

Certificate of Analysis

NATURAL MATRIX CERTIFIED REFERENCE MATERIAL

Produced and Certified by a Partnership between



Resource Technology Corporation, the Dutch Centre for Water Management

& C N Schmidt BV



Trace Elements on Fresh Water Sediment

Catalog No: CNS392-50G

L ot No: 011295.

CERTIFIED ANALYTE CONCENTRATIONS

Element	Reference Value	S.D.	Units	Confidence Interval	Prediction Interval
Aluminum, Al	(14100)		mg/Kg		
Antimony, Sb	12.0	3.17	mg/Kg	10.7 - 13.3	5.30 - 18.7
Arsenic, As	6.49	3.21	mg/Kg	5.46 - 7.52	0.109 - 12.9
Barium, Ba	54.8	16.8	mg/Kg	48.1 - 61.6	19.6 - 90.0
Beryllium, Be	14.3	1.17	mg/Kg	13.6 - 15.0	11.7 - 17.0
Cadmium, Cd	21.5	0.993	mg/Kg	21.2 - 21.9	19.6 - 23.5
Cobalt, Co	9.16	0.622	mg/Kg	8.90 - 9.41	7.85 - 10.5
Chromium, Cr	36.6	15.6	mg/Kg	31.5 - 41.8	5.62 - 67.7
Copper, Cu	146	6.30	mg/Kg	144 - 148	133 - 158
Iron, Fe	7880	867	mg/Kg	7580 - 8180	6160 - 9610
Lead, Pb	121	8.17	mg/Kg	119 - 124	105 - 137
Mercury, Hg	12.7	1.12	mg/Kg	12.3 - 13.1	10.5 - 14.9
Manganese, Mn	6604	679	mg/Kg	6340 - 6870	5180 - 8020
Molybdenum, Mo	14.5	1.18	mg/Kg	14.1 - 15.0	12.1 - 17.0
Nickel, Ni	32.9	4.96	mg/Kg	31.3 - 34.6	23.0 - 42.8
Selenium, Se	8.59	2.29	mg/Kg	6.40 - 10.8	2.06 - 15.1
Silver, Ag	15.8	1.15	mg/Kg	15.2 - 16.3	13.3 - 18.2
Titanium, Ti	(25.9)				
Vanadium, V	41.9	11.5	mg/Kg	37.3 - 46.4	17.8 - 65.9
Zinc, Zn	81.7	6.63	mg/Kg	79.6 - 83.7	68.5 - 94.8

Other Determinants

Chemical Oxygen Demand (COD)	0.619	0.201	g/Kg	0.531 - 0.707	0.172 - 1.07
Chloride, Cl ⁻	0.255	0.035	g/Kg	0.239 - 0.270	0.178 - 0.331
Kjeldahl-Nitrogen (KN)	0.185	0.134	g/Kg	0.130 - 0.240	0.00 - 0.466
Phosphorus, Total (TP)	0.137	0.057	g/Kg	0.117 - 0.156	0.023 - 0.251



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ADDITIONAL INFORMATION

Particle Size Distribution – 200 micron to 1 mm

pH – 6.74

Texture Classification – Loamy Sandy Sediment

Pack Size – 50gm

Values in () are not certified and are listed for information only.

The Reference Values were determined by **Dutch standard methods (NEN 56.; 57.; 64.; and 66.; series) after total digestion using predominantly Nitric / Hydrochloric acid mixture (Aqua Regia) in pressurized microwave digester units. The sample is suitable for use by these, or other similar digestion and analytical procedures.** All values were calculated using the USEPA BIWEIGHT Method. Refer to accompanying Product Information Sheet for certifying details.

Data from a series of Interlaboratory studies carried out during 2006 and early 2007 were collected. Between 24 and 36 laboratories in the Netherlands, USA and UK submitted data, which was used to develop the certified values which were calculated using the USEPA BIWEIGHT Method.

The Confidence Interval (C.I.) range is the 95% C.I. for the Reference Value. The Prediction Interval (P.I.) is the 95% P.I. around the Reference Value. Measurements should fall within the P.I. 19 of 20 times. The Certified Reference Values were established through extensive Interlaboratory testing.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY under a Cooperative Research and Development Agreement between RT Corp (USA &UK) RIZA (Netherlands) and C N Schmidt BV (Netherlands) IN ACCORDANCE WITH ISO 17025, ISO GUIDES 34 AND 35, and ILAC G13 2000.



Christopher Rucinski
Certifying Officer

Shelf life on delivery: normally no less than 12 months.

Expiry Date: See date stamp on bottle label.

Store at +18 to +20°C