



INSTITUTE OF NON-FERROUS METALS

Analytical Chemistry Department

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CERTIFICATE OF ANALYSIS

Chemical reference material of blende ore RB 7

The average results of chemical analyses in wt %

Component	Mean content	Mean deviation, s (n=20)
Zn	3,07	0,07
Fe	8,28	0,04
Cd	0,033	0,002
CaO	24,35	0,30
MgO	15,26	0,12
Pb	(0,26)	(0,04)
S	(10,3)	(0,08)
SiO ₂	(0,8)	(0,15)

Director of the Institute

Prof. Ph.D. Zbigniew Śmieszek

Analytical methods applied:

- Zn* - complexometric method in the presence of xylene orange
- atomic absorption method
- urbasch method (titration with hexacyanogen potassium ferrate (II))
- Fe* - atomic absorption method
- titration: chromatometric
- Cd* - atomic absorption method
- Pb* - atomic absorption method
- polarographic method
- S* - weight method in form of BaSO_4
- weight method after wasting the sample with a mixture of sodium potassium carbonate with zinc oxide
- Ca* - manganometric titration
- complexometric in the presence of fluorexone with fluoresceine
- Mg* - weight method in form of $\text{Mg}_2\text{P}_2\text{O}_7$
- complexometric, in the presence of eriochrome black T
- Si* - weight method in form of SiO_2
- spectrophotometric method

The chemical analyses have been carried out in two industrial laboratories and at the Institute of Non-Ferrous Metals.