

DECLARATION OF QUALITY

METRANAL[®] 33

Quality Control Material (QCM)

Matrix: Clay loam soil, normal analyte levels
Powdered material, grain size < 100 µm

The material is primarily designed for internal and external quality control purposes in the determination of total element contents and contents of element fraction extractable by the below described conventional procedures in soils and materials of similar matrix (quality control charts, inter-laboratory comparisons, estimation of bias etc.) but not for ensuring traceability of measurements and calibration purposes.

Element	Total element content (mg/kg, dry weight)**	Extract by aqua regia* (mg/kg, dry weight)**	Matrix composition (% of the oxides, dry weight)	
	Mean ± Unc.***	Mean ± Unc.***	Oxide	%
As	16.7	11.6 ± 0.7	SiO ₂	68.80
Ba	495	146	Al ₂ O ₃	12.30
Be	2.18 ± 0.16	1.29 ± 0.13	CaO	1.38
Cd	0.32 ± 0.04	0.32 ± 0.03	MgO	1.02
Co	11.5 ± 0.7	10.3 ± 0.5	Fe ₂ O ₃	4.15
Cr	79.8 ± 6.7	42.4 ± 3.8	K ₂ O	2.21
Cu	29.1 ± 0.8	25.4 ± 0.9	Na ₂ O	0.74
Hg	0.096 ± 0.014	0.093	P ₂ O ₅	0.16
Mn	600 ± 37	529 ± 19	TiO ₂	0.68
Ni	31.3 ± 1.5	28.8 ± 1.2	Loss on ignition at 900 °C	8.60
Pb	33.5 ± 2.4	25.2 ± 1.1		
V	76.2 ± 6.4	52.9 ± 2.7		
Zn	81.0 ± 7.6	69.4 ± 1.8		

* Aqua regia extractable content according to ISO 11466 (1995)

** Dry weight at 105 °C

*** The half-width of a 95% confidence interval

The property values were assigned in 5 – 25 experienced accredited laboratories (ISO 17025) by using validated analytical methods.

The sample is stabilized by radiation (25 kGy).

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Czech Republic

Bank:
Citibank EUROPE plc
Acc. No.: 5103986004/2600
IBAN: CZ5626000000005103986004
BIC/Swift: CITICZPX

RM is valid until expiry date indicated in the Declaration, provided the RM is properly stored in the original closed bottle and professionally handled. This Declaration is nullified if the RM is damaged, contaminated, or otherwise modified.

Analytika®, spol. s r.o. will monitor this RM over the period of its validity. If substantive changes of reference values occur, Analytika®, spol. s r.o. will notify the purchaser.

Packing: 80 g in an amber HDPE bottle

Batch No.: 004

Declaration issue date: 08th January 2016

Latest revision date: 27th June 2022

Expiration: **31st December 2024**

Producer: ANALYTIKA®, spol. s r.o.

Production unit Manager: Mgr. Mirka Petránková

Signed:



Declaration version n. 4

Declaration Revision History:

27th June 2022 (Editorial changes, extension of expiry period)

22nd June 2020 (minor editorial changes, extension of expiry period)

22nd July 2016 (editorial changes, extension of expiry period)

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