91	Apr-91	Apr-91	Anr-91	Apr-91	Apr-91		Apr-91
	Collector: Lab no.:	D&M 1736	D&M 1737	D&M 1738	D&M 1739	D&M 2710		D&M 2712	D&M 2713	D&M 2714	D&M 2715	D&M 2716	D&M 2717	D&M 2718		D&M 2725
naphthalene		B	В	а	B	В	ed	B	В	B	В	8	В	g	В	а
C1-naphthalenes			i		1	1	1	1	1	ſ	•	•		,	ı	ı
C2-naphthalenes		1		ī	1	1	,	•	,	1	0.4	7	0.3	1	1	1
C3-naphthalenes		1	1	,		•	1		ı	.1	1	1		1		1
C4-naphthalenes		1	0.2	i	•		,	1	•	1	1	1	1	,	1	1
acenaphthylene		•	•	1	t	ı	1	•	1		•	1	•	1	1	•
acenaphthene		1	1	1	1	ı		1	,	,	1	1	1	1	,	ï
fluorene		1	.1	1		1	í	1	•		0.4	1	1	1	1	0.5
C1-fluorene	,	1	•	٠	1	í	,	1	•	•	0.5	1	1	ı	1	1
C2-fluorene		1	6.0	1	1	1	1	1	•	9.0	2	1	1	1	1	1
C3-fluorene		ī	2	0.5	1	1	1	1	1	3	4	3	3	1	0.5	1
phenanthrene		-	1	-	9.0	1		1	1	•	1	•	10	1	1	1
C1-phenanthrenes		0.5	7	1	1	0.7	-	0.8	9.0	7	7	2	1	2	-	7
C2-phenanthrenes		∞	26	13	3	-	2	2	-	7	11	∞	7	2	3	7
C3-phenanthrenes		16	09	33	11	2	2	2	2	15	27	20	16	12	7	15
C4-phenanthrenes		-	10	2	1		0.5	0.5	0.4	∞	14	12	6	2	3	11
dibenzothiophene		1	1		1	I.	1	•	1	1	1	1	1	1	1	1
C1-dibenzothiophenes		. ,	- :	0.5	•	1 .	1 .	1	Ι.,	0.7	-	-	0.8	0.5	1	9.0
C2-dibenzothiophenes		9	22	11	_ا س	-	-	8.0	-	9	1	000	9	4	3	9
C3-dibenzothiophenes		12	46	5.5	-	71	7 (7 (7 1	14	26	22	17	= :	7	20
Sum of LACs		4 4	170	91	26	7	œ ;	œ !	1	57	100	16	61	4 2	26	64
fluoranthene		0.0	0.7	0.7	0.4	0.5	9.0	0.5	9.0	0.7	8.0	-	0.8	0.7	9.0	9.0
pyrene		0.3	4.0	0.5	' (1	r	•	,	0.7	9.0	0.9	9.0	0.5	0.5	0.7
CI-moranmenes/pyrenes		7.0	7	S	7.0		' '	t	' '	5	0		3	2	-	6
Christian		٠	' <	' '	٠ -	4.0	0.7	' 0	4.0	4.0	' C		' '	' '	' (4.0
C1_chrysenes/henz[a]anthracenes		, ,	+ oc	7 0	, (6.0		6.0	00	0 0	7 1	00	n o	0 1	2 4	- 01
C2-chrysenes/benz[a]anthracenes		-	9	. 0	-	2 '	0.7	0.8	000	0 00	15	1	10	, ,	+ v	10
C3-chrysenes/benz[a]anthracenes		. 1	0.3	6.0		1	,	-) 1	4	7	2	4	. 6	0.9	4
C4-chrysenes/benz[a]anthracenes		1	1	1)	1	•	1		•	•	,	1	,	•	
benzo[b]fluoranthene		•	0.3	0.3	ï	1	T	0.4	1	8.0	1	6.0	6.0	1	9.0	1
benzo[k]fluoranthene		ı	1	1	1	1	•		ı	,	1	•	1	,	,	
benzo[a]pyrene		•	r		r	1	ı	ı	•	1	•		1	1	,	1
indeno[1,2,3-cd]pyrene		1	r	ï	1	1	•	ı	ţ	•	1	1	1	1	1	1
dibenz[a,h]anthracene		1	r	r	ï	1				1	•	0.4		ı	1	1
benzolghijperylene Sum of HACs		. 8	22	23	. 3	3	, 4	, 4	· 4	32	52	37	33	26	16	37
sample weight, grams:		5.05	5.02	5.21	5.02	4.99	4.98	4.98	5.01	4.99	5.02	5.02	4.99	5.00	5.03	5.04

Table E-34. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

The second secon																
	Species:							_	Mussel							
	Site:	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3
ACS	Collector:	D&M 2726														ADFG 2997
naphthalene		а	В	а	а	В	В	В	В	g	в	а	а	а	в	ಣ
C1-naphthalenes		•	1	•	1	1	•	•	•	•		•	r		1	
C2-naphthalenes		•	0.5	2		1	1	0.7	ī	1	0.4	1	1	-	-	ı
C3-naphthalenes		•	•	0.7	1	•	•	•	0.7	•	-	7	1	7	3	3
C4-naphthalenes		1	•	•	1	•		•	-	•	7	17	1	7	3	18
acenaphthylene		1		,	1	•	,	•	1	0.4	0.5	٠	1		1	r
acenaphthene		•	•	7	•		•	•	1	1	1	1	•	ı	•	,
fluorene		.1		2	•	•	•	1	0.4	•	•	0.7	ſ		0.4	ı
C1-fluorene		1	•	•	•		1	•	8.0	0.4	6.0	7	1	0.5	1	2
C2-fluorene		1	•	7	•	•	-	_	7	7	4	19	•	3	3	27
C3-fluorene		1	,	3	•	•	8.0	·	2	•	4	22	•	7	-	35
phenanthrene		•	-	9	1	-	-	-	0.7	9.0	0.7	7	0.5	0.7	6.0	6.0
C1-phenanthrenes		•	-	3	-	2	7	-	2	6.0	2	6	6.0	7	2	2
C2-phenanthrenes		•	4	10	6	∞	6	∞	4	3	11	9	3	∞	2	70
C3-phenanthrenes		•	∞	25	17	15	16	17	9	4	25	130	7	14	7	170
C4-phenanthrenes		•	4	24	6	6	7	10	2	-	∞	49	3	2	2	71
dibenzothiophene		•		6.0		1	•	1	•	1	1	-		1	0.4	9.0
C1-dibenzothiophenes		•	0.4	-	0.7	8.0	6.0	8.0	-	0.7	7	6	1	7	2	9
C2-dibenzothiophenes		4	3	10	9	7	7	7	4	3	12	70	3	6	9	95
C3-dibenzothiophenes		==	8	30	19	19	55	19	∞	4	29	150	7	15	%	200
Sum of LACs		15	30	120	63	63	100	99	35	21	100	550	24	99	46	700
fluoranthene		9.0	0.5	7	8.0	9.0	0.5	9.0	0.5	0.4	0.7	7	•	0.4	0.4	2
pyrene		9.0	0.4	7	0.7	0.7	9.0	9.0	' !	0.4	9.0	e ;	0.4	0.4	0.5	6
C1-fluoranthenes/pyrenes		7	-	S	e ;	3	7	3	0.7	1	4	14	0.7	2	-	91
benz[a]anthracene		' '	' (9.0	0.4	' t	0.4	' (٠,	' 0	1 \	0.5	' (' (٠,	' [
chrysene		o ,	£ .	× ;	× ;	- 0	- ;	- ;	- (0.9	0;	47	7 (7 1	7 (2 9
C1-chrysenes/benz[a]anthracenes		9 1	4 ,	13	Ξ;	6	01	01	n (7 (4 ,	55	· ·	0 1	7 (47
C2-chrysenes/benz[a]anthracenes		7	2	16	10	6.	6.	6 .	7	7	16	\$ 3	4 ,	9 (ς,	48
C3-chrysenes/benz[a]anthracenes		4	2	∞	2	4	4	4	9.0	•	∞	34	-	7	_	52
C4-chrysenes/benz[a]anthracenes		1	•	1	1	1	1	1.	•	1		6	1 -	1 1	•	0.7
benzo[b]fluoranthene		0.7	9.0	-	_	6.0	-	-	•	•	-	3	0.4	0.5	1	3
benzo[k]fluoranthene		1	•	•		1	1	1		1	ì	ı	1	1		
benzo[a]pyrene		1	•	1	1	1	Ţ	,	0.4	1	1	1	1	1	1	1
indeno[1,2,3-cd]pyrene		•	•	1	0.4	1	•	1	1	1		1	1	1	,	0.1
dibenz[a,h]anthracene		•	,	1	1	1		1	1	1	1	1	•	1		1 3
benzo[ghi]perylene		0.4 26	16	0.4 5.6	0.4 4.1	3.5	34	35	' ∞	' 9	0.4 51	200	12	18	10	0.6 160
		2	202	70.3	,	101	20.2	00.4	20	90.3	90	202	20.3	20.3	90	70 3
sample weight, grams :		5.04	5.05	5.04	3.43	4.85	5.04	4.99	2.02	2.00	2.00	2.03	2.06	20.0	2.00	2.00

Table E-35. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species:							Mussel	W.						Chiton	on
	Site:	WNB3									WNB3	WNB3	WNB3	WNB3	WNB3	WNB3
ACs	Date collected:	Aug-91	Mar-90	Apr-90												
	Lab no.:	2998	2999	3000R	3002R	3001	3008	3009	3010	3011	3012	3013	3025	3026	962	1570
naphthalene		а	а	а	а	а	а	а	а	В	а	а	а	а	а	а
C1-naphthalenes		1	1	•	1	1	1	•	i	1	1	,	1	1	1	1
C2-naphthalenes		9.0	2	9.0	0.8	7	1	1	ı	1	1	•		6.0	0.2	.1
C3-naphthalenes		3	2	1	2	2	8.0	-	1	1	1	•	2	4	•	1
C4-naphthalenes		2	-	1	9.0	2	1	2	1	1	1	1	3	7	.1	
acenaphthylene			1	ï		1	1	1	T	ŀ	•	T	1		1	1
acenaphthene		•	•	1	•	ı	•	1	1	1	1	1	•	1	1	9
fluorene		0.4	0.4	1	1	9.0	1	0.4	9.0	1	1	1		ď	1	1
C1-fluorene		2	-	6.0	0.8	0.7	0.7	-	1	0.8	0.4	1	1	7	1	,
C2-fluorene		4	2	1	7	4	-	2	t	•	1	0.4	3	4	40	•
C3-fluorene		2	1	1	6.0	1	•	0.5	1	í	1	1	3	3	24	1
phenanthrene		0.0	0.8	0.8	0.8	1	0.7	0.8	1	1	1	•	-	-	-	1
C1-phenanthrenes		7	-	-	1	7	-	7	0.7	0.0	0.4	0.8	3	3	9	•
C2-phenanthrenes		2	3	2	4	10	3	2	0.8	7	0.8	-	7	6	7	,
C3-phenanthrenes		2	3	11	11	22	7	∞	2	3	-	5	12	13	1.	1
C4-phenanthrenes		1	1	9	9	10	3	3	-	1	0.4	1	3	3	•	1
dibenzothiophene			•		1	9.0	r	1		1	1		1	0.5	1	•
C1-dibenzothiophenes		7	0.8	0.0	- '	7	- 0	7	0.5	9.0	1 (9.0	7	e ;	1 0	1
C2-dibenzothiophenes		9	. 3	2	2	12	∞ !	10	· .	4	7	3	∞ !	= !	90.0	
C3-dibenzothiophenes		∞ !	4	12	12	24	15	21	4	9	7	9	13	17	0.3	í
Sum of LACs		47	24	46	8	95	4	29	13	18	7	15	61	8 1	8 1	•
fluoranthene		0.4	0.5	9.0	0.5	0.5	0.5	0.5	1	9.0	0.4	0.4	0.7	0.7	0.3	1
pyrene		0.4	9.0	0.4	0.4	9.0	0.5	9.0	í		0.4	1	٠,	9.0	0.2	1
C1-fluoranthenes/pyrenes		•	0.8	2	2	2	1	2	•	0.4	•	í	_	_	2	T
benz[a]anthracene			•	' (' (' (' (•	1 0	,	' (' (. (0.0	•
chrysene		0.0	1	7 4	7 -	20	7 .	7 .	' '	0.8	1 .	0.0	7 .	7 (0.8	1
C1-chrysenes/benz[a]anthracenes		0.8		0 1	4 0	× 5	4 4	4 4	4.0	- (4.0	٦,	4 -	7 (8.0	1
C2-chrysenes/benz[a]anthracenes		1		- (, 0	71	0 (4 -	0.0	7	0.7	7 .	4 4	2	0.3	ı
C3-chrysenes/benz[a]anthracenes		•	•	2	3	•	7	1	r	1	-	4.0	0.0	í.		
C4-chrysenes/benz[a]anthracenes	,		1	' '	' 4' 0	' '	' '	' <	ı	•	1	1	•	, 6	1	1
Denzolo Jilluoranthene				2.5	0.0		5	4.0	r		t - 1			1 .	c	
benzo[k]fluoranthene		ř.		1	ť.			1	t	ſ	ı	1		ı		1
benzo[a]pyrene		1	•	,	1	•			1	1	1	1	ı	ı	1	1
indeno[1,2,3-cd]pyrene		1	•	1	ī	ı	1	ı	1		1	1	1		1	1
dibenz[a,h]anthracene		1.	•	1		1	t	' '	1	1	•	1	1	1	1	1
benzo[ghi]perylene Sum of HACs		, E	' 7	20	20	34	15	1.5	. 1	, rv	' ε	, 4	12	10	· ∞	' '
sample weight grams		5.04	5.00	5.04	5.06	5.01	5.04	5.00	5.06	5.01	5.01	5.00	5.18	5.03	5.01	5.00
sample weight, grams .			2.00	0.0	20:00	20.0	0.0	00.0	20.0	0.0	10.0	2000	01.0		70.0	2000

Table E-36. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species:								Chiton							
ACs	Site: Date collected:	WNB3 Apr-90	WNB3 Apr-90	WNB3 Apr-90	WNB3 Apr-90	WNB3 Apr-90	WNB3 Jul-90	WNB3 Jul-90	WNB3 Jul-90	WNB3 Jul-90	WNB3 Jul-90	WNB3 Apr-91	WNB3 Apr-91	WNB3 Apr-91	WNB3 Apr-91	WNB3 Apr-91
	Collector: Lab no.:	Ď&M 1571		D&M 1573		D&M 1575	D&M 1781	D&M 1782	D&M 1783	D&M 1784	D&M 1785	Ď&M 2696	D&M 2697	D&M 2698	D&M 2699	D&M 2700
naphthalene		а	а	а	B	я	а	а	а	а	а	а	а	а	а	а
C1-naphthalenes		•	•	,		•	7	•	7	7	3	•	•	•	•	1.
C2-naphthalenes		•	-	9.0	0.7	•	0.5	8.0	0.4	9.0	2	8.0	•	7	-	0.5
C3-naphthalenes		1	1	•	•	•	•	0.4	1	0.3	0.4	•	•	•	6.0	1
C4-naphthalenes		1	•	1	1	. 1	,	,	1	•	1	1	1	1	1	
acenaphthylene	,	•			1	,	•	•	•	1,	1	•		•	1	•
acenaphthene		•	•		•	,	1	,		•	1	í	-1	1	ı	
fluorene		•	•	1	,	٠	•	0.3		0.3	0.3	1		•	•	1
C1-fluorene		•	•	1	1	,	r	0.3	0.3	0.3	0.2	, 1	1	1	1	•
C2-fluorene		•	•	•	-1		•	•	•	.'	1	1	•	•	2	•
C3-fluorene		•	1	•		•	ï		•	•	•	•		•	7	1
phenanthrene		•		•		•		•	•	•		0.7	9.0	0.7	0.7	1
C1-phenanthrenes		•		•	1	•	0.2	•	0.5	0.2	0.7	0.5	0.5	0.8	8.0	0.5
C2-phenanthrenes		•	•			•	0.2	1	•	0.8	0.4	0.4	0.8	9.0	6.0	•
C3-phenanthrenes		•	•	•	•	,	•	1	•	1	0.2	•	1	1	0.5	0.5
C4-phenanthrenes		•	,	1	•	•	•	•	•	•	•		0.4	1	•	•
dibenzothiophene		1	•	1	•	,	•		•		0.2		•	•	•	1
C1-dibenzothiophenes			•	!	•	•	0.5	8.0	0.2	•	9.0	1	•		0.4	1
C2-dibenzothiophenes		•	1	1	•		•	.1	•	1	•	•	9.0	,	1	1
C3-dibenzothiophenes		1	•	•	•	•	•	•	1	1	0.3	1	•	•	•	1
Sum of LACs		•	1	9.0	0.7	•	3	3	3	4	∞	7	4	S	10	7
fluoranthene		0.8	Ĭ.	1	1	•	r	•	•	1	1	•		1	1	1
pyrene		1	•	ï			1	•	•	1	•		١,	•	' '	•
C1-fluoranthenes/pyrenes		•	•	1	•	•	' (' (t	' .	1	,	3		0.5	1
benz[a]anthracene		•	' '	' 6	' (ı	0.7	0.7	1	0.1	1	•	' '	' t	•	
chrysene			0.0	0.8	0.0	1	٠,-	1	' -		' -	1	n v	. 0	1	
C1-chrysenes/benz[a]anunacenes			,	•			0.0		0.1		0.1		v	t. C		,
C2-cin yenes/benz[a]anthracenes		' '					1.0				1	. (9	1	0.5	1
C4-chrysenes/benz[a]anthracenes		•	1	1	ı	,	•	.1		1	1	•	9.0		•	ı
benzolblfluoranthene			1	1	ı	•		, 1		1		•	9.0	1		
benzo[k]fluoranthene		•	•	1	•	•		•	•	•	•	•	1	1	1	
benzo[a]pyrene		•	•	1		•	1	•		1	1	1	1	•	•	1
indeno[1,2,3-cd]pyrene		1	1	•	•	•	•	1	•	1		1			•	•
dibenz[a,h]anthracene		•	•	1	•	•	1	1	•	1	1	!		ı	1	'
benzo[ghi]perylene Sum of HACs		. 8.0	9.0	. 8.0	9.0	٠.	0.5	0.2	0.1	0.1	0.1		0.0 7.0	٠ 🗖	' 7	•
. Description of the second		8.08	5 03	204	505	2 00	5.00	5 04	5.05	5 13	\$ 0.8	5 01	5.01	\$ 0.2	5.02	\$ 0.8
sample weight, grains .		00.0	1	10.0	50.0	00.0	30.0	10.0	0.00	0.10	00.0	10.0	10.0	20.0	20.0	00.0

Table E-37. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

		Acres								:			1	1		
	species:				Chiton	ou				Snail			Mussel	sel		
	Site:	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB3	WNB4	WNB4	WNB4	WNB4	WNB4	WNB4
ACs	Date collected:	Apr-91	Apr-91	Apr-91	Aug-91	Aug-91	Aug-91	Aug-91	Aug-91	Mar-90	Apr-90	Apr-90	Apr-90	Apr-90	Jul-90	Jul-90
	Collector:	D&M 2701	D&M 2702						ADFG 3017	D&M 1005	D&M 1551	D&M 1552	D&M 1553	D&M 1554	D&M 1740	D&M 1741
naphthalene		В	а	8	8	B	ಣ	R	es	В	g	ಣ	В	В	8	а
C1-naphthalenes		1	•	,	1	,	1	•	1	.1	,	9	.1	1	·	1
C2-naphthalenes		0.7	0.8	0.7	ı	1	1	1	ì	,	0.5	1	_	,	1	1
C3-naphthalenes		1	0.8	0.4	1	•	1		,	ı	•	,	1	,	1	1
C4-naphthalenes		.1	•	1	1	•		1	1	,		,	1	1	ı	1
acenaphthylene					•	1	ı	•	1	ī	1		•	•	1	1
acenaphthene		1	E	T.	1.	•	1	ı	,	ı	1	1		1	ī	1
fluorene		1	•	,	1	1	1)	1	1	1	1	1	1		1
C1-fluorene		.1	1	1	1	1	1	1	1	1	1	-1	1	1	1	1
C2-fluorene		1	,	,	1	1	1	1	1	1	1	1	1	•	1	1
C3-fluorene		1	,	1	ı	1	ī	1	1	,	1	1	•	1	•	•
phenanthrene		1	1	į)		1	i	,	1	1	2	2	•	0.7	9.0
C1-phenanthrenes		0.4	9.0	0.5	,	1		1	,	8.0	1	1	1	6.0	1	1
C2-phenanthrenes		1	1	ī	1	1	•	•	ı	37	2	9	2	S	2	8.0
C3-phenanthrenes		,	•	í	1	ı	1	1	1	130	7	9	9	2	4	3
C4-phenanthrenes		ı		1	1	1	ı	1	i	39	-	6.0	0.7	0.7	•	1
dibenzothiophene		1	1	1	ī	1	1	1	ì	ï	1	1	1	1	t	•
C1-dibenzothiophenes		1	1	1	1	1		1	ı	i	0.8	-	9.0	0.5	1	1
C2-dibenzothiophenes		1	1	1	1	T.	•	1	1	31	2	4	4	3	-	9.0
C3-dibenzothiophenes		1	1 ,	8.0	1	1	1	1	1	140	∞ ,	∞	6	7	3	2
Sum of LACs		1	7	7	•		•	•		380	78	29	29	22	11	7
fluoranthene		1	0.4	0.5	1	0.4	ı	í	i	1	•		1	1	0.2	0.2
pyrene		•	t	ı	1		1	1	ı	0.1		1	1 1	1	1	1
C1-fluoranthenes/pyrenes		1	t	ı	1	1	ı	•	1	7	0.4	ı	0.0	,	•	1
benz[a]anthracene			ľ		1	r		1	ı	, ;	٠,	' (٠.	٠.	' '	' (
chrysene			T	1	1	1	1	•	ı,	77	7 (7 (٠.	0.0	0.0
C1-chrysenes/benz[a]anurracenes		1	ı	' 0	1	1	1	•	,	57	7 0	7 4	- 4	- O	0.7	0.4
C2-chrysenes/benz[a]anunracenes		•	1	4.0	1	1	1	1		3 4	0.0	0.0	0.3	0.0	0.3	1
C3-chrysenes/benz[a]anthracenes		•		•	1	1	1		1	0		1	1	ı	1	1
C4-chrysenes/benz[a]anthracenes		•	1	ř.		1	,		1	, ,	1	1		ı	1	1
benzo[b]fluoranthene		•	r	1	1	1	1	1	1	0.3	1	•	•		1	r.
benzo[k]fluoranthene		•	i	1	1	1	1	1	1	,	1	•	1	1	r	1
benzo[a]pyrene		•		1	1	1	1	•	1	ı	ř.	1	ı	1	1	1
indeno[1,2,3-cd]pyrene		1	1	•	1	ı	1	1	1		1	1	1	ı		ı
dibenz[a,h]anthracene		•	1	1	1	•	1	1	ı	r	•	r	t	1	ı	t
benzolghi]perylene Sum of HACs			0.4	0.9	٠.	0.4	٠.	' '	-	7.5	. 8	, 4	3	3	. 2	. 1
sample weight, grams:		5.01	4.99	5.01	5.02	5.09	5.01	5.00	5.01	5.00	5.04	5.07	5.02	5.04	5.02	5.01

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Table E-38. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

				ľ										I	١	
	Species:	WNRA	WNRA	WNRA	WNRA	WNR4	WNRA	WNBA	WNRA	WNRA	WNRA	MNR4 WNR4		WNRA	WNR4	WNR4
ACs	Date collected:	Jul-90						Apr-91	Jul-90	Jul-90	Jul-90			Jul-90		Apr-91
	Collector: Lab no.:	D&M 1747	D&M 1748					Ď&M 2745	D&M 1786R	D&M 1800R	D&M 1801R	D&M 1792	D&M 1793	D&M 1794	D&M 1795	D&M 2740
naphthalene		а	В	g	а	В	а	а	а	а	а	а	в	а	В	а
C1-naphthalenes		1	6.0	1	•	1	•			3	2	7	7	2	4	
C2-naphthalenes		í		8.0	1	8.0	1	0.7	1	2	-	3	3	2	2	0.5
C3-naphthalenes			,		1	1	ľ	,	,	1	2	7	7	2	7	,
C4-naphthalenes		,		1	1	,		,	1	1	9.0	1		0.5	0.7	ī
acenaphthylene		•	•	•		1	•	1	ī	1	1	9	0.3	0.3	0.3	i
acenaphthene		£	1	1	•	•	•		1	•	1	0.5	1	1	1	•
fluorene		•	•	,	•	1	•		1	9.0	0.5	6.0	-	6.0	0.7	1
C1-fluorene		1	ı		1	ı	1	,	r	-	0.7	1	-	6.0	6.0	•
C2-fluorene		1	1		ī	ı	,	,		6.0	-	7	1	-	-	
C3-fluorene		1	•	,	1		,	,	•	•	•	ı	C.	1	r	
phenanthrene		0.7	-	9.0	9.0	0.7	0.7	9.0	1	1	1	2	3	2	2	ı
C1-phenanthrenes		•	0.7	9.0	9.0	9.0	0.7	9.0	0.5	7	2	2	3	2	2	9.0
C2-phenanthrenes		4	∞	1	-	-	-	_	9	10	11	10	12	10	∞	7
C3-phenanthrenes		7	4	7	7	7	-	-	7	2	S	9	9	S	9	7
C4-phenanthrenes		•	0.7	0.4	0.5	0.7	•	0.4	0.2	-	0.9	7	7	2	2	1
dibenzothiophene		•	1	1	1	ï	ı	ì	0.3	0.2	1	0.2	0.2	0.2	0.2	r
C1-dibenzothiophenes		•	-	1	i		•	,	0.3	-	-	-	0.4	-	0.7	0.4
C2-dibenzothiophenes		0.7	7	-	-	-	-	-	-	3	3	3	3	3	4	-
C3-dibenzothiophenes		7	9	7	7	7	7	7	4	∞	5	∞ 1	9	5	7	7
Sum of LACs		10	24	∞	∞	6	9	_	14	40	36	S	45	40	4	∞
fluoranthene		0.7	0.7	0.5	9.0	0.7	0.7	9.0	1	6.0	- 1	- 1	-	- !	0.0	8.0
pyrene		Į.	1		ı	ı	1	ı	1	9.0	0.7	0.7	8.0	0.7	9.0	0.4
C1-fluoranthenes/pyrenes			1	•	•		•	,	1	0.0	0.0	- ;	2	- ;	- ;	
benz[a]anthracene		1 9	' (' (' (1	0.1	0.5	0.5	0.5	0.1	0.1	1 0
chrysene		9.0	0.7	0.0	0.7	9.0	0.5	0.4	1 .	- :	- ;	2 5	_ ,	- ;	- '	9.0
C1-chrysenes/benz[a]anthracenes		•	0.5	0.5	8.0	0.5	•	0.5	4.0	8.0	9.0	0.0	- ,	0.0	0.7	' '
C2-chrysenes/benz[a]anthracenes		•	6.0	0.4	0.5	4.0		0.5	0.5	0.0	0.5	0.8		0.0	0.7	0.5
C3-chrysenes/benz[a]anthracenes		1	r.	1	í	ı	0.4			0.5	4.0	4.0	4.0	4.0	0.3	ı
C4-chrysenes/benz[a]anthracenes			•			ï	1		1	4.0	0.0	4.0	0.0	4.0	0.3	,
benzo[b]fluoranthene		•	1			•	•	,	1	0.2	0.1	0.0	0.3	0.7	0.1	
benzo[k]fluoranthene		1	T.	ı	•	•	•		1 (•	,	0.8	0.2	0.1	1	
benzo[a]pyrene		•	1	r	r	1	•		0.3		0.1	0.9	0.5	1 .		
indeno[1,2,3-cd]pyrene		1	1	1	•	1	•		1	0.1	1 (7	- •	0.4	0.5	
dibenz[a,h]anthracene		•	1	1	1	1	1		•	0.3	0.2	14		- ;	0.4	
benzo[ghi]perylene		1	•	1	1	1	1		1	0.2	0.1	3	8.0	4.0	0.5	•
Sum of HACs		1	3	7	3	7	7	2	1	7	9	34	14	∞	9	7
sample weight, grams:		5.08	5.04	5.00	4.98	4.99	5.03	4.97	5.05	5.19	5.25	5.07	5.03	5.04	5.09	4.97

Table E-39. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

	Species:	Litt	ittleneck clam	E		Macoma					Soft-	Soft-shelled clam	am			
	Site .	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNRA	WNR4
, ,	ollected.	Anr 01	Apr 01	A pr 01		Anr 01	A nr 01	A Dr. 00	A nr 00	Apr 00	A pr 00	A 25 00	A Dr. OO	A 25 00	Apr 01	A pr 01
200		D&M D&M	D&M	D&M	D&M	D&M	D&M	D&M D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M
	Lab no.:	2733R	2734R	2746	2749	2755R	2764R	1555	1556	1557	1558	1559	1724	1725	2747	2756
naphthalene		а	а	а	а	а	а	æ	В	a	а	а	а	a	а	а
C1-naphthalenes		1	t	ı	1	1	8.0	1	1		•	1	•	r	•	8.0
C2-naphthalenes		1		1	-	1	t	,	1	T	1	1	1	1	1	1
C3-naphthalenes		1	•	ı	1	1	ı	1	ı	1	1	1	1	,	1	1
C4-naphthalenes		1	1	1	,	1	ı		1	•	1	1	•	1.		1
acenaphthylene		•	•	ì	•	1	,	١	•	1	1	1	1	ī	1	•
acenaphthene		1	1		1	,	,	1	1	1	1	1	1	1	1	1
fluorene		•	•		0.4	•	,	1	1	1	•	1	1	7	•	•
C1-fluorene		1	•	,	,	,	,	•	1	•		ï	•	•	•	•
C2-fluorene		1	•		J	1	1		1		•	1			•	,
C3-fluorene		1	1	1	1	1	,		1	1	•	1	1	1	•	•
phenanthrene			•	1	1	•	,	2	ı	1	•			,	t	1
C1-phenanthrenes		0.5	9.0	9.0	1	6.0	8.0	1	1	1	8.0	1	•	•	0.7	1
C2-phenanthrenes		-	1	8.0	4	7	3	12	9	3	2	7	0.5	0.4	6.0	6.0
C3-phenanthrenes		-	-	_	10	2	S	10	7	3	00	∞	-	0.9	2	-
C4-phenanthrenes		1	1	1	4	1	r	-	0.5	1	ï	1	,	1	1	1
dibenzothiophene		1	1	1	1	1		1	1	1	1	10	•	1	1.	1
C1-dibenzothiophenes		1	1	1	9.0	1	1		1	1	8.0	-	i	•	1	1
C2-dibenzothiophenes		0.7	8.0	-	4	3	e .	2	3	7	4	2	1	1.	-	6.0
C3-dibenzothiophenes		0.0		8.0	= ;	00 (∞ ;	14	6	4	12	13			e (- 1
Sum of LACs		4 1	4 0	4	37	20	21	46	26	12	31	35	7	7	∞ !	s ;
fluoranthene		0.7	0.8	9.0		0.0	8.0	1	1	T.	7	1	ŗ	1	0.7	0.5
pyrene		0.4	0.4	1	- (0.8	9.0	1 (1 1	•	2 '	١,	í.	1	0.5	0.4
C1-fluoranthenes/pyrenes		1	•	ı	7	-	8.0	9.0	0.5	1	0.0	-	1	1	0.4	1
benz[a]anthracene		1 .		,			, ,		2	1 .	0.5	1.			1	
chrysene		0.4	0.4	9.0	2	-	_	7	r	-	7	7	0.5	0.5	0.0	0.5
C1-chrysenes/benz[a]anthracenes		1	1 1	, !	3	_	_	7	-	-	7	7	•	t	0.5	1
C2-chrysenes/benz[a]anthracenes		9.0	9.0	0.5	2	2	_	2	0.7	9.0	0.5	0.0	•		-	1
C3-chrysenes/benz[a]anthracenes		1		ı	3	1	r	T	i	.1	1		•	•	t	1
C4-chrysenes/benz[a]anthracenes		•	1	,	1	•		£	•	1	1	1	1	1	1	1
benzo[b]fluoranthene		1	•	T.	9.0	0.4	ı.	•	1	t	•	1	1	1	0.4	
benzo[k]fluoranthene		1	1	,	1	1	1	1	ı	1	1	•	•	1	t	•
benzo[a]pyrene		1	,	,	1	1		1	1	1		r	1	ľ	1	•
indeno[1,2,3-cd]pyrene		1	•	ì	'	1	r	1	1	1	ı	ı		1	r	1
dibenz[a,h]anthracene		1	1	ı	1	1	1	1	1	1	1	1	1	1	1	ī
benzo[ghi]perylene Sum of HACs		' 7	' 73	. 7	18	, ,	· K	, ,	' 4	່ ຄ	10	' 9	0.5	0.5	, 4	. 1
sample weight, grams:		5.01	5.02	4.98	5.03	5.01	5.01	5.03	5.02	5.20	5.00	5.03	5.01	5.04	4.99	4.99
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Table E-40. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Windy Bay.

								1	I	ı	1	1		I		
	Species:	Soft-shell	ed clam	Cockle	WAIDS	I AMERICA	Mussel		MAIDS	MAIDS	Littl	Littleneck clam	am WANDS	WAIDS	Macoma	
ACs	Date collected:	Apr-91		Apr-91	Apr-91			Apr-91	Apr-91	Apr-91	Apr-91			Apr-91	Apr-91	
	Collector: Lab no.:	D&M 2757		D&M 2748	D&M 2771				D&M 2775	D&M 2760	D&M 2761	D&M 2762		Ď&M 2770	Ď&M 2759	
naphthalene		а	а	а	B	a	B	а	а	а	B	а	а	B	а	
C1-naphthalenes		-	3		7	7	1	•	,	6.0	1	7	8.0	1	6.0	
C2-naphthalenes		1	2	9.0	0.5	•	1		,	4	•	-	1	ı		
C3-naphthalenes		•	1	1	1	ı	1	1	1	ı	1	ı	£	1	8.0	
C4-naphthalenes		1	,	ī	•	1	•	•	ı	1	•	•	•	ı	S	
acenaphthylene		•	,	1	•	1		1	,	1	1			ī	,	
acenaphthene		•	,			•	1	•	1	•	•	0.5	1	1	•	
fluorene		1	0.5	ı	•	ı	1	ı	ı	•	1	0.7	1	ı	ı	
C1-fluorene		1		,	1	1	i	1		•		j	1	ï	•	
C2-fluorene		1		1	0.4	ŧ	.1.	ı	1	1	ı	,	•	1	2	
C3-fluorene		r		,	1	1	1.	•	ı	•	•	1	1		3	
phenanthrene		1	7	,	8.0	0.7	9.0	0.5	9.0	•			•	,		
C1-phenanthrenes		0.4	7	0.5	9.0	6.0	0.4	1	0.7	0.8	0.7	-	0.8	-	3	
C2-phenanthrenes		0.8	-	0.5	7	4	7	-	_	0.4	7	4	7	8	31	
C3-phenanthrenes		6.0	8.0	-	3	6	3	7	7	7	7	3	3	3	99	
C4-phenanthrenes		1	1	1	6.0	2	0.5	0.5	0.5	•	1	1		0.5	12	
dibenzothiophene			,	ī	1 3	1	î	1	į	1	•		•	, 1	•)	
C1-dibenzothiophenes		•	,		0.4	1	1	1	1	0.4	1	0.4	1	0.5	.3	
C2-dibenzothiophenes		9.0	1	0.5	_	4	7	-	_	7	7	7	7	7	35	
C3-dibenzothiophenes		7	7	7	7	10	7	7	7	3	e ;	e ;	4	4	100	
Sum of LACs		9	13	s,	14	36	10	1	∞ ;	14	1	18	13	4	260	
fluoranthene		0.5	7	9.0	0.5	0.4	0.5	0.4	0.4	9.0	9.0	- 1	0.7	9.0	2	
pyrene		0.5	S	,	4.0	٠,	•	i	,	0.5	0.5	0.7	0.5	' '	<i>د</i> ، ز	
C1-fluoranthenes/pyrenes		' (7 ,	,	•	-	•	ı	,	0.7	0.7	0.8	0.7	0.5	12	
benz[a]anthracene		0.7	0.5	' ?	' '	٠,	' (' (ı	' t	' 0	' (٠,	1 +	0.6	
chrysene		•	8.0	4.0	0.0	7	0.9	0.0		0.7	0.8	0.0	- :	- ;	= ;	
C1-chrysenes/benz[a]anthracenes		ì	,	, 6	0.0	4 /	0.8	0.0	4.0	4.0	4.0	' '	0.5	0.5	9 ;	
C2-chrysenes/benz[a]anthracenes		1		6.0	-	0	0.8	0.7		0.4	0.7	0.5	0.8	9.0	13	
C3-chrysenes/benz[a]anthracenes		•	·		•	7	•	•		1	1	•	1	1		
C4-chrysenes/benz[a]anthracenes		ī	ı	,	•		1	•	,	•	r	1	i.	ı	. ,	
benzo[b]fluoranthene					•	9.0			,	,	•	1	1	ı	-	
benzo[k]fluoranthene		•	,		,	•	i	•	,	1	•		1	1	•	
benzo[a]pyrene		í		,	•	,	•			1	•	•	ı	į	•	
indeno[1,2,3-cd]pyrene		1			•	•	•	1	,	•	1	1	1	ı	i	
dibenz[a,h]anthracene		•	,		•	•	•	•	1	1	1	1	1	ı		
benzo[ghi]perylene		٠,	. ;		٠,	' '	٠,	٠,	, 6	٠,	٠,	,	•	, ,	' '	
Sum of HACs		2	15	7	3	16	3	7	8.0	3	4	4	4	3	6.2	
sample weight, grams:		5.00	5.00	4.97	5.07	5.01	5.00	5.01	5.00	5.00	5.01	5.00	5.01	5.06	4.98	

Table E-41. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Dick.

	Species:	Mussel			Litt	Littleneck clam	ш			Horse clam	clam	
	Site:	PTD1	PTD1	PTD1	PTD1	PTD1	PTD1	PTD1	PTD1	PTD1	PTD1	
ACs	Date collected:	Apr-90	Apr-90	Apr-90				Apr-90	Apr-90	Apr-90	Apr-90	
	Collector: Lab no.:	D&M 2518	D&M 2547R	D&M 2549R	D&M 2548	D&M 2555	D&M 2556	D&M 2562	D&M 2563	D&M 2473	D&M 2474	
naphthalene		в	в	а	в	в	в	а	в	В	B	
C1-naphthalenes		1	1	1	,	1	ī	•	ı	1	1	
C2-naphthalenes		6.0	_	_	_	_	0.9	-	_	2	-	
C3-naphthalenes		0.7	-	_	9.0	9.0	0.8	6.0	6.0	0.9	0.8	
C4-naphthalenes				,	1	1	1	'			'	
acenaphthylene		,	0.4	0.4	1	1		1	0.4	1	,	
acenaphthene		,	1	1	1	1		1	,	1		
fluorene			1	1	1	1	1	•		ī	1	
C1-fluorene			1	1	•	•	•	í	,	1	ı	
C2-fluorene		,	1	ì	1	1	.1	1	1	ī	1	
C3-fluorene		,	1	,	•	1	1	•	1	1	,	
phenanthrene		,	1	,	•	1	1	•	,	i	ı	
C1-phenanthrenes		0.7	0.7	9.0	0.7	9.0	0.7	9.0	8.0	8.0	9.0	
C2-phenanthrenes		-	-	-	6.0	-	-	1	8.0	1	2	
C3-phenanthrenes		7	6.0	0.7	1	0.8	0.7	0.5	0.5	9.0	2	
C4-phenanthrenes	*	0.4		1	Ļ		1	•	,	í	í	
dibenzothiophene		1	1	1	1	•	ı	1	,	1	1	
C1-dibenzothiophenes		, ,	' 0	' '	' (' 0	' '	' '	, ,	1	٠.	
C3 dihenzothionhenes		- 5	0.0	3		0.0			2.0			
Sum of LACs		- 1	9	S	4	'n	, w	N.	· v	10	1 6	
fluoranthene		0.4	9.0	0.5	0.5	0.5	0.5	9.0	9.0	0.5	9.0	
pyrene		.1	0.4	ı		0.4	í	0.4	0.4	0.4		
C1-fluoranthenes/pyrenes		1		ı	ı	1	1	ı	1	ı	0.5	
benz[a]anthracene		1	1	•	1	ř	1	1	į	1		
chrysene		' '		1	t	ı	1	1	ı	1	9.0	
C1-chrysenes/benz[a]anthracenes		9.0		1	t	ı	t	ı	į	1	0.5	
C2-chrysenes/benz[a]anthracenes		4.0	ı	1	ı	ï	ı	1		ı	0.4	4
C3-chrysenes/benz[a]antinracenes		ſ	•	l,	ř.	1		ľ	ı	1	ı	
C4-chrysenes/benz[a]anthracenes		,	,	1	í	ī	1	•	ı	1	,	
benzo[b]fluoranthene		ı	1	•	r	1	1	ı	ı,	1	í	
benzo[k]fluoranthene		1	1	1	ľ	T	E	ı	,	١.		
benzo[a]pyrene		ī	ı	1	r	1	1	•	ı	•		
indeno[1,2,3-cd]pyrene			ı	I.	1	ı	ı	(ı	ſ	í	
dibenz[a,h]anthracene		ı	•	1	i	i	ı	1	ı	'	í	
Sum of HACs		1	. 1	0.5	0.5	0.9	0.5	1	1	0.9	3	
sample weight, grams:		5.07	2.99	3.04	3.06	5.01	5.01	5.00	5.06	5.01	5.02	

Table E-42. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chugach Bay.

ACs naphthalene C1-naphthalenes C2-naphthalenes C3-naphthalenes c4-naphthalenes accenaphthylene	Site: Date collected: Collector:				CHB1			CHBI	
ACs naphthalene C1-naphthalenes C2-naphthalenes C3-naphthalenes C4-naphthalenes accenaphthylene	Date collected: Collector:							-	
naphthalene C1-naphthalenes C2-naphthalenes C3-naphthalenes C4-naphthalenes accomphthylene	. ou de l	D&M 2510	D&M 2511	D&M 2512		Apr-90 D&M 2528	Apr-90 D&M 2529	Apr-90 D&M 2541	
C1-naphthalenes C2-naphthalenes C3-naphthalenes C4-naphthalenes acenaphthylene		6		6	8	e	a	В	
C2-naphthalenes C3-naphthalenes C4-naphthalenes acenaphthylene						0.7	9.0	5	
C3-naphthalenes C4-naphthalenes acenaphthylene		-	0.7	6.0	-	; '	,		
C4-naphthalenes accepaphthylene		0	0.7	0.6	6.0	•	•	0.8	
acenaphthylene		. '	; '	;	, '	. (, '	
- Caronthian		•	•	•		1	1	0.4	
acellaplinicine		•	ī	•	,	•	ı	1	
fluorene		•	,	•		•	1	1	
C1-fluorene		•	1	1	•	٠	•	•	
C2-fluorene		•	•	1	•	,	•		
C3-fluorene		1	•	•	ı			•	
phenanthrene		•	•	•	•	9.0	0.5	•	
C1-phenanthrenes		0.5	0.4	0.4	0.4	•	,	0.5	
C2-phenanthrenes		0.5	0.5	0.4	٠	•	٠	0.5	
C3-phenanthrenes		•	•	0.5	í		٠	0.5	
C4-phenanthrenes		•	8.0	•	1	•	•	4.0	
dibenzothiophene		•	•	•	1	ı	1		
C1-dibenzothiophenes	·	•		•	•	1	•		
C2-dibenzothiophenes		•	•	•	ı	1	•		
C3-dibenzothiophenes		٠,	٠,	۰,۰	' (٠,	٠ -	' 0	
Sum of LACS		0	0	0	4	4	•	0.0	
Huoranthene				. 1	•	1		9 '	
C1-fluoranthenes/nyrenes		•	1		1	1	•	,	
benzlalanthracene		-1	•	1	•	1	1		
chrysene		•	•	1	1	Ť	•	1	
C1-chrysenes/benz[a]anthracenes		6.0	C		r	•	•	1	
C2-chrysenes/benz[a]anthracenes		• ,	5	0.5	ı.	1	,	0.4	
C3-chrysenes/benz[a]anthracenes		7	2	0.5	•	91	•	ı.	
C4-chrysenes/benz[a]anthracenes		•	•		•	•	•	•	
benzo[b]fluoranthene		r	r	1	•	•	•	ı.	
benzo[k]fluoranthene		•	ı			ı.	•		
benzo[a]pyrene			1	•	•	1	•	•	
indeno[1,2,3-cd]pyrene		•		1	ı	1	·		
dibenz[a,h]anthracene		•	•	•	•	ì			
benzo[ghi]perylene		· 6	, 4	' T	•		٠.	0.9	
sample weight, grams:		4.98	2.00	4.95	4.97	5.03	4.95	2.99	

O

Table E-43. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Chatham.

	Species .			Tittleneck clam	k clam			Muccel	leal				Chiton			
	Cita .	DTG	DTG	DTC1	DTG	DTG	DTC	DTO	DTC	DTC	DTC	DTC	DTC	DTC	DTC	DTC
Ž.	Site : Date collected:	Anr-90		Apr90		Apr-90	Apr-90	Anr-90	Anr-90	Apr-90		Apr-90				Apr-90
	Collector:	D&M		D&M		D&M	D&M	D&M	D&M	D&M		D&M				D&M
	Lab no.:	2465	2480	2481	2690	1252R	1253R	2471	2472	2467	2468	2469	2470	2542	2543	2544
naphthalene		B	B	B	а	a	B	a	е .	а	я	B	a	B	B	В
C1-naphthalenes		1	1	1	ı	1	1	1	4	i	1	•	•		1	1
C2-naphthalenes		6.0	8.0	8.0		•	1	1	3	-	-	7	-	7	2	7
C3-naphthalenes		1	1	•		1	1	-	7	-	-	-	0.5	-	-	0.7
C4-naphthalenes		1	1	,	ī	ì	1	1	0.5	•		1	•	•	1	t
acenaphthylene		ı	r	1	1	1	,		0.5	•	ı	ï	1	r	1	0.4
acenaphthene		1	ı	,	1	1	1	1		r	r	1	1	ī	1	1
fluorene		•	ı		1	r	,	1	9.0	1	,	1	1	1	1	1
C1-fluorene		1	ï	1	1	1	1	,	6.0	1	1	1	1	1	T	1
C2-fluorene		1	,	•	ı	T.	,	•	,	,	1	•	•	•	•	ĭ
C3-fluorene		1	•	1	1	1	1	1	1	1	ı	1	j	•	•	1
phenanthrene		0.0	0.7	0.8	9.0	1	1		2	•	•	•	1	ï	1	1
C1-phenanthrenes		-	0.8	0.7	,	1	-	0.7	1	0.4	0.5	0.5	0.5	1	9.0	0.7
C2-phenanthrenes		2	-	0.8	,	3	7	9.0	-		0.5	•	T.	•	í.	0.4
C3-phenanthrenes		6.0	1	1	1	0.5	0.5	1	0.4	1	1		ı	1	1	r
C4-phenanthrenes		*	•	,	ī	1	т	1	j	1	1	1	•	1	•	1
dibenzothiophene		•	à	1	1	1 1	1	,	1.	•	1	ı	•	1	•	1
C1-dibenzothiophenes		•	1	1.	1	0.5	0.4	1	•	1	•	1	1		1	•
C2-dibenzothiophenes		0.8	0.5	i		-	- ;	'	,	ī	,	1	1	ī	ı	•
C3-dibenzothiophenes		6.0				-	0.5	1	1	1	1		٠,	٠,	٠,	
Sum of LACs		00	4	3	9.0	1	S	3	16	7	3	4	7	6	4	4
fluoranthene		9.0		1	0.4	9.0	ı	0.4	9.0	,	1	1	1	0.4	0.5	0.4
pyrene		9.0	•	1	,	•		•	- 5	'	•	1			4.0	0.4
C1-fluoranthenes/pyrenes		,	,	r	1	ı	ı	1	0.7	ì	ı	ı		í.	1	1
benz[a]anthracene		•	1	•	' (í	ı	1	ı	1	į.	£	ı	ť	ı	r
chrysene		1	1	1	0.0	ı	ı	ı	ı	1	í	ı	1		t	ı.
C1-chrysenes/benz[a]anthracenes		1	ı	ı	1	ı	ı	1	,	ı	1	ı	t.		1	1
C2-chrysenes/benz[a]anthracenes		ı		1	1	t	1	•		i	1		•			1
C3-chrysenes/benz[a]anthracenes			1	ì	1	1	1	1	ı	ı	1	•	1	,		•
C4-chrysenes/benz[a]anthracenes		1	1	1	1	1	ı			1	1	1	1	1	i	1.
benzo[b]fluoranthene		1	1	•	1		ı	•	ı	ī	•	,	•	•	1	1
benzo[k]fluoranthene		1	1	•	1	1	1	•	ı	1	•	1		•	•	•
benzo[a]pyrene		1	1	1	1	1		1	ı	•	1.	1	1	•	1	1
indeno[1,2,3-cd]pyrene		1	•	1	1	1	ı	1	1	ı		•	1	•	1	•
dibenz[a,h]anthracene		1	1	1	1	1	ŗ	1	,	•		1	1	•	1	1
benzo[ghi]perylene Sum of HACs		. 1	٠.		' 1	9.0		0.4	. 4	٠.	1 1		٠.	0.4	0.9	0.8
sample weight grams		5.03	5.02	5.00	3.28	5.07	5.14	5.01	5.04	5.00	5.02	5.04	5.01	3.01	3.06	3.03
sample weight, grains .		0.00	70.0	2000	2	2:0		1	20.0	20.00	20:0	0.0	1000		20:0	20.0

Table E-44. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Chatham.

	Species .	Chiton			imnot	
	Site .	DTC	DTC2	DTC	DTC	DTC?
	Detected.		7717			
ACS	Date collected: Collector:	Apr-90 D&M	Apr-90 D&M	Apr-90 /	Apr-90 /	Apr-90 D&M
	Lab no.:	2545	2546			2579R
naphthalene		а	а	а	а	В
C1-naphthalenes		,	ı	1	1	ı
C2-naphthalenes		-	-	0.7	0.7	0.8
C3-naphthalenes		9.0	8.0	0.5	0.5	0.5
C4-naphthalenes		•	,	•	1	
acenaphthylene		•	,	1		
acenaphthene		1	,	1	1	
fluorene		ć	í	r	í	
C1-fluorene			1			
C2-fluorene		1	ı	1	1	
C3-fluorene		,		' '	' '	' '
phenanthrene		' •	' 6	0.5	0.5	0.4
CI-phenanthrenes		4.0	0.0	•		
C2-phenanthrenes			4.0	•		
C3-phenanthrenes		•	,	ı.	r	
C4-phenanthrenes			,			•
dibenzothiophene			,	ì	ı	
C1-dibenzothiophenes		1	,	1	ı	
CZ-dibenzothiophenes		•		ı		
C3-dipension of I ACs		' "		' '	' (
fluoranthene		0 4	0.4	,	,	
pyrene		. '	0.4		ı	. ,
C1-fluoranthenes/pyrenes		,	,	1	1	
benz[a]anthracene		i	,	•	1	
chrysene		•		1	•	•
C1-chrysenes/benz[a]anthracenes		,			i	
C2-chrysenes/benz[a]anthracenes		•	,	1	•	
C3-chrysenes/benz[a]anthracenes		•			r	•
C4-chrysenes/benz[a]anthracenes		•		i	•	•
benzo[b]fluoranthene		•	,	1		T
benzo[k]fluoranthene		•		•	•	•
benzo[a]pyrene		1	,	ì	•	
indeno[1,2,3-cd]pyrene		•	,	1	•	
dibenz[a,h]anthracene		1			•	
benzolghi]perylene Sum of HACs		0.4	9.0	٠.	٠.	
sample weight, grams:		3.00	3.00	5.04	5.05	5.06

Table E-45. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Point Bede.

													١		
	Species:				Chiton	uc				Limpet	et		Kelp		
	Site:	BED1	BED1	BED1	BED1	BED1	BED1	BED1	BED1	BED1	BED1	BED1	BED1	BED1	
ACs	ollected:	Apr-90					Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	
	Collector:	D&M	D&M	D&M 2516R	D&M 2519R	D&M	D&M	D&M	D&M 2527	D&M	D&M 2578	D&M	D&M 2573	D&M 2574	
naphthalene		8	8	a	a	B	8	B	a	B	a	a	g	a	
C1								70	70			9			
C1-naphthalenes		1 (' "	1 (' (,		4.0	1 .	' (, t		' (
C2-naphthalenes		0.8	0.7	9.0	0.8	_	•	ı.	1.	0.9	0.7	0.5	6.0	0.8	
C3-naphthalenes		8.0	0.5	4.0	9.0	8.0		1	,	0.7	0.4	1	1	0.5	
C4-naphthalenes		1	ı	r	1	•	1	•	,	1	ı	1	1	1	
acenaphthylene		1	•	1	1	1	1	1	į	1	,	1	1	1	
acenaphthene		•	1	1	1	,	1	1	,	,	,	1	1	1	
fliomph		,			•	.1	•	1	,		,	,	1	1	
Illuoielle C1 August		01												,	
CI-Iluorene		•		1		•		'							
C2-fluorene		,	•	•				•	,	1	,	•	•	r	
C3-fluorene		1	•	1	ı	1		•	1	1		ı	1 1	. 1	
phenanthrene	,	ı.		1	1	•	9.0	0.4	0.5	0.7	0.5	•	0.5	0.5	
C1-phenanthrenes		0.4	r	1.	1	0.4	1		,	0.4	ı	1	1	1	
C2-phenanthrenes		1	1	-1	.1	1)	1	,	1	,	1	•	1	
C3-phenanthrenes		,	1	1	1	1	1		,	•	1	'	•		
C4-phenanthrenes		•	•	•	1	1	1	•	,	1	į	•	•	,	
dibenzothionhene		1	1	,	1	•	1	1	ı	,	,	•	•	•	
C1 dibenzothionhenes		,	,)	,	,	,		,	,	,		•	•	
C1-diberzothionhones			,							,	,		,		
C2-dipenzouniopnenes						1									
C3-dipenzounopnenes		' (-	-	-	' (0	0	٠,	, (•	-	,	
Sum of LACS		4	1	1	1	4	0.0	0.0		0	4	3	1	1	
fluoranthene		ı	•	1	ı.		1	•	ı					•	
pyrene		1	1	1	,	ı		r	r		ı		•		
C1-fluoranthenes/pyrenes		1	1	ı	ı	ı	1	r	ı	1	ı	•		1	
benz[a]anthracene		1	1.	•	•	ι	í	1	ı	1	ı		1	1	
chrysene		1	1	1	1	1	1	•		1	ı	,	1	1	
C1-chrysenes/benz[a]anthracenes		1	1	1	1	1	1	1	١,	1	1	•	1	1	
C2-chrysenes/benz[a]anthracenes		1	1	1	1	1	ï	1	ì	1	1	1	1	•	
C3-chrysenes/benz[a]anthracenes		1	•	1	•	•	1	•	i	•	1	1	1	•	
C4-chrysenes/benz[a]anthracenes		1	'	1	•	1	i	1	,	ı	í	'	1	•	
benzolb]fluoranthene		.1	1	•	•		1		1	1	,		1	1	
benzo[k]fluoranthene			,		•		1	•	,	•	1	-	•	1	
benzofalpyrene		1	1	•	1	1	•	1	,	•	,	'	•	•	
indeno[1,2,3-cd]pyrene		1	•	1	1	1	•	1	ı	•	,	'	•	1	
dibenz[a,h]anthracene		7	,	1	•	1	1	•	,	•	,	'	•	.1	
benzofghilperylene		1	.1	1	•	1	1	1	ı		r	•	1	1	
Sum of HACs			•	٠	•	•	•	•		•		•	'	'	
		603	4.06	10.5	200	4 00	4 05	20.3	8 00	4 00	20.0	20.5	8 00	8 0 8	
sample weight, grams:		3.03	4.90	3.01	3.00	4.90	4.93	3.01	3.00	4.99	3.04	2.00	3.00		

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Table E-46. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kasitsna Bay.

	Chacias .	Museol	I	Butter clam	ı	l	T 3441,	Tittlened Jones		l	I	l		Horne clam	l	I
		KASI	134	KAS1	VACI	VACI	VACI	VACI	VACI	VACI	VACI	VACI	VACI	VACI	VACI	VACI
ACs	ollected:		Sep-89	Sep-89	Apr-90	Apr-90			Apr-90	Apr-90	Apr-90	_				Apr-90
	Collector:		D&M 356	D&M 361	D&M 2500	D&M 2501			D&M 2504R	D&M 2540	D&M 2564					D&M 2486
naphthalene		ea	В	В	В	ಣ	g	B	а	B	a	В	ಣ	a	a	g
C1-naphthalenes		0.3	0.3	0.4	•	•	í	•	•			1	1		1	1
C2-naphthalenes				1	1	9.0	0.4	9.0	8.0	1	6.0	8.0	0.7	8.0	0.7	8.0
C3-naphthalenes		•	,	ī	8.0	•	1	•	•	6.0	8.0	•	•	1	0.4	0.5
C4-naphthalenes		ī	1	ť	•	•	•		1	1	,	1	J	1	1	
acenaphthylene		•	i	,	1	•	ï	•	1	0.4	0.4	1	•	•	ì	1
acenaphthene		•	i	,	•	•		•	T	1	,		1	1	1	1
fluorene		i	,		•	1	1	1	1	•		1		1	1	ı
C1-fluorene		•		•	•	ï	•	1	1	•		•	1	1	ı	
C2-fluorene		1		1	•		1	•	•	1		•	•	•	•	•
C3-fluorene		1	ı		•	1	•	.1.	r	1	,	ť		•	1	1
phenanthrene		8.0	0.4	1	-	-	-	1	-	-	7			•	•	•
C1-phenanthrenes		ť		4.0	7	7	7	7	7	0.7	-	9.0	.1.		0.4	0.4
C2-phenanthrenes		•		0.4	3	3	7	3	3	0.7	6.0		1	1	T	r
C3-phenanthrenes		í	,	ı	9.0	0.5	•	·	0.5	1		1	ı	1	1	•
C4-phenanthrenes		•	1	,	r		•	•	•	•	,	ı		1	,	ı
dibenzothiophene		•	,	ı	1	•	•	•		1		1	,1	1	1	
C1-dibenzothiophenes		1	•	,	-	8.0	9.0	0.8	6.0		,		•	١	1	•
C2-dibenzothiophenes		ī	ı	,	-	7	-	-	-	0.4	9.0	•	i	1	1	r
C3-dibenzothiophenes		1	ı		0.4	-	0.8		1	1		1		1	i	1
Sum of LACs		1	0.7	71	11	11	∞	∞	6	S	_	1	0.7	0.8	7	7
fluoranthene		•		0.3	9.0	0.8	0.0	0.8	0.8	0.7	-	0.5	ı	•	1	0.4
pyrene		r	ı	60.0	0.4	9.0	0.4	0.4	0.4	í	9.0	1	1	,	•	i
C1-fluoranthenes/pyrenes		1	1	1	1	1	•	•	1	1	,	•	•	•		1
benz[a]anthracene		1	ı	i	•	•		ï	1	1		1	r	í	ı	·
chrysene		•	r	,	•	1		ì	,	•		1	•	•	r	ı
C1-chrysenes/benz[a]anthracenes			ì		'	1	•	•	•	1	1		1	T.	•	í
C2-chrysenes/benz[a]anthracenes		•	,	,	1	•		•	•	•		1	1	1	•	
C3-chrysenes/benz[a]anthracenes		,	,		1	ì	•	1	1	1	1	1	ı	•	1	r
C4-chrysenes/benz[a]anthracenes		•	,		•	•	•	1	•	•	,	1	,	•	1	
benzo[b]fluoranthene		•	ı		1	1	ī	•	•	1	,	L			•	
benzo[k]fluoranthene		•		,	1	r	ı	•	•	1	,	1	ı	1	1	r
benzo[a]pyrene		ï			1	1	•		1	•		•		r	•	
indeno[1,2,3-cd]pyrene		1		1	r	•	1	1	•	0.5		•	•	·	•	1
dibenz[a,h]anthracene		r	,		•	1	ı	ı	•	9.0	,	•	1	1	1	í
benzo[ghi]perylene		•	ı	. ;	٠,	٠,	1,		٢.	0.4			1	1		
Sum of HACs		1		9.4	-	-	-	-	-	7	2	0.5	1	'		4.0
sample weight, grams:		5.42	5.32	5.34	5.05	4.98	5.05	5.02	5.03	3.03	5.02	5.04	5.00	5.00	5.00	5.00
								l	l	l	1	١				

Table E-47. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kasitsna Bay.

	Species .		Horse clam	lam		Chiton	
	Species .	10 1 11	,	TA A C.	10 111	TA ST	
		KASI			KASI	KASI	
ACs	Date collected:	Apr-90	Apr-90		Apr-90	Sep-89	
	Collector:	D&M	D&M 2532	D&M 2533	D&M 2534	D&M 358	
naphthalene		В	es	В	8	8	
C1-naphthalenes		•	,	0.4	0.4	0.8	
C2-naphthalenes				1		,	
C3-naphthalenes			٠	-1		,	
C4-naphthalenes		1			,	1	
acenaphthylene		•	•	•		r	
acenaphthene				- 1		,	
fliorene		,		•	1	,	
C1-fliorene				,	,	,	
C2-fliorene		•	•	,	,	-1	
C3-fliomne		,	,	,			
phenanthrene		0.5	0.8	0.5	0.7	0.7	
C1-phenanthrenes		,	1	1	,	•	
C2-phenanthrenes		1	•	1	1	•	
C3-phenanthrenes		•	,	•	ī	,	
C4-phenanthrenes		1	,	i	1	1	
dibenzothiophene		1		1	,1	,	
C1-dibenzothiophenes		1	•	•	1	3	
C2-dibenzothiophenes		•	•	•	,	į	
C3-dibenzothiophenes		1	•	1	,	ı	
Sum of LACs		0.5	8.0	6.0	-	7	
fluoranthene		0.4	0.4		9.0	ı	
pyrene			ř.	•	ı	ī	
C1-fluoranthenes/pyrenes		•	ı	í	r	Ĺ	
benz[a]anthracene				•	ı.	ı	
chrysene			ı	ı			
C2 chrysenes/henz[a]anthracenes				, ,			
C2-ciny scince form [a] animacons							
C3-cnrysenes/benz[a]antinacenes			ı			,	
C4-chrysenes/benz[a]anunracenes			•	ı		ı	
benzo[b]fluoranthene		1	ı	,	ı	ı	
benzo[k]fluoranthene		ī	1	1	,	ı	
benzo[a]pyrene		1	r	1	r	1	
indeno[1,2,3-cd]pyrene		1	,	t	,	,	
dibenz[a,h]anthracene		1	1	1	ı	1	
benzo[ghi]perylene		' '		ï	' '	ı	
Sum of HACs		0.4	4.0	1	0.0		
sample weight, grams:	4	5.00	5.00	5.04	4.99	5.50	
							The second secon

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Table E-48. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Sadie Cove.

	Species:		Mussel			Litti	Littleneck clam	am			H	Horse clam				
	Site:	SADI	SADI	SAD1	SAD1	SADI	SADI	SAD1	SAD1	SADI	SADI	SADI	SADI	SAD1		
ACs	Date collected:	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Арт-90		Apr-90	Apr-90		
	Collector: Lab no.:	D&M 2487	D&M 2488R	D&M 2489R	D&M 2557	D&M 2558	D&M 2559	D&M 2560	D&M 2561	D&M 2495	D&M 2496	D&M 2497	D&M 2498	D&M 2499		
naphthalene		а	а	а	а	а	a	а	а	а	а	a	в	а		ı
C1-naphthalenes			•		•	•	•			•	•	•	•	•		
C2-naphthalenes		1	1	0.7	6.0	8.0	1	-	8.0	1	1	1	6.0	-		
C3-naphthalenes		0.4	0.8	0.4	6.0	9.0	6.0	0.8	0.7	1	1	1	1	1		
C4-naphthalenes		1	r		1	1	1	•	,	j	1	4	1	1		
acenaphthylene		•	1	,	•	ı	,	0.4	,	•		1	i	1		
acenaphthene			•	,	•	1	•	1	,	•	1	•	•	,		
fluorene		•	•	,	•	ı	•	•		1	1	1	•			
C1-fluorene		•	1	,	•		•	1	í	1	1	•	e:	1		
C2-fluorene		•	•		1	,	1	ı	ı	•	1	j	1	•		
C3-fluorene	los de la constante de la cons	1	•	1	1	,	•	•	,	ı	1	•	1			
phenanthrene			' '	, 6	' '	00	' 90	' '	, 0	ı	' 6	' '	' '	' '		
C2-phenanthrenes		9 '	2.	† ,	0.0	200	0.0	0.5	0.0		4.0	. '	0.0			
C3-phenanthrenes		1	1	,			. '	;	? .	1	;	1		,		
C4-phenanthrenes		1	•	1	1	•			,	•	1	1		1		
dibenzothiophene		•	•	,	•	Ţ	•	1	,	•	,	,	1			
C1-dibenzothiophenes		•		1	•	•	1	1		•	1	1				
C2-dibenzothiophenes		1	1	1	•	1	•	1	1	ı	1	1	1			
C3-dibenzothiophenes		• •		. (٠,	٠,	١,	٠,	. (•	٠,		٠,	٠,		
Sum of LACs		7 '	7 .	7 ?	2	ים ני		2			7 7	7	77	7		٠
Huoranthene		0.5	4.0	4.0	0.0	7.0	× ×	0.0		0.4	0.4	4.0	0.4	0.4		
C1-fluoranthenes/nyrenes						† '	t '	† '				† '				
benz[a]anthracene		4	1		ı		1	1	ı	1	1	1	,			
chrysene		•	1	1		ı	•	1	,	1		1	1	1		
C1-chrysenes/benz[a]anthracenes		•		1	1		.1)	,	1		í	•	1.		
C2-chrysenes/benz[a]anthracenes		•	1	ı	1	•	•	r		ř	r	1	1	1		
C3-chrysenes/benz[a]anthracenes			1 1					1 1			r			1		
benzolblifuoranthene			•								. 1		1	, ,		
benzo[k]fluoranthene		1	1	,	•	1	•	,			1			1		
benzo[a]pyrene			•	,	1	1	•	•	,			٠	•	•		
indeno[1,2,3-cd]pyrene		•	1.		•	•	•	ı	1	•	1	1	1	1		
dibenz[a,h]anthracene		i	•		•	•	1	1	1		•	1	1	1		
benzolghi]perylene		' 4	. 4	. 0	' 9	٠ -	4.0	-		' "		. 0				
Sum of Macs		3			2.0	1	1	1	I			0.0	7.0	•		I
sample weight, grams:		5.03	5.01	5.03	5.05	5.02	5.02	5.01	5.06	5.04	5.04	5.01	5.04	4.99		
															۱	I

Table E-49. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kodiak.

	Species .			Mussel							Rutter clam	rlam				
	Cito .	VODA	VODA	VOD2	VODA	VOD2	VOD2	VOD2	VOD2	VOD2	VODS	VOD3	VOD2	VOD2	VOD2	VOD2
Ç	Date collected:	In 80	A per 90	A per 90	A per 90	Apr 00	Aug 80	Mar 90	Mar 00	A pr 90	A pr 00	Apr 00		May 90		May 90
ACS	Date contected.	Lo-Inc	De M	The Me	or-ide	oc-idy	Co-Sny	Mal-90	Mal-90	ok-idw	ok-idw	or-ida		A PEC		A PEC
	Lab no.:	D&M 48	1844 1844	1845	1846	1853	212	1157	ADFG 1166	1862	1868	1869	1870	1649	1650	1656
naphthalene		а	а	B	а	a	В	В	В	В	В	B	а	а	B	а
C1-naphthalenes		1	9	2	3	3	1	80	12		4	2	3	9	7	6
C2-naphthalenes		4	13	5	10	7	4	47	72	2	6	6	∞	43	50	33
C3-naphthalenes		41	43	19	37	53	24	180	220	19	34	27	32	180	200	120
C4-naphthalenes		85	89	27	59	24	40	290	310	27	47	43	48	100	220	110
acenaphthylene			0.4	1	0.4	0.5	90.0	0.5	0.4	1	0.3	0.4	1	•	1	ſ
acenaphthene		1	8.0	1	0.7	0.5	0.8	3	2	4.0	9.0	8.0	0.5	2	7	2
fluorene		2	9	2	4	4	2	80	∞	7	7	2	-	9	7	9
C1-fluorene		27	15	7	15	12	00	33	33	8	7	7	7	36	41	31
C2-fluorene		110	13	4	13	12	28	140	130	2	20	9	19	87	98	55
C3-fluorene		73	36	19	36	21	8	81	16	13	6	12	10	39	83	22
phenanthrene		34	20	11	18	18	16	61	28	10	14	13	14	53	58	48
C1-phenanthrenes		140	46	26	20	4	32	160	150	25	26	24	26	110	150	120
C2-phenanthrenes		250	84	49	100	81	45	230	220	4	38	36	41	160	190	140
C3-phenanthrenes		150	72	37	95	69	22	150	140	31	19	22	21	72	78	47
C4-phenanthrenes		2	15	4	23	13	42	20	19	-	2	3	7	7	4	0.8
dibenzothiophene		14	7	3	7	7	5	9	6	3	3	2	2	12	Ξ	6
C1-dibenzothiophenes		66	33	16	37	35	99	70	69	19	17	15	14	88	88	19
C2-dibenzothiophenes		270	91	49	110	87	41	230	210	52	42	44	28	190	200	150
C3-dibenzothiophenes		230	100	52	140	110	28	180	160	46	31	36	35	110	130	78
Sum of LACs		1500	670	330	160	280	410	1900	1900	310	320	310	310	1300	1600	1000
fluoranthene		57	20	11	25	19	27	110	88	20	20	21	19	51	26	49
pyrene		25	7	4	∞	2	14	65	51	12	11	13	10	56	28	24
C1-fluoranthenes/pyrenes		14	10	9	13	6	4	33	27	∞	2	9	2	12	12	11
benz[a]anthracene		9	7	-	2	7	0.8	∞	∞	2	-	7	-	7	2	3
chrysene		19	9	4	∞	7	3	16	16	4	4	2	4	∞	00	6
C1-chrysenes/benz[a]anthracenes		r	0.7	0.3	1	1	0.04	4	4	9.0	0.5	1	1	2	-	7
C2-chrysenes/benz[a]anthracenes		1		1	1	,	1	2	-	1	1	1	1	0.5	1	1
C3-chrysenes/benz[a]anthracenes		•	1.	1	1	ı	j	1	.1	1	1	1	1	1	1	1
C4-chrysenes/benz[a]anthracenes		1		•	1	i	1	1	1	1	1	1		1	•	1
benzo[b]fluoranthene		2	-	6.0	2	-	0.7	9	4	-	-	.3	-	2	-	7
benzo[k]fluoranthene		37	1	0.8	2	1	0.5	7	3	1	9.0	0.0	9.0	2	0.7	6.0
benzo[a]pyrene		1	1	1	0.3	ì	0.1	-	-	9.0	0.5	-	0.5	0.7	0.5	9.0
indeno[1,2,3-cd]pyrene		•	1		1	ı	•	0.3	9.0	1	.1	1	1	0.5	0.5	1
dibenz[a,h]anthracene		1	1	•	1		•	1	0.2		•	1	•	•	•	0.3
benzo[ghi]perylene		160	, 4	28	9	. 4	50	0.3 250	200	49	4 4	53	41	110	0.3	100
			8 00	208	8	4 00	5 11	5.03	10.0	8	6.01	23	70	10	20.3	90
sample weight, grams:		5.31	2.08	3.00	2.00	4.98	5.11	2.07	5.21	2.00	5.01	5.32	4.94	5.01	5.03	2.08

Table E-50. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kodiak.

						ı	177.1	-		I			١			١
	species:	q	Butter claim					2	E					Chitton		
	Site:	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3	KOD3
ACs	Date collected:	Sep-90	Sep-90	Sep-90	Sep-89	Sep-89	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Aug-89	Sep-89	Apr-90	Apr-90	Apr-90
	Collector:	ADFG	ADFG	ADGG	D&M	D&M	D&M	D&M	D&M	D&M		D&M	D&M	D&M	D&M	D&M
	Lab no.:	7174	5717	7867	431	44/	1886	1887	1888	1889K	1986K	208	396	1996	1997	1998
naphthalene		es.	B	8	B	B	В	es ·	æ	æ	B	B	В	В	В	В
C1-naphthalenes		9	9	3	0.0	•	7	2	3	3	,	3	1	•	1	•
C2-naphthalenes		36	41	23	7	T	9	9	12	11	4	4	0.3	•	7	3
C3-naphthalenes		130	160		14	4	19	21	39	12	17	14	-	6.0	-	7
C4-naphthalenes		190	230	170	22	9	27	28	49	17	24	27	-	8.0	6.0	1
acenaphthylene		1	1	0.5	•	•	•	1	0.3	•	,	•	٠	,	•	•
acenaphthene		-	1	8.0	•	•	0.5	0.5	0.7	0.5	1	7	٠	,	•	,
fluorene		S	9	2	-	•	-	_	7	_	7	3	0.3	9.0	9.0	0.5
C1-fluorene		30	41	35	9	3	2	2	6	3	9	6	3	6.0	0.7	0.5
C2-fluorene		95	120	110	18	9	15	18	25	6	21	45	7	9	9	S
C3-fluorene		4	69	99	6	2	6	=	14	2	15	12	3	9	3	2
phenanthrene		28	38	32	∞	4	∞	0.3	13	1	6	14	13	3	4	S
C1-phenanthrenes		95	130	130	28	14	18	20	26	13	27	30	34	4	2	S
C2-phenanthrenes		130	170	130	42	22	33	34	43	20	35	21	14	3	S	4
C3-phenanthrenes		61	110	19	20	8	16	18	22	6	21	19	4	-	3	7
C4-phenanthrenes		12	24	6	6.0	•	3	3	3	9.0	-	2	•	1	1	1
dibenzothiophene		∞	15	10	4	7	3	4	9	7	3	3	0.5	0.5	0.4	0.3
C1-dibenzothiophenes		9	81	63	17	6	11	13	18	7	13	9	-	0.7	6.0	0.7
C2-dibenzothiophenes		140	190	130	4	24	33	38	52	23	37	11	3	-	7	-
C3-dibenzothiophenes		92	150	78	31	15	30	33	36	17	53	6	4	0.7	2	-
Sum of LACs		1200	1600	1100	270	120	240	260	370	160	260	230	06	29	36	36
fluoranthene		38	40	46	23	15	29	33	33	19	56	11	7	-	-	1
pyrene		18	18	23	=	7	14	17	16	6	13	0.4	7	8.0	8.0	0.7
C1-fluoranthenes/pyrenes		12	14	14	21	0.0	2	9	0.4	3	9	6	13	0.4	0.8	0.5
benz[a]anthracene		7	7	7	0.2	•	0.7	-	0.8	1	8.0	0.8	0.1	•	ı	1
chrysene		9	7	_	7	0.8	3	3	3	7	3	4	3	ı	0.4	6.0
C1-chrysenes/benz[a]anthracenes		-	7		1	•	1		1	C	,	ı	r	1	1	1
C2-chrysenes/benz[a]anthracenes		0.4	0.7				•	1	1	1.	,		ı	,		,
C3-chrysenes/benz[a]anthracenes		1	•	,	1	ī	1	•	1	ı	ı		r	í	•	1
C4-chrysenes/benz[a]anthracenes		1	1				1	t		1	,	1	1	1	,	•
benzo[b]fluoranthene		-	-	-	0.2	•	0.4	9.0	0.4	0.4	0.7	8.0		•		•
benzo[k]fluoranthene		1	-	-	•	•	0.5	_	0.5	0.5	-	0.5	•			1
benzo[a]pyrene		0.5	r	0.4	r	1	•	0.4	1	9.0	,	0.1	1	1		•
indeno[1,2,3-cd]pyrene		•	1		•	•	•	1	1	1		•	ı	1		•
dibenz[a,h]anthracene		•	r	1	1	•	1	ı	ı	1	ı	1		1	1	•
benzo[ghi]perylene		' 8	' 8	. 0	. 78	' '	' "	, 63	' 4	' "		' '	' 0'	٠,	٠,	٠,
Sum of HACS								70			2	1	20	4	,	,
sample weight, grams:		5.03	5.05		5.35	5.62	2.08	5.14	5.16	5.15	5.06	5.08	3.80	5.01	5.01	5.00
													١			

Table E-51. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kodiak.

		100				4			1	T total						
	species:	CIIIOII	Dungeness crap	ss cran		Butter clam	clam			Littleneck clam	k clam			Chiton	ou	
	Site:	KOD3	KOD4	KOD5	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7	KOD7
ACs	ollected:	Apr-90	Jul-89	Aug-89	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90
		D&M		D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M
	Lab no.:	1999	96	341	1905	1906	1950	1951	1901	1902	1903	1904	2000	2001	2007	2008
naphthalene		B	B	g	æ	В	B	В	B	В	B	B	В	B	В	ਲ
C1-naphthalenes		ı	0.1	0.2	1	1	7	_	1	1	1	,	•	1	•	1
C2-naphthalenes		3	,	,	0.3	1	0.4	,	٠	•	1	,	,	1	,	1
C3-naphthalenes		3		0.08	-	1	0.6			0.8	0.6	0.4	•	,	•	-
C4-nanhthalenes		6		2	())	,		,) '	; '	1	,	,	
scenarhthylene)			1				1							
acenaphuny lene		,	,	c	•							ı	•	r		ı
acenaphthene		. ,	,		•		1	ı	1	ı	r	i		r	•	i
fluorene		_ ,	ı	î	1	1	1		1	1	1		,	1	1	1
C1-fluorene		_	i	r		1	1	1	7	•	•	,	•	1	1	•
C2-fluorene		∞	,	1	0.5	í	0.3	,	•	1	ì	,	2	9.0	1	0.3
C3-fluorene		9	ı	ı	-	1	0.8	_	9.0	-	-	-	1	1	•	1
phenanthrene		9	60.0	0.3	1	-	7	_	-	1	-	1	,	1	1	
C1-phenanthrenes		9	ı		3	-	7	_	-	7	7	7	,	•	ı	0.3
C2-phenanthrenes		7		ï	2	0.4	-	0.5	0.7	2	-	1	9.0	1	f	9.0
C3-phenanthrenes		4	,	,	1	1	ı.	į	•	•	1	,	ı	1	1	1
C4-phenanthrenes		,		,	T		1	i	ı	1		r	•	t		1
dibenzothiophene		1	,	ī	1	1	1	ī	1	1	1	,	,	1	•	1
C1-dibenzothiophenes		2	1	,	0.7	1	9.0	0.4	1	9.0	0.5	,	7	1	•	1
C2-dibenzothiophenes		4	ì	1	2	i	6.0	1	ī	6.0	8.0	0.5	1	ı	1	1
C3-dibenzothiophenes		4	i	,	0.7	1	ī	,	1	1	,	,	1	1	1	1
Sum of LACs		29	0.2	9.0	12	7	11	'n	3	00	7	9	3	9.0	•	7
fluoranthene		7	1	i	1	0.8	1	1	6.0	1	1	1	1	•	1	•
pyrene		1	,	,	0.5	1	0.5	0.3	•	1	1	1	1		1	1
C1-fluoranthenes/pyrenes		9.0	1	,	1	1	1	1	•	•	1			•	i	1
benz[a]anthracene		ı	,	,	t	ï	•	ï	1		1	,		•	i	1
chrysene		8.0	r		1	1	1		1	1	•		1	•	,	•
C1-chrysenes/benz[a]anthracenes		1	,		•	1	•	ı	•	1	•	ı	•	1	ï	•
C2-chrysenes/benz[a]anthracenes		ı	ī	ı	1	•	t	ı	1	i		,	1	1	•	•
C3-chrysenes/benz[a]anthracenes		,	ī		1	1		,	1	•	í		ı	ľ	1.	•
C4-chrysenes/benz[a]anthracenes		ı	r	,	1	1	1	1	•	1	1	ı	•	•	1	•
benzo[b]fluoranthene		,	ī		1	1		ï	1	1		ţ	į	ï	ı	1
benzo[k]fluoranthene		1	,	ı	í	1	·	ı	1		1	,	1	ï	1	•
benzo[a]pyrene		1	ı		r	1	1	1	1	1	1	,		1	1	1
indeno[1,2,3-cd]pyrene		ı	,	ı	1	1	1	ı	1	1	í	,	1	T	1	•
dibenz[a,h]anthracene		í	,	ı	í	ŕ	ı	ı	1		ť	ı		1	í	1
benzo[ghi]perylene			,	r	٠,	' 0	٠,		' 6	٠,	٠,	. •	'	t	ï	•
Sum of HACS		4			7	0.8	7	-	6.0	-	1	-	'	•	1	•
sample weight, grams:		5.09	5.13	5.38	5.01	5.01	4.99	4.98	5.00	4.99	5.00	5.02	5.00	5.00	5.05	5.00
THE RESIDENCE OF THE PERSON OF						And in case of Females, Spinster,										

Table E-52. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kodiak.

	Charies .	l	Muscol	I	Dissonate and
	operes .		Deenia	-	Dungeness crap
	Site:	K	K7	K7	K7
ACs	Date collected:	Sep-90	Sep-90	Sep-90	Sep-90
	Collector: Lab no.:	ADFG 2126	ADFG 2154	ADFG 2155	ADFG 2183
naphthalene		a	а	а	e
C1-naphthalenes		•	1	ī	
C2-naphthalenes		ï	1		
C3-naphthalenes		∞	•	9	
C4-naphthalenes		∞	2	7	1
acenaphthylene		•	0.4	0.5	,
acenaphthene		0.4	0.5	0.5	
fluorene		8.0	6.0	-	
C1-fluorene		7	1	7	
C2-fluorene		3	7	4	
C3-fluorene		4	1	S	,
phenanthrene		3	3	4	,
C1-phenanthrenes		4	9	6	
C2-phenanthrenes		∞	=	17	
C3-phenanthrenes		15	∞	12	
C4-phenanthrenes		7	3	4	
dibenzothiophene		9.0	0.8	6.0	,
C1-dibenzothiophenes		7	3	9	,
C2-dibenzothiophenes		S		13	,
C3-dibenzothiophenes		= ;	= ;	21	
Sum of LACs		82	26	110	
fluoranthene		7	7	4	
pyrene		_	-	7	
C1-fluoranthenes/pyrenes		-	•	-	
benz[a]anthracene			• 1	ï	·
chrysene		0.8	0.8	_	
C1-chrysenes/benz[a]anthracenes		1	1	,	
C2-chrysenes/benz[a]anthracenes		•	1	í	·
C3-chrysenes/benz[a]anthracenes		•	•		
C4-chrysenes/benz[a]anthracenes		•	1		
benzo[b]fluoranthene		•	1	1	
benzo[k]fluoranthene		•	t	i	
benzo[a]pyrene		•	1	ı	
indeno[1,2,3-cd]pyrene		•	•	ï	,
dibenz[a,h]anthracene		•	1	,	ı
benzo[ghi]perylene		· w	•	, 0	T :
Sum of nACS		n	4	0	
sample weight, grams:		5.03	5.00	5.20	5.14

Table E-53. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chiniak.

	Species:					Mussel		1000		i		B	Butter clam	u		Littleneck clam
	Site:	CHII	CHII	CHII	CHII	CHII	CHII	CHII	CHII	CHII	CHIII	CHII	CHIII	CHIII	CHIII	CHII
ACs	Date collected:	Jul-89		May-90	May-90	May-90	May-90	Jul-90	Jul-90	Jul-90				Mar-90	Mar-90	Aug-89
	Collector:	D&M 57	ADFG 1657	ADFG 1646	ADFG 1647R	ADFG 1665R	ADFG 1648	ADFG 2151	ADFG 2152	ADFG 2153	D&M 667	D&M 413	D&M 428	ADFG 1155	ADFG 1156	D&M 246
naphthalene		B	R	R	ea	B	g	63	В	62	B	a	B	g	а	а
C1-naphthalenes		•	٠	•	•	.1	•	,	•	. 1	0.5	•	0.1	٠	,	0.2
C2-naphthalenes		•	٠	-	-	0.7	8.0	•	•		•	•	•	•		,
C3-naphthalenes		1	•	1	-	6.0	•		•	,	•	•	,	•	,	1
C4-naphthalenes		•	•			•	•		0.5	,		•	•	٠		
acenaphthylene		1	1	,	1	. •	1			7	1	•		•	,	
acenaphthene		1	1	,	-1	•	1	9.0	0.4	0.4	1	•	1	•	,	,
fluorene		1	•	٠	•		1	0.5	0.4	,	•	•	,	•		
C1-fluorene		•	•	•	1	•	•	0.7	0.7	9.0	ì	1	1	٠		•
C2-fluorene		•	•	•	•	•	•	•	•		•	•	•	•	ı	
C3-fluorene		•	•	i		•	•	í	1	,	0.1	•	•		,	
phenanthrene		•	2	1	1	. 5	1	•	•		9.0	0.2	0.5	2	,	0.4
C1-phenanthrenes		•	•	•	_	-	9.0	i			1	•	•	0.4	,	
C2-phenanthrenes		1	ı	1	-	0.5		7	5	,	ı	•	•	0.1	ı	,
C3-phenanthrenes		1	ī	1	•		•	•	t	ı	t	1	1	•	ī	•
C4-phenanthrenes		•	1	•		ı	•	•			1	,	٠	•		ř
dibenzothiophene		•	•	•	•			0.4	0.4	0.4	ï	•	•	t	i	•
C1-dibenzothiophenes		1	•	6.0	0.7	9.0	0.4	0.7	9.0	9.0	1	•	1		ī	,
C2-dibenzothiophenes		•	1	1	-	-	0.5	0.5	•	0.5	•	•	•	•	ī	
C3-dibenzothiophenes		1		٠,	1.1	0.4		1.1	1.1	,	•			•	1.	
Sum of LACs		•	7	3	7	7	6	0	2	7	1	0.5	9.0	7		9.0
fluoranthene		ř	9.0		-	1	0.4	0.7	0.7	0.7	0.1	•	0.3	-	0.7	0.3
pyrene		r	0.3	0.4	0.4	1	ï	0.5	0.5	0.5	•	•	•	0.1	0.2	
C1-fluoranthenes/pyrenes		1	•	,	•	•	•	•	1		•	•	•	•		,
benz[a]anthracene		1	•		' '	r	r	•	ï	,	,	ı	•	•		,
chrysene		•		ŕ	0.0		•	1	í	ı	ı	ı	ı	•	,	í
C1-chrysenes/benz[a]anthracenes			•			e		1	1		ı	•	•	•		·
C2-cnrysenes/benz[a]anthracenes			•	1	•	t	•		•	ı		•		•		
C3-chrysenes/benz[a]anthracenes		1	•	ı		•		•	•		•	•	•	•		
C4-chrysenes/benz[a]anthracenes		•	•	•	•	•	•		•	,		•	•	•	í	
benzo[b]fluoranthene			•	1	•	•	•	,	•	,	,	•	•	•	,	,
benzo[k]fluoranthene		1		•	•	t	1	•	•		•	,	•	•		,
benzo[a]pyrene			•	•	•	•	•	•	•	1	1	•	•		,	,
indeno[1,2,3-cd]pyrene		•	•	•	•		•	•	•	,	1.	i.	•	•		•
dibenz[a,h]anthracene			ı	1		•	•	•	•		•	1	•	'	i	
benzolghi perylene Sum of HACs			0.9	0.4	2	. 1	0.4	. 1	1	1	0.1		0.3	. 1	6.0	0.3
sample weight, grams:		5.10	5.07	5.02	5.07	5.11	5.04	5.14	4.94	4.97	5.08	5.98	5.26	5.11	5.13	4.99
2. 0			ı											1		

Table E-54. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chiniak.

	17.1		l	l	Musee	-	١	I	l	ı	l	Dutter clear	molo	I	I	
	Site: CHIL	CHIII	CHI2	CHI2	CHI2	CHIZ	CHI2	CHIZ	CHI2	CH12	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2
ACs	Date collected:	Sep-89	Jul-89		May-90	May-90		May-90	Jul-89	Aug-89	Sep-89	Sep-89	Mar-90	Mar-90 I	Mar-90 May-90 May-90 ADFG D&M D&M	Aay-90
	Lab no.:	613	58	915	2595	2596	2597	2598	899	223	415	429	1032	843	2599	2600
naphthalene		а	а	а	а	а	В	В	а	а	а	В	В	g	8	63 1
C1-naphthalenes		0.1	•	0.0	•	i	0.5	-	ı	•	1	9.0	1	•	0.4	9.0
C2-naphthalenes		,	•		•	1	•	4.0	1	•	•		0.4	•	ï	
C3-naphthalenes			ţ	1	•	1	•	r	·	•	1	1	ı		•	•
C4-naphthalenes		,	1	1	•	•	•	1	1	1	1	1	1	•	1	1
acenaphthylene		,	1	1	•	•	ī		•		1	ŗ	1	•	1	r
acenaphthene		·	•	1	•		•		1	1	1	ſ	•	1	1	ı
fluorene		,	•	1	•	•	•	,	1	•	1	1	0.2	r	1	•
C1-fluorene			•	•	•	•	1		1	1	1	•		1	1	i.
C2-fluorene			•	1	£		• •	0.4	1	1	1	1	1	r		' '
C3-fluorene		_	í	1	1	0.4	0.5	0.4	1			' '		. ,	0.4	9.0
phenanthrene		8.0	,	7	0.7	0.8		- 3	0.3	0.5	0.3	0.3	4 (-	- t	- :
C1-phenanthrenes			•	- ,	1	1	0.4	0.9		r	1	•	7 1	•	0.7	0.7
C2-phenanthrenes			1	-	•	•	•		1	1	1	1	n (•	•	
C3-phenanthrenes		ī	•	•	1	1	1		•	1	•	i	7	•	r.	,
C4-phenanthrenes			•	•	r	•			1	•		1	' '	•	,	ı
dibenzothiophene			,	' 4		•		,	•	•	•	1	0.0		ı	•
C1-dibenzothiophenes		,	•	0.0	•	•	•		•	•	'	•	7.0	•		
C2-dibenzothiophenes				0 · 0					•				0.0			
C3-dibenzothiophenes		, ,		0.0		· -	, c	. 4				0	-	-	' '	٠,
fluoranthana		40		-	0.4	0.5	0.7	-	;		'	. '	2	, 10	- 1	. –
nyrene		; '		0.8	;		;	. ,	1	, i	•	•	00	3		0.4
C1-fluoranthenes/pyrenes		,	,	•	1	•	1	,	•	•	•	•	4	,	1	•
benz[a]anthracene			•	1	1		•	,	•	. '	i	1	2	1	1	٠
chrysene		1	1	1	i		1	1	•	•	1	ī	3	•		
C1-chrysenes/benz[a]anthracenes			•	1	1	•	,	i	1	•	•	1	•	1.	•	i
C2-chrysenes/benz[a]anthracenes		1	•	•	•	•	•	,	•	1	1	1	1		1	•
C3-chrysenes/benz[a]anthracenes			1	1.	1		•	,	•	1	1	1	•	1	1	1
C4-chrysenes/benz[a]anthracenes			1	i.	ı	•	•	,	,	•	1	•	•	•	1	ı
benzo[b]fluoranthene			•	1	1	•	•	,	•	1	1		•		1	
benzo[k]fluoranthene			•	•		1		,		1	1	•		•	•	
benzo[a]pyrene			•		•	•		,	•	•			•			
indeno[1,2,3-cd]pyrene			•			•	1		,	,		•			1	
dibenz[a,h]anthracene			•	•		•	ı			•	•	•			ı	
benzo[ghi]perylene		4.0	9	' 7	. 4.0	0.5	0.7		١.		٠.	٠.	24	. 9	' -	' -
				1			3					1			00.	
sample weight, grams:		5.33	5.05	5.15	4.99	4.98	5.03	5.05	5.07	5.06	5.53	5.26	5.01	5.04	2.00	4.99

Table E-55. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chiniak.

								Ī						5		
	Species:	Butter clam	clam		Lin	Littleneck clam	E			Cockle	cle			Chiton	on	
	Site:	CHI2	CHIZ	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2	CHI2
ACs	Date collected:	May-90	May-90	Sep-89	Mar-90	May-90	May-90 May-90		Aug-89	Sep-89	Sep-89	Mar-90	Jul-89	Aug-89	Aug-89	Sep-89
	Collector:	D&M 2601	D&M 2602	D&M 614	ADFG 844	D&M 2188	D&M 2189	D&M 2190	D&M 303	D&M 612R	D&M 618R	ADFG 1031	D&M 77		D&M 344	D&M 397
naphthalene		B	а	B	а	а	а	а	а	В	в	в	а	В	а	a
C1-naphthalenes		2	0.5	0.3		3	3	3	0.2	1	0.1	ī	0.2	0.3	9.0	1
C2-naphthalenes		1	,	ı	1	4	4	4	•		,	0.2	1	,	1	•
C3-naphthalenes			i	,		3	3	2	1	1	•	,	,	•	1	
C4-naphthalenes		,	1		1	0.7	9.0	0.5		1	ı	,	1	•	1	
acenaphthylene		•	,	1	1	1	1	,	t			1	1	1	1	1
acenaphthene		1	,	1		ī	1	,	ı	,	ı	£	î	1	•	1
fluorene		í	,	1	1	1	0.4	0.4	•		1	3	1	1	1	•
C1-fluorene		•	ı	1	1	0.5	0.5	0.5	ţ	1	,	1	1	1.	1	1
C2-fluorene			ř	1	,	1	,	i	1	1	1	,	1	1	ï	1
C3-fluorene		.1.	0.4	0.3	1	1	1	,	1	0.3	•	,	1	4	•	1
phenanthrene		6.0	6.0	0.5	2	,	•	,	9.0	0.4	0.4	-	1	0.7	9.0	0.5
C1-phenanthrenes		1	0.5		,			,	ï	1	•	8.0	•	ı	í	1
C2-phenanthrenes		1	ı	1	1	-	6.0	7	1	1		_	1	ı	1	•
C3-phenanthrenes			í	1	t			r	ř	1	1	0.7	1	ì	•	1
C4-phenanthrenes		1	í	1		1	1	,	1	1	1	r	•	1.	1.	1
dibenzothiophene		1.	r	1	1	0.4	1	,	1	1	1	0.1	1	•	,	1
C1-dibenzothiophenes		•	1	1	1	0.5	-	6.0	1	•	1	0.5	,	1		
C2-dibenzothiophenes		•	1	1	1	0.5	9.0	0.7	1	1		,	1	ī	1	•
C3-dibenzothiophenes		٠,	. (١,	1.9	' '	,	, ;	' 6	' 1	' 1		٠,	٠,	٠,	
Sum of LACs		E (7		7 .	14	14	4 .	8.0	0.7	0.5	4	1 0	1	1	6.0
fluoranthene		0.8	8.0	0.1	1	1		_	0.1	i	1	ı	0.1	0.08	0.00	1
pyrene		3	,	1	1	1	0.4	ı	r	,i	1	, ,	0.04	•	•	
CI-Iluoranthenes/pyrenes		•		,	,				'			7.0			,	
benz[a]anthracene		1	,		1	•	•	į	1	1	,	4.0			•	•
chrysene						ı		,			'	0.0				ı
C1-chrysenes/benz[a]anunacenes				'				,								
C2 chrisenes/benz[a]anthracenes							' '	,			. 1	. 1		,	1	1
CA chrysenes/henz[a]anthracenes		1		,	1	,	,	,	,	1	,	,			-	
benzofblittioranthene		1	1		1	1	1	,	1		1	,	1	1	,	1
bonzo (b) fluoranthana		1		,	9			,	,			,	,	,	,	,
benzelelminene				1				,		1	,		1		,	
benzolajpyrene																
indeno[1,2,3-cd]pyrene				1	t	1		,		1	,			1		
dibenzla,njantnracene		1	ı	1	•	1	ı		1	1	,	ı	'			
benzolghi]perylene Sum of HACs		0.8	0.8	0.1	. 1	. 1	. 1	<u>.</u>	0.1			1	0.1	0.1	0.1	٠.
sample weight, grams:		5.00	5.08	5.15	5.11	5.04	5.12	5.15	5.42	5.26	5.49	5.01	5.01	5.30	5.37	5.41

Table E-56. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chiniak.

		١	١		١	I	١			ı	١	١		
	Species:			Chiton			Snail	Dungeness crab	_		Mussel			
7	Site:	CH12	CHI2	CHI2	CHI2	CHI2	CHI2	CHI3	CHI7	CHI7	CHI7	CHI7	CHI7	
ACs	ollected:	Sep-89 1	May-90]	May-90	May-90 May-90	May-90	Jul-89	Jul-89	May-90 May-90	May-90	May-90	May-90 May-90	May-90	
	Collector:	D&M 398	D&M 2603	D&M 2604	D&M 2610	D&M 2611	D&M 685	D&M 97	D&M 2612	D&M 2613R	D&M 2619R	D&M 2614	D&M 2615	
naphthalene		а	В	В	В	а	а	а	а	а	а	в	В	
C1-nanhthalenes		٠	•	•			8.0			4	_	2	2	
C2-nanhthalenes		1	1	,	,	,	2 .	,	'	. "	80	-	2	
C2 maphiniatenes					-							•	1	
C3-naphunalenes		,	•	,	-					•	1	•		
C4-naphthalenes		1	1	•	•		,		1	1		,	,	
acenaphthylene		1	1	,	•	ì		ı	ı	' '	1	1	1	
acenaphthene		r	1	1	1 ,	ı		i	•	0.5	1	,	•	
fluorene		1	•	1	0.4	,	,			0.9	•	•	•	
C1-fluorene		•	Ĺ	1	1	,		,	•	0.0	,	1.		
C2-fluorene		ı	r		1	,	i,	,	•	0.0		•	•	
C3-fluorene			1	1 1	•			, ,		' (' '	' (٠,	
phenanthrene		0.1	1	4.0	0.0	9.0	9.0	0.1	0.6	7	0.7	0.7		
C1-phenanthrenes		•	•	•	9.0	9.0			0.0	- ,	0.8	0.0	- 0	
C2-phenanthrenes		1	•	1	•	,	ı	ı	0.4	- ;	9.0	0.0	0.8	
C3-phenanthrenes		1	1	1	1	ï	,		•	0.4	0.4		•	
C4-phenanthrenes		r	ı	1	•	,	,	,	1	•		•	•	
dibenzothiophene		ï	•	1.	1	,			1	' '	1 1	•		
C1-dibenzothiophenes		ſ.		1	1	1	1		1	0.5	0.5	1 1	4.0	
C2-dibenzothiophenes		r	•		t	ı	,	1		9.0	9.0	0.7	9.0	
C3-dibenzothiophenes			1	,	١,	, ,		, ,	' '	0.4	1		٠,	
Sum of LACs		0.1	•	0.4	e .	1	1	0.1	7 7	17	v ,	9	x	
fluoranthene		r	•		0.4	4.0	,	,	4.0	0.0	0.5	0.0	0.0	
pyrene		1	1	,	1	ı			1	- 0		1	0.4	
C1-fluoranthenes/pyrenes		1		1	•	·		,	'	0.0			•	
benz[a]anthracene		1 1										1		
chrysene														
C1-chrysenes/benz[a]anthracenes									'					
C2-chiysenes/benz[a]anthmeenes					.)					,		,		
C3-cnrysenes/benz[a]anunacenes		•												
C4-Cirrysches Ochz[a]anunacenes		.)						, ,		,			,	
penzoloji noranniene		ı	ı	Ĺ	i	ı							1 0	
benzo[k]Iluoranthene		'	1		ı	ı	,				1	1	•	
benzo[a]pyrene		•	•	1		i			'	•	•	r	í	
indeno[1,2,3-cd]pyrene		1	•	1	•	,	,		'		•	1	1	
dibenz[a,h]anthracene		1	1	1	1	1			!	i	1	•	1	
benzo[ghi]perylene		•	٠.		0.4	0.4			. 4.0	' 7	0.5	9.0	' -	
		l	١	l	l				L	l	l	İ		
sample weight, grams:		5.31	4.99	2.08	2.00	5.03	5.09	5.25	5.03	5.03	2.00	5.07	5.05	

Table E-57. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Old Harbor.

	Species .	Tanner crah			Museel	les						Butter clem	clom			
		Taillie clan			2	301						Dulle	Cidill			
	Site:	OHA2	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3
ACs	Date collected:	Jul-89	Jul-89	Mar-90		Apr-90	Apr-90	Apr-90	Jul-89	Aug-89	Aug-89	Sep-89	Sep-89	Mar-90	Apr-90	Apr-90
	Collector: Lab no.:	D&M 98	D&M 60	ADFG 1137	D&M 1854	D&M 1855	D&M 1856	D&M 1857	D&M 669	D&M 225	D&M 226	D&M 431	D&M 432	ADFG 839	D&M 1871	D&M 1872
naphthalene		B	g	а	а	а	а	в	В	а	а	B	в	В	g	а
C1-naphthalenes		80.0	ī	1	1	1	1	,	9.0	0.2	0.2	0.3	1	1	1	•
C2-naphthalenes			1	1	ì	1	0.4	,	1	1	1	,	,	1	2	8.0
C3-naphthalenes		1	1	1	•	•	0.3	,	ı		•	- 1	. '		2	8.0
C4-naphthalenes		ī	7	1	1	,	•	1	•	1	1	•	•	•	1	1
acenaphthylene		ï	1	,	1	•	1	,	1	1		1	1	ī	,	1
acenaphthene	,	ï	1	1	1	î	•	,	1	1	•	T	1	1	•	
fluorene		,	,	1	•	1	0.5		1.	,	1	1	•	•	1	•
C1-fluorene		•	1		•	1	1	,	1	•	1	1	1	1	1	•
C2-fluorene		1	'	1	1	1	1	,	ı		1	1	1	1	1	1
C3-fluorene		,	1	•	1	1	7	,	1	1	•	•	•	1	1	•
phenanthrene		0.05		1	7	7	2	2	_	0.0	0.5	_	0.3	0.7	2	2
C1-phenanthrenes		ı	'	0.2	9.0	0.8	2	-	1	0.3	•	•	•	1	2	•
C2-phenanthrenes		1	•	0.3	1	1	8.0	0.5	ť	0.1	1	1	1	1	2	0.5
C3-phenanthrenes			r	1	1	1	1		1			1	1	1	•	•
C4-phenanthrenes			1		í	1	1	ı	ı	1		1	•	'	٠	1
dibenzothiophene		ı	•	1	1	í	0.3	ı	1	1	1	1	£	•	•	1
C1-dibenzothiophenes		ı	1	t	1	0.3	0.3	.1	ı	1	1	r	1	1	0.7	0.3
C2-dibenzothiophenes		i	1	0.2	1	1	0.5	1	,	1	1	•	1	1	6.0	0.7
C3-dibenzothiophenes		, ,	T	' (.' '	٠,	' (1 '	1	1	1	1	r		9.0	ı
Sum of LACs		0.1	•	7 7	e .	es :	6	4 ,	7	7	0.7	-	0.3	0.7	13	S
fluoranthene		1	r	0.5	0.4	0.5	0.0	0.7	9.0	0.7	0.3	0.0	1	0.7	- ;	0.8
pyrene		í	1	0.2	1	ı	0.8	0.5	•	0.1		0.2	•	1	0.4	0.3
CI-Illuoranthenes/pyrenes			'	,		•	1	ı	ı	1	•		1	r	•	
Denz[a]anuracene		,	1	1	•	1	i	,	ı	ı	1	ı	1	1	1	1
chrysene		ı	'			•	1	,	1	1		í	í	1	1	•
C1-chrysenes/benz[a]anthracenes		ı	•	•		•	E	í	1	•	•		•	•	1	!
C2-chrysenes/benz[a]anthracenes		,	,	1	•	•	1	1	1	1	•	,	•	•	1	,
C3-chrysenes/benz[a]anthracenes			1	ı	r		1		1		1	ţ	•	•	1	•
C4-chrysenes/benz[a]anthracenes		,	1	1	t	ı	ı	r	•	•	1	1	1		,	•
benzo[b]fluoranthene		1	1	1		•	•	,	1	1	•	•	•	1	1	1
benzo[k]fluoranthene		ı	1	1	1	ı		ı	1	1	1	•	•	'	1	1
benzo[a]pyrene			ſ	1	1	1	•	ī	1	ī	•	•	•	1	•	•
indeno[1,2,3-cd]pyrene		1	1	r	1	1	1	1		t	•		ı	1	1	
dibenz[a,h]anthracene		1	1	1	1		•	1	r	r	1	1	1	1	1	,
benzo[ghi]perylene		,	'	' 1			١,	٠,	' (' (١,	I.	' 1	١,	١,
Sum of nacs					4.0	6.0	7	-	9.0	0.8	0.3	7	'	0.7		7
sample weight, grams:		5.95	5.32	5.05	4.94	5.03	5.05	5.06	5.03	5.07	5.04	5.26	5.31	5.16	5.11	5.16
				The second second												١

Table E-58. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Old Harbor.

	Species:	l	l		Butter clam	clam			Γ	l	Littl	Littleneck clam	B	I	Cockle	cle
	Site:	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3
ACs	Date collected:	Apr-90	Apr-90	Jun-90	Jun-90				Aug-90	Sep-89	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90
	Collector: Lab no.:	D&M 1873	D&M 1874	ADFG 1664	ADFG 1671	ADFG 1672			ADFG 2123	D&M 615	D&M 1890	D&M 1891	D&M 1892	D&M 1898	D&M 2013	D&M 2014
naphthalene		а	а	a	в	В	В	а	а	В	В	а	В	а	а	а
C1-naphthalenes		•	•	•	•	•	ţ	•	,	0.5	,	•	1	1	1	1
C2-naphthalenes		2	•	1	•	1	1	•	1	1	1	1	1	,	1	•
C3-naphthalenes		-	•	•	1	•	1	•	,	1	0.3	1	0.4	ı	1	1
C4-naphthalenes		8.0	•	1	•	٠	•	•		•	•	1	r	ı		ı
acenaphthylene		1	1	1	1	•	1	1		1	1	1	1		1	1
acenaphthene		r	•	•	•	•	1	,		•	1	1	1	ı	F	ı
fluorene		•	1	1.	0.5		•	•	1	•	1		•	1		ï
C1-fluorene		ı	1	1	i	T	1	1	1	1		ì	1.	1	1	•
C2-fluorene			1	•	•	•	1.	1		1	1	ï	ı	ı		ı
C3-fluorene		•	1	1	•	•	ı	1		0.4	•	1			•	•
phenanthrene		7	e ;	-	•	1 1	- ;	8.0	- ;	1	0.7	- !	9.0	a.	1	
C1-phenanthrenes		_ ,	0.4	1	í	0.5	8.0	0.5	0.0	ţ	1	0.7	9.0	i	ï	9.0
C2-phenanthrenes		-	6.0	1	•	1	-	0.7	0.7	1	1	_	0.5	ī	1	•
C3-phenanthrenes		i	•	1	r	•		•			ı	1	1	,	1	1
C4-phenanthrenes		1		1	1		r	1	ı	ť	T.	1	i	,	1	1
dibenzothiophene			' (•	ı	1	•	•		•	1	r	1	,	£	
C1-dibenzothiophenes		0.4	0.3	1		r		•	ı	ı		1		ı	1	•
C2-dibenzothiophenes		0.7		ï	•		9.0	1			1	0.4	ı	ï	•	•
C3-dibenzothiophenes		0.4	٠,	٠,	•			• (1	1 ,	1		ı	•	,
Sum of LACs		6 6	s o	- '	0.5	0.5	e (7 '	e ;	7 7	- '	4	7		•	9.0
fluoranthene		0.0	0.0	-	0.7	- ;	0.7	0.5	0.5	0.7	0.5	0.8	0.3	,	í	ı
pyrene		0.3	0.4	,		4.0	t	0.7	,	•	ı	0.3	•	,	1	
C1-fluoranthenes/pyrenes				ı	r	•	ı	1	1.	•	1	ī	1	ı	1	
benz[a]anthracene		•		,		' (1	1		1	ı	1	1	,	1	1
chrysene		•	,	1		7.0	ı		·	1		1	ı	,	1	1
C1-chrysenes/benzlajanthracenes		í	•	1	•	•	í	1		ľ	ľ	1	ſ	1	1	1
C2-chrysenes/benzlajanthracenes		•	ı	1	í	r	1		ı		1	r		,	1	•
C3-chrysenes/benz[a]anunracenes		•	1	1	1		•	•		r		•	,	ı		ı
C4-cnrysenes/benz[a]anunacenes								•			•	1	•	ı	•	
Denzo[b] Huoranthene				, ,						•			ı	ı	ı	ı
benzolelnyrene															•	
indeno[1,2,3,cd]ryrene		' '	,	, ,	•	•								r		ı
indenol 1,2,3-calpyrene		•	•		•			•		1	1	1		,	•	
dibenz[a,n]anunracene		•			•	•				•		ı		ı		,
Sum of HACs		. 1	· -	1	0.7	2	0.7	0.7	0.5	0.7	0.5	1	0.3		•	1 1
sample weight, grams:		4.96	4.98	5.11	5.02	5.03	5.04	5.02	4.99	5.34	5.13	5.29	5.02	5.00	5.14	4.99
				I	I			I	1							

Table E-59. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Old Harbor.

	Species:	Cockle						Chiton			١			S	Sea urchin	
	Site:	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3	OHA3
ACs	Date collected:	Apr-90		Aug-89	Sep-89	Mar-90	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90		Aug-90		Mar-90	Jun-90
	Collector: Lab no.:	D&M 2015	D&M 79	D&M 345	D&M 401	ADFG 1024	D&M 1985	D&M 1992	D&M 1993	D&M 1994R	D&M 2016R		ADFG 2182	D&M 691	ADFG 1025	ADFG 1673
naphthalene		в	а	а	в	a	æ	В	ಣ	B	B	B	а	В	В	8
C1-naphthalenes			0.5	0.3	j	,		1		1	1	1	,	2	B	8
C2-naphthalenes		,	,	1	1	1	,	1.	1	1	ì	,	1	0.3		0.3
C3-naphthalenes		,	•	1	•	•	,	1	1	1	,	1	1		,	
C4-naphthalenes		,	1	1	1	1	1	ı	1	1	1	1	1		,	
acenaphthylene		,	•	1	1		1	1	1	,	٠	. 1	ı	,	1	
acenaphthene		1	,	1	1		1	ì	•	1	•	•	ı	,		
fluorene		,	,	1	1	1	1	ı	1		1	,	ı		1	0.5
C1-fluorene		1	1	1	1		1		1	1	. 1	ì	,	'	1	
C2-fluorene		1	1	1	1	ī	•	•	í	1	•	,	,	1	1	,
C3-fluorene		0.4	1	1		£	1	į	1	1	•	•	ı	•	1	
phenanthrene		r	6.0	9.0	0.5	1	-	1	ı	1	1	1	1	7	1	60
C1-phenanthrenes		6.0	0.05	1		r	0.3	1	r	I	1	1	1	6.0	0.2	0.3
C2-phenanthrenes		0.3	-	ì	•	,	j	ī	1	1	,	1	i.	0.2	1	•
C3-phenanthrenes		ı	1	1	1	1		1	, Î	1	•	•	1	1	1	
C4-phenanthrenes		ı	1	1	•	į	1	ī	ī.	1	1	1	1	1	1	
dibenzothiophene			1	1	1	t	1	1	١,	ı	•	1	ı	'	1	0.2
C1-dibenzothiophenes		1	1	ť	1		1	ī	1	•	•	i	1	1	1	•
C2-dibenzouniophenes		r			1	ı	1	£	r	1	ı	1	ı	1	•	•
C3-dibenzounophenes		, ,	' (0	' '	1	٠,-		ı	ı	1	1	ı		, ,	, ,
flioranthene			0.05	. '	? '		, '							4.0	7.1	1.3
pyrene		,	0.03	-1	1	1	1		1	1				0.00	,	
C1-fluoranthenes/pyrenes		,	1	ī	,	1	1	1	1	1	1		1	'	1	
benz[a]anthracene		,	•	ī	•	, r	1	1	1	ī	1	•	ı	•	,	•
chrysene		ï	1	•	,	1	1	•	1	•	1	•	,	0.1	•	,
C1-chrysenes/benz[a]anthracenes		,		r	1	•	1	t	ı	1	1	.1	T.		1	•
C2-chrysenes/benz[a]anthracenes		,	1	1	1	1	r	١,		ī,	t		1	1	1	•
C3-chrysenes/benz[a]anthracenes		ï	•	•	ı	1	1	1	1	1.	1	í	1	1		•
C4-chrysenes/benz[a]anthracenes		ı	ı	T	ı	•	1	r	•	t	1	1		'		•
benzo[b]fluoranthene		r.	1	1	1	1		1		1	•	.1	1	0.3	1	0.2
benzo[k]fluoranthene		i	1	i	r	1	1	1		ı	•	.1	ı	1	•	
benzo[a]pyrene		,	•	1	1	1	•	r.	1	1	•	1	í	1	1	
indeno[1,2,3-cd]pyrene				ı	•	•	•	1	i	1	•	,	1	1	1	,
dibenz[a,h]anthracene			1	ı	,	1	1	1		ı	1	•	i	1	•	
Sum of HACs			0.1							٠.	٠.	٠,		2.1	٠,	0.2
sample weight, grams :		5.00	4.58	5.31	5.21	5.04	5.06	4.99	4.98	5.00	5.11	5.09	5.02	5.06	5.03	5.13

Table E-60. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Old Harbor.

	Species:	Sea urchin			Mussel	el	,					Butter clam	clam				
	Site:	OHA3	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	
ACs	Date collected:	Aug-90	Mar-90	Apr-90		Apr-90		Apr-90		Aug-89	Aug-89	Sep-89	Sep-89	Sep-89	Mar-90	Apr-90	
	Collector: Lab no.:	ADFG 2181	ADFG 1158	D&M 1858R	D&M 1877R	D&M 1859	D&M 1860	D&M 1861	D&M 670	D&M 227	D&M 247	D&M 418R	D&M 419R	D&M 433	ADFG 841	D&M 1875	
naphthalene		В	В	а	а	в	а	а	В	а	В	а	В	В	B	ಣ	
C1-naphthalenes		63	•	•	1	1		1	0.1	0.2	0.4	0.2	0.4	0.4	1	٠	
C2-naphthalenes			3	0.4	-	0.3	8.0	-	٠	•	•	7	3	6.0	•	7	
C3-naphthalenes		ı	24	0.7	•	0.5	7	3	ı	٠	•	56	33	16	1	7	
C4-naphthalenes		1	28	í	•	•	8.0	7	1	•	1	23	39	21	•	7	
acenaphthylene		ı	0.2	1	•	1	•	1	•	•	•	•	1	1	í	•	
acenaphthene			0.5	1	1	•	•	0.3	•	•	•	٠				0.3	
fluorene		1	-	0.5	•	9.0	-	-	1	1		0.8	1	0.3	•	0.5	
C1-fluorene	1	,	2	0.4	•	0.4	6.0	7	1	1	•	6	11	3	•	0.7	
C2-fluorene		ı	28	•	•	•	0.5	0.7	1	1	1	6	19	14	•	6.0	
C3-fluorene		,	25	4	1	7	3	3	1	1	•	1	1	3	1	1	
phenanthrene		Ø	6	9	9	S	9	6	3	7	7	16	19	13	7	4	
C1-phenanthrenes		1	53	S	7	4	9	7	-	7	-	37	46	36	1	3	
C2-phenanthrenes		0.5	9	3	7	4	7	7	0.3	0.8	0.4	32	4	9	•	3	
C3-phenanthrenes		,	51	-	9.0	7	9	3	1	1	•	2	13	15	•	9.0	
C4-phenanthrenes		1	9	•	1		•	,	1	•	•	•	0.05	1.		•	
dibenzothiophene			3	9.0	9.0	0.5	-	-	•	•	1	. 1	3	4	1	0.4	
C1-dibenzothiophenes			16	<u>, , , , , , , , , , , , , , , , , , , </u>	0.4	-	7	8	1	0.3	0.2	23	30	1	•	-	
C2-dibenzothiophenes		ī	28	-	-	7	S	~	0.1	0.3	0.1	33	47	25	1	7	
C3-dibenzothiophenes		, ;	9 :	0.7	- !		∞	4	1 ,	1	1	10	22	22	•	7	
Sum of LACs		0.5	440	24	15	7 7	20	52	4	9	4	230	330	210	7	24	
fluoranthene		1.	52	e .	. 3	6	4 (9 0	s c	m (7	12	15	10	14	4	
pyrene		1	14		0.8	6.0	7 -	7 (7	7	-	× 6	0 0		10	7	
C1-fluoranthenes/pyrenes		ı	ν,	0.7	•	0.0		7 0	r	' '	1	0.3	7 .	- 1	•	0.0	
benz[a]anthracene			ۍ ۷	0.0	' '	4.0	4.0	6.0	' -	0.1	' .	' '	0.4	0.5	•	0.3	
chrysene			0 0	-	0.0	-	-	7	0.1	7.0	0.1	0.5	ı	-	•	0.8	
C1-cntysenes/benz[a]anthracanac			0.0		1			r	'		1		•	•	i	1	
C2-ciii yericanachanafalanthracanac							•	i						1	1		
C3-ciii ysciica Ocii [a]ainiii acciica								ı				,		,			
C4-cill yelles/cellz[a]amiliacelles benzo[h]fluoranthene			' '		' 6		0.4	- 0						' '	1	1	
bear of blue mathens			1 (9:								7.0	0.0	•		
benzo[k]muoranniene		r.	7 0				0.0	4.0		1	•	•		7.0	١.		
cenzolalpyrene			6.5					ı	•	•				•	1		
dibenzia hlanthracene								, ,									
honzol akilnerylene			,					. 1									
Sum of HACs			62	9	4	9	6	14	7	. 5	3	21	29	20	24	· œ	
sample weight, grams :		5.02	5.13	5.08	5.17	4.99	5.02	5.09	5.05	5.20	5.52	5.00	5.65	5.38	5.00	4.98	
									١					4 20 1			

Table E-61. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Old Harbor.

								١	I		I					
	Species:				Butter clam	clam						Litt	Littleneck clam	Ш		
	Site:	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4	OHA4
ACs	Date collected:	Apr-90	Apr-90	Apr-90	Apr-90	Apr-90	Jun-90	Jun-90	Jun-90	Sep-89	Mar-90	Apr-90	Apr-90			Aug-90
	Collector:	D&M 1876	D&M 1883	D&M 1884R	D&M 1907R	D&M 1885	ADFG 1674	ADFG 1675	ADFG 1676	D&M 616	ADFG 842	D&M 1899	D&M 1900	ADFG 2098	ADFG 2156	ADFG 2160
naphthalene		а	а	а	а	а	а	а	а	В	а	а	а	В	а	а
C1-naphthalenes		ì	•	1	,	1	r	1	r	0.2	1	1	1	1	1	•
C2-naphthalenes		0.7	1	•	•	1	,	1	2	6.0	•	•		1	1	•
C3-naphthalenes		,	-	1	•	-	,	1	,	17	1	•	•	•	•	,
C4-naphthalenes		1		0.3	•	0.5	1	1	,	16	,	,	1	5	2	-
acenaphthylene			,	1	1	,	1	1	,	1	,	1	1	•	0.4	0.4
acenaphthene		,	0.4	1	1	0.3	,	1	,	1	1	ı	i	0.4	0.4	0.4
fluorene		•	0.4	0.3	•	0.4		,	8.0	0.4	•	1	•	9.0	9.0	0.5
C1-fluorene		,	0.5	1		0.4	1	1	1	8	•	1	1	2	0.7	1
C2-fluorene		í	0.4	•		4.0	1	1		6	•	ť	1	_	8.0	1
C3-fluorene		1	í	•	1	£	E		,	3	t	.1	1	1	1	1
phenanthrene		2	3	2	2	3	•	•	,	15	3	7	7	4	•	1
C1-phenanthrenes		0.7	1	2	1	2	3	2	2	34	•	8.0	0.8	9	4	3
C2-phenanthrenes		0.5	2	3	0.3	2	-	1	1	32	1	1	1	6	9	3
C3-phenanthrenes		•	0.3	1	•	0.3	1	•	,	6	1	1	1	2	2	í
C4-phenanthrenes		1		•	ı	í	•	1	,	•	•	ï	1	•	1	1
dibenzothiophene			0.3	0.3	1	0.3	,	í	ı	00	1	1		-	0.7	0.4
C1-dibenzothiophenes		,	0.7	0.7	t	_	8.0	0.4	0.5	21		1	r	2	-	6.0
C2-dibenzothiophenes		1	-	-	ı	7	-	•	0.3	18	,	1	ī	4	3	1
C3-dibenzothiophenes		1	0.4	0.8	1	0.8	0.5	1	1	10	1	1	1	3	4	1
Sum of LACs		4	11	11	3	14	9	4	7	200	3	3	6	40	76	11
fluoranthene		ì	3	3	7	3	2	3	2	11	7	7	7	6	6	ε.
pyrene		,	_	-	0.0	-	3	2	3	7	4	0.0	0.0	2	9	1
C1-fluoranthenes/pyrenes		1	•	•	1	• •	0.4		9.0	0.5		ī	1	- ;	7	1
benz[a]anthracene		1	1	1	1	0.3	1	0.3	0.4	1	,	1	•	0.5	0.5	ı
chrysene		1	0.4	0.4	1	0.5	0.5	0.5	0.5	0.3		1	•	1	7	•
C1-chrysenes/benz[a]anthracenes		1	.1	ľ	1	1	1	•	ı	1	ť	•	•		1	•
C2-chrysenes/benz[a]anthracenes		1	1	,	1	1	1	•	í	•)	1	•	1	1	•
C3-chrysenes/benz[a]anthracenes		,	•	1	•	1	•	•	ı	1	•	•	1	1	1	4
C4-chrysenes/benz[a]anthracenes		•		1	•	•	1		í	•	1	1	•	•	•	
benzo[b]fluoranthene		•	1	1	,	1	0.2	0.2	0.3	-	1	1		0.4	0.5	•
benzo[k]fluoranthene			1			1	0.2	0.2	ı	1	T	1	•	0.4	0.5	•
benzo[a]pyrene		•	1	1	,	•	1	ι	0.2	,	1		•	•	1	
indeno[1,2,3-cd]pyrene		1	1		1	•	1	1	,	1	1	1	1	1	1	1
dibenz[a,h]anthracene		1.	1	E	1	1	C	1	í	1	1	1		1 0		1
benzo[ghi]perylene			, 4	' 4	' "	' V	' 6	' '	. 0	1 9	' =	' 6	. 6	8. ~	2.1	, 4
Sull of HACS							Ì			ì		ì	,			
sample weight, grams:		4.98	5.02	5.04	5.04	5.51	5.09	5.04	2.08	5.24	5.01	5.01	5.01	5.03	5.03	5.04

Table E-62. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Akhiok.

	Species:	Mussel	Bı	Butter clam		Chiton			Mussel	l	ſ	B	Buffer clam		I ittleneck clam	relam
	Site:	AKH2	AKH2	AKH2	AKH2	AKH2	AKH3	AKH3	AKH3	A KH3	AVU2	AVU2	AVU2	AVIII	AVITA	ALTIO
ACs	Date collected:	Sep-89	Jul-89	Sep-89	Sep-89		Aug-89	Feb-90	Jun-90	Jun-90	Inn-90	Feb-90	Clina.		ON DITA	ANA 80
	Collector:	D&M	D&M	D&M	D&M		D&M	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	D&M	D&M
naphthalene	LAU IIU.	392	70	41/	430	399	251	1128	1630	1631	1632	1130	1633	1641	301R	310R
Cl narhthalanac		3	4	d	a .	4 ,		4	a	cd	ಡ	ಡ	а	æ	ea	g
C1-naphunaiches			•	•	0.1	4.0	0.2	1	1	ţ	2		1	r		0.2
C2-naphthalenes		1	1	1	ı		1	1.	-	2	7	1		,	•	1
C3-naphthalenes		ı	,	ī	r.	,	•	•	•	7	3	1		,	٠	•
C4-naphthalenes		,	•	•	,	,	•	•	•	,	0.4	,		,	,	
acenaphthylene		,	•	1	,	,	1	1		1	0.2	,	. 1	,		•
acenaphthene		1	,	•	,	,	,	1	,		000					
fluorene		,	•	•		,				0.5	7.0					1
C1-fluorene			٠	•		,				0.0	2.0	•	•	,		•
C2-fluorene											†		1			1
C3-fluorene				,						ı		•	1		1	1
phenanthrene		0 3		0.4	00	10	' (٠ -	٠ ,	<u>'</u> (, ,	' 6			' (1 1
C1-phenanthrenes		? '	,	† '	4.	3	7.0	00	7	4 6	4 c	6.0	٠.	-	0.3	0.5
C2-nhenanthrenes								7.0	í.	4 0	4 (7.0	-	1	•	1
C3 phonanthrones				•				0.1	ı	0.9	7	0.1	1	,	ř	1
CA phononthronos			,		,				ı	í	0.5	1		,	1	
dibonzothionhone		,	•	1		ı	1	í.	ı	1	,	1	•	,	1	ı
dicenzounophene		í		ı	í		•	í.	1	4.0	0.4	•	•		,	ſ
C.1-dibenzotniopnenes		,		1	,	,	•	,	0.7	0.0	6.0	•	•	,	,	ī
C2-dibenzothiophenes		,	•	ī	,	1	,	•	•	1	6.0	•	•	,	1	1
C.3-dibenzotniopnenes		, ,	1			,	1	1	1	0.3	0.3	£	1	,	,	1
Sum of LACS		6.9	•	4.0	0.3	_	0.4	-	4	12	18	-	-	_	0.3	0.7
Illoranthene		,		1			i	0.7	0.7	1	-	0.7	0.8	0.5	•	1
pyrene C1 diographeness/missings		,		1		i	î	0.2	0.5	0.4	0.4	0.1	0.3	,	•	•
CI-Inolaninency pyrency			•	i		ı	ī	1		1	,	1	1	i	•	1
central annuacene		,		ı	ı	ı	•	•	1	1			i	,	1	,
City sene			•	r		1	•	•	0.2	0.2	0.2	1	,	,	1	,
C1-cnrysenes/benz[a]anunacenes		,		ı	1	,	1	•	•	•	,	•	i	,	•	1
C2-cinysenes/benz[a]anthracenes			·	ı	,		,	1	T	•	,		,	,	1	.1
C3-cmysenes/benz[a]anunacenes			•	r	,	,	1		1	1		í	•	,	,	1
C4-cnrysenes/benz[a]anunracenes				ı	ı	,	1	r.	•	•	,		•			1
penzolbjiluoranmene		,	1	ı			ı	•	1	•	,	•	1	ī	,	1
benzo[k]fluoranthene		ř	•	T	ï		1	•	1	1		,		ı	,)
benzolajpyrene		1	1	•	1	,	1	1	1	•	,	1	,	1	1	1
indeno[1,2,3-cd]pyrene			1	•	,	,	1	1	ï	1	,	•	•	,	,	
dibenz[a,h]anthracene		,	1	1	ï	,	,	ı	,1	t	,	1	r	1	,	,
benzolghi perylene		ı	1	1	i	,	1		r.	i.	1	•	1	,	1	1
Sum of nacs		-	1	١	1	-	•	6.0	-	2	2	8.0	-	0.5		
sample weight, grams:		5.21	5.09	5.84	5.20	5.18	5.02	5.16	5.03	5.22	5.10	5.09	5.05	5.02	5.35	5.07
		١		١	1	1	I				1			1		

Table E-63. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Akhiok.

	Species:			Littleneck clam	k clam			Sea urchin		Mussel	el	
	Site .	AKH3	AKH3	AKH3	AKH3	AKH3	AKH3	АКНЗ	AKH6	AKH6	KHG	AKH6
ACs	Date collected:	Feb-90	Feb-90	Feb-90	Jun-90	Jun-90	Jun-90				~	Aug-90
	Collector:	ADFG 1129	ADFG 1131	ADFG 1132		ADFG 1643	ADFG 1644					D&M 1829
naphthalene		a	В	a	в	a	в	а	B	в	g	a
C1-naphthalenes		1	,	1	1	•	1	g		•	1	
C2-naphthalenes		,	,	,	0.8	1	1	2	1	,	. 1	
C3-naphthalenes		1	,	1		J	ı	,	•	•	٠	,
C4-naphthalenes		,	1	į	1	,	,	,	,	ı	,	,
acenaphthylene					1	,	,	,	,	,	1	,
acenaphthene		•	1	,	1	1	,	,			1	1
fliomene		,		,	1	1	,	,	•	,	1	1
C1-fliorene		1	ı	1	1	.1	ı	,	'	-1	t	,
C2-fluorene		-1	,	,	,	,	,	,	,	,	1	,
C3-fluorene		,	1	1	1	1	,	,	1	•	ı	
phenanthrene		9.0	8.0	,	6.0	6.0	1	1	1	1	1	
C1-phenanthrenes		ı	,	ı	1	1	ï	ı	0.7	1	1	0.3
C2-phenanthrenes		1		1	1			,	1		1	1
C3-phenanthrenes		.1.	1	1	ı	i.	1	ī	1	,	1	į
C4-phenanthrenes		1	ı	1.	1	1.	,	ï	ì	1	1	,
dibenzothiophene		1	1	1	1	•	,		,	1	ï	0.5
C1-dibenzothiophenes		1	1	1	t	1	1	1	•	ī	1	i
C2-dibenzothiophenes		1	1	1	1	•		,	1.	1	1	
C3-dibenzothiophenes		1 1	1 (1	,	١.,		1. (' '	ı	1	1 (
Sum of LACs		9.0	8.0		77	7	7 ;	e ;	0.7	•		8.0
fluoranthene		0.4	0.5	0.3	9.0	9.0	0.7	0.5	,	r	•	1
pyrene		1	0.1	1	ī	1		,	r	1	1	1
C1-fluoranthenes/pyrenes		1	1	1	1	1	,		' '	1	1	' "
Denzlajanuracene				, ,			, ,	, ,	7.0			6.0
Cillysciic												
C2_chrysenes/henz[a]anthracenes		,	1				,	,	1			
C3-chrysenes/benz[a]anthracenes		1	1	1	•	1	1	,	1	1	1	ı
C4-chrysenes/benz[a]anthracenes			1		1	1	1	ı	r	1		,
benzofblfluoranthene		•	1	1	1		,	1		1		0.3
benzo[k]fluoranthene		1	1	1	1	•	1	1	1	1	1	0.3
benzo[a]pyrene		•	ì	1	•	1	,		1	1	1	0.2
indeno[1,2,3-cd]pyrene		•	1	1	•	1		r	0.1	0.1	1	0.2
dibenz[a,h]anthracene		•	1	•	1	1	ı	ı	0.2	0.2	·	0.3
benzo[ghi]perylene Sum of HACs		0.4	9.0	0.3	9.0	0.6	0.7	0.5	0.5	0.3		0.2 2
sample weight orams:		5.03	5.00	5.02	5.07	5.04	5.08	5.03	5.04	5.01	5.06	5.03
sample weight, blums :		20:0	20.5		1000	200	2010		0.0	10:0	2015	

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Table E-64. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Karluk.

		l	ľ	Museel			Chiton				Museel				Butter clam	clam
	Site .	KARI	KARI	KARI	KARI	KARI	KARI	KAR2	KAR2	KAR2	KAR2	KAR2	KAR2	KAR2	KAR2	KAR2
ACs	Date collected:	Jul-89				Apr-90	Jul-89	-	Sep-89	Sep-89	May-90	May-90	Sep-89 May-90 May-90 May-90 May-90		Aug-89	May-90
	Collector: Lab no.:	D&M 59	ADFG 1169	ADFG 1170	ADFG 1171	ADFG 1172	D&M 78	D&M 245	D&M 393	D&M 394	D&M 2626	D&M 2627	D&M 2628	D&M 2629	D&M 224	D&M 2630
naphthalene		а	В	а	B	а	а	а	а	а	а	а	а	а	а	а
C1-naphthalenes		1	•	1			0.1	0.2	0.1	•	1	•	1		0.1	•
C2-naphthalenes		•	•	ï	1	,	,	•		•	9.0	1.	6.0		·	1
C3-naphthalenes		1	•	1	1	ï		1		1	•	•	-	,	1	•
C4-naphthalenes				r		,	,	1	1	•	1	•	•	,	1	ı
acenaphthylene		•	1	ı	•	ı		•	•	•	1	1	i	,	•	ı
acenaphthene		.1.	ı	•	1		,	•	1	•	1	•	1	ı	•	1
fluorene		1	1	1	•	ı.	à	1	•	1	•	•	,	,	1	1
C1-fluorene		1	•	1	•	i		1	1	1		1	•	,	•	i
C2-fluorene		•		•	•	ı		1		r		1	1	ı	•	i
C3-fluorene		1	1	•	•	í	•	1						,		1
phenanthrene		1	•	•	1		0.1	0.2	0.2	0.3	0.4	0.4	7	0.4	0.2	
C1-phenanthrenes		•	•	•	•	,		1		•	1	•	2	4.0		0.4
C2-phenanthrenes		•	ï	1	•	,		•	•	1		t	7	1	1	0.4
C3-phenanthrenes		•	,	1	1	,		1	•	•	•)	0.8		•	í
C4-phenanthrenes			•	1	•	,		•	•	1	1	ì	•	ı	1	1
dibenzothiophene			•	1	1		,	•	•	•	1	•	•	,	•	r
C1-dibenzothiophenes			1.	ť	1	i	,	•	•	•	ť	1	0.0	,	•	1
C2-dibenzothiophenes		•	•	•	1				1	•	1	•	-	,	•	r
C3-dibenzothiophenes		•	ı	•	1	,	, ,		' 6	' 6	٠.		- ;	, 6	' 6	' 0
Sum of LACs		•	•				7.0	4.0	6.9	6.0	-	4.0	71	0.0	0.3	0.0
fluoranthene		ı	•	í	•	ı		1	•		1		n (1	4.0
pyrene		1		1				1	•			,	7 0	,		1
CI-fluoranthenes/pyrenes		L							•				6.0			
Denz[a]anthracene																
chrysene															,	
C1-chrysenes/benz[a]anthracenes			,	,	' '				•	•	1	1	80	,	,	
C3-chrysenes/benz[a]anthracenes						1	,	1			i)	,	1	3
C4-chrysenes/benz[alanthracenes		1	1	•	•	í	1	,	1	1	1	1	•	,	1	1
benzolblfluoranthene				i	ľ	1	,	1	1	,	1		,	,	1	•
benzolklfluoranthene		1	1	•	•	ï	1	1	•	,	•	•	1	î.	•	1
benzo[a]pyrene		1	•	1	•	£	11	•	1		1	1	•	ī	•	,
indeno[1,2,3-cd]pyrene		•	•	1	ı	,	,	•	•	1	1	.1	•	,	•	ı
dibenz[a,h]anthracene		1	1	1	1	ı		•	í	1	•	,	•	r		•
benzo[ghi]perylene			1	1	1	1	1	1	•	ı	1	1	٠,	,	1	
Sum of HACs		1	•	'	•				•	'	'	1	-	1	1	4.0
sample weight, grams:		5.58	5.09	5.02	5.00	5.02	5.04	5.33	5.40	5.18	5.02	5.02	5.01	5.00	5.00	4.97
																-

Table E-65. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Karluk.

do.	Species:	B	Butter clam	n		Littleneck clam	ck clam		Chiton	
ACs	Site: Date collected:	May-90	KAR2 KAR2 Mav-90 Mav-90	KAR2 Mav-90		May-90	KAR2 KAR2 KAR2 KAR2 Mav-90 Mav-90 Mav-90	Mav-90	KAR2 Sep-89	
	Collector: Lab no.:	D&M 2631	D&M 2632	D&M 2633		D&M 2617	D&M 2618	D&M 2688	D&M 400	
naphthalene		а	а	а		В	В	а	а	
C1-naphthalenes		,	•	1	1	1	1	,	ī	
C2-naphthalenes		•	ī	1	1	1	2	-	r	
C3-naphthalenes		•	,	1	1	1	1	,	1	
C4-naphthalenes		•	•	ı	1	•	1		1	
acenaphthylene		•	•	ı	,	•	•	,	ı	
acenaphthene		1	1	,	1	1	.1	,	1	
fluorene		•	•	ı	0.4	•	9.0	i	,	
C1-fluorene		,		ı	1	•	•	i	,	
C2-fluorene		•	t	,	•	1	•	,	ı	
C3-fluorene			1	ı	1		•	,		
phenanthrene		0.4	0.4	0.5	0.5	9.0	0.7	0.5	r	
C1-phenanthrenes		,	•	,	1	9.0	2	1	r	
C2-phenanthrenes		,		ı	0.5	0.4	1	ı	ı	
C3-phenanthrenes		1	1	1	1	1	1	1	,	
C4-phenanthrenes		•	1	1	•	1	.1	,	r	
dibenzothiophene			,	,	1	1	1	,	ı	
C1-dibenzothiophenes		1	1	1	•	1	1	,	ı	
C2-dibenzothiophenes		1		1		1	1	,	,	
C3-dibenzothiophenes				, ,	٠,	' (1.		í	
Sum of LACS		4.0	4.0	6.0	7 7	7 7	n	7		
fluoranthene		ı		ı.	4.0	4.0	' '	1	ı	
pyrene				ı	1	4.0	0.0		i	
C1-fluoranthenes/pyrenes		1	1	,	1	1	1	1	ı	
benz[a]anthracene		•			,	ı		ι	1	
chrysene		1			1	1	•	,	ı	
C1-chrysenes/benz[a]anthracenes		•	1	1	1	1	•	r	,	
C2-chrysenes/benz[a]anthracenes		1	,	ı	'	1	1	ı	1	
C3-chrysenes/benz[a]anthracenes		•	1	î	,	1	1	1	ř.	
C4-chrysenes/benz[a]anthracenes		1	1	,	1	1.	1	,	r	
benzo[b]fluoranthene		•	1	,	,	1	•	,	ı	
benzo[k]fluoranthene		•	•	,	,	1	1	,	1	
benzo[a]pyrene		1	1	1	1	1	1		1	
indeno[1,2,3-cd]pyrene		1	1	1	•	•	•	ī	1	
dibenz[a,h]anthracene		1	1	1	,	1	•	1	1	
benzo[ghi]perylene		•	1	ı	1	1			1	
Sum of HACs			1		0.4	8.0	9.0			The state of the s
sample weight, grams :		5.01	5.01	5.00	5.04	5.05	5.08	5.03	5.13	
							ı			

Table E-66. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Larsen Bay.

	Species:	Mussel					Butter clam	clam					Chiton	ton	Limpet	
	Site:	LAB1	LAB1	LABI	LAB1	LABI	LABI	LAB1	LABI	LAB1	LABI	LABI	LAB1	LABI	LABI	
ACs	Date collected:	Jul-89	Jul-89	Sep-89	Sep-89	Jun-90	Jun-90					Aug-90		Aug-89		
	Collector:	D&M 61	D&M 673	D&M 416	D&M 435	ADFG 1677	ADFG 1678	ADFG 1679		ADFG 2128	ADFG 2129R	ADFG 2130R	D&M 81	D&M 346	D&M 690	
naphthalene		B	g	g	В	g	es	8	а	æ	В	а	В	B	B	
C1-naphthalenes		,	0.3	1	0.3	7			•	1	1		0.2	0.2	6.0	
C2-naphthalenes		,	•	١	•	2	1	•	•	.1	1	,	1	1	1	
C3-naphthalenes		,	1	•	1	-	6.0	1	•	•	1		•	,	•	
C4-naphthalenes		1	1	•		1		1	2	2	2	7	•			
acenaphthylene		,	•	•	•	1	•	1	1	•	•	,	1		1	
acenaphthene			•	,	•	0.5	•	1	•	•	1	,	1	,	1.	
fluorene		,	•	.1	•	6.0	r	1	1	1	•	,	,	1	1	
C1-fluorene		,	•	•	,1	•	•	ï	0.5	0.5	0.4	0.5	· ·	,	•	
C2-fluorene		·	•		•	•	•	1	0.5	0.8	•	0.7	•		•	
C3-fluorene			•	•	•	•	•	•	,	•	1	1	•	ı	•	
phenanthrene		-	2	0.5	0.7	3	3	3	7	7	7	7	0.4	0.7	9.0	
C1-phenanthrenes		,	0.3	•	•	e 1	e (- 1			- ,	7 .	•	1	•	
C2-phenanthrenes		,	0.3	•	•	2	7	2	2	-	-	- ;	•	í	•	
C3-phenanthrenes		ı	•	•	•	r	•	1	1		•	9.0	•		•	
C4-phenanthrenes				•	•		' (•		1		1	1		•	
dibenzothiophene			•		1	4.0	0.3		' (' (' (, ,	1	,	i	
C1-dibenzothiophenes		, ;	•		1	_ ,	7 1	7 .	0.0	0.5	0.0	0.7	,	ī	'	
C2-dibenzothiophenes		0.1	•	1	•	- :	0.7		0.8	0.7	0.9	- 5	•		•	
C3-dibenzothiophenes		0.00	٠,	' '	٠,		7 .	- 5	٠ ،	٠ ،	0.0				٠,	
Sum of LACs		٦,	· ·	0.5	-	70	15	10	2	× •	× •	11	0.0	9.9	7 -	
fluoranthene		0.3	- (1		4 (7 -	٠.	- 1			7 0	0.03	4.0	0.1	
pyrene			0.5		•	7 7	-	-	0.7	0.0	0.7	0.0	0.01	7.0		
C1-Illuoranunenes pyrenes				, ,	' '	. 0	, ,					,		,		
chrysene				. 1		0.7	,	1		,	. 1		•	,	1	
C1-chrysenes/benz[a]anthracenes		,	1.	ï		1	•	•	,	1	1	,	١	,	1	
C2-chrysenes/benz[a]anthracenes		,	•	1	•	r	•	1	•	1	,	ı	•	,	1	
C3-chrysenes/benz[a]anthracenes			•	•	•		•	1	9	•	'	1.	•	,	•	
C4-chrysenes/benz[a]anthracenes		1	,	1	1	1	1		·	•	1	,		į.	1	
benzo[b]fluoranthene		1.	•	•	•	0.4	0.3	0.3	1	1	1		•		•	
benzo[k]fluoranthene			•	•	ı	0.3	•		1		•		1		r	
benzo[a]pyrene			•	•	•	0.4	•	•	1	•	•	,	•		•	
indeno[1,2,3-cd]pyrene			•	•	•	•	,	•	•	1	•	,	1	,	'	
dibenz[a,h]anthracene			•	1	1 0	١.	•	•	'	ī	1	,	1			
benzo[ghi]perylene		0.3	12.	٠,		' 6	' E	' -	' 2	' 73	' 2	۰ ج	0.1	9.0	0.1	
sample weight, grams:		5.09	2.08	5.17	5.38	5.19	5.11	5.19	5.03	5.01	4.99	5.00	5.15	5.50	5.03	

Table E-67. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Larsen Bay.

	Species .			Mussel							Butter clam	clam				
	· corondo			1000							-					
	Site:	LAB2	LAB2	LAB2	LAB2	LAB2	LAB2			LAB2	LAB2	LAB2	LAB2	LAB2	LAB2	LAB2
ACs	Date collected:	Jul-90	Jul-90	Jul-90	Jul-90	Jul-90	Jul-89	Aug-89	Aug-89	Aug-89	Jun-90	Jun-90	Jun-90	Aug-90	Aug-90	Aug-90
	Collector:	D&M 1822	D&M 1823	D&M 1824R	D&M 1847R	D&M 1825	D&M 682			D&M 260	ADFG 1694	ADFG 1716	ADFG 1717	ADFG 2091	ADFG 2092	ADFG 2093
naphthalene			В	В	a	а	В	B	B	В	g	а	а	g	B	а
C1-naphthalenes		1			1	1	6.0	0.3	0.2	0.7	1	1	1	1	ı	1
C2-naphthalenes		1	i	1	,	7	1	٠	1	-1	,	1	1	ì	1	1
C3-naphthalenes		0.8	1	0.7	1	,	,	,	1	1	ı	,	1	ì	ì	1
C4-naphthalenes		'	1	'	1	1	1	,	1	ī	1	1	ī	6.0	9.0	1
acenaphthylene		,	,	1	1	,		•	1	,	,	١	,	١		'
acenaphthene		,	1	1	1	,	,	٠	•	1	1	•	1	1	1	1
fluorene		0.7	1	•	0.1	0.7	1	•	1	.1	1	•	1	1	1	1
C1-fluorene		-	8.0	9.0	•	,	1	1	1	1		,	1	1	•	,
C2-fluorene		,	1	i	1	,	•	1	i	1	1	•	1	1	1	•
C3-fluorene		1	•		1	,	•	•	1	,		•	1	1	1	1
phenanthrene		3	3	3	1	3	1	1	8.0	2	1	9.0	0.4	•	,	1
C1-phenanthrenes			0.4	0.7	0.5	-	1	7	ľ	9.0	6.0	•		1	1	1
C2-phenanthrenes		•	2	3	1	-	1	0.5	1	0.3	0.7	1	1	8.0	-	6.0
C3-phenanthrenes		1	-	1	9.0	,	1	1	ī	1	1	ì	1	1	1	1
C4-phenanthrenes		•	1	1	r	ī	,	1	1	1	1	1	1	1	ì	•
dibenzothiophene		1	0.7	•	1	,	1	•	1	1	1	1	1		1	1
C1-dibenzothiophenes		1	1	1	0.3	,	1	1	1	•	•	1	•	0.0	1	1
C2-dibenzothiophenes			1	1	0.2	ı	1	0.1	1	•	ī	1	i	1	•	0.4
C3-dibenzothiophenes		1 7	7	7	0.4	. (٠,	٠,	١,		٠,		, ,	0.5	١,	' (
Sum of LACs		9	10	11	4	00	7	4	- ;	4	3	9.0	0.4	e ;	7	7
fluoranthene		9	1		9.0	1	0.1	0.7	0.2	0.7	1	0.2	1	0.5	1	0.5
pyrene		1	1	1.1	0.3	1	1	0.1	1	0.1	•	1	1	1	1	1
C1-fluoranthenes/pyrenes		1	r	0.5	1	1	ı	1	t	•	1	1	1	1	1	1
benz[a]anthracene		0.5	0.3	0.3		0.2	1	t	1	1	1	t	1	1	1	1
chrysene		1	r	1	t	1	1	1	ı	1	1	J	1	•	1	•
C1-chrysenes/benz[a]anthracenes		•	1.	E	t	ı		E	1	1	1.	1	1	1	1	1
C2-chrysenes/benz[a]anthracenes			1	•	1	1	•		1,	1	ı	•	1	1	1	1
C3-chrysenes/benz[a]anthracenes			1	1	1	ı	1	ì	1	1	1	1	1	1	1	1
C4-chrysenes/benz[a]anthracenes		1	•	1	9.	,	1	ī	1	1	i	•)	1		1
benzo[b]fluoranthene		0.4	0.3	0.2		,	1	•	1	1	1	1.	1	,	,	•
benzo[k]fluoranthene		0.7	0.3	0.2		r	,	•	1	1	1	•	1	•	•	1
benzo[a]pyrene		9.0	0.2	•	1	,	1	1	1	1	1	1	1	1	ı	1
indeno[1,2,3-cd]pyrene		1	9.0	0.3		0.2	1	•	1	1	1	•	•	•		
dibenz[a,h]anthracene		1	2	0.0	1	4.0	1	1	1	1	1)	1	1	1	1
benzo[ghi]perylene		' 2	0.7	0.1	0.0	0.9	0.1	8.0	0.2	. 0	• •	0.2		0.5		0.5
					1		1				9		1		;	
sample weight, grams:		2.00	5.02	4.99	5.27	5.02	5.11	5.38	5.02	5.16	2.00	5.14	5.11	2.08	5.13	5.12

Table E-68. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Larsen Bay.

		١		I	I	I								
	Species:		Littleneck clam	c clam		Chiton	Octobns	Sea urchin	Sea urchin	Dungeness crab	3	I anner crab	Snail	
	Site:	LAB2	LAB2	LAB2	LAB2	LAB2	LAB2	LAB2	LAB3	LAB4	LAB4	LAB4	LAB4	
ACs	Date collected:	Jul-90	Jul-90	Jul-90	Jul-90	Sep-89	Mar-90	Mar-90	Jul-89	Jul-89	Jul-89	Jul-89	Jul-89	
	Collector:	D&M	D&M	D&M	D&M	D&M	ADFG	ADFG	D&M	D&M	D&M	D&M	D&M	
	Lab IIO	1000	1601	10.30	1037	,	5/11	1001	260	27	600	100	000	١
napnualene		ರ	7	.u	d	.d	. v	ব	z (1 5	-d (a .	T (
C1-naphthalenes			•	•		,	-	g	0.7		0.8	0.1	0.5	
C2-naphthalenes		•	•		,		0.4	ı	,	,	,	·	ï	
C3-naphthalenes		•	•	•	r		•	,			,	,		
C4-naphthalenes		•			,			ř	ı	ı	,	,	,	
acenaphthylene		. 1	•	•	,		,			,		ì	í	
acenaphthene		,	•	,	,	,		,			,	,	,	
fluorene		,	0.3	0.1	,	,	0.2	9.0		,	,	,	,	
C1-fluorene		,	•	•		,			,		,	,		
C2-fluorene		•	•	•							,			
C3-fluorene		•	•				7		ı		1	ı	í	
phenanthrene		1	r	-		0.4	3	2	-	80.0	6.0	0.1	8.0	
C1-phenanthrenes		0.5	-	0.4	,		6		1		,	,	1	
C2-phenanthrenes		•	0.7	0.1	,	,	4		1			ı	,	
C3-phenanthrenes		i	,	•	,		e	ı			i			
C4-phenanthrenes		ī	,	•	,	,	0.1		,	•		,	,	
dibenzothiophene				•	,		- ;	0.3	,				i	
C1-dibenzothiophenes		1	-	i	i	,	0.4		,				ï	
C2-dibenzothiophenes		•	•	1		,	0.5			,		,	ı	
C3-dibenzothiophenes		' "	٠,	, ,		. ;	0.0	, ,		. ;		, ,	٠,	
Sum of LACs		0.5		7 (. ;	4.0	70	2.9	1.7	0.1	7	0.2	1	
fluoranthene			1	0.5	0.7		۰۰	, 0	8.0	,				
pyrene			ı	0.7		·	n (6.0	0.3	c	·			
C1-fluoranthenes/pyrenes		' (•			7 6						1	
benz[a]anthracene		7.0	,				y.,							
chrysene							7 6	4.0			·			
C1-cnrysenes/benz[a]anunacenes							7.0							
C2-chijselies belig ajantinaciles					,		7 01						. ,	
C4-chrysenes/henz[a]anthracenes		•	,		,	,	9.0				,			
benzolhiftnoranthene		•	•	•				0.5		,		,		
benzolkifluoranthene				•	,	,	,	0.4		,	,	ı		
benzolalpýrene		٠	•	•		,	,	0.3				1	,	
indeno[1,2,3-cd]pyrene		•	•	•	,	,					,	t	,	
dibenz[a,h]anthracene		ī	•	,	,	,	,	,	•	,	1	ı	í	
benzo[ghi]perylene		. 0			, ,		, 81	, ,		. ,		٠,		
Sulli of MACS			١											١
sample weight, grams:		5.08	5.08	5.14	5.04	5.38	5.01	5.01	5.01	5.18	5.00	5.11	. 5.08	
											,			

Table E-69. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Larsen Bay.

	Comment	1000	-1-	D	-1	1 :44: T	1			E	-		OF: 4
	Species	COCKIE	KIE		Clam		Littleneck clam						Cmton
	Site:	LAB9	LAB9	LAB10	LAB10	LAB10	LAB10	LAB10	LAB10 I	LAB10 I	LAB10 1	LAB10	LAB11
ACs	Date collected:	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Mar-90	Jul-90	Jul-90	Jul-90	Jul-90	Mar-90
	Collector:	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	ADFG	D&M	D&M	D&M	D&M	ADFG
	Lab no.:	1680R	1695R	_	1136	1133	1135	1167	1840	1841	1842	1843	1686
naphthalene		B	а	а	а	а	а	а	а	а	а	a	В
C1-naphthalenes		•	,	'	1		•	1	1		•	,	1
C2-naphthalenes			1.	0.3	ı		1	,	1	1	•	,	6.0
C3-naphthalenes		1		0.3	0.3		,	,	•	•	1	,	•
C4-naphthalenes		1	1	0.3	6.0	,	0.1	,	,	i	•	,	ı
acenaphthylene		•	1	,		1	1	,	•	٠	•	,	•
acenaphthene		1		0.2	1	'	1	1	1	1		,	•
fluorene		0.7	,	0.9	0.3	0.1	0.2	,	1	1	1	r	
C1-fluorene			1	0.3	0.2	1	1		1	ï	1	í	,
C2-fluorene		ı	7	'	0.1	•	1	,		1	1	,	
C3-fluorene		1	1	,		•	1	,	,	1	•	1	
phenanthrene		•	,	7	2	4	9	3	1	ī	1	,	3
C1-phenanthrenes		•	0.5	4	4	-	7	7	ï		1	ı	0.3
C2-phenanthrenes		1	7	7	3	1	7	-	1	1	1	1	•
C3-phenanthrenes		,	ì	0.3	0.4		1	ı	1.	1	1	,	,
C4-phenanthrenes		•	,	•	1	1	1	1	1	1	1	,	•
dibenzothiophene		0.3	ì	,	,	0.2	0.4	0.1	1	ı	1	1	0.2
C1-dibenzothiophenes		•	ī	0.1	0.3	1	0.2	0.2	1	1	1	1	,
C2-dibenzothiophenes		•	į	0.0	-	0.2	0.4	,	•	1	i	1	•
C3-dibenzothiophenes		1		0.5	0.4	1 ,	1		,	ī	1	ı	
Sum of LACs		1	7	17	91	9	11	_	•	٠	•		ın
fluoranthene		2	7	12	10	9	∞	4	1	1	1	1	1.
pyrene		1	9.0	2	4	2	7	_	1	1	1	1	r
C1-fluoranthenes/pyrenes		•	8.0	0.8	0.5	' (0.2	,	1	1	1	,	1
benz[a]anthracene		' 0	, 6	0.8	0.5	0.2	0.5	, 6	•	•	1		
chrysene		0.8	0.9	_	0.7	0.3	0.3	0.3	1	1	•	i	0.4
C1-chrysenes/benz[a]anthracenes		1	0.3	1	ı	1		í	í	1	1	ï	1
C2-chrysenes/benz[a]anthracenes		1	ı	•			•		1	1	I	ı	1
C3-chrysenes/benz[a]anthracenes			ı	1	ı	1	1	ŕ	£	ŗ	ı	r.	1
C4-chrysenes/benz[a]anthracenes		' (' (, (•		,		ı		ı	' (
benzo[b]fluoranthene		0.0	0.5	0.3	0.7		,	ı	•	1	1	,	0.6
benzo[k]fluoranthene		0.4	0.5	0.1	ı	1	1	,	1	•	1	ı	0.5
benzo[a]pyrene		0.3	0.2	1	ı	1	1	ı	1	T	1	ı	0.5
indeno[1,2,3-cd]pyrene		ï	i	•	ı		1	ı	ı	1	t	ı	ı
dibenz[a,h]anthracene	,	•	ï	'		'	1		ř.	1	í	,	1.
benzo[ghi]perylene		, 4	. 9	20	16	' ∞	11	· w		٠,	٠,		' 73
. amoint arame		5.43	5.03	\$ 10	5.03	\$ 00	5 10	5.04	4 95	5 14	5 35	5.21	\$ 0.2
sample weight, granns.			0.00	2.10	- 1	2.03	2.10	2.04	4.7.7	3.14	0.00	7.71	5.02

Table E-70. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Lions.

The second secon													ľ		١	
	Species:					Mussel	sel						· Β	Butter clam		
	Site:	PIL1	PTL1	PTL1	PTL1	PTL1		PTL1		PTL1	PIL1					PILI
ACs	Date collected:	Apr-90	Apr-90		May-90 1	May-90 I		May-90 May-90			May-90					Sep-89
	Collector:	ADFG 1149	ADFG 1150	ADFG 1152	ADFG 1659	ADFG 1660	ADFG 1731	D&M 1977	D&M 1978	D&M 1979	D&M 1980	D&M 64	D&M 205	D&M 206	D&M 414	D&M 436
nanhthalene		а	а	В	g	В	B	g	В	а	а	В	а	B	а	а
Cl nanhthalanes		,	•	•	•	r	,		,	1		1	0.3	0.3	1	0.3
C1-naphunatenes		80	90	6.0	-	- 1	٠	3	1		1	1	•	•	1	•
C2-naphulalenes		0.0	5			-		2	•	•	,	1	,	í		
C3-naphunalenes		1 (٠, ر	1 "	-	•		, ,	,	,	,	,	•	٠	•	1
C4-naphthalenes		7	7	0	-	'		1			,	,	,	,		•
acenaphthylene		•	ı	•		•		' '		•						
acenaphthene		•			0.4	1	1	0.3		•	, ,	1			1	
fluorene		8.0	9.0	9.0	- '	1	1	4.0	i	•	0.3	ı				
C1-fluorene		7	-	7	7	1		9.0	•	1	ı	•			•	,
C2-fluorene		7	7	3	7	0.9	•	0.0	•	•	i	1	1	1	1	1
C3-fluorene		7	1	-	3	1	•	0.4	•	•	r	1	1 1		, ,	٠,
phenanthrene		2	4	2	6	9	4	3	3	3	9	6.0	0.7	-	-	-
C1-phenanthrenes		9	2	7	4	4	0.5	-	0.7	0.0	7	1	•	0.02	,	
C2-nhenanthrenes		7	2	7	6	9	•	7	0.3	1	9.0	1	1	1	1	1
C3-phenanthrenes		4	-	2	7	1	1	8.0	1	•	,	ı	ŗ	1	ì	•
C4-phenanthrenes		0.08	•	1	•	•	•	•	•	•	,	1	1	1	1	
dibenzothionhene		-	-	2	0.8	0.7	•	0.4	•	•	0.3	1	ı	1	1	
C1-dibenzothionhenes		4	3	4	7	3	,	8.0		•	•	,		9	1	·
C2-dihenzothionhenes		9	4	7	4	7	1	7	•	0.3	0.3	1	1	•	ì	
C3-dibenzothiophenes		9	3	4	3	1	1	-	1	1	1			Τ,	1 ,	٠,
Sum of LACs		51	34	20	45	24	4	21	4	4	10	6.0	-	-	-	-
fluoranthene		7	7	4	7	S	7	7	6.0	5	4	0.4	0.2	- 1	-	1
pyrene		0.4	0.3	6.0	3	2	9.0	0.5	1	1	7	1	1	0.3	1	•
C1-fluoranthenes/pyrenes		•	•	0.1	7	0.3	•	1	1	1	1	!	1	•	ı	1
benz[a]anthracene		1	•	1 1	0.5	' 1		•	•	1	1	•	•	í.		
chrysene		0.2	0.1	0.5	-	0.7	1	•	•	ì		1			t	
C1-chrysenes/benz[a]anthracenes		1			r	•	1	•		j.	ı	'		1		1
C2-chrysenes/benz[a]anthracenes		•	•	ı			•	•	•	1	ı	•	í	1	•	
C3-chrysenes/benz[a]anthracenes		1	•	1		•	•	1	•	1	1	!	1	ı	1	1
C4-chrysenes/benz[a]anthracenes		1	1	•	1	1	•	r	1	1	ı		•	•	1	,
benzo[b]fluoranthene		•	•	•	0.4	•	r	•	1	1	ï	1	1	1	í.	•
benzofklfluoranthene		•	1		0.2	•	•	•	1	•	ı	•	•	,	1	1
benzofalpyrene		•	•	•	0.2	•	1	1	í	•		•	•	1	ı.	1
indeno[1,2,3-cd]pyrene		•		•		1	í	1		1	ı		•	1		
dibenz[a,h]anthracene		1	•	•	1	1	•	·	1		ı		•		1	
benzo[ghi]perylene		' ε	' 7	' 9	14	' x o	, E	. 2	0.9	. 2	. 9	0.4	0.2	1	1	, 1
omala waiaht arame		5.18	5.00	5.09	5.05	5.02	5.04	4.98	5.02	5.00	5.03	5.28	00.9	5.17	5.54	5.43
Sample weight, grains .			1										١		l	

Table E-71. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Lions.

	Crossing			Die	Duttor clam							I ittlanach clam	molo 1			
	species.			חמ	inci ciam							דיוווכווור	or cialli	-	-	-
	Site:	PTL1	PIL1	PTL1		PTL1				PIL1	PTL1	PIL1	PTL1			PTL1
ACs	ted:	May-90	May-90 May-90 May-90	May-90 N								Apr-90	Apr-90			May-90
	Collector:	D&M 2039	D&M 2040	D&M 2041	D&M 2042		ADFG 2114	ADFG 2115	D&M 213	D&M 617	ADFG 1151	ADFG 1153	ADFG 1154	ADFG 1661	ADFG 1662	ADFG 1663
naphthalene		В	В	В	а	в	а	в	а	а	а	а	а	а		a
C1-nanhthalenes		1	1	1	,	,		,	0.2	0.2	1	1	•	•	1	
C2-nanhthalenes		,	,		,	!	,				0.3	•	0.3	0.5	1	•
C2-naphthalanes		0	0.4	0.5	2	,		,	•	,	0.8	-	0.3		,	,
CA nanhthalanas		0 6	: '	? '	1 (8	60	,	-	1	0.0	0.7	0.2		1	
occupatitudes		0.0			1	9 '	:	1			. '		1	- 1		,
acenaphunylene						1 1			.)	, ,					-	' '
acenaphunene		0 6		03	0 6		, ,	, ,	1 1		0.0	0.0	0.2		0.5	, ,
C1-fluorene		0.0	. 1	0.0	0.0	,		0.5	ī	1	0.5	0.5	0.2		; '	
C2-fliorene		-		0.7	7		1	0.4			0.3	0.3	'	•	,	,
C3-fluorene		3	2	3	4	1		1	•	•	1	0.2	0.2	•	•	1
phenanthrene		2	3	3	4		•	,	1	1	3	4	3	7	2	3
C1-phenanthrenes	,	5	2	2	5	•	ī	,	0.3	ſ	4	4	2	8.0	3	0.7
C2-phenanthrenes		2	0.7	_	4	-	-	7	0.3	ı	3	7	9.0		2	1
C3-phenanthrenes			1		9.0	i	1	1	•	1	0.2	1		1		1
C4-phenanthrenes		•	•	•	,	1	•	,	1	•	1	•	1	1	1	•
dibenzothiophene		1	•	1	3	ı	1	,	1	•	0.7	0.0	9.0	0.3	0.5	0.3
C1-dibenzothiophenes		1	0.4	9.0	2	1	i,	1	1	1	-	1	0.3	1	1	1
C2-dibenzothiophenes		2	0.3	9.0	3	0.4	•	9.0	•	•	2	-	0.2	0.4	0.7	9.0
C3-dibenzothiophenes		1	1	1	0.7	1 7	1)		• ,		1 1	0.1	1 (' 1	' '	0.2
Sum of LACs		23	6	12	34	. 17	7 9	9	. 17	- 0	17	16	œ ·	so c	10	,
fluoranthene		4	7 7		4 0	- ;	8. C	7,	- ;	0.9			- 0		4 -	4 -
pyrene		0.8	0.5	9.0	0.8	4.0	0.5	0.5	0.1	0.1	0.4	0.0	0.3	0.9	-	-
CI-illuoranmenes pyrenes		•				1	ı				•					
Denz[ajanunacene		•					1		•	•						0 3
Chrysene C1 shansandhanzfolanthmeaner		. ,													.)	C: '
C1-ciii yəciicə ociiz[a]aiiuii acciicə		•					·				•	- 1	•		1	
C3_chrysenes/henz[a]anthracenes		,			,	1	,	,	'	,	1	,		,		,
C4-chrysenes/benz[a]anthracenes				1	ı	ı	1	,	-1	1	.1	,	1	ı	•	1
benzolblfluoranthene			. 1		1	ī	1		1	1	1	ı	1	1	1	1
benzo[k]fluoranthene		,		ī	,		1	,	1	•	1	1	•	1	1	1
benzo[a]pyrene		1	•		1	1	•		1	•	1	1	1	1	•	1
indeno[1,2,3-cd]pyrene		•	t	1	t	1	1	,	1	•	1	1	,	1	1	1
dibenz[a,h]anthracene		.1	1	ı	•	,	•	i				,	•		1	1
benzo[ghi]perylene		' '	' (' (٠,	٠,		١,	٠,	٠,	٠,	١,		1.	
Sum of HACs		C	7	3	n	1	1	7	-		3	4		4	n	C
sample weight, grams:		5.01	5.08	5.07	5.06	4.99	4.98	5.13	5.37	5.26	5.12	5.02	5.06	5.13	5.03	5.04

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Table E-72. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Lions.

	Species:		Littleneck clam	c clam			Chiton		Snail		Mussel	sel		B	Butter clam		_
	Site:	PTL1	PTL1	PTL1	PTL1	PTL1	PTL1	PTL1	PIL1	PTL2	PTL2	PTL2	PTL2	PIL2	PTL2	PTL2	
ACs	ted:				May-90			Sep-89	Jul-89				May-90			May-90	
	Collector: Lab no.:	D&M 2057	D&M 2064	D&M 2065	D&M 2066	D&M 82	D&M 210	D&M 412	D&M 687	D&M 1981	D&M 1982	D&M 1984	D&M 2383	D&M 65	D&M 211	D&M 2043	
naphthalene		а	а	а	а	а	a	а	а	а	а	а	B	а	а	а	
C1-naphthalenes		•		•	,	0.2	1	0.4	0.3	•	•	•		,	0.3	1	
C2-naphthalenes		1	•	3		•	1	1	ı	1	1	•	4.0	1	1	1	
C3-naphthalenes		1		2	ř	r			r	6.0	1	-	6.0	1	•	7	
C4-naphthalenes		•	•	9.0	0.4	1	1		ı	0.4	1	0.3	0.4	•	•	7	
acenaphthylene		1	•	1		•	ı	ı	i	1		ı	,	•		1	
acenaphthene		' 6	•	ľ	r	•	•			1		' (,		ï	•	
fluorene		0.3	1	ı		r	ı	,	ı	' '	ı	0.3		1	1	' (
C1-Iluorene				' '		1	1	ı		0.3	•	0.3	. 0	ï	1	٥.7	
C2-fluorene		0		6.0				, ,	. ,	- 0	, ,	,	0.0			7 r	
phenanthrene		2.2	2	2	2	0.4	0.7	0.7	0.5	1 W	1 —	1 m	2	2	2	, m	
C1-phenanthrenes		6.0	9.0	-	-	,	•	,		3	8.0	4	-	•	0.00	2	
C2-phenanthrenes		0.3	9.0	1	9.0	•		,	,	7	0.4	2	-	1	•	3	
C3-phenanthrenes		•	1	1	,	1	1	,	1	0.8	•	J		1		0.5	
C4-phenanthrenes		1		1		1	1		ī	1 1	•	1 1	,	•	•	•	
dibenzothiophene		1	0.3	0.3	0.3	ï			r	0.5	1	0.5	. ;	•	1		
C1-dibenzothiophenes		•	•	0.4	0.5	1	•	ı	,		1 (7	9.0	1	1	7	
C2-dibenzothiophenes		•	ı	0.0		1	1		i	· ·	0.3	7 2	- 3	į	•	en 1	
C3-dibenzotmophenes		' ▼	٠ ¬	' =			٠,		. «	10	٠ ٦	1.0	4.0	٠,	٠,	0.0	
fluoranthene		, ,		11			4		0.	, ,	0	7 "	-	-	4 -	4	
pyrene		9.0	. '	0.4		,	•		,	0.4	2.	0.5		. '	0.2	0.6	
C1-fluoranthenes/pyrenes		•	•	•	,	•	. 1	1	,	•	1	1	,	1	1	1	
benz[a]anthracene		•	•	1		•	•	ı		•	1	•	,	1	1	1	
chrysene		•	r	1	ı	•	1	,	1	•	•	•	,	•	•	i	
C1-chrysenes/benz[a]anthracenes			1				t .	ı		i	1	L	ı	1	1	1	
C2-cinysenes/benz[a]antinacenes				. 1				, ,					, ,	. ,	, ,		
C4-chrysenes/benz[a]anthracenes				1			í				- 1	•		1		,	
benzo[b][fluoranthene		•	•	1	,	•	•	,		1				1		1	
benzo[k]fluoranthene		1	1	1		1	•	,	1	1		•	,		1	1	
benzo[a]pyrene		1	•	1			1	ï	,	r	1	1	,	•	1	1	
indeno[1,2,3-cd]pyrene		•	•	ı.		•	1	ı		1	1		,	ı	,	•	
dibenz[a,h]anthracene		1		•		•	•	,	,	1.	r	ı	,	•	ı	1	
benzo[ghi]perylene Sum of HACs		3,	٠ 🗕	. 2	. 1		٠.			' 7	0.5	, 4		0.1	' -	' E	
samule weight grams		5.09	5.03	5.00	5.00	5.03	5.03	5.18	5.06	005	5 11	5.05	5 11	5 19	512	4 97	
sample weefing brands.		2	2	2	2	2	2	22.2	2	2		2	;	× 1.5	711.5		_

Table E-73. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Lions.

	Species:	F	Butter clam	5		I ittleneck clam	rk clam			Horse clam	-lam			Chiton	5	
	Cito .	DTI 7	DIT 2	DIL	DIT 7	DIL	DIT	C TIVE	C TTG	DIA PARA	DITT 7	C LLA	, mar		110	C TITLE
254	Date collected.	Mer. 00	-	-	7117	Man 00		FIL2				FILL	FIL2		FIL2	FIL2
ACS	Date collected:		May-90	2	May-90	May-90		May-90				May-90	Jul-89			May-90
	Lab no.:	2049	2050	2051	2058	2071	2072	D&M 2073	2067	2068	2070	D&M 2107	D&M 83R	D&M 84R	D&M 209	D&M 2009
naphthalene		а	а	а	а	В	а	а	а	а	æ	8	а	8	B	В
C1-naphthalenes		1	ſ	í		•	1	,	,	1	1	,	0.1	0.1	0.7	1
C2-naphthalenes		1	1	,	1	3	3	3	1	,	1	,1	1	,	. 1	1
C3-naphthalenes		2	_	-	,	4	2	2	1	,	1	1	,		•	•
C4-naphthalenes		3	2	2	1	3	2	1	0.3	1	1	9.0	1		1	1
acenaphthylene		1	,	,	1	1				1	1	,	1	1		1
acenaphthene		•	1	,	•	,	1	,	,	1	1	1		í	1	1
fluorene		0.3	0.3	0.4	0.4	0.3	1	,	1	1	3	1	1	•	•	r
C1-fluorene		0.7	0.4	9.0	'	9.0	9.0	1	ı	1	,	0.4	1	1	1	1
C2-fluorene		3	0.9	_	0.4	1	0.5	1	1	.1		0.3	1	1	1	1
C3-fluorene		1	-	_	2	1	í	1	1	1	•	1	1	1	1	1
phenanthrene		3	3	3	3	3	2	7	-	2	1	2	0.2	0.3	9.0	1
C1-phenanthrenes		4	3	3	3	4	2	1	-	8.0	9.0	3	•	1	•	1
C2-phenanthrenes		3	2	3	7	7	3	1	0.7	1	0.4	3	•	1	1	•
C3-phenanthrenes		r	1	0.3	1	0.7	1	1	1	1	•	-	,	ï	1	1
C4-phenanthrenes		1	1		1	1	1	i	1	1	•	1		•		1
dibenzothiophene		0.3	•	0.3	0.5	0.7	0.4	0.4	0.5	0.4	ì	0.5	ı	ı	1	ſ
C1-dibenzothiophenes		1	9.0	6.0	0.4	7	1	0.3	0.5	0.5	0.3	9.0	•	•	1	1
C2-dibenzothiophenes		0.5	0.8	0.4	0.4	3	2	1	0.3	0.4	9.0	6.0	ī	1	•	ì
C3-dibenzothiophenes		,	,	1	1	-	0.3	1	9.0			6.0	1	1		î
Sum of LACs		22	15	17	13	27	19	12	S	4	3	16	0.3	0.4	1	•
fluoranthene		3	7	7	7	7	2	-	9.0	0.7	0.4	16	,	1	ı	1
pyrene		1	6.0	0.7	0.7	0.4	0.3	0.3	0.4	0.3	1	14	1	1	í	1
C1-fluoranthenes/pyrenes		•	,		•	ı	1	1	1	1	1	3	'	i	1	1
benz[a]anthracene		1	1	1	•	t	1	,	1	ı	1	7	•	1	ı	1
chrysene		•	,	i.	•	1	1	1	1	1	1	7	1	ï	1	•
C1-chrysenes/benz[a]anthracenes		•	1		•	1	1	ı	f	•	1	0.5	1	1	1	1
C2-chrysenes/benz[a]anthracenes		•	1	1	,	1	•	ı	1.	1	1	1	•	1	į	•
C3-chrysenes/benz[a]anthracenes		•	•	,	1	r	1	1	í	ſ	1	,		1	•	1
C4-chrysenes/benz[a]anthracenes		•	,	ı	ï	1	1	,	t	1	ľ	1	•	1	1	i
benzo[b]fluoranthene		1	•	ı	•	T.	ı	ı.	1	•	•	6.0	,	•	1	1
benzo[k]fluoranthene		ī	•	į	1	1	•	,	•	ī	1	-	1	•	1	٠
benzo[a]pyrene		1		ı	1	•	,	ı	1	1	1	6.0	1	•	1	1
indeno[1,2,3-cd]pyrene		1	1	ı	•		ı	1	1.	ı		0.3	1	1	1	1
dibenz[a,h]anthracene		•	1		1	•	1	,	1	•	1	1	•	í	i	•
benzo[ghi]perylene			' (. (' (1 (1 (Ι,	1		1			•	1
Sum of HACS		4	3	2	5	7	7	-	-	-	0.4	41	'	'	•	'
sample weight, grams:		5.12	5.07	5.02	5.05	4.99	5.01	5.02	5.02	4.95	5.02	5.02	5.10	5.42	5.33	5.11
STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE PERSON NAMED IN COLUMN TWO IS NAMED IN THE OWNER, THE PERSON NAMED IN THE PERSON NAMED IN THE OWNER, THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON NAMED IN THE PERSON					-											

Table E-74. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Port Lions.

	Special .	l	Chiton		11000	Vinc out	E	1	1	E	James	
	openes.		CILICII		Silaii	ning clan	Tallilei Clab	Clan	Dungeness clab	Talline	Tanner cran	
			PIL2	PIL2	PIL2	PIL4	PIL4	PIL4	PILS	PIL9	PIL9	
ACs	ed:	-		May-90	Jul-89	Ang-89	Jul-89	Sep-89	Jul-89	Apr-90	Apr-90	
	Collector: Lab no.:	D&M 2010	D&M 2011	D&M 2012	D&M 688	D&M 342	D&M 101	D&M 491	D&M 102	ADFG 1174	ADFG 1175	
naphthalene		В	В	В	а	В	а	а	а	B	а	
C1-naphthalenes		•	•	,	0.5	-	1	1	,	•	1	
C2-naphthalenes		•	1	,		,	•	1	,	•	1	
C3-naphthalenes		•	•	,	,	,	•	,	,	•	,	
C4-naphthalenes		'	,	,	,	,	,		,	•		
acenaphthylene		•	•	,	,	,	,	1	,	•	ı	
acenaphthene		•	•	ī	,	0.5	•	,		,		
fluorene		•	•	,	,	0.2	٠	,		1	•	
C1-fluorene		•		1			,1			,	1	
C2-fluorene		1	•	,	,	,	•	,		1	1	
C3-fluorene		1	•	,	,	Ţ		0.3	,		ī	
phenanthrene			•		0.4	1	0.07	0.4	60.0		ï	
C1-phenanthrenes		•	1	0.7	•	1	•			1	1	
C2-phenanthrenes		•	•	0.3		ı	į	,		•	1	
C3-phenanthrenes		ŗ		1		,	•	1		•	ı	
C4-phenanthrenes		•	•	,		i	1	ı			1	
dibenzothiophene		•	•	ı		,		1			i	
C1-dibenzothiophenes		•	•	ı	,		•	,		•	i	
C2-dibenzothiophenes		1	•	ı	1	£	1	1		•	ı.	
C3-dibenzothiophenes		•	•	. ,			' '	' (1	1	
Sum of LACs		•	•	1	6.0	က	0.1	0.7	0.1	•	•	
fluoranthene		1	•	ı		,	ı	,		•		
pyrene		•	1	ı	r	,	•	ı		1	r	
C1-fluoranthenes/pyrenes		•	•		,			r	ı	•	1	
benz[a]anthracene		•	•					ı	1	•	1	
Cinysene										•	ı	
C1-cm years benefajanthmener							•			•		
C2-cin ysenes/benz[a]anthracenes		,	. 1						, ,			
C4-chrysenes/henzfalanthracenes		,	•	,	,	,	1	,	,	,		
benzofblfluoranthene			,	,	,			ı		•		
benzolklfluoranthene		•	•	,		ı	•	,	1	,	1	
benzolalpyrene		•	1	,	1	,	1	,	,	,		
indeno[1,2,3-cd]pyrene			1	i	,	,	,	i		1	1	
dibenz[a,h]anthracene		1		1	ı		•	,	,	•	i	
benzo[ghi]perylene			•	,	,		1	i	,	•		
Sum of HACs		1					•			•		
sample weight, grams:		4.99	5.00	4.99	5.19	5.31	5.53	5.53	4.91	5.13	5.21	
								1				

Table E-75. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Ouzinkie.

	Species :			Mussel		ľ	l	l	la la	Rutter clam		Ì		1	I ittleneck clam	E C
	Site	01172	0172	0172	0177	0177	0177	01172	0177	0177	01172	0177	0177	O	OITZ	01177
ACs	Date collected:	Sen-89				May-90							May-90		Aug. 80	May 90
	Collector:	D&M 395	D&M			D&M							D&M	D&M D&M	D&M DAM	D&M D&M
naphthalene		a	g	a	a	a	В	a	g a	a	2043 a	a a	a	0/1 a	417 9	404
C1-naphthalenes		0.2	1		1		,	0.2	1			1	ı	0.3	0.2	1
C2-naphthalenes		,	0.7	1	2	6.0	•	•	1	1	-	9.0	,	1	1	0.5
C3-naphthalenes		1	1	1	-1	6.0	1	1	1	6.0	-		ï	,		1
C4-naphthalenes		•	1	1	ì	1	1	1	í	1		•		'	,	
acenaphthylene		,	•	1	1	1	•	•	1	1	1	1	1	1	1	,
acenaphthene		,	1	1	1	ï	1	•	ī	1	1	•	1	1	1	
fluorene		,	1	1	r	,	,	-1	0.5	0.4	1	ı	ī		1	- 1
C1-fluorene		1	1	1	1	,	7	3	1		í	1	ï	1	1	1
C2-fluorene		1	1	1	1	ı	•	1	1	1.	1		,	,	ľ	1
C3-fluorene		•	1	•	1	i	,	1	1	1	1	1	1		1	1
phenanthrene		0.7	1	1	1	8.0	1	0.7	1	•	1	1	1	0.7	0.4	
C1-phenanthrenes		ı	0.4	6.0	0.8	9.0	•	•	1	1	-	6.0	1	,	1	0.7
C2-phenanthrenes		1	1	1	0.4	0.7	t	1	0.5	9.0	0.7	0.5	9.0	1	•	9.0
C3-phenanthrenes		ī	1.	t	1	1	ı	1	1	1	1	ī	i	t		1
C4-phenanthrenes			•	1	1	ī	•	1	1		1	1	ï	ı	•	1
dibenzothiophene		1	1	1	1	1	,	•	1	1 4	1 1	1	r	•	1	
C1-dibenzothiophenes			•	1	•	ı	1	1	ī	0.4	0.5	1	0.4		1	
C2-dibenzothiophenes		£	1	t	1	1	•	1	1	0.7	9.0	1	1	•	•	1
C3-dibenzothiophenes		' 6	٠,	١,	٠,			' 6	' (•	•	١,		٠,	1 4	٠,
Sum of LACS		6.0	1	4 5	2	4	•	6.0	9 6	0 6	o ,	7 7	7 7	-	9.0	
Iluoranthene		1	ı	0.4	0.4	i	ı	1	0.5	0.5	0.5	0.4	0.5		1	0.5
pyrene		1	ı	1	ı	ı	ı	1	1	į	1	i.	ì	•	1	
C1-Illuorantheness pyrenes		1	1	1	1	1	1	1	1	1		1	í.	•	1	1
Central						,	,	,	1	1	ı	•	1	1	t	1
Ciliyselle					1			'	1	1	1	1	1	1	1	1
C1-ciii yelley belig ajanunaciies								,	•	1	1	1	1	1	•	1
C2-cinysenest benefajanthacenes				ı.	1			1		1	1	t	1	1		1
C3-ciii ysellex beligla jaliuli acelles									1	1	1	1		'	•	
Lorzoll Hinganthana		•			ı			•	1	i	1	1			ı	
Denzo[b] inoralitiene						,		r	1	í	•	1		'	1	
benzo[k]Illuorantnene		1	•	1	1		1	í.	1	1		1	,	ı	1	•
penzolalpyrene					r.	,	ı	1	1			1	•	'	1	i
indeno[1,2,3-cd]pyrene		1	1	1	1	r	•	ı	r	1	1	1	,	1	1	
dibenz[a,n]anuracene		1	•	1	ı		1	1	1	1	r	•	1	1	•	
benzolghilperylene Sum of HACs			٠.	0.4	0.4		٠.	٠,	0.5	0.5	0.5	0.4	0.5		' '	0.5
sample weight, grams:		5.68	5.03	5.00	5.02	4.98	5.31	5.28	5.09	5.40	5.09	5.08	5.07	5.03	5.30	5.07
						1										

Table E-76. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Ouzinkie.

				Ī									6			
	Species:	Littl	Littleneck clam	E I	20110	0010	Chiton	on	20110	22130	Mussel	22120	Bl	Butter clam	22120	20110
	Site:		00022	00.22	00022	7700	00022	00022	0077	7700	5700			5700	00023	5700
ACs	Date collected:			May-90	Jul-89		May-90	May-90 May-90	May-90	May-90	Mar-90			Mar-90 I		4ay-90
	Collector:	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	D&M	ADFG 1016	D&M 672	ADFG 835	ADFG 838	ADFG 1691	ADFG 1692
naphthalene		6	e e	a	g	8	a	a	a	а	а	а	a	В	а	а
C1-nanhthalenes		-	0.8	6.0	•	0.2	5	-	-	1	1	0.2		,	1	,
C2-naphthalenes			0.7	6.0	•		4	1	0.8	,	1	1	1	•	2	
C3-naphthalenes			•	0.9	•		7		•		ı	•	1	•	2	6.0
C4-nanhthalenes			1				1	,	•	,	1	1	1	1	4	6.0
acenanhthylene		•	•	,		•	1	•	•	1	ı	,	1	1	1	•
accomplishing		•			•	•	,	'		,	,	•	•		•	•
fluoring					•		00	•	•		0.1		,	,	0.5	5 0
C1 fluorone						,	0.0		•	,	; '	,		•		90
CI-IIIOIEIIE							0.0	•	•	-					1 ic	0.0
C2-11001clie											,	•	•		, 4	` '
C3-IIIuorene		•	•			0					1 (C	C	00	· "	C
phenanthrene		' (' '	, 0	0.1	0.5	٠.	•	1		4 (4 -	7	6.0	n v	4 6
C1-phenanthrenes		0.7	0.0	0.0	1	•	- 0	í	1	í	۷ (٠,			2	י מ
C2-phenanthrenes		1	ı.	0.5	•	•	0.0	•	1	ı	7 (7 0	1	1	6 6	0
C3-phenanthrenes		ı	•	i	1	•	1	1	1	,	7	0.3	ī	1	2	í
C4-phenanthrenes		•	•	ı	•	r		1	1		0.1	1	1	1		٠,
dibenzothiophene		i	1		1	ľ	•	1		ı	0.1	1	ı		0.5	0.3
C1-dibenzothiophenes			•	0.4	ĭ	1	•	•	r		0.2	0.1	•	1	e i	7
C2-dibenzothiophenes		1	1	0.5	•	1	•	•	1	r	_	-	1	1	2	7
C3-dibenzothiophenes		•	1			•	1	1	1	1	e ;	4.0	1	. ,	6	0.5
Sum of LACs		7	7	v.	0.1	0.5	14	7	7	-	14	r .	7	6.0	53	19
fluoranthene		0.5	0.4	9.0	1	1	1	1	1	î	· 3	- !	7	0.7	e .	5
pyrene		•	1	1	1	•	9.0	1	1	ī	-	0.5	0.8	1	- !	8.0
C1-fluoranthenes/pyrenes		•	1	r	1	•	•	•	1		0.3	1	1	1	0.7	•
benz[a]anthracene		•	1	,	•	•	•	1	1	,	0.2		1	ı	0.3	
chrysene		t	•	1	•	i.	1	1	1	1	0.4	•		1	0.5	0.3
C1-chrysenes/benz[a]anthracenes		•	,	,	1	•	•	1	1		1	1	ï	1	•	•
C2-chrysenes/benz[a]anthracenes		1	•	ï	•		1	•	•	1	,	1	1	1	1	ī
C3-chrysenes/benz[a]anthracenes		1	•	r	r	ľ	1	•	•		•	•	•	1	1	1
C4-chrysenes/benz[a]anthracenes		1	•	,	•	•	1	1	1	1	,	•	1	1	•	•
benzo[b]fluoranthene		•	ï	,	r	•	1	1	,	r	0.1	1	1	1	ı	•
benzo[k]fluoranthene		1	ï	,	•		1	•	1	,	1	1	•	•	•	1
benzo[a]pyrene		1	•		1	•	1	1	•	į		•	1	1	•	1
indeno[1,2,3-cd]pyrene		1			•	•	•	1	1	1		•	1	•	•	•
dibenz[a,h]anthracene		•	•		•	•	1	1	1			1	1	1	•	i
benzo[ghi]perylene		•			1	1	1	1	1	,		1	٠,		. ,	٠,
Sum of HACs		0.5	0.4	9.0	•	•	9.0			-	2	7	3	0.7	9	3
sample weight, grams:		5.00	4.98	4.99	5.49	4.99	5.01	5.02	5.01	5.02	5.05	5.02	5.03	5.00	5.27	5.01

Table E-77. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Ouzinkie.

	Species:		Butter clam	clam		Littlenec	k clam	Littleneck clam Sea urchin		Mussel	sel			
	Site:	OUZ3	OUZ3	OUZ3	OUZ3	OUZ3	OUZ3	OUZ3	OUZ4	OUZ4	0174	OUZ4		
ACs	Date collected:	May-90		Sep-90	Sep-90		Mar-90	Mar-90		May-90	May-90 May-90	May-90		
	Collector:	ADFG 1693		ADFG	ADFG 2112	ADFG 836	ADFG 837	ADFG		D&M	D&M	D&M 7664		
naphthalene		a	a	a	a	g	a	3	a	2002 a	g 8	a a		
C1-naphthalenes		1	•		,			ed	0.9	1	1	1		
C2-naphthalenes		7	•	1		1	,		0.9	7	1	-		
C3-naphthalenes		3	1	1	1	,	,1	,	•	3	0.5	9.0		
C4-naphthalenes		2	6.0	1	7	ı	1	,		0.8	'	} '		
acenaphthylene		1	•	ı	,	1	1		1	•	•	1		
acenaphthene		1		ì	,	1	7		•	•	٠	1		
fluorene		0.7	t)	1	1	1	1	ı.	9.0	1	0.5		
C1-fluorene		1	0.4	1	0.5	1	,	ı	•	6.0	•	ï		
C2-fluorene		7	0.5	0.4	0.7	•	,		1	2	6.0	1		
C3-fluorene			•		,	,	,	ı	1	•	,	1		
phenanthrene		3	١.		1	-	7	1	•	•	•	í		
C1-phenanthrenes		4		1	,	ï	ι	ı	9.0	7	0.7	6.0	r	
C2-phenanthrenes		∞	0.7	-	1		,	1	0.7	2	-	8.0		
C3-phenanthrenes		2	1	•	,	1	,	ı	1	1	0.4	r		
C4-phenanthrenes		•	•	•	,	1	,	1	•	•		•		
dibenzothiophene		0.4	•	ı	,	•	,	1	1	9.0	1			
C1-dibenzothiophenes		3	0.4	1	0.5	1	î		0.4	1	0.4	0.5		
C2-dibenzothiophenes		4	0.5	0.5	-	•	ï	,	0.4	2	6.0	6.0		
C3-dibenzothiophenes		4	1 1	0.5	8.0	•	,		1	2	9.0	4.0		
Sum of LACs		39	3	7	9	1	7	1	4	21	7	9 0		
fluoranthene		3	- ;	- !	- 1	-	7		1	0.8	,	0.5		
pyrene		2 5	9.0	0.7	8.0	0.5	0.3		1	1	•			
C1-fluoranthenes/pyrenes		0.7	ı	ı	ı	ı	1	١.	1	1	j	ı		
Denz[ajanuracene		. 90	ı	1	r.	1		ı.		1	•	1		
Circl sharmond hard foliathmone.		0.0			,	1	ı	ı.		1	•	ı		
C2 chargenes/henz[a]anthracenes										1				
C2 chargenes/henzfalanthacenes							ı	ı				ı.		
CA chargener hone anthropane														
C4-cillyselies/celiglaliullaciles										1		ı		
benzolojiluorantnene		•	,	1		1.		ı	ı	1	ı	ı		
benzo[k]Iluoranthene		,	•		,	1	1	ı	1	1	1.	ť		
benzola]pyrene		1	•		,	1	1	,	1	1	1	ı		
indeno[1,2,3-cd]pyrene		•	٠.	r	1	1	r		•	•	1	1		
dibenz[a,h]anthracene		,	•	1	,	1	1		1	1	1	1		
Sum of HACs		9	' 7	' 73	. 7	' 74	. 7			0.8	٠.	0.5		
				1			1							
sample weight, grams:		5.01	2.08	5.05	4.98	2.00	5.02	5:13	4.99	5.02	5.01	2.02		
				The second second			The second second							

Table E-78. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Ouzinkie.

	Species:		Bı	Butter clam	-			Littleneck clam	k clam				Chiton			Chiton
	Site:		OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ4	OUZ7
ACs	ollected: tor:		May-90 May-90 May-90 May-90 D&M D&M D&M	May-90 D&M	May-90 I D&M	May-90 D&M			May-90 May-90 D&M D&M	May-90 D&M	May-90 May-90 D&M D&M				May-90 D&M	Mar-90 ADFG
	Lab no.:	207	2670	2671	2672	2673	2674	2675	2676	2677	2678R	2679R	2685	2686	2687	1023
naphthalene		B	B	B	B	ed	B	B	B	B	B	8	В	B	B	В
C1-naphthalenes		0.4		•	1	ı	1	•	1	,	1			í	,	•
C2-naphthalenes		•	7	1	7	6.0	8.0	1	1	6.0	1	0.8	•	0.5	0.7	•
C3-naphthalenes		•	7	7	3	7	7	7	-	-	•	•	•	1	,	•
C4-naphthalenes		•	•	•	0.7	,	•	•	•	ı		•	•	1	,	
acenaphthylene		•	•	1	•		1	1	1		•		1	1	ī	1
acenaphthene		•	•	•	1	1		•	r	ı		•	ť	ı	,	1
fluorene		•	0.7	1	•	,	•	•	•	0.4		•	1	•	,	•
C1-fluorene		í	8.0	1	0.4	0.4	•	4.0	1	ì	•	ì	,1	1		•
C2-fluorene		•	0.8	٠	-	ı.	•	•		,	•	•	•	•	,	•
C3-fluorene		•	•	1	•		•	•	1		•	•	•	'	,	1
phenanthrene		-	-	1	-	-	-	6.0	0.7	-	0.5	0.5	0.8	0.8	0.5	•
C1-phenanthrenes		0.7	7	1	7	2	-	_	0.7	-	1	0.4	0.4	0.4	0.4	•
C2-phenanthrenes		0.4	2	1	7	-	-	-	0.5	_	•	•	•	•		•
C3-phenanthrenes		ı	•	•	1	1	•		•	î	•	1	1	•	1,	•
C4-phenanthrenes		r	•	1	1			1	•	,	•	1	1	•	,	•
dibenzothiophene		•	1	•	•	à	•	0.4	т.	0.5	•	1	1	1	,	,
C1-dibenzothiophenes		0.1	0.7	0.8	-	6.0	9.0	9.0	1	9.0	•	•	1	ì	1	1
C2-dibenzothiophenes		•	-	1	7		9.0	0.7	1	8.0	1	•	1			•
C3-dibenzothiophenes		٠,	' '	0.5	' '	0.5	' t	٠,	٠,	1 1	٠,	,	٠,	٠,		•
Sum of LACs			13	× 0	15	0 0		2 0	4 2	- 5	7	7	-	7	7	•
fluoranthene		0.5	6.0	0.8		×	0.0	0.0	0.4	0.7						
pyrene C1 fluoranthenes/myrenes			4. '		† '	t. '		† '						. ,	. ,	
CI-IIIOI all uleiles pyrelles benzfalanthracene						,					•	•				
chrysene			•	1	1	ı	,1	1	•	1	•	. 1	•	•	,	•
C1-chrysenes/benz[a]anthracenes			,	•	•	,		•	•	,	•	•	•	1	1	•
C2-chrysenes/benz[a]anthracenes		•		•	•	ı	•	•	1		•	•	,		•	
C3-chrysenes/benz[a]anthracenes		•	•	1		,	•	•	1.	ı	•	•		•	ī	•
C4-chrysenes/benz[a]anthracenes		•	1	1	•	,	•	1	1	,	1	•	•	•		
benzo[b]fluoranthene		•	•	1	•	,	•	•	1	ı	1	1	•	•	,	•
benzo[k]fluoranthene		•	•	•	•	,	•	•	•	ı	•	•	•	•		•
benzo[a]pyrene		•		•			'	•	1	ı	'	•	•	•		
indeno[1,2,3-cd]pyrene		•		1	•	ı	1	•	•	,	•	•	•	1		•
dibenz[a,h]anthracene		•	,	1	•		•	•	i	1	•	•	•	1		•
benzo[ghi]perylene Sum of HACs		0.5	1	0.8	. 1	. 1	9.0	. 1	0.4	0.7						
sample weight, grams		5.15	5.03	5.01	5.00	5.02	4.99	5.02	5.00	4.99	5.01	5.01	4.99	4.99	4.99	5.01
Sample washing Branch												I				

Table E-79. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Ouzinkie.

	Species:			Butter clam	clam			Horse clam
	Site:	6700	67.00			6700	6Zno	6Z00
ACs	Date collected:	May-90 May-90 May-90	May-90			Sep-90	Sep-90	
	Collector: Lab no.:	ADFG 1688	ADFG 1689	ADFG 1690	ADFG 2108	ADFG 2186	ADFG 2187	ADFG 2109
naphthalene		а	а	ß	а	g	в	а
C1-naphthalenes		1	í	1	1	1	,	1
C2-naphthalenes		2	3	2	1	ı	,	
C3-naphthalenes		3	9	2	1	1	1	A.
C4-naphthalenes		2	4	4	1	6.0	6.0	2
acenaphthylene		1	•	0.2	1	j	,	
acenaphthene		,	1	0.5	•	•	,	
fluorene		9.0	0.5	9.0	1	ì	,	
C1-fluorene		9.0	1	7	0.4	1	1	0.5
C2-fluorene		1	2	3	9.0	•	ı	
C3-fluorene			.1	3	1	•	,	
phenanthrene		2	3	3	.1	1	,	
C1-phenanthrenes		3	2	2	1		,	
C2-phenanthrenes		00	7	∞	2	_	-	2
C3-phenanthrenes		0.2	1	8.0	0.4	•	,	0.4
C4-phenanthrenes		•	•	•	•	1	,	
dibenzothiophene		0.3	9.0	0.5		•	,	0.4
C1-dibenzothiophenes		7	3	3	0.4	0.4	0.5	0.5
C2-dibenzothiophenes		3	4	3	0.8	0.4		
C3-dibenzothiophenes		1	2	-	0.5	1	,	
Sum of LACs		78	42	45	9	0	7	1
fluoranthene		•	-	- ;	0.5	0.4	0.5	
byrene		1	0.4	0.4	0.4	1	,	0.8
C1-fluoranthenes/pyrenes		1			,	1	i	
benz[a]anthracene		' 6	1	' (,	ī	,	•
chrysene		0.7	ľ	0.7	1	,	ı	•
C1-chrysenes/benz[a]anthracenes		1	í	•			ŕ	
C2-chrysenes/benz[a]anthracenes		1	•	1		í	ı	•
C3-chrysenes/benz[a]anthracenes		1.	1	1	•	•	ı	
C4-chrysenes/benz[a]anthracenes			1		t	1,	ı	
benzo[b]fluoranthene		1	1.	ı	•	1	i	
benzo[k]fluoranthene		•	1	1	í	1	,	
benzo[a]pyrene			•	•	,	•	,	
indeno[1,2,3-cd]pyrene		•	,	•		ı	1	
dibenz[a,h]anthracene		•	1	1	,	ı	ì	,
benzo[ghi]perylene		0.2	' -	' 2	6.0	- 4.0	. 0	
sample weight, grams :		5.21	5.01	5.46	4.99	2.06	5.13	5.00

Table E-80. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chignik Villages.

Site: CI Date collected: Jaı Collector: AI		CHG1 C	CHG1 (Jan-90]	CHG1		CHG1	CHG1			CHG1	CHG1	
											Sep-90	
Lab no.:	ADFG A 856		ADFG / 858R	ADFG 859R	ADFG 1582	ADFG 1583	ADFG 1584	ADFG 2136	ADFG 2137R	ADFG 2145R	ADFG 2175	
	в	а	В	В	В	ಣ	а	а	B	а	В	
	0.3	•	0.4	0.5	2	1	-	ī		1	1	
	1	,	1		3	8.0	0.4	7	•	•	1	
	,	,		•	4	4	4	2	•	4		,
	1	•	1		4	3	4	3	-	7	0.5	
	,	1	•	•	•	0.3	,1	•	•	•		
	,	•	•	j	1	1	1	4.0	1	1		
	,		•		9.0	9.0	0.5	6.0	0.5	0.5	0.4	
	,	•			7	2	7	7	6.0	6.0	9.0	
	-1	ı	1	٠	9	3	2	_	0.8	1	9.0	
	,	٠	,	,	3	7	4	-	•		1	
	3	2	2	2	=======================================	7	10	4	٠		1	
		1	. 1		18	11	16	5	1		i	
	1	7		ı	19	14	18	7	4	2	2	
	,	•	•	1	9	5	7	3	-	2	í	
	,	,	٠	1,	•		•	0.4	•	•		
	0.3	,	•	1	7	2	3	8.0	0.4	0.4	1	
		1	•	r	7	9	∞	3	•	-	2	
	,	1	•	1	13	10	15	3	3	2	8.0	
	,	•		1	7	9	6	4	3	3	-	
	4	7	7	7	110	7 8	110	20	15	22	œ	
	3	7	1	1	7	S	6	3	7	7	6.0	
	_	1	0.5	9.0	-	0.7	7	-	8.0	8.0	0.5	
		,	٠	•	-	9.0	9.0	-	7	0.7	,	
	•	,		1	1	•	1	0.4	í		1	
	9.0	9.0	0.2	0.4	-	0.8	0.8	-	0.0	-	4.0	
	ı	1	i	,	,	•	•	1	0.5	•	,	
	î	,	1	•	1	ı	ı	1		1	ı	
	ı	•	,	•	ī	1	1	•	1	•	ı	
	r	•	1	•	ı	0.5	1	•		•	r	
	0.4	1	1	•	•	0.2	1	•	•	•	1	
	0.3		1		•	0.2	ı	1	1	•	,	
		•	ı	1	1	ı	•	,	1	1	ı	
	,	•	1	1	•	ï	1	1	1	•	ť	
	1	•	1	•	ı	1	•		•	1	ı	
	' v	, 4	' 74	' 14	10	' x o	12	' 9	' 9	, 4	' 7	
	10.8	10	6 03	20.0	2	208	60.8	8	6 23	60.8	80.8	
	3.01	3.01	5.05	5.04	3.01	3.00	3.02	3.00	27.6	20.0	3.00	
		3 		3 3 2 2 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 2 2 2 4 2 3 5 4 2 5 6 6 0 5 6 0 5 6 0 5 6 6 0 5 6 6 0 5 6 6 0 5 6 6 0 5 6 6 6 6	3 2 2 2 1 3 2 2 2 2 1 3 3 2 2 2 2 1 4 2 2 2 2 1 1 1 0.5 0.6 0.6 0.7 0.4 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	3 2 2 2 111 3 2 2 2 118 4 2 2 2 119 4 2 2 2 110 3 3 1 1 1 1 1 1 1 3 2 1 1 1 1 1 3 2 1 1 1 1 1 3 2 1 1 1 1 1 3 4 2 2 2 110 5 4 2 2 1 10 5 1 5.01 5.03 5.04 5.01 5	3 2 2 2 111 7 11 3 2 2 2 111 7 11 3 2 2 2 111 7 11 3 2 2 2 111 7 11 4 2 2 2 110 78 11 3 2 1 1 1 0.5 0.6 11 0.6 0. 0.6 0.6 0.2 0.4 11 0.8 0. 0.7 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	3 2 2 2 111 7 10 1 1 1 10 1 1 0.5 0.6 11 0.5 1 2 1 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 1 0.5 1 1 0.5 0.6 0.6 1 1 0.6 0.6 1 1 0.7 0.6 1 0.7 0.6 1 0.8 0.8 1 0.8 0.8 1 0.9 0.6 1 0.0 0.5 1 0.	3 2 2 2 111 7 10 4 3 2 4 11 3 2 2 2 111 7 10 4 4 11 16 5 7 3 7 6 8 7 7 3 7 6 8 7 7 7 8 7 8 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9	3 5 3 5 1 0.8 3 2 1 <td>3 2 4 1 0.8 1 3 2 1 0.8 1 0.8 1 4 2 2 11 17 10 4 1 1 1</td>	3 2 4 1 0.8 1 3 2 1 0.8 1 0.8 1 4 2 2 11 17 10 4 1 1 1

Table E-81. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Chignik Villages.

	Crocios .						Manage					
	species .					7	Nussci					
	Site:											CHG3
ACs	Date collected:			-								Sep-90
	Collector: Lab no.:	ADFG 911	ADFG 912	ADFG 913	ADFG 1585R	ADFG 1634R	ADFG 1586	ADFG 1587	ADFG 1588	ADFG 2138	ADFG 2139	ADFG 2140
naphthalene		g	а	а	а	а	а	В	g	а	а	а
C1-naphthalenes		1	2	7	-1	1	1	1	,	•	,	T
C2-naphthalenes		1	1	8.0	•	1	1	1	1	9	,	7
C3-nanhthalenes		_	2	-	•	0.4	,	,	,	4	,	. 0
C4-nanhthalenes		. 1	-	60		. '	•			٧.	4	10
occount thulons)	-	
acenaphinyiene							1		•	' '		
acenaphthene		ı	,		1	1	1			0.4	1	•
fluorene		1	1	•	í	1	r	•	ı	9.0	1	9.0
C1-fluorene		1	,	•	•	1	•	1	•	-	7	4
C2-fluorene		1	1	,	1	,	1	1	•	3	4	9
C3-fluorene	*	1	1	,	1	1	٠	,	,	3	4	4
phenanthrene		2	_	-	0.8	1	0.4	0.4	0.4	•	1	4
C1-nhenanthrenes		C	-	-		-				~	~	-11
C1-phonamanonce		1 6				•				. 5	14	11
C2-pnenanurenes		0 (0 0	4 ,	•	1	•		1	CI C	01;	01
C3-phenanthrenes		7	3	0	•	1		1	•	6	15	10
C4-phenanthrenes		i.	0.5	0.0	•	1	•	•	1	7	3	2
dibenzothiophene		1	T	•	1	1	•	•	r	0.5	0.5	2
C1-dibenzothiophenes		0.5	0.3	9.0	1	0.3	,	,	•	2	S	∞
C2-dibenzothiophenes		1	1	7	1	4.0	1	1	٠	13	7	18
C3-dibenzothiophenes		1	4	9	1	0.2	,	•	1	22	20	25
Sum of LACs		14	20	25	8.0	3	0.4	0.4	0.4	92	8 0	140
fluoranthene		2	0.7	0.7	0.3	0.5	1	1	1	_	0.7	1
pyrene		1	0.5	9.0	1	0.2		,	•	6.0	0.7	1
C1-fluoranthenes/pyrenes		1	0.3	0.3	•	1	1	1	1	12	19	13
benzfalanthracene		1	0.2	•	•	1	•	1	1		1	r
chrysene		2	0.7	9.0	1	0.3	,	,	1	0.4	0.4	0.5
C1-chrysenes/benz[a]anthracenes		0.5	0.3	0.1	1	1	1	ï	1	9.0	8.0	-
C2-chrysenes/benz[a]anthracenes		1	1	1	1	1	1	•	1	1	r	1
C3-chrysenes/benz[a]anthracenes		1	ů,	t	1	•		1	1	1	1	ř
C4-chrysenes/benz[a]anthracenes		•	0.2	0.1	1	1	1	1	•	,	1	•
benzolblfluoranthene		8.0	0.2	0.2	1	1		•	•	•	1	
benzolk]fluoranthene		6.0	0.2	0.2	1	1	,	1	1	.1	1	í
benzo[a]pyrene		0.3	1	1	1	í	ï	1	1	1	1	·
indeno[1,2,3-cd]pyrene		•	1	1	,	1	1			1	1	
dibenz[a,h]anthracene		1	1	1	7	,	1	r	•	1	1	ſ
benzo[ghi]perylene		•	•	1	•	ı	•	ı	1	1		1
Sum of HACs		10	3	3	0.3	1	,	•		15	22	16
. smooth design clame.		5.03	80 5	5.01	505	2 06	5 11	2 04	5.01	S 03	5.07	90 %
sample weignt, grams:		5.03	3.00	3.01	2.03	0.00	3.11	5.04	2.01	5.03	2.07	5.00

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Table E-82. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Ivanof Bay.

			I	I			I									
	Species: Dungeness crab	ness crab	Cockle	200	2	2021	2022	Mussel	el	200	200	200	77.00	È	Butter clam	
	Site:	IVBI	IVB2	IVB3	IVB3				IVB3			IVB3	IVB3		IVB3	IVB3
ACs	Date collected:	Feb-90	Feb-90	Feb-90	Feb-90			155	Apr-90			Sep-90	Sep-90		Apr-90	Apr-90
	Collector: Lab no.:	ADFG 1019	ADFG 1020	870 870	871R	874R	872 872	ADFG 1615	ADFG 1616	ADFG 1617	ADFG 2169	ADFG 2170	ADFG 2171	1589	1590	ADFG 1626
naphthalene		а	а	ದ	B	ß	В	B	я	æ	B	a	а	а	а	а
C1-naphthalenes		i	,	ť	1	1	1	1	∞	1		1	,	•	ï	1
C2-naphthalenes		1	,	1	1		•	8.0	7	6.0	•	٠		'	t	1
C3-naphthalenes		1	,	•	•	•	•	1	•	•				•	,	•
C4-naphthalenes		1	1	1	T	•	•	ı	•	•	0.5	1	1	'	•	•
acenaphthylene		ī		•	ī	•	•	•	•	•	•	•	,	'	•	•
acenaphthene			,	•	1	,	1	1	1	1	0.4		4.0	•	•	í
fluorene		ī	,	1	1	•	•	1	1	•	•	1	,	'	•	ī
C1-fluorene			,	•	•	•	•	1	,	1	0.4	1	9.0	1	1	•
C2-fluorene			,	1			,	1	1	•	1	.1	,	•	1	·
C3-fluorene		,	,	•	1		•	1	1	1	1	•	ı	•		•
phenanthrene		,	3	_	1		1	•	4	1	1	•	,	0.7	8.0	
C1-phenanthrenes		1	0.7	1	0.4	,	6.0	i	7	ī	1	1		•	1	1
C2-phenanthrenes		•	0.2	r	•	•		•	1	1.	3	0.5	4	1	1	•
C3-phenanthrenes			1	1	•	•	1	1	1	1	1	٠	1	'	1	1
C4-phenanthrenes		1	í	1	ī	1	1	1	.1	•	•	1	,	1	•	ī
dibenzothiophene		1	,	1		•	•	1	1	•	•	•	,		•	1
C1-dibenzothiophenes		,		1		•	•	1	1	•	0.5	1	1	,	•	•
C2-dibenzothiophenes		1	1	1	•	•	•	1	1	1	0.4).	-	1	1	1
C3-dibenzothiophenes		1	,	1	1	•	1	•	1	1	•	1	-	1	1	1
Sum of LACs			4	-	_	•	7	8.0	22	6.0	S	0.5	10	0.7	0.8	-
fluoranthene		1	3	•	r	•	•	0.9	1	9.0	0.5	•	0.7	,	0.2	0.7
pyrene			0.8	•	1	1	•	9.0	ı	•		1	0.7	,	•	0.3
C1-fluoranthenes/pyrenes		ı		•		1	•	ī	•	1	4.0	•	0.5	•		i
benz[a]anthracene			•	•	•	1	ı	1	1	1	ı	ı	1	•	1	1
chrysene		•	0.4	•	1	•	•	•	0.7	1	1	1	,	1	•	0.2
C1-chrysenes/benz[a]anthracenes		ı	ı	1	•	r	•	1	1	1	1	r	ı	,	•	1
C2-chrysenes/benz[a]anthracenes		r		•		•	•	1	1		1	•	ı	1	•	
C3-chrysenes/benz[a]anthracenes		,	,		1		1	1	î.	ì	•	1	r	1	1	1
C4-chrysenes/benz[a]anthracenes		1	1		1	ŗ			1	r		1		'	•	1
benzo[b]fluoranthene			ı	•	ľ	1	•	•	•	1	1	1	,	,	1	•
benzo[k]fluoranthene		r		1	ì		•	•	1		•	•		•	•	ı
benzo[a]pyrene		ı	,		t	•	•	•	•	•	1			•	•	•
indeno[1,2,3-cd]pyrene				•	•	•	•		1	1	ľ			'	•	
dibenz[a,h]anthracene					•	•	•		•	•		1	,	'		
benzo[ghi]perylene				•	í	•	•	٠,	' 6		' 6	1	. ('	' 6	٠,
Sum of HACs			4		1	1	1	2	0.7	9.0	6.0	1	7		0.2	-
sample weight, grams:		5.04	5.13	5.04	5.00	5.07	5.05	5.02	5.03	5.03	5.05	5.05	5.01	5.05	5.11	5.06

Table E-83. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Perryville.

	Species:	Chiton					Mussel					
	Site:	PER1	PER3	PER3	PER3	PER3	PER3	PER3	PER3	PER3	PER3	
ACs	Date collected:	Feb-90	Feb-90	Feb-90	Feb-90	Apr-90	Apr-90			Sep-90	Sep-90	,
	Collector: Lab no.:	ADFG 1018	ADFG 866	ADFG 867	ADFG 868	ADFG 1581	ADFG 1618			ADFG 2173	AĎFG 2174	
naphthalene		а	а	а	а	2	g	B	В	а	а	
C1-naphthalenes		1	1			1	1	1	1	1		
C2-naphthalenes		,	,	1	1	t	0.8	,	1		1	
C3-naphthalenes		,		1	1	1		1	,		,	
C4-naphthalenes		,	•	,	į	1	1	1	•	- 1	1	
acenaphthylene		,	1	'	•	,	,		1	1	,	
acenaphthene				•	į			1	1	1	,	
fluorene		0.2			. 1		,	•	1		ı	
C1-fluorene		,			,	,	1	1	0.4	0.4	0.5	
C2-fluorene		,	1		.1.	1	1		,		ī	
C3-fluorene		4.0	•	1	,	ı	1	1	1		į	
phenanthrene		4	0.7	0.7	•	9.0	•	1	1	7	ı	
C1-phenanthrenes		_	1	1	1	1		1		1	,	
C2-phenanthrenes		,	1	1	1	1	•	1	•	1	ı	
C3-phenanthrenes		,	ı	•	1	1	1	1	1	1	1	
C4-phenanthrenes			•	1	1	1	1	1	•	•	,	
dibenzothiophene		4.0	1	•	1	1	ı	•	1 1	1		
C1-dibenzothiophenes		i.	t	ı	ı	ı	1		0.5	0.4	0.7	
C2-dibenzothionhenes												
Sum of LACs		9	0.7	0.7	٠	9.0	8.0	•	6.0	' 7	٠,	
fluoranthene		1		.1	,	1	0.7	1	'	ı î		
pyrene		,	1	•	.1.	•	0.5	0.5	Ţ	1	ı	
C1-fluoranthenes/pyrenes		0.2		•	ŗ		1		ı	1	J	
benz[a]anthracene		. (1	1	1	•	0.4	•	t	i	ı	
chrysene		0.8	1	•	ı		0.7	•	•	•	i	
C1-chrysenes/benz[a]anthracenes		0.2	•	ı.	ı	1	1	1	•	1		
C2-chrysenes/benz[a]anthracenes		ì	•	•			i	1.	•	'	1	
C3-chrysenes/benz[a]anthracenes		ı		ľ	ì	1	•	1	ı	1	1	
C4-chrysenes/benz[a]anthracenes	,	, ,	•	1	,	1		1	1		ı	
benzo[b]fluoranthene		0.5	,	•	•	1	0.4	1	1	•	t	
benzo[k]fluoranthene		,	•	1	1	1	•	1	1	T	ı	
benzo[a]pyrene			•	•	•	i	1	•	1	•	,	
indeno[1,2,3-cd]pyrene			1	1	1	1	ï	,	•	ľ	1	
dibenz[a,h]anthracene			'	•	1	•	•	ī	t	r	ı	
benzolgnijperylene Sum of HACs		2			٠.		. 6	' 7				
sample weight, grams :		5.03	5.03	5.03	5.03	5.04	5.06	5.00	5.12	5.11	5.12	
, ,					- Local March							

Table E-84. Concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in invertebrate samples from Kashvik Bay.

	Species:	ŀ	Razor clam	clam				l	ľ	ŀ	l			l	
	Site:	KAT1	KATI	KAT1	KAT1										
ACs	Date collected: Collector:	Apr-90 ADFG	Apr-90 ADFG	Apr-90 ADFG	Apr-90 ADFG										
naphthalene	Lau IIO.	1021 a	1020 a	1029 a	1037 a	l	ı	1	1	l	l		l	l	
C1-naphthalenes		•	•	٠	1										
C2-naphthalenes		1	9.0	1	r							٠			
C3-naphthalenes		•	1		1										
C4-naphthalenes		r		•	1										
acenaphthylene		ī	•	,	1										
acenaphthene		•	•	•	1										
fluorene		•	0.3	٠	ï										
C1-fluorene		•	•	•	•										
C2-fluorene		•	•	1	1										
C3-fluorene		•	1	1	1										
phenanthrene		•	•	•	1										
C1-phenanthrenes		1	6.0	•											
C2-phenanthrenes		7	7	-	7										
C3-phenanthrenes		3	4	3	9										
C4-phenanthrenes		•	1	1	1										
dibenzothiophene		•	1	•	1										
C1-dibenzothiophenes		•	0.2												
C2-dibenzothiophenes		-	2	0.3	7										
C3-dibenzothiophenes		e (4	7	' '										
Sum of LACs		6	14	9	15										
fluoranthene		4.0	0.7	0.5	0.7										
pyrene		0.3	4.0	0.3	0.5										
C1-fluoranthenes/pyrenes		0.7	0.7		ı										
benz[a]anthracene		' '	' '	' '	٠.										
Chrysene C1 chrysenes/henzfalanthracenes		0.0	0.0	0.0											
C2-chrysenes/benz[a]anthracenes		0.3	,	0.7											
C3-chrysenes/benz[a]anthracenes		•	,	1	•										
C4-chrysenes/benz[a]anthracenes		•	•	•	•										
benzo[b]fluoranthene		•	ŗ	,	•										
benzo[k]fluoranthene			1	1	1										
benzo[a]pyrene		•	•	•	•										
indeno[1,2,3-cd]pyrene		•	•	1	•										
dibenz[a,h]anthracene		•	•		•										
benzo[ghi]perylene Sum of HACs		. 2	3 .	3 .	3 ,										
sample weight grams		5.11	5.02	5.16	5.07										
Sample weight, grains .		7117	20.0	2.10	0.0										

SECTION F

QUALITY ASSURANCE

QUALITY ASSURANCE

Quality Assurance for Analyses for Fluorescent Aromatic Compounds (FACs)

Quality assurance procedures for bile analyses included use of naphthalene (NPH) and phenanthrene (PHN) calibration standards, a "bile pool" control material, blank analyses, and replicate analyses to evaluate the performance of the high performance liquid chromatography fluorescence (HPLC/UV-F) method.

Quality Assurance for Analyses for Aromatic Compounds

Quality control (QC) measures included analyses of method blanks, spiked blanks, matrix spikes, and National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) 1974. Where possible, primary standard solutions were purchased. The recoveries of the following surrogates are reported as QC information: Naphthalene-d8, acenaphthene-d10, and benzo[a]pyrene-d12. Analyte concentrations are reported on the basis of the internal standards ("surrogates") added at the beginning of the sample extraction. The HPLC internal standard (used to determine the fraction of total sample extract used in the analysis for aromatic hydrocarbons) was phenanthrene-d10. Hexamethylbenzene was used as the gas chromatography (GC) internal standard to calculate the recoveries of the surrogates. The criterion for the recovery of each surrogate standard was greater than 50%, but less than 130%, and the relative standard deviations (RSDs) for surrogate recoveries in a set of samples was less than 25%. When the recovery of any surrogate was outside these limits, corrective action was taken, including instrument repair, inlet cleaning, column replacement, and/or reanalysis of the samples.

The GC calibration standards generally included all surrogates and analytes of interest, except for some classes of alkylated aromatic hydrocarbons and dibenzothiophenes. In these cases, the response factor for the corresponding

unsubstituted compound was used to calculate the analyte concentrations. Graduated concentrations of GC-calibration standards were used for determining multilevel response factors. A GC-calibration standard was analyzed after every six samples to demonstrate the stability of the calibration. The GC/MS was considered "under control" when the response for each analyte or surrogate in a GC-calibration standard was reproducible within \pm 10% from analysis to analysis.

Target detection limits were ≤ 0.5 ng/g (wet weight basis). The instrument sensitivity, the sample weights for the associated sample set, the low-level instrument calibration standards, and the standard reference material were used to determine the detection limits.

One method blank was analyzed with each set of approximately 10 samples. The aromatic hydrocarbons (except NPH, which was present in the solvents at trace concentrations) and dibenzothiophenes in the blanks should not be present at the limit of detection. A matrix spike (containing 50-80 ng/g of each analyte) or a spiked blank (containing 40-70 ng/g of each analyte) was analyzed with each set of approximately 10 samples during the first year (about 1/3) of the study. During the latter part of the study, a sample of NIST Standard Reference Material 1974 was analyzed with each set of 10 samples.

The percent recovery of the surrogate standards provides a measure of losses incurred for each sample during the extraction and cleanup steps. Ideally, recoveries would be near 100%, but realistically, recoveries of approximately 90% are considered within quality control guidelines because the procedures involve so many sample handling steps. The mean percent recovery and standard deviation of the surrogate standards (deuterated naphthalene, deuterated acenaphthene, and deuterated benzo[a]pyrene) were $92\% \pm 15\%$.

Method detection limits are usually defined by a combination of factors including instrument signal-to-noise ratio, the lowest level of multilevel standard that can be reliably measured, the original sample weight, and the final volume of the sample extract. Based on the results for field blanks (Table F1), method blanks analyzed with each set of samples (Table F2), and results for the analyses of the NIST SRM 1974 analyzed with each set of samples after the first year (Table F3), our detection limits ranged from about 0.5 ng/g to about 1 ng/g. One of the

certified values in the NIST SRM is 0.35 ng/g for dibenz[a,h]anthracene (DBA). Our results for DBA were 0.3 ng/g \pm 0.4 ng/g.

Naphthalene was present in the solvents at trace concentrations and resulted in concentrations in method blanks and in samples of about 1 ng/g (Table F2). Generally, the other analytes were not found in the method blanks at the stated limit of detection.

In the first year of the study, analytes were added to a method blank (also called a spiked blank) or to a tissue sample (also called a matrix spike) and then analyzed as a sample with each set of samples. The results were used to show that the analytes would be found by this method and to show losses due to sample handling but would not provide any information on extraction efficiency. The recoveries for the analytes in spiked blanks (Table F4) and in matrix spikes (Table F5) ranged from 75% to 130%. As soon as SRM 1974 tissue material was available, a sample of it was analyzed with every set of samples in place of a spiked blank or a matrix spike. The SRM was far more useful than the matrix spike for quality control because it was a homogeneous material, 11 analyte values were certified or noted, and its use afforded a way to monitor extraction efficiency as well as losses due to sample handling. Also, the SRM tissue contained all of the analytes we were monitoring in the subsistence samples, thus enabling us to monitor quality control for all of our analytes.

QA TABLES

Table F-1. Detection limits and standard deviations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in field blanks (n=10). The "less than" symbol (<) indicates that the analyte was not detected in concentrations above the stated value.

ACs	Mean	Standard deviation
C1-naphthalenes	< 0.5	0.4
C2-naphthalenes	< 0.6	1
C3-naphthalenes	< 0.4	0.6
C4-naphthalenes	< 0.2	0.2
acenaphthylene	< 0.2	0.2
acenaphthene	< 0.3	0.2
fluorene	< 0.2	0.2
C1-fluorenes	< 0.2	0.1
C2-fluorenes	< 0.2	0.1
C3-fluorenes	< 0.2	0.2
phenanthrene	< 0.4	0.2
C1-phenanthrenes	< 0.3	0.3
C2-phenanthrenes	< 0.2	0.2
C3-phenanthrenes	< 0.2	0.2
C4-phenanthrenes	< 0.1	0.1
dibenzothiophene	< 0.2	0.3
C1-dibenzothiophenes	< 0.2	0.1
C2-dibenzothiophenes	< 0.1	0.1
C3-dibenzothiophenes	< 0.1	0.1
fluoranthene	< 0.2	0.2
pyrene	< 0.2	0.2
C1-fluoranthenes/pyrenes	< 0.09	0.06
benz[a]anthracene (BAA)	< 0.2	0.2
chrysene	< 0.1	0.1
C1-chrysenes/BAAs	< 0.08	0.03
C2-chrysenes/BAAs	< 0.08	0.03
C3-chrysenes/BAAs	< 0.1	0.1
C4-chrysenes/BAAs	< 0.08	0.04
benzo[b]fluoranthene	< 0.1	0.09
benzo[k]fluoranthene	< 0.1	0.07
benzo[a]pyrene	< 0.1	0.07
indeno[1,2,3-cd]pyrene	< 0.1	0.08
dibenz[a,h]anthracene	< 0.2	0.1
benzo[ghi]perylene	< 0.1	0.1

Table F-2. Detection limits and standard deviations, ng/g (ppb) wet weight, of aromatic compounds (ACs) in method blanks (n=165). The "less than" symbol (<) indicates that the analyte was not detected in concentrations above the stated value.

ACs	Mean	Standard deviation
21-naphthalenes	< 0.8	0.9
2-naphthalenes	< 0.4	0.7
3-naphthalenes	< 0.3	0.3
4-naphthalenes	< 0.2	0.2
enaphthylene	< 0.3	0.8
enaphthene	< 0.3	0.3
iorene	< 0.2	0.2
-fluorenes	< 0.2	0.2
2-fluorenes	< 0.2	0.2
3-fluorenes	< 0.3	0.3
enanthrene	< 0.4	0.7
l-phenanthrenes	< 0.1	0.2
2-phenanthrenes	< 0.1	0.2
-phenanthrenes	< 0.1	0.1
1-phenanthrenes	< 0.1	0.1
oenzothiophene	< 0.1	0.1
-dibenzothiophenes	< 0.2	0.1
-dibenzothiophenes	< 0.2	0.1
-dibenzothiophenes	< 0.2	0.1
oranthene	< 0.2	0.3
rene	< 0.2	0.2
-fluoranthenes/pyrenes	< 0.1	0.1
nz[a]anthracene (BAA)	< 0.2	0.4
rysene	< 0.2	0.4
-chrysenes/BAAs	< 0.2	0.4
2-chrysenes/BAAs	< 0.2	0.4
-chrysenes/BAAs	< 0.2	0.4
-chrysenes/BAAs	< 0.2	0.4
nzo[b]fluoranthene	< 0.2	0.3
nzo[k]fluoranthene	< 0.1	0.2
nzo[a]pyrene	< 0.2	0.3
leno[1,2,3-cd]pyrene	< 0.2	0.3
enz[a,h]anthracene	< 0.2	0.3
nzo[ghi]perylene	< 0.2	0.2

Table F-3. Mean concentrations, ng/g (ppb) wet weight, of aromatic compounds (ACs) determined in NIST Standard Reference Material 1974, standard deviation (n=121), and certified values.

ACs	Mean	σ	Certified con	ncentrations	S
			Mean	σ	
naphthalene	4	1			
C1-naphthalenes	3	2	3.2*	0.5	
C2-naphthalenes	4	2			
C3-naphthalenes	8	3			
C4-naphthalenes	24	9			
acenaphthylene	0.4	0.6			
acenaphthene	0.6	0.6			
fluorene	1	0.6	1.5*	0.2	
C1-fluorenes	4	1			
C2-fluorenes	20	8			
C3-fluorenes	23	15			
phenanthrene	6	2	5.6	1.4	
C1-phenanthrenes	11	4			
C2-phenanthrenes	44	15			
C3-phenanthrenes	49	19			
C4-phenanthrenes	11	8			
dibenzothiophene	0.9	0.4			
C1-dibenzothiophenes	5	2			
C2-dibenzothiophenes	29	10			
C3-dibenzothiophenes	34	13			
fluoranthene	46	8	33.6	5.8	
pyrene	44	7	34.1	3.7	
C1-fluoranthenes/pyrenes	25	7	J		
benz[a]anthracene (BAA)	5	1	4.6*	0.4	
chrysene	18	3			
C1-chrysenes/BAAs	7	2			
C2-chrysenes/BAAs	3	2			
C3-chrysenes/BAAs	0.6	0.9			
C4-chrysenes/BAAs	0.0	0.4			
benzo[b]fluoranthene	7	2	6.5	1.2	
benzo[k]fluoranthene	4	1	0.5		
benzo[a]pyrene	2	1	2.29	0.47	
indeno[1,2,3-cd]pyrene	2	1.0	1.8	0.3	
dibenz[a,h]anthracene	0.3	0.4	0.35*	0.01	
benzo[ghi]perylene	2	1.0	2.47	0.28	
sample weight, grams:	4	1.0			

^{*} Noncertified concentrations reported by NIST.

Table F-4. Spiked blanks. Mean percent recoveries and relative standard deviations (RSD) of aromatic compounds (ACs) in spiked blanks (n=6).

ACs	Mean %	Relative standard deviation %	Amount spiked ng/g
naphthalene	100	4	65
acenaphthylene	95	7	63
acenaphthene	98	2	69
fluorene	98	4	66
phenanthrene	100	6	68
dibenzothiophene	110	, 7	120
benz[a]anthracene	120	18	58
chrysene	110	9	68
benzo[b]fluoranthene	110	16	66
benzo[k] fluoranthene	110	12	65
benzo[a]pyrene	96	4	59
indeno[1,2,3-cd]pyrene	110	15	54
dibenz[a.h]anthracene	120	19	43
benzo[ghi]perylene	100	13	56

Table F-5. Matrix spikes. Mean percent recoveries and relative standard deviations (RSD) of aromatic compounds in matrix spikes (n=39).

ACs	Mean %	Relative standard deviation %	Amount spiked ng/g
naphthalene	110	25	65
acenaphthylene	93	16	70
acenaphthene	92	13	63
luorene	95	21	69
ohenanthrene	110	13	68
libenzothiophene	120	23	120
luoranthene	130	30	
pyrene	120	30	
penz[a]anthracene	94	25	58
chrysene	94	24	68
penzo[b]fluoranthene	86	20	66
penzo[k]fluoranthene	82	20	65
penzo[a]pyrene	87	17	59
ndeno[1,2,3-cd]pyrene	77	26	54
libenz[a,h]anthracene	76	33	43
penzo[ghi]perylene	75	24	56

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