

Supplementary Material for:

Metals, *n*-Alkanes, Hopanes, and Polycyclic Aromatic Hydrocarbon in Sediments from Three Amazonian Streams Crossing Manaus (Brazil)

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Table S1. Location of the sampling stations of surface sediments from the Mindu (M), Quarenta (Q), and Tarumã-Açu (T) streams.

Samples	Latitude (S)	Longitude (W)
M1	3°2'43.97"	59°56'38.26"
M2	3°3'16.08"	59°57'12.19"
M3	3°3'17.77"	59°57'15.50"
M4	3°3'43.18"	59°57'40.18"
M5	3°4'28.21"	59°58'57.70"
M6	3°4'44.78"	59°59'37.42"
M7	3°5'13.76"	60°0'32.79"
M8	3°5'29.41"	60°0'54.63"
M9	3°6'6.61"	60°1'29.99"
Q1	3°06'25.72"	59°57'38.84"
Q2	3°06'59.59"	59°58'26.65"
Q3	3°07'10.15"	59°58'42.35"
Q4	3°07'30.01"	59°59'11.55"
Q5	3°07'46.21"	59°59'39.78"
Q6	3°08'10.50"	60°0'33.18"
T1	3°3'8.16"	60°6'32.23"
T2	3°2'57.77"	60°6'36.15"
T3	3°2'35.20"	60°6'51.30"
T4	3°1'52.34"	60°6'8.51"
T5	3°0'59.14"	60°5'47.29"
T6	3°0'12.59"	60°5'27.20"
T7	3°0'15.35"	60°5'5.38"
T8	3°0'9.93"	60°6'7.38"
T9	2°59'4.03"	60°6'16.63"
T10	2°58'52.75"	60°6'17.70"
T11	2°57'49.01"	60°6'23.42"

Table S2. Molecular ion, retention time, and internal standard for PAHs.

HPA	<i>m/z</i> Molecular Ion	Retention Time (<i>min</i>)	Internal Standard
Naphthalene	128	11,95	Naftaleno- <i>d</i> ₈
Acenaphthylene	152	17,84	Acenafteno- <i>d</i> ₁₀
Acenaphthene	154	18,57	Acenafteno- <i>d</i> ₁₀
Fluorene	166	20,48	Fluoreno- <i>d</i> ₁₀
Phenanthrene	178	24,13	Fenantreno- <i>d</i> ₁₀
Anthracene	178	24,30	Fenantreno- <i>d</i> ₁₀
Fluoranthene	202	28,75	Fluoranteno- <i>d</i> ₁₀
Pyrene	202	29,52	Pireno- <i>d</i> ₁₀
Benzo[<i>c</i>]phenanthrene	228	33,50	Criseno- <i>d</i> ₁₂
Benzo[<i>a</i>]anthracene	228	34,28	Criseno- <i>d</i> ₁₂
Chrysene	228	34,45	Criseno- <i>d</i> ₁₂
Benzo[<i>b</i>]fluoranthene	252	38,27	Criseno- <i>d</i> ₁₂
Benzo[<i>j</i>]fluoranthene	252	38,27	Criseno- <i>d</i> ₁₂
Benzo[<i>k</i>]fluoranthene	252	38,27	Criseno- <i>d</i> ₁₂
Benzo[<i>e</i>]pyrene	252	39,11	Criseno- <i>d</i> ₁₂
Benzo[<i>a</i>]pyrene	252	39,28	Criseno- <i>d</i> ₁₂
Indeno[1,2,3- <i>cd</i>]pyrene	276	42,75	Criseno- <i>d</i> ₁₂
Dibenzo[<i>a,h</i>]anthracene	278	42,87	Criseno- <i>d</i> ₁₂
Benzo[<i>g,h,i</i>]perylene	276	43,37	Criseno- <i>d</i> ₁₂
Dibenzo[<i>a,l</i>]pyrene	302	47,13	Criseno- <i>d</i> ₁₂
Dibenzo[<i>a,i</i>]pyrene	302	49,09	Criseno- <i>d</i> ₁₂
Dibenzo[<i>a,h</i>]pyrene	302	49,37	Criseno- <i>d</i> ₁₂

Table S3. Grain size fractions (% m/m) for surface sediments samples from the Mindu (M), Quarenta (Q), and Tarumã-Açu (T) streams.

Samples	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Mud (Silt + Clay)
M1	0.13	20.12	54.05	22.17	2.47	1.04
M2	0.00	1.81	28.69	55.26	11.30	2.83
M3	0.01	11.45	49.96	32.77	4.02	1.75
M4	0.00	8.50	53.85	32.85	3.39	1.31
M5	0.07	5.24	28.28	47.09	13.73	5.34
M6	0.02	10.33	41.86	43.70	3.70	0.65
M7	0.00	8.50	53.85	32.85	3.39	1.31
M8	0.23	4.33	63.21	24.82	7.19	0.14
M9	0.00	4.46	52.10	40.01	2.68	0.53
Q1	0.00	57.14	36.45	5.46	0.05	0.10
Q2	0.00	57.76	33.91	7.98	0.14	0.10
Q3	0.00	29.35	56.90	12.14	0.05	0.06
Q4	0.00	43.05	46.64	8.15	0.55	0.03
Q5	12.15	67.18	18.37	1.89	0.14	0.10
Q6	0.00	39.06	15.65	20.11	10.35	13.50
T1	0.00	29.50	35.35	25.57	6.83	2.50
T2	15.24	16.73	41.37	24.93	1.36	0.22
T3	3.47	8.56	33.71	44.40	6.71	2.84
T4	1.88	13.80	53.80	28.55	1.79	0.26
T5	21.85	31.63	32.46	11.13	1.50	0.37
T6	9.34	6.18	20.48	58.78	4.43	0.56
T7	2.56	9.85	47.58	34.05	4.51	1.27
T8	4.31	12.70	26.52	42.43	10.45	3.17
T9	4.42	13.55	48.72	27.67	4.27	1.23
T10	0.00	6.97	68.55	24.03	0.33	0.04
T11	0.02	31.84	49.88	19.40	1.73	0.53

Table S4. Concentrations of *n*-alkanes in the surface sediment samples from the Mindu (M) stream.

<i>n</i> -Alkane (ng g ⁻¹)	M1	M2	M3	M4	M5	M6	M7	M8	M9
<i>n</i> -C ₁₁	0.9	0.8	0.9	1.6	7.0	8.1	0.9	1.3	1.1
<i>n</i> -C ₁₂	1.2	1.1	1.3	1.4	60.8	77.3	1.2	1.1	0.9
<i>n</i> -C ₁₃	2.6	2.4	2.6	1.5	9.4	5.2	3.0	1.3	1.0
<i>n</i> -C ₁₄	3.7	3.5	3.6	3.9	52.2	38.7	4.2	2.9	2.6
<i>n</i> -C ₁₅	5.0	4.3	5.2	13.8	67.4	9.1	5.4	5.4	12.1
<i>n</i> -C ₁₆	27.9	26.6	27.2	74.8	227.5	33.7	29.8	32.9	70.1
<i>n</i> -C ₁₇	36.3	31.8	38.5	74.4	196.9	41.1	38.7	41.2	63.7
<i>n</i> -C ₁₈	87.8	68.4	94.7	152.2	300.7	68.0	100.2	100.0	115.7
<i>n</i> -C ₁₉	49.1	36.5	52.6	74.4	174.0	44.1	58.3	59.9	52.3
<i>n</i> -C ₂₀	88.5	63.8	94.5	137.2	253.7	69.1	107.1	98.5	98.7
<i>n</i> -C ₂₁	102.0	72.1	108.7	115.0	274.9	77.6	125.0	104.2	73.6
<i>n</i> -C ₂₂	161.9	112.7	172.1	180.7	431.9	120.1	200.7	159.1	111.3
<i>n</i> -C ₂₃	176.5	119.3	188.9	256.5	464.1	134.6	221.4	179.7	176.5
<i>n</i> -C ₂₄	162.0	102.6	178.8	297.8	356.0	129.6	204.6	171.0	219.7
<i>n</i> -C ₂₅	155.6	93.1	173.6	408.3	264.8	149.5	200.2	196.1	327.6
<i>n</i> -C ₂₆	166.0	92.5	187.7	394.3	200.8	171.7	217.8	192.2	311.2
<i>n</i> -C ₂₇	149.5	95.1	159.0	348.3	197.1	182.5	194.5	167.9	281.4
<i>n</i> -C ₂₈	171.2	101.9	186.5	372.4	184.6	228.3	225.1	202.0	286.1
<i>n</i> -C ₂₉	158.3	99.7	169.2	331.9	262.6	281.3	205.8	183.9	256.1
<i>n</i> -C ₃₀	144.5	96.8	150.7	255.4	150.6	249.1	186.1	161.3	188.0
<i>n</i> -C ₃₁	122.0	91.3	121.3	210.0	215.4	262.8	153.5	128.2	159.7
<i>n</i> -C ₃₂	97.2	73.0	98.4	140.9	98.9	194.4	120.2	86.2	103.1
<i>n</i> -C ₃₃	68.0	53.5	68.6	76.1	114.7	158.6	82.0	58.9	51.4
<i>n</i> -C ₃₄	46.7	39.1	46.1	52.5	53.3	105.7	55.0	36.0	37.4
<i>n</i> -C ₃₅	33.9	31.5	32.3	34.7	59.5	82.6	37.9	27.6	24.3
<i>n</i> -C ₃₆	25.0	22.4	24.5	19.4	36.9	53.9	28.0	14.9	12.5
<i>n</i> -C ₃₇	18.6	16.6	17.7	15.0	26.4	44.1	21.6	13.0	8.0
Total <i>n</i>-alkane (µg g⁻¹)	2.26	1.55	2.41	4.04	4.74	3.02	2.83	2.43	3.05
CPI	0.956	0.994	0.940	1.027	1.256	1.076	0.951	0.986	1.058

Table S5. Concentrations of *n*-alkanes in the surface sediment samples from the Quarenta (Q) stream.

<i>n</i> -Alkane (ng g ⁻¹)	Q1	Q2	Q3	Q4	Q5	Q6
<i>n</i> -C ₁₁	0.9	0.9	0.9	1.0	0.8	0.9
<i>n</i> -C ₁₂	1.4	1.9	1.2	1.5	1.0	2.5
<i>n</i> -C ₁₃	3.2	7.4	2.0	3.0	2.7	12.8
<i>n</i> -C ₁₄	4.3	32.4	2.9	7.8	4.1	61.9
<i>n</i> -C ₁₅	6.4	66.5	4.1	24.2	4.5	128.9
<i>n</i> -C ₁₆	30.4	146.1	24.0	166.2	29.2	268.1
<i>n</i> -C ₁₇	45.4	202.8	31.6	142.9	32.0	374.0
<i>n</i> -C ₁₈	126.5	198.8	62.8	267.6	74.0	334.8
<i>n</i> -C ₁₉	74.4	143.7	30.9	150.0	42.2	256.5
<i>n</i> -C ₂₀	137.8	170.1	51.3	270.4	76.4	288.8
<i>n</i> -C ₂₁	161.6	174.8	55.8	327.8	88.4	293.9
<i>n</i> -C ₂₂	260.1	222.3	84.1	517.4	141.4	360.6
<i>n</i> -C ₂₃	291.0	238.8	86.8	554.9	151.8	390.8
<i>n</i> -C ₂₄	280.8	209.5	76.9	438.1	128.4	342.2
<i>n</i> -C ₂₅	280.7	227.3	66.5	333.0	119.7	388.2
<i>n</i> -C ₂₆	313.0	174.2	62.4	262.0	122.7	286.0
<i>n</i> -C ₂₇	258.3	163.1	59.6	209.8	130.6	266.5
<i>n</i> -C ₂₈	309.7	178.2	63.3	232.3	140.5	293.1
<i>n</i> -C ₂₉	275.4	232.2	63.1	203.7	136.3	401.3
<i>n</i> -C ₃₀	240.1	172.6	61.4	185.6	132.1	283.8
<i>n</i> -C ₃₁	183.5	230.7	59.1	152.1	123.4	402.3
<i>n</i> -C ₃₂	145.6	151.7	51.2	123.2	94.8	252.2
<i>n</i> -C ₃₃	97.1	159.1	40.0	88.1	67.0	278.2
<i>n</i> -C ₃₄	62.0	95.6	30.2	62.4	47.9	160.9
<i>n</i> -C ₃₅	38.8	99.1	25.9	51.1	37.0	172.4
<i>n</i> -C ₃₆	30.0	63.1	19.0	37.6	25.9	107.3
<i>n</i> -C ₃₇	22.7	47.6	12.7	23.2	20.5	82.5
Total <i>n</i>-alkane (µg g⁻¹)	3.68	3.81	1.13	4.84	1.98	6.49
CPI	0.93	1.22	0.99	0.94	1.00	1.27

Table S6. Concentrations of *n*-alkanes in the surface sediment samples from the Tarumã-Açu (T) stream.

<i>n</i> -Alkane (ng g ⁻¹)	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
<i>n</i> -C ₁₁	2.6	2.5	2.6	2.6	2.5	1.9	2.7	2.5	2.8	2.6	2.5
<i>n</i> -C ₁₂	2.4	2.5	2.4	2.3	2.6	1.6	2.2	2.4	2.5	2.1	2.5
<i>n</i> -C ₁₃	2.5	2.6	2.5	2.5	2.7	1.5	2.4	2.5	2.6	2.3	2.8
<i>n</i> -C ₁₄	24.6	31.0	23.8	19.0	35.7	2.6	11.8	26.2	7.9	5.3	6.2
<i>n</i> -C ₁₅	20.3	22.8	20.3	17.9	25.2	3.9	15.5	20.3	47.5	13.0	8.7
<i>n</i> -C ₁₆	657.9	690.6	708.3	574.7	824.2	9.5	592.4	557.0	242.5	107.9	23.8
<i>n</i> -C ₁₇	66.4	66.0	73.2	59.9	79.3	8.1	67.0	52.7	207.2	111.5	53.1
<i>n</i> -C ₁₈	610.5	600.8	671.2	559.4	712.6	47.3	629.8	489.0	361.1	217.3	182.6
<i>n</i> -C ₁₉	41.8	37.2	44.4	43.8	37.8	24.5	51.0	36.5	132.4	129.3	110.4
<i>n</i> -C ₂₀	264.4	256.8	294.0	242.3	308.5	212.0	279.4	205.2	291.7	202.0	192.2
<i>n</i> -C ₂₁	36.9	29.7	40.6	40.3	30.0	47.7	51.2	29.4	157.9	210.4	206.6
<i>n</i> -C ₂₂	118.7	104.7	135.7	115.7	124.8	152.8	146.6	84.7	266.8	289.6	347.0
<i>n</i> -C ₂₃	48.9	32.7	57.7	56.4	33.9	81.5	81.4	31.4	563.5	319.1	399.7
<i>n</i> -C ₂₄	117.3	76.5	142.4	132.9	86.0	164.5	198.9	67.0	805.1	293.6	390.5
<i>n</i> -C ₂₅	142.2	65.6	184.0	177.2	72.4	179.5	295.6	58.7	1256.8	381.2	403.4
<i>n</i> -C ₂₆	177.5	80.4	227.0	224.9	82.5	247.5	371.6	78.3	1202.7	353.4	415.2
<i>n</i> -C ₂₇	117.1	40.9	153.1	157.3	36.7	147.1	269.6	45.1	1070.0	336.9	334.5
<i>n</i> -C ₂₈	182.3	85.6	230.5	230.9	85.1	288.0	375.8	86.0	1054.2	376.1	431.7
<i>n</i> -C ₂₉	171.6	96.7	204.5	213.6	87.6	277.9	321.5	105.8	923.7	356.7	379.0
<i>n</i> -C ₃₀	140.3	67.6	175.8	177.4	66.0	241.6	285.7	69.1	631.8	308.1	337.0
<i>n</i> -C ₃₁	108.8	64.3	122.3	139.8	46.9	165.8	197.8	81.8	537.2	261.4	251.6
<i>n</i> -C ₃₂	65.5	32.1	80.3	84.1	28.3	115.9	132.3	35.8	359.8	155.5	189.5
<i>n</i> -C ₃₃	43.4	26.1	49.3	54.9	20.4	79.9	78.1	31.8	145.0	112.0	123.4
<i>n</i> -C ₃₄	20.9	10.3	25.5	27.1	8.7	38.7	42.3	11.8	118.5	68.6	75.5
<i>n</i> -C ₃₅	13.3	6.9	15.7	17.4	5.3	25.5	26.2	8.5	63.0	58.7	51.7
<i>n</i> -C ₃₆	9.2	4.4	11.2	12.0	3.6	15.2	18.8	5.2	37.2	25.5	34.2
<i>n</i> -C ₃₇	43.9	61.0	64.3	6.3	118.9	9.3	9.7	3.0	23.2	16.5	35.3
Total <i>n</i>-alkane (µg g⁻¹)	3.25	2.60	3.76	3.39	2.97	2.59	4.56	2.23	10.51	4.72	4.99
CPI	0.92	0.95	0.89	0.93	0.85	0.86	0.90	1.05	1.06	1.05	0.93

Table S7. Concentrations of PAHs (ng g⁻¹) in the surface sediment samples from the Mindu stream.

PAHs	M1	M2	M3	M4	M5	M6	M7	M8	M9
Naphthalene	4.07	4.62	4.04	4.84	10.33	4.70	3.95	3.26	3.76
Acenaphthylene	2.59	2.59	2.56	2.61	2.87	2.63	2.53	2.65	2.49
Acenaphthene	0.43	<LOQ	<LOQ	0.32	0.39	<LOQ	<LOQ	<LOQ	<LOQ
Fluorene	5.09	6.64	5.93	8.28	9.51	5.30	4.90	4.91	<LOQ
Phenanthrene	128.03	39.18	45.82	71.69	74.73	5.93	9.20	0.38	39.11
Anthracene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
Fluoranthene	99.51	89.84	96.24	126.79	117.72	31.19	91.72	68.88	102.17
Pyrene	31.07	23.16	36.43	39.71	47.22	10.18	30.50	21.26	31.74
Benzo[a]anthracene	6.47	4.46	4.23	5.98	6.77	3.66	5.28	4.18	5.46
Chrysene	13.24	10.89	10.87	13.88	22.64	9.74	10.42	8.73	9.28
Σ Benzofluoranthene	5.44	5.58	5.54	7.48	11.62	5.21	5.41	5.09	4.96
Benzo[e]pyrene	6.37	7.48	5.32	12.32	22.36	2.68	3.17	1.67	1.79
Benzo[a]pyrene	6.74	6.42	5.64	7.90	14.18	4.72	4.98	4.75	4.57
Indeno[1,2,3- <i>cd</i>]pyrene	11.29	13.42	11.26	16.51	32.98	10.04	10.47	9.24	8.74
Dibenzo[a,h]anthracene	7.29	7.05	6.30	8.49	13.57	5.46	5.03	5.31	4.60
Benzo[g,h,i]perylene	10.09	16.15	10.73	14.99	39.37	6.56	6.49	4.88	4.97
Dibenzo[a,i]pyrene	13.97	11.46	8.19	10.53	15.31	10.95	6.55	6.80	6.54
Σ Total PAHs	351.69	248.95	259.09	352.31	441.58	118.95	200.60	152.00	230.18

Benzo[c]phenanthrene, dibenzo[a,h]pyrene, and dibenzo[a,l]pyrene were not detected for all of the sediment samples and, therefore, were not included in this table.

Table S8. Concentrations of PAHs (ng g⁻¹) in the surface sediment samples from the Quarenta stream.

HPAs	Q1	Q3	Q4	Q5	Q6
Naphthalene	2.87	3.31	3.89	4.45	9.96
Acenaphthylene	<LOQ	<LOQ	<LOQ	<LOQ	2.80
Acenaphthene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
Fluorene	4.90	4.90	4.86	6.06	5.16
Phenanthrene	48.20	51.83	25.37	48.43	22.93
Anthracene	<LOQ	<LOQ	<LOQ	<LOQ	0.73
Fluoranthene	115.83	110.29	96.51	100.35	74.09
Pyrene	43.16	37.37	32.81	30.05	58.22
Benzo[<i>a</i>]anthracene	5.02	3.94	5.43	4.13	9.04
Chrysene	7.32	6.85	8.18	7.32	46.86
Σ Benzofluoranthene	4.59	4.47	4.69	4.61	16.03
Benzo[<i>e</i>]pyrene	0.39	<LOQ	0.77	1.14	32.07
Benzo[<i>a</i>]pyrene	3.91	3.76	4.15	4.57	19.10
Indeno[1,2,3- <i>cd</i>]pyrene	7.15	7.24	7.49	8.24	28.51
Dibenzo[<i>a,h</i>]anthracene	4.55	4.43	5.09	4.64	9.62
Benzo[<i>g,h,i</i>]perylene	1.91	2.54	3.02	3.43	32.93
Dibenzo[<i>a,i</i>]pyrene	<LOQ	<LOQ	7.37	<LOQ	12.06
Σ Total PAHs	249.82	240.93	209.63	227.39	380.12

Benzo[*c*]phenanthrene, dibenzo[*a,h*]pyrene, and dibenzo[*a,l*]pyrene were not detected for all of the sediment samples and, therefore, were not included in this table.

Table S9. Concentrations of PAHs (ng g⁻¹) in the surface sediment samples from the Tarumã-Açu stream.

PAHs	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
Naphthalene	1.97	2.16	1.84	2.01	2.33	2.42	3.78	1.80	3.38	2.50	2.80
Acenaphthylene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	2.54	<LOQ	<LOQ	<LOQ	2.52
Acenaphthene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
Fluorene	5.21	5.09	5.15	5.09	4.86	5.14	4.89	4.86	5.18	5.10	4.98
Phenanthrene	11.45	<LOQ	<LOQ	23.08	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	10.55	34.33
Anthracene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
Fluoranthene	98.09	30.75	55.39	95.92	53.05	15.86	14.16	12.22	61.82	79.12	104.12
Pyrene	34.45	14.69	17.92	26.55	20.16	7.93	9.02	8.63	22.90	21.65	25.36
Benzo[a]anthracene	4.29	4.23	3.70	4.29	4.09	3.78	4.10	3.79	4.34	4.21	4.16
Chrysene	6.11	6.53	4.78	5.62	5.64	5.29	7.06	5.31	6.30	5.68	6.06
Σ Benzofluoranthene	4.34	4.93	4.15	4.15	4.13	4.10	5.51	4.10	4.39	4.13	4.10
Benzo[e]pyrene	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	0.47	<LOQ	<LOQ	<LOQ	<LOQ
Benzo[a]pyrene	3.84	4.56	3.42	3.67	3.42	3.42	4.62	3.42	3.58	3.42	3.42
Indeno[1,2,3- <i>cd</i>]pyrene	6.46	8.24	<LOQ	6.40	6.35	6.43	8.65	6.31	6.60	6.35	<LOQ
Dibenzo[a,h]anthracene	4.15	4.21	4.03	4.07	4.04	4.06	4.91	4.04	4.22	4.07	4.10
Benzo[g,h,i]perylene	1.22	2.07	0.74	0.80	0.85	0.86	2.86	0.70	0.96	0.80	0.85
Dibenzo[a,i]pyrene	<LOQ	6.12	4.96	5.41	<LOQ	5.59	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
Σ Total PAHs	181.57	93.58	106.09	187.05	108.94	64.86	72.57	55.18	123.65	147.58	196.81

Benzo[c]phenanthrene, dibenzo[a,h]pyrene, and dibenzo[a,i]pyrene were not detected for all of the sediment samples and, therefore, were not included in this table.

Table S10. Concentration range of *n*-alkane and PAHs observed for sediments of the Mindu, Quarenta, and Tarumã-Açu streamas and other Brazilian areas.

Parameter	Concentration Range	Location	Reference
<i>n</i> -Alkanes μg g ⁻¹	0.22-2.72	São Francisco River (SE)	29
	1.2-4.3	Imbé, Urubu and Ururaí rivers (RJ)	30
	0.10-14.56	Santos Bay and Estuary (SP)	31
	9.9-30.8	Sergipe River Estuarine System (SE)	32
	1.9-55.6	Carijós, Rio Tavares and Itacorubi mangroves (SC)	12
	0.50-69.70	Itajaí-Açu Estuarine System (SC)	10
	1.55-4.74	Mindu Stream (AM)	this study
	1.13-6.49	Quarenta Stream (AM)	this study
	2.23-10.51	Tarumã-Açu Stream (AM)	this study
PAHs ng g ⁻¹	7.3-92.8	Patos Lagoon (RS)	39
	n.d.-127.3	Sergipe River Estuarine System (SE)	40
	22.2-158.9	Amazon River Estuary (AP)	8
	n.d.-497.6	Capibaribe Estuarine System (PE)	41
	5.6-1187	Negro River (AM)	6
	28.4-1237.2	Itajaí-Açu Estuarine System (SC)	10
	3.04-2234.76	Cocó and Ceará rivers (Ce)	42
	60-8680	Santos Bay and Estuary (SP)	31
	79.6-15389.1		43
	118.95-441.58	Mindu Stream (AM)	this study
	209.63-380.12	Quarenta Stream (AM)	this study
	55.18-196.81	Tarumã-Açu Stream (AM)	this study

n.d.= not detected;

Table S11. Concentration range of metals observed for sediments of the Mindu, Quarenta, and Tarumã-Açu streamas and other Brazilian areas.

Location	Concentration Range ($\mu\text{g g}^{-1}$)									Reference
	Cr	Mn	Co	Ni	Cu	Zn	Ag	Cd	Pb	
Itajaí-Açu Estuarine										44
System (SC)	8.4-59.3	-	3.5-15.0	4.1-26.4	1.4-31.5	17.6-120.0	-	n.d.-0.28	12.8-35.3	
São Marcos Bay and										45
Anil River Estuary (MA)	1.1-43.3	12.5-960.4	-	0.6-33.3	0.3-18.5	3.0-77.1	-	-	1.4-77.1	
Rodrigo de Freitas Lagoon (RJ)	3-74	-	-	8-39	17-88	13-366	-	<0.8-2.1	6-122	46
Tietê River (SP)	3-113	16-926	n.d.-15.1	n.d.-45	2.0-146	5.8-715	-	8.8-1130	1.4-34.1	47
Xingu and Fresco River (PA)	9.3-46.8	-	-	1.7-22.9	0.8-21.5	-	-	-	2.9-29.3	22
Furo da Laura Estuary (PA)	42.3-63.2	-	8.3-13.0	12.9-22.9	9.4-15.1	-	-	2.7-5.2	-	24
Amazon, Madeira, Carú, Anebá,										23
and Urubu Rivers (AM)	1.4-28.4	-	-	n.d.-17.1	n.d.-26.6	0.6-49.9	-	-	0.2-28.0	
Mindu Stream (AM)	3.62-11.84	1.49-23.76	0.11-0.51	0.61-3.96	2.68-41.64	17.58-113.09	0.60-2.05	0.12-0.92	1.15-10.32	this study
Quarenta Stream (AM)	1.36-37.54	1.11-20.64	0.09-0.76	0.44-29.26	4.27-44.86	20.60-174.86	0.40-2.77	0.09-1.95	1.09-17.85	this study
Tarumã-Açu Stream (AM)	0.46-3.78	0.54-3.14	0.03-0.13	0.05-0.31	0.17-1.40	1.05-7.16	0.28-0.66	0.02-0.23	0.48-3.00	this study

n.d.= not detected