



**WAGENINGEN EVALUATING PROGRAMS
FOR ANALYTICAL LABORATORIES**

Certificate of Analysis



International Soil-Analytical Exchange

REFERENCE MATERIAL

ISE sample 845



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 determinand 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.

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 ISE samples are dried at 40°C and milled to pass a 0.5 mm sieve.

This ISE sample 845 of Clay soil, from Switzerland, is prepared for the WEPAL proficiency programs. The sample has been used in 1 period (or round). The results on which the values in this report are based were taken from the period given in the following table:

Year	Round	Number
2025	2	1



Consensus Values ISE 845



Method: Real totals

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Al	g/kg	57.1	4.43	7.8	12	57.1	2.53	1.60	2.80
Ba	mg/kg	337	11.3	3.4	10	338	6.90	4.48	1.33
Ca	g/kg	76.6	4.32	5.6	12	75.8	2.84	1.56	2.04
Co	mg/kg	12.4	0.887	7.1	11	12.5	0.500	0.334	2.69
Cr	mg/kg	70.9	7.91	11.2	14	71.3	4.05	2.64	3.73
Cu	mg/kg	58.9	4.07	6.9	14	59.1	2.32	1.36	2.31
Fe	g/kg	28.7	0.865	3.0	13	28.8	0.500	0.300	1.04
K	mg/kg	17229	1885	10.9	13	17070	915	654	3.79
Mg	mg/kg	11385	1761	15.5	12	11872	813	635	5.58
Mn	mg/kg	831	41.2	5.0	13	833	23.0	14.3	1.72
Na	mg/kg	8258	925	11.2	9	8000	361	386	4.67
Ni	mg/kg	49.9	3.73	7.5	15	50.1	1.88	1.20	2.42
P	mg/kg	799	115	14.4	11	800	62.5	43.3	5.42
Rb	mg/kg	86.5	4.87	5.6	8	86.7	2.75	2.15	2.49
Si	g/kg	261	9.03	3.5	10	260	4.29	3.57	1.37
Sr	mg/kg	340	19.6	5.8	9	342	15.7	8.15	2.40
Y	mg/kg	27.3	2.55	9.4	10	26.7	1.10	1.01	3.70
Zn	mg/kg	82.0	4.69	5.7	15	82.6	2.07	1.52	1.85
Zr	mg/kg	218	13.0	6.0	10	221	4.50	5.15	2.36
C-elementary	g/kg	34.9	1.15	3.3	32	34.8	0.713	0.255	0.731
V	mg/kg	75.4	6.84	9.1	11	76.4	4.04	2.58	3.42
Ti	mg/kg	3228	251	7.8	11	3187	146	94.7	2.93
N - elementary	g/kg	1.18	0.127	10.8	51	1.18	0.071	0.022	1.89
Ce	mg/kg	82.0	11.0	13.4	10	81.7	7.29	4.33	5.28
Hg	µg/kg	58.9	7.76	13.2	12	58.8	5.88	2.80	4.76

Method: Acid extractable (So-called totals)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Al	g/kg	12.7	1.58	12.5	16	12.9	0.731	0.494	3.89
As	mg/kg	17.6	1.30	7.4	23	17.6	0.879	0.339	1.92
Ca	g/kg	72.9	4.82	6.6	19	72.4	3.08	1.38	1.90
Cd	mg/kg	0.209	0.032	15.3	19	0.210	0.019	0.009	4.38
Co	mg/kg	11.5	1.22	10.6	22	11.5	0.763	0.325	2.83
Cr	mg/kg	27.1	4.62	17.0	25	27.4	2.59	1.15	4.25
Cu	mg/kg	57.7	3.46	6.0	27	57.5	2.16	0.834	1.44
Fe	g/kg	23.8	2.03	8.5	18	23.5	1.68	0.597	2.50
Mg	mg/kg	9388	732	7.8	17	9300	497	222	2.36



Consensus Values ISE 845



Method: Acid extractable (So-called totals)

(cont.)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Mn	mg/kg	809	65.2	8.1	19	803	40.0	18.7	2.31
Mo	mg/kg	0.756	0.143	18.9	16	0.794	0.099	0.045	5.90
N	g/kg	1.18	0.205	17.4	29	1.19	0.130	0.048	4.05
Ni	mg/kg	44.4	4.44	10.0	25	43.7	2.38	1.11	2.50
P	mg/kg	754	73.3	9.7	23	756	39.6	19.1	2.53
Pb	mg/kg	513	93.3	18.2	25	509	59.9	23.3	4.55
S	mg/kg	235	29.1	12.4	16	239	16.4	9.08	3.87
Zn	mg/kg	68.8	6.10	8.9	28	67.4	3.85	1.44	2.09
Be	mg/kg	0.365	0.042	11.5	8	0.372	0.017	0.019	5.10
Hg	µg/kg	61.1	8.01	13.1	16	62.6	5.25	2.50	4.09

Method: Aqua Regia (ISO 11466)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Al	g/kg	10.6	1.83	17.2	20	10.8	1.02	0.512	4.81
As	mg/kg	17.7	1.40	7.9	22	17.7	0.885	0.373	2.11
Ca	g/kg	72.2	6.60	9.1	17	72.8	3.30	2.00	2.77
Cd	mg/kg	0.206	0.032	15.8	23	0.210	0.019	0.008	4.11
Co	mg/kg	11.2	1.09	9.8	24	11.2	0.600	0.278	2.50
Cr	mg/kg	25.2	3.65	14.5	29	25.4	2.51	0.848	3.37
Cu	mg/kg	57.4	3.02	5.3	28	57.4	1.88	0.713	1.24
Fe	g/kg	23.4	2.08	8.9	20	23.2	1.00	0.581	2.48
Hg	µg/kg	61.2	7.15	11.7	13	60.5	3.80	2.48	4.05
K	mg/kg	1301	268	20.6	20	1327	134	74.9	5.76
Mg	mg/kg	9365	1104	11.8	21	9550	730	301	3.21
Mn	mg/kg	766	55.9	7.3	22	763	28.3	14.9	1.95
Mo	mg/kg	0.781	0.099	12.6	14	0.803	0.045	0.033	4.22
Ni	mg/kg	43.7	3.78	8.6	29	42.9	2.20	0.876	2.01
P	mg/kg	778	62.8	8.1	17	770	37.0	19.0	2.45
S	mg/kg	239	34.8	14.6	12	239	16.5	12.6	5.26
Ti	mg/kg	191	24.1	12.6	8	192	12.0	10.7	5.59
V	mg/kg	15.2	1.94	12.8	15	15.2	1.00	0.627	4.13
Zn	mg/kg	70.5	5.95	8.4	29	71.8	3.50	1.38	1.96

Method: Extraction with boiling 2M HNO3

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cd	mg/kg	0.212	0.014	6.8	9	0.215	0.009	0.006	2.83
Co	mg/kg	9.56	1.12	11.7	8	9.43	0.647	0.493	5.16

Method: Extraction with boiling 2M HNO3									(cont.)
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cu	mg/kg	56.1	8.68	15.5	11	58.2	7.70	3.27	5.83
Method: Soil characteristics									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
pH - H2O	...	8.01	0.234	2.9	99	8.00	0.160	0.029	0.368
pH - KCl	...	7.84	0.317	4.0	42	7.78	0.220	0.061	0.779
pH - CaCl2	...	7.42	0.224	3.0	28	7.40	0.135	0.053	0.712
TIC=Tot.Inorg C(as CaCO3)	%	18.5	1.81	9.8	39	18.7	1.10	0.362	1.96
EC-SC (ISO 11265)	mS/m	13.6	2.24	16.5	43	13.3	1.60	0.428	3.15
Fraction < 63 µm	%	59.3	8.34	14.1	18	59.2	4.07	2.46	4.14
Fraction > 63 µm	%	41.7	7.71	18.5	14	41.5	4.72	2.58	6.18
Org.matter (L.O.I.)	%	2.99	0.486	16.3	48	3.02	0.345	0.088	2.93
TC=Total C (org.+inorg.)	g/kg	35.0	0.947	2.7	37	34.9	0.500	0.195	0.556
TOC=Total Org. C	g/kg	12.2	1.95	16.1	50	12.0	1.10	0.345	2.84
C - org others (W&B a.o.)	g/kg	11.7	1.99	17.0	45	11.6	1.13	0.371	3.17
Method: Other determinations									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Moisture-content	%	0.585	0.141	24.0	41	0.600	0.080	0.027	4.69
Method: Pot. CEC using 1M NH4-acetate at pH=7									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
K	cmol+/kg	0.088	0.022	24.8	53	0.092	0.013	0.004	4.26
Mg	cmol+/kg	0.488	0.151	30.9	56	0.493	0.098	0.025	5.17
Method: Mehlich-3									
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cu	mg/kg	17.2	2.89	16.8	23	17.1	1.21	0.752	4.38
Fe	mg/kg	278	54.3	19.5	24	277	29.5	13.9	4.98
K	mg/kg	32.1	4.70	14.6	18	33.1	2.40	1.38	4.31
Mg	mg/kg	131	27.7	21.2	20	133	17.9	7.74	5.93
Mn	mg/kg	162	32.1	19.8	24	159	17.1	8.18	5.06
Zn	mg/kg	2.92	0.631	21.6	22	2.96	0.395	0.168	5.76



Consensus Values ISE 845

Method: Extraction with 0.01M CaCl₂ - 0.005M DTPA 1:10 (w/v)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cu	mg/kg	11.8	2.13	18.1	18	11.7	1.35	0.628	5.33
Zn	mg/kg	1.36	0.123	9.0	17	1.41	0.112	0.037	2.73

Method: Extraction with 1M KCl 1:10 (w/v)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
N - NO ₃ (as N)	mg/kg	2.93	0.542	18.5	14	3.05	0.304	0.181	6.18

Method: Phosphorus and related analysis

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
P - Olsen (as P)	mg/kg	5.43	1.01	18.6	38	5.53	0.693	0.205	3.78

Method: UK Soil Methods

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
K - NH ₄ NO ₃ (1/5)	mg/l	29.3	4.62	15.7	13	29.3	3.25	1.60	5.46
Mg - NH ₄ NO ₃ (1/5)	mg/l	35.4	4.96	14.0	12	35.2	2.45	1.79	5.06
pH - H ₂ O (2/5)	...	8.00	0.187	2.3	14	8.00	0.130	0.063	0.782

Method: PEP-Ammoniumacetate-EDTA extraction

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
AAE10-Ca	mg/kg	58203	2918	5.0	10	57714	2084	1153	1.98
AAE10-Mg	mg/kg	470	27.9	5.9	10	459	24.5	11.0	2.35
AAE10-K	mg/kg	29.7	3.62	12.2	10	29.5	2.51	1.43	4.82

Method: PEP-Test measurements

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
pH-H ₂ O	...	7.77	0.116	1.5	9	7.75	0.070	0.048	0.621

Method: PEP-Physical parameters

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
C-org	%	0.999	0.127	12.8	8	0.998	0.081	0.056	5.64
Humus	%	1.73	0.211	12.2	8	1.72	0.133	0.093	5.39



Indicative Values ISE 845



Method: Real totals

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
As	mg/kg	17.4	3.10	17.9	12	17.3	1.82	1.12	6.44
Cd	mg/kg	0.205	0.050	24.5	9	0.222	0.032	0.021	10.2
Ga	mg/kg	13.9	1.94	13.9	7	13.6	0.800	0.918	6.59
Mo	mg/kg	0.779	0.142	18.2	6	0.790	0.085	0.072	9.31
Pb	mg/kg	618	167	27.0	14	607	89.0	55.7	9.02
S	mg/kg	216	117	54.0	10	227	82.2	46.1	21.4
Sn	mg/kg	2.95	0.125	4.2	4	2.97	0.060	0.078	2.65
Sb	mg/kg	29.9	7.28	24.3	7	29.3	4.60	3.44	11.5
La	mg/kg	38.5	7.38	19.2	9	37.5	4.98	3.08	7.99
Nb	mg/kg	10.5	1.91	18.3	7	10.3	1.10	0.904	8.64
Nd	mg/kg	32.1	10.3	32.1	8	32.7	6.90	4.56	14.2
Sc	mg/kg	9.95	2.68	26.9	6	9.93	1.04	1.37	13.7
Th	mg/kg	10.6	2.07	19.6	7	10.2	1.10	0.978	9.25
U	mg/kg	2.42	1.38	57.2	5	2.14	0.840	0.773	32.0

Method: Acid extractable (So-called totals)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
B	mg/kg	3.96	2.15	54.2	5	4.15	1.26	1.20	30.3
Ba	mg/kg	43.2	11.1	25.7	14	42.7	7.64	3.71	8.59
K	mg/kg	1613	765	47.4	17	1680	485	232	14.4
Li	mg/kg	35.6	3.16	8.9	6	35.0	1.28	1.61	4.53
Na	mg/kg	139	101	72.3	13	143	57.1	34.9	25.0
Rb	mg/kg	13.2	4.13	31.3	4	13.4	1.99	2.58	19.6
Se	mg/kg	0.222	0.123	55.5	5	0.280	0.070	0.069	31.0
Sn	mg/kg	1.16	0.767	66.1	9	1.23	0.425	0.319	27.5
Sr	mg/kg	254	22.1	8.7	6	251	12.0	11.3	4.44
V	mg/kg	16.9	3.63	21.5	16	17.9	2.46	1.13	6.71
Sb	mg/kg	23.6	10.2	43.3	10	23.5	3.70	4.03	17.1
Tl	mg/kg	0.108	0.046	43.0	7	0.109	0.022	0.022	20.3
U	mg/kg	0.906	0.171	18.9	5	0.910	0.120	0.096	10.6

Method: Aqua Regia (ISO 11466)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Ba	mg/kg	42.3	2.67	6.3	7	42.8	1.55	1.26	2.99
Be	mg/kg	0.270	0.011	4.2	6	0.269	0.005	0.006	2.13
Li	mg/kg	33.7	5.79	17.2	4	33.9	3.45	3.62	10.7
Na	mg/kg	90.9	49.0	53.9	12	93.6	30.5	17.7	19.5



Indicative Values ISE 845



Method: Aqua Regia (ISO 11466)									(cont.)
Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Pb	mg/kg	598	184	30.8	26	591	131	45.2	7.55
Sb	mg/kg	25.6	5.22	20.4	8	26.5	4.16	2.31	9.03
Se	mg/kg	0.375	0.239	63.6	6	0.415	0.143	0.122	32.5
Sn	mg/kg	0.893	0.203	22.7	5	0.920	0.129	0.113	12.7
Sr	mg/kg	244	18.2	7.5	7	243	8.90	8.62	3.54
Tl	mg/kg	0.090	0.006	6.5	4	0.091	0.003	0.004	4.03
U	mg/kg	0.851	0.092	10.9	4	0.845	0.043	0.058	6.80

Method: Extraction with boiling 2M HNO₃

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cr	mg/kg	14.2	2.53	17.8	11	14.1	1.35	0.954	6.72
Hg	µg/kg	56.2	15.3	27.2	7	60.0	8.88	7.22	12.8
Mo	mg/kg	0.311	0.139	44.7	8	0.347	0.056	0.061	19.7
Ni	mg/kg	30.8	6.82	22.1	11	31.6	4.80	2.57	8.34
Pb	mg/kg	680	217	31.9	11	651	92.0	81.7	12.0
Tl	mg/kg	0.053	0.013	25.1	5	0.059	0.009	0.007	14.0
Zn	mg/kg	45.6	8.05	17.7	11	44.5	7.90	3.04	6.66

Method: Extraction with 0.1M NaNO₃

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cu	µg/kg	487	84.8	17.4	5	482	49.6	47.4	9.73
Ni	µg/kg	41.6	0.892	2.1	5	41.7	0.500	0.499	1.20
Pb	µg/kg	51.0	13.7	26.9	4	52.4	6.50	8.58	16.8

Method: Extraction with 0.01M CaCl₂ 1:10

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Cu	µg/kg	393	27.0	6.9	4	386	14.3	16.9	4.30
K	mg/kg	21.6	2.79	12.9	6	21.8	1.27	1.42	6.60
Mg	mg/kg	28.5	0.895	3.1	5	28.7	0.570	0.500	1.76
N - NH ₄ (as N)	mg/kg	2.46	0.323	13.1	7	2.49	0.140	0.153	6.20
N - NO ₃ (as N)	mg/kg	2.85	0.687	24.1	7	2.95	0.380	0.324	11.4
Na	mg/kg	4.37	0.409	9.4	4	4.36	0.200	0.255	5.84
P	mg/kg	0.213	0.117	55.2	5	0.240	0.071	0.066	30.8



Indicative Values ISE 845

Method: Soil characteristics

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Fraction < 2 µm	%	5.76	2.14	37.2	30	5.61	1.13	0.489	8.49
Fraction < 16 µm	%	29.7	5.84	19.7	7	29.2	2.40	2.76	9.29
Active Lime (as CaCO ₃)	%	1.80	0.981	54.6	9	2.00	0.561	0.409	22.8
Fraction 2 - 50 µm (USDA)	%	30.8	9.55	31.1	4	30.5	6.24	5.97	19.4

Method: Other determinations

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
B - Hot water	mg/kg	0.253	0.151	59.7	12	0.285	0.110	0.054	21.6

Method: Pot. CEC using 1M NH₄-acetate at pH=7

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
CEC	cmol+/kg	3.07	1.57	51.3	35	3.20	0.890	0.333	10.8
Na	cmol+/kg	0.046	0.029	64.4	42	0.048	0.018	0.006	12.4
Ca	cmol+/kg	21.0	10.1	47.9	56	20.6	6.29	1.68	8.00

Method: Pot. CEC using 1M or 0.1M BaCl₂-TEA at pH=8.1 (ISO 13536 OR BZE)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
CEC	cmol+/kg	8.11	2.33	28.7	4	7.90	1.11	1.45	17.9

Method: Act. CEC using cobaltihexamine (AFNOR NFX 31 130)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
CEC	cmol+/kg	5.69	0.392	6.9	7	5.70	0.310	0.185	3.26
Na	cmol+/kg	0.024	0.004	18.6	4	0.024	0.002	0.003	11.6
K	cmol+/kg	0.080	0.002	2.0	5	0.080	0.001	0.001	1.13
Ca	cmol+/kg	6.41	1.38	21.5	5	6.10	0.908	0.772	12.0
Mg	cmol+/kg	0.252	0.010	3.9	6	0.253	0.007	0.005	1.97

Method: Mehlich-3

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
B	mg/kg	0.493	0.376	76.2	11	0.450	0.210	0.142	28.7
Ca	mg/kg	12811	3534	27.6	20	13171	1819	988	7.71
Na	mg/kg	8.18	4.58	56.0	14	9.81	3.09	1.53	18.7
P	mg/kg	2.65	1.68	63.6	20	2.86	1.14	0.471	17.8
Al	mg/kg	25.0	8.57	34.2	10	26.4	5.29	3.39	13.5
Co	mg/kg	1.44	0.460	31.9	4	1.41	0.205	0.288	19.9



Indicative Values ISE 845

Method: Extraction with 0.01M CaCl₂ - 0.005M DTPA 1:10 (w/v)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Fe	mg/kg	27.4	8.17	29.9	17	26.8	5.22	2.48	9.05
Mn	mg/kg	17.2	6.56	38.2	19	18.0	3.52	1.88	10.9

Method: Extraction with 1M KCl 1:10 (w/v)

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
N - NH ₄ (as N)	mg/kg	2.38	1.33	55.6	13	2.19	0.862	0.460	19.3

Method: Phosphorus and related analysis

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
P - Bray (as P)	mg/kg	1.88	2.07	109.8	21	1.84	1.40	0.563	29.9
P - AL (as P)	mg/kg	6.11	2.13	34.8	7	6.58	1.57	1.01	16.4

Method: UK Soil Methods

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
P – NaHCO ₃ (1/20)	mg/l	5.21	1.45	27.8	11	5.25	0.890	0.545	10.5

Method: PEP-Ammoniumacetate-EDTA extraction

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
AAE10-P	mg/kg	3.54	1.18	33.2	8	3.70	0.400	0.520	14.7

Method: PEP-Water extraction

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
H ₂ O10-Mg	mg/kg	8.96	0.682	7.6	7	9.11	0.295	0.322	3.60
H ₂ O10-K	mg/kg	15.8	0.672	4.3	7	15.8	0.320	0.318	2.01
H ₂ O10-P	mg/kg	1.30	0.134	10.2	7	1.32	0.090	0.063	4.84

Method: PEP-Test measurements

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
CO ₂ -K	K-test	1.72	0.105	6.1	7	1.75	0.050	0.049	2.87
CO ₂ -P	P-test	2.15	0.471	21.9	7	2.14	0.210	0.223	10.3
CC-Mg	Mg-test	2.94	0.144	4.9	7	2.95	0.090	0.068	2.31
CaCO ₃	%	18.1	1.10	6.1	7	18.2	0.466	0.522	2.89

Method: PEP-Physical parameters

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	Rel.Uncert. %
Ton (clay)	%	6.15	2.01	32.7	7	6.80	1.49	0.951	15.5
Schluff (silt)	%	41.6	1.78	4.3	7	41.4	1.03	0.843	2.03



Indicative Values ISE 845

Method: PEP-Physical parameters

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	(cont.) Rel.Uncert. %
Sand	%	49.5	1.63	3.3	6	49.4	1.02	0.830	1.68
TOC_400	%	0.893	0.119	13.3	5	0.920	0.080	0.066	7.44