



INSTITUTE OF NON-FERROUS METALS

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CERTIFICATE OF ANALYSIS

Chemical reference material of zinc

The average results of chemical analyses in wt % and the confidence intervals in wt % at the probability level 0,05

Element	Average results	Confidence intervals \pm
Pb	0,011	0,0007
Cd	0,00066 *	0,00006
Fe	0,0012	0,0001
Cu	0,00080	0,00002
Sn	0,00021	0,00005

- After recertification

Director of the Institute

Prof. Ph.D. Zbigniew Śmieszek

Analytical methods applied:

- Pb - polarographic*
- Cd - atomic emission spectrometry with ICP; atomic absorption spectrometry **
- Fe - photometric with sulfosalicylic acid*
photometric with rhodanate
- Cu - photometric with dithizone*
photometric with lead diethyldithiocarbamate
photometric with oxalyl dihydrazide, polarographic
- Sn - photometric with phenylpluoran*

The chemical analyses have been carried out in four industrial laboratories and at the Institute of Non-Ferrous Metals. In recertification procedure took part Bol—Therm Sp. z o. o. laboratory

Melts have been performed using induction furnace. Zinc CRMs is in form of chips (100g package). Homogeneity testing was made using about 30% of the material produced. Homogeneity was estimated statistically with application of the test F. Application: "wet chemistry method"