



WEPAI-QUASIMEME

Certificate of Analysis



International Sediment Exchange for Tests on Organic Contaminants

REFERENCE MATERIAL

SETOC sample 775

2026-Jul-30



Certificate of Analysis SETOC 775

General Information

In this report an overview is given of analytical data for this sample collected in our proficiency testing program. The consensus values are calculated using a robust statistical model. With this NDA model, the mean and standard deviation are calculated using all reported data when at least 4 results are left after removal of reported 'lower than' (<) and 0 (= zero) values. No outliers are removed.

This report is divided into two sections: Consensus Values and Indicative Values. The division is made on the reliability of the data. Consensus Values are based on at least 8 results and a maximum relative uncertainty of 6.25%. Indicative Values are based on a maximum relative uncertainty of 35% and a minimum of 4 and maximum of 7 results, or a relative uncertainty greater than 6.25% when there are at least 8 results.

For each measurand the following parameters are given: mean, standard deviation, coefficient of variation, number of results, median, MAD (Median of Absolute Deviation), the uncertainty of the mean (consensus or indicative) value and the relative uncertainty.

Please note: Most WEPAL-QUASIMEME reference materials are found to be stable over the long term (>10 years) for most measurand/matrix combinations. There are a few exceptions known to us as being less stable over the long term. These are organotins in sediment (MS6), ASP in shellfish (BT7), some PAHs and PCBs in sediment (SETOC) and N-NH₄ (as N) & N-NO₃ (as N) in clay soils (ISE).

All values, expressed on a weight basis (kg or %), are reported as oven-dried (105°C) material. Moisture is reported in the material as received.

Sample information

WEPAL reference materials are from natural sources only. There is no spiking, mixing or other alterations of the samples. For sample preparation, the SETOC samples are dried at 40°C and milled to pass a 0.5 mm sieve.

This SETOC sample 775 of Sediment, from Netherlands, is prepared for the WEPAL proficiency programs. The sample has been used in 9 rounds. Only results from the last 5 periods are used. This way, the consensus values reflect the latest 'state of the art' analytical techniques used by the laboratories. The results on which the values in this report are based were taken from the rounds given in the following table:

Year	Round	Number
2026	2	4
2025	2	2
2022	4	3
2020	2	2
2017	2	4

Consensus Values SETOC 775

Method: Polycyclic aromatic hydrocarbons

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
phenanthrene	µg/kg	137	32.6	23.8	124	137	19.5	3.66	2.67
fluoranthene	µg/kg	406	73.2	18.0	125	407	44.3	8.18	2.01
pyrene	µg/kg	189	38.4	20.4	96	189	25.9	4.90	2.60
chrysene	µg/kg	164	34.2	20.9	124	168	21.0	3.84	2.34
benz(a)anthracene	µg/kg	90.5	18.0	19.9	122	91.4	11.9	2.04	2.25
benzo(b)fluoranthene	µg/kg	190	44.6	23.5	91	195	32.4	5.84	3.07
benzo(k)fluoranthene	µg/kg	82.0	17.2	21.0	120	84.0	10.6	1.97	2.40
benzo(a)pyrene	µg/kg	80.0	15.2	18.9	123	80.1	8.14	1.71	2.13
dibenz(ah)anthracene	µg/kg	26.6	8.21	30.8	83	27.4	5.39	1.13	4.23
indeno(1,2,3-cd)pyrene	µg/kg	112	21.1	18.9	119	113	13.2	2.42	2.16
benzo(ghi)perylene	µg/kg	104	18.1	17.3	121	106	11.8	2.05	1.97
EPA ΣPAH(16)	µg/kg	1660	291	17.5	69	1687	207	43.8	2.64

Method: Organochlorine pesticides

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
p,p'-DDT	µg/kg	30.3	7.28	24.0	48	32.3	5.54	1.31	4.33
p,p'-DDE	µg/kg	61.5	10.7	17.4	49	62.3	6.64	1.91	3.10
o,p'-DDE	µg/kg	1.27	0.231	18.2	26	1.29	0.147	0.057	4.45
p,p'-DDD	µg/kg	50.3	14.9	29.7	49	50.3	8.66	2.67	5.31
o,p'-DDD	µg/kg	17.8	3.96	22.3	44	18.3	2.91	0.746	4.20

Method: Other parameters

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Mineral oil, GC	mg/kg	59.0	20.4	34.6	89	60.0	12.6	2.70	4.58
Organic carbon	g/kg	9.79	1.34	13.6	54	9.87	0.745	0.227	2.32
Particles < 2 µm	%	21.9	1.97	9.0	11	21.0	2.00	0.744	3.39
Particles < 63 µm	%	52.8	3.09	5.9	14	52.8	1.40	1.03	1.96

Method: Metals

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
As	mg/kg	5.60	1.02	18.2	58	5.56	0.563	0.167	2.99
Cd	mg/kg	0.205	0.029	14.4	43	0.208	0.016	0.006	2.75
Cr	mg/kg	51.8	12.1	23.4	59	51.7	8.32	1.97	3.80
Cu	mg/kg	17.8	2.03	11.4	61	18.0	1.11	0.326	1.82
Hg	mg/kg	0.053	0.015	28.5	38	0.056	0.008	0.003	5.77
Ni	mg/kg	34.3	4.74	13.8	61	34.3	3.28	0.759	2.21
Pb	mg/kg	17.9	2.43	13.6	60	18.0	1.31	0.392	2.19



Consensus Values SETOC 775

Method: Metals

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Zn	mg/kg	70.0	6.84	9.8	60	70.0	4.96	1.10	1.58
Ba	mg/kg	116	19.4	16.7	44	118	13.1	3.66	3.15
Co	mg/kg	8.37	0.871	10.4	50	8.31	0.405	0.154	1.84
Mo	mg/kg	0.755	0.138	18.3	37	0.762	0.062	0.028	3.76

(cont.)

Indicative Values SETOC 775

Method: Polycyclic aromatic hydrocarbons

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
naphthalene	µg/kg	5.26	5.13	97.6	49	6.45	4.08	0.916	17.4
acenaphthylene	µg/kg	6.31	4.73	75.0	42	6.57	2.72	0.912	14.5
acenaphthene	µg/kg	5.88	2.78	47.2	48	6.02	1.80	0.501	8.52
fluorene	µg/kg	10.1	5.67	55.9	59	12.0	3.11	0.923	9.10
anthracene	µg/kg	19.7	10.5	53.3	98	21.5	6.95	1.33	6.73
VROMΣPAH10	µg/kg	1171	115	9.9	6	1172	66.0	58.9	5.03

Method: Polychlorobiphenyls

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
PCB 028	µg/kg	0.291	0.256	88.0	30	0.360	0.165	0.058	20.1
PCB 052	µg/kg	0.206	0.109	53.0	25	0.230	0.053	0.027	13.2
PCB 101	µg/kg	0.501	0.324	64.6	33	0.549	0.190	0.070	14.1
PCB 118	µg/kg	0.184	0.140	76.1	24	0.225	0.101	0.036	19.4
PCB 138	µg/kg	0.801	0.527	65.8	55	1.24	0.393	0.089	11.1
PCB 153	µg/kg	0.934	0.675	72.2	62	1.30	0.465	0.107	11.5
PCB 180	µg/kg	0.741	0.425	57.4	52	1.03	0.341	0.074	9.95
ΣPCB(7)	µg/kg	4.35	1.74	40.0	35	4.90	1.03	0.367	8.44

Method: Organochlorine pesticides

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
o,p'-DDT	µg/kg	4.93	1.81	36.6	38	5.11	1.14	0.366	7.43

Method: Other parameters

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
EOX	mg/kg	0.368	0.280	76.2	10	0.450	0.150	0.111	30.1
Inorganic carbon	g/kg	8.05	1.45	18.0	12	8.05	0.655	0.524	6.51
Particles > 63 µm	%	36.9	9.80	26.6	9	37.9	4.86	4.08	11.1
CN - Total	mg/kg	0.614	0.544	88.6	12	0.807	0.343	0.196	32.0

Method: Metals

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Sb	mg/kg	0.454	0.082	18.0	7	0.475	0.036	0.039	8.50
Sn	mg/kg	1.50	0.289	19.3	9	1.55	0.205	0.120	8.02
V	mg/kg	42.4	14.2	33.5	12	43.3	10.6	5.12	12.1



Method: Experimental
Element
DEHP

Indicative Values

SETOC 775



Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
µg/kg	86.2	42.6	49.4	4	97.4	22.3	26.6	30.9