Łukasiewicz
Instytut Metali
Nieżelaznych

CERTIFICATE OF ANALYSIS

Low sulphur copper CuS-L

The assigned values[1] and uncertainties[2] in mg/kg

Element	CuS-L
S	4.24 ± 0.30

[1] Unweighted mean value of the means of accepted sets of data, each set being obtained in a different laboratory and/or with a different method of determination.

[2] The certified uncertainty is the expanded uncertainty with a coverage factor k=2, corresponding to a level of confidence of about 95 %.

Signature

SIEĆ BADAWCZA ŁUKASIEWICZ
INSTYTUT METALI NIEŻELAZNYCH
DYREKTOR
dr inż. Barbara Juszczyk

Production date: November 2020

Description of the material:

The certified reference materials are available in the form of chips.

Traceability:

The values are traceable to the SI via calibration using pure metals or certified monoelement standard solutions. All values were confirmed in an inter-laboratory comparison. CRM CuS-L is in accordance with CRM CuS-10 produced by Institute of Non-Ferrous Metals.

Analytical methods applied:

S - Inductively coupled plasma optical emission spectrometry (ICP OES),

- Combustion method

Participants:

1. Łukasiewicz Research Network - Institute of Non-Ferrous Metals, Analytical Chemistry Department – Emission Spectrometry and Chromatography Laboratory, Gliwice, Poland
2. Łukasiewicz Research Network - Institute of Non-Ferrous Metals, Analytical Chemistry Department – Atomic Spectrometry Laboratory, Gliwice, Poland
3. Łukasiewicz Research Network - Institute for Ferrous Metallurgy, Department of Analytical Chemistry, Gliwice, Poland
4. Centrum Badań Jakości Sp. z o. o., Lubin, Poland

Intended use:

The CRM is intended for establishing or checking the calibration of combustion sulphur analyzers for analysis of samples of similar matrix composition.

Minimum sample size

0.5 g

Storage and transportation:

Storage the material in a dry and clean environment at room temperature.
Transport under normal conditions.

Brief description of the production and certification process:

Metal chips were taken from OFE copper rod. Homogeneity tests were made by ICP-OES analysis of 10% of the material produced. Results were estimated statistically with the ANOVA application.

The certification of CuS-L is valid indefinitely, within the measurement uncertainties specified, provided the CRM is handled in accordance with the instructions given in this certificate.

Since 2018 our production of the certified reference materials is carried out in accordance with requirements of the ISO 17034 standard.

Contact:

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