

# DECLARATION OF QUALITY

## METRANAL® 22

### Quality Control Material (QCM)

**Matrix:** Industrial polluted land, (metals)

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.

Analyte	Concentration (mg/kg) <sup>1,3</sup>	Uncertainty (mg/kg) <sup>2</sup>
As	34.0	0.8
Ba	148	4
Be	3.31	0.05
Ca	4660	135
Cd	0.47	0.01
Co	15.0	0.4
Cr	44.6	2.5
Cu	57.9	0.7
Hg	0.46	0.01
Mn	416	7
Mo	4.50	0.18
Ni	32.0	0.9
Pb	44.3	2.1
Se	< 2	-
Sn	4.83	0.29
V	50.1	1.2
Zn	149	4

Analyte	Concentration (mg/kg) <sup>1,3</sup>	Uncertainty (mg/kg) <sup>2</sup>
sulphate (water soluble)	8568	51
chloride (water soluble)	165	2
fluoride (water soluble)	3.32	0.05

Analyte	Concentration (%) <sup>1,3</sup>	Uncertainty (%) <sup>2</sup>
Loss on ignition, LOI ( 440 °C )	8.12	0.03
Dry residue ( 40°C )	98.42	0.05
Dry residue ( 105°C )	97.34	0.05

- 1 Corrected for dry mass at 105 °C
- 2 Half width of the 95% confidence interval
- 3 Aqua regia extractable content according to ISO 11466 (1995)

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).

RM is valid until expiry date indicated in the certificate, provided the RM is properly stored in the original closed bottle and professionally handled. This Certificate of Analysis 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:** 40 g in an amber HDPE bottle

**Batch No.:** 004

**Certificate issue date:** 14 January 2016

**Certificate revision date:** 03 August 2016

**Expiration:** 31 December 2020

**Producer:** ANALYTIKA®, spol. s r.o.

**Quality Manager:** Ing. Lenka Janečková

**Signed:**

