

Table D7. Individual hydrocarbon and total petroleum hydrocarbon concentrations (in µg/g wet wt.) for ribbed mussels taken from Saw Mill North marsh, a replanted site.¹⁻³

Sample ID	Nonane (n-C ₉)	Decane (n-C ₁₀)	Undecane (n-C ₁₁)	Dodecane (n-C ₁₂)	Tridecane (n-C ₁₃)	Tetradecane (n-C ₁₄)	Pentadecane (n-C ₁₅)	Hexadecane (n-C ₁₆)	Heptadecane (n-C ₁₇)	Pristane	Octadecane (n-C ₁₈)	Phytane	Nonadecane (n-C ₁₉)	Eicosane (n-C ₂₀)	Heneicosane (n-C ₂₁)	Docosane (n-C ₂₂)	Tricosane (n-C ₂₃)
First Collection																	
197020401	0.66	nd	nd	nd	nd	nd	0.12	0.14	0.29	0.11	nd	nd	0.23	nd	1.22	nd	nd
197020402	nd	nd	nd	nd	nd	nd	nd	0.11	0.23	0.16	nd	0.12	0.18	nd	1.62	nd	nd
197020409	nd	nd	nd	nd	nd	nd	nd	nd	0.20	nd	nd	nd	0.21	nd	1.54	nd	nd
197020415	0.65	nd	nd	nd	nd	nd	nd	nd	0.23	0.15	nd	nd	0.12	nd	1.45	nd	nd
297031702	nd	nd	nd	nd	nd	nd	nd	nd	0.13	nd	nd	nd	nd	nd	nd	nd	nd
Average⁴	0.33	nd	nd	nd	nd	nd	< MDL	< MDL	0.22	0.11	nd	< MDL	0.16	nd	1.20	nd	nd
Std Dev	0.29	-	-	-	-	-	-	-	0.06	0.05	-	-	0.07	-	0.59	-	-
Second Collection																	
497051405	nd	nd	nd	nd	nd	nd	nd	nd	0.96	nd	nd	nd	nd	0.24	2.52	1.01	4.53
497051406	nd	nd	nd	nd	nd	nd	nd	nd	0.89	nd	nd	0.13	0.12	nd	2.35	0.80	3.08
497051407	0.52	nd	nd	nd	nd	0.23	0.17	0.12	0.78	0.30	0.15	0.30	0.29	0.38	3.79	2.07	3.87
497051409	nd	nd	nd	nd	nd	nd	nd	nd	0.84	nd	nd	nd	nd	nd	nd	nd	nd
497051410	nd	nd	nd	nd	nd	nd	nd	nd	0.89	nd	nd	0.12	0.17	nd	nd	nd	nd
Average⁴	< MDL	nd	nd	nd	nd	< MDL	< MDL	< MDL	0.87	0.10	< MDL	0.13	0.14	< MDL	1.81	0.91	2.79
Std Dev	-	-	-	-	-	-	-	-	0.07	0.11	-	0.10	0.10	-	1.58	0.71	1.51
MDL	0.24	0.06	0.12	0.12	0.11	0.11	0.11	0.09	0.08	0.10	0.10	0.10	0.11	0.21	0.38	0.68	2.47

Table D7. Continued.¹⁻³

Sample ID	Tetracosane (n-C ₂₄)	Pentacosane (n-C ₂₅)	Hexacosane (n-C ₂₆)	Heptacosane (n-C ₂₇)	Octacosane (n-C ₂₈)	Nonacosane (n-C ₂₉)	Triacotane (n-C ₃₀)	n-Hentriacontane (n-C ₃₁)	Dotriacontane (n-C ₃₂)	Tritriacontane (n-C ₃₃)	Tetratriacontane (n-C ₃₄)	Pentatriacontane (n-C ₃₅)	Hexatriacontane (n-C ₃₆)	Heptatriacontane (n-C ₃₇)	Octatriacontane (n-C ₃₈)	Nonatriacontane (n-C ₃₉)	Tetracontane (n-C ₄₀)
First Collection																	
197020401	nd	nd	0.19	nd	nd	nd	nd	nd	3.13	3.65	0.32	0.43	0.39	0.41	0.32	0.24	0.15
197020402	nd	nd	nd	nd	nd	nd	nd	0.55	1.27	0.22	0.40	0.45	0.43	0.44	0.34	0.25	0.16
197020409	nd	nd	nd	nd	nd	nd	nd	0.40	0.33	0.41	0.46	0.52	0.50	0.49	0.39	0.29	0.18
197020415	nd	nd	nd	0.21	0.39	nd	nd	0.52	0.70	0.70	0.73	0.80	0.76	0.74	0.59	0.44	0.27
297031702	nd	nd	nd	nd	nd	nd	nd	0.14	nd	0.12	nd	nd	nd	nd	nd	0.10	0.12
Average⁴	nd	nd	< MDL	< MDL	< MDL	nd	nd	0.34	1.10	1.02	0.39	0.45	0.43	0.43	0.34	0.26	0.18
Std Dev	-	-	-	-	-	-	-	0.23	1.22	1.49	0.25	0.27	0.26	0.23	0.20	0.12	0.06
Second Collection																	
497051405	1.33	0.63	0.20	0.61	1.04	8.55	nd	0.42	0.72	0.20	nd	nd	0.14	0.18	0.16	0.10	nd
497051406	nd	nd	nd	nd	nd	nd	nd	0.12	nd	nd	nd	nd	nd	nd	nd	nd	nd
497051407	nd	nd	nd	nd	nd	nd	nd	0.60	3.31	0.29	nd	0.19	0.11	nd	0.14	0.08	nd
497051409	nd	nd	nd	nd	nd	nd	nd	nd	0.17	nd	nd	nd	nd	nd	nd	nd	nd
497051410	nd	nd	nd	nd	nd	nd	nd	0.30	1.60	0.14	nd	nd	nd	nd	nd	nd	nd
Average⁴	0.38	< MDL	< MDL	0.15	0.29	1.93	nd	0.30	1.18	0.14	nd	< MDL	< MDL	< MDL	0.09	< MDL	nd
Std Dev	0.53	-	-	0.26	0.42	3.70	-	0.22	1.34	0.10	-	-	-	-	0.06	-	-
MDL	0.29	0.27	0.11	0.08	0.20	0.56	0.48	0.11	0.14	0.11	0.09	0.10	0.10	0.18	0.08	0.06	0.06

Table D7. Continued.¹⁻³

Sample ID	Total Petroleum Hydrocarbons ⁵	Total Concentrations of Individual Hydrocarbons ^{6,7,15}	Total: Pristane + Phytane ^{6,15}	Pristane/n-C ₁₇ ¹⁶	Phytane/n-C ₁₈ ¹⁶	Pristane/Phytane ¹⁶	Total: Odd No Carbons ^{6,8,15}	Total: Even No Carbons ^{6,9,15}	Carbon Preference Index (CPI) ^{10,16}	Sum: C ₁₀ -C ₁₂ -C ₁₄ ^{6,11,15}	Sum: C ₂₂ -C ₂₄ -C ₂₆ -C ₂₈ ^{6,12,15}	Weathering Index (WI) ^{13,16}
First Collection												
197020401	266	15.0	nd	0.40	-	-	9.09	5.77	1.58	nd	nd	-
197020402	131	10.1	0.28	0.73	-	1.41	5.91	3.90	1.52	nd	nd	-
197020409	136	9.23	nd	-	-	-	6.03	3.10	1.95	nd	nd	-
197020415	186	12.5	0.20	0.63	-	-	7.69	4.58	1.68	nd	nd	-
297031702	nd	nd	nd	-	-	-	nd	nd	-	nd	nd	-
Average⁴	149	10.3	< MDL	0.49 ¹⁷	-	-	6.32	3.78	1.67 ¹⁷	nd	nd	-
Std Dev	87.2	3.93	-	-	-	-	2.33	1.59	-	-	-	-
Second Collection												
497051405	541	24.6	nd	-	-	-	19.1	5.40	3.54	nd	3.58	-
497051406	103	9.62	nd	-	-	-	7.54	nd	-	nd	nd	-
497051407	268	19.0	0.60	0.39	1.95	1.01	11.2	7.22	1.55	0.32	2.38	0.13
497051409	nd	nd	nd	-	-	-	nd	nd	-	nd	nd	-
497051410	77.9	nd	nd	-	-	-	nd	2.99	-	nd	nd	-
Average⁴	203	13.1	0.23	0.11 ¹⁷	-	0.77 ¹⁷	9.01	3.82	2.36 ¹⁷	< MDL	1.67	-
Std Dev	209	8.40	0.21	-	-	-	6.48	2.42	-	-	1.28	-
MDL	53.6	8.19 ¹⁴	0.19 ¹⁴				5.09 ¹⁴	2.91 ¹⁴		0.29 ¹⁴	1.29 ¹⁴	

Table D7. Continued.

Footnotes:

- ¹ The concentrations of the individual aliphatic hydrocarbons and the total petroleum hydrocarbons were determined using external standard calculations.
- ² When an individual aliphatic hydrocarbon was not detected, its concentration was replaced by nd.
- ³ The concentrations for n-C₈ will be not reported, since it was difficult to identify this peak in samples and to determine MDL for n-C₈.
- ⁴ If all concentrations are nd, the average is replaced with nd. When there is at least one number in the data set to be averaged, each nd is replaced with 1/2*MDL, and an average is calculated. If this numeric value is less than the MDL, the average is replaced by < MDL; otherwise, the average is the calculated value. When a numeric value is found for the average, the standard deviation is then determined using the same number set used to calculate the average.
- ⁵ Determined from the total peak areas in the chromatogram from n-C₈ to n-C₄₀ minus any contributions from the internal standard areas.
- ⁶ These formulae use 1/2MDL values for each analyte not detected.
- ⁷ Sum of the concentrations of the individual aliphatic hydrocarbons n-C₉ through n-C₄₀ plus the concentrations of pristane and phytane.
- ⁸ The total of the concentrations of the aliphatic hydrocarbons with an odd number of carbon atoms.
- ⁹ The total of the concentrations of the aliphatic hydrocarbons with an even number of carbon atoms. The contribution of n-C₈ is not included in the total.
- ¹⁰ Carbon Preference Index (CPI) is defined as the ratio of the total of the concentrations of the aliphatic hydrocarbons with an odd number of carbons to the total concentration of the aliphatic hydrocarbons with an even carbon number.
- ¹¹ The total of the concentrations of n-C₁₀, n-C₁₂, and n-C₁₄.
- ¹² The total of the concentrations of n-C₂₂, n-C₂₄, n-C₂₆, and n-C₂₈.
- ¹³ Weathering Index (WI) is defined as the ratio of the total concentration of n-C₁₀, n-C₁₂, and n-C₁₄ to the total concentration of n-C₂₂, n-C₂₄, n-C₂₆, and n-C₂₈.
- ¹⁴ These MDL values are calculated with the same summation formulae as the samples using the individual hydrocarbon MDL values.
- ¹⁵ The summation totals for the samples are compared with calculated MDL values obtained using the same summation formulae as the samples. When these sample totals were less than the total MDL, its value was replaced by nd. The averages and standard deviations for the totals were treated in the same way as the individual hydrocarbons; see footnote 4.
- ¹⁶ Numerical values of the CPI, WI, and the ratios: pristane/n-C₁₇, phytane/n-C₁₈, and pristane/phytane, will be calculated only when the defined quantity for each index or ratio has a numeric value.
- ¹⁷ These results are not true averages, instead they are the ratios of the averages of the defined quantities, if these averages exist.