



# INSTITUTE OF NON-FERROUS METALS

Analytical Chemistry Department

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## CERTIFICATE OF ANALYSIS

*Chemical reference material of Galmei ore RG 8*

*The average results of chemical analyses in wt %*

Component	Mean content	Mean deviation, s
Zn	5,40	0,073
Pb	0,84	0,038
Fe	6,34	0,077
Cd	0,047	0,0016
S	0,57	0,018
SiO <sub>2</sub>	2,64	0,10
CaO	26,45	0,14
MgO	12,16	0,12
Al <sub>2</sub> O <sub>3</sub>	0,90	0,039
Zn oxidized	(4,36)	(0,06)
Pb oxidized	(0,72)	(0,02)

*(Value s has been calculated for n=20-24)*

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 hexacyanoen potassium ferrate (II))
- Pb* - atomic absorption method
- polarographic method
- Fe* - titration manganometric or chromatometric
- complexometric in the presence of sulfosalicylic acid
- d* - atomic absorption method
- S* - weight method in form of  $BaSO_4$ , after solving the sample in nitric acid with addition of bromine, or after wasting the sample with a mixture of sodium potassium carbonate with zinc oxide
- Si* - weight method in form of  $SiO_2$
- Ca* - manganometric titration
- complexometric in the presence of fluorexone with fluoresceine
- Mg* - weight method in form of  $Mg_2P_2O_7$
- complexometric, in the presence of eriochrome black T
- Al* - atomic absorption method
- complexometric, in the presence of xylene orange
- spectrophotometric method
- Zn oxidized* - atomic absorption method
- Pb oxidized* - atomic absorption method

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