

CERTIFICATE OF ANALYSIS

CERTIFIED REFERENCE MATERIAL

№ SH7/3

FLUX

CERTIFIED VALUES AND UNCERTAINTIES (95% confidence level), %

Silicon oxide, SiO₂	23.4 ± 0.1	Sulphur, S	0.031 ± 0.001
Calcium oxide, CaO	24.0 ± 0.1	Phosphorus, P	0.011 ± 0.001
Magnesium oxide, MgO	11.4 ± 0.1	Calcium fluoride, CaF₂	28.5 ± 0.1
Aluminium oxide, Al₂O₃	29.8 ± 0.1	Potassium oxide, K₂O	0.94 ± 0.02
Manganese oxide (II), MnO	0.40 ± 0.01	Sodium oxide, Na₂O	1.41 ± 0.03
Ferrum oxide (II), FeO	0.56 ± 0.01		

ADDITIONAL DATA:

Powder, less than 0.063mm.

Minimum weight of sample for analysis is 0.1g

Analytical methods used are given in Supplement.

Producer: The Institute for Certified Reference Materials, Yekaterinburg

Date of issue: February 2002.

Date of re-certification: November 2016.

Storage and transporting conditions: It is prohibited to storage the CRM in moist and foggy indoor places and to transport it by sea or river ships.

It is hereby certified that the named CRM has been approved by the National Committee on Standards and Metrology and entered in the National Register of measuring devices which had passed official testing.

Director, ICRM-Center

Alexander V. Lipsky

ANALYTICAL METHODS USED

Silicon oxide, SiO₂	Photometry, as blue Si-Mo complex, reduction by thiourea, by ascorbic acid Gravimetry perchlorate, chloric, sulfuric
Calcium oxide, CaO	Complexometric permanganate titration Gravimetry, as calcium oxide
Magnesium oxide, MgO	Complexometric titration Atomic absorption spectrometry Phosphatic gravimetry Photometric with phenazo
Aluminium oxide, Al₂O₃	Complexometric titration Photometry with aluminone
Manganese oxide (II), MnO	Titrimetry, persulphate/silver with sodium arsenite Photometry, oxidation potassium periodate, ammonium persulphate Atomic absorption spectrometry
Ferrum oxide (II), FeO	Photometric with sulphosalicylic acid, with O-phenanthroline Atomic absorption spectrometry
Sulphur, S	Titrimetric Iodometric Gravimetry, as barium sulphate
Phosphorus, P	Photometry, as blue Si-Mo complex, reduction by thiourea, by Fe(II)ions with hydroxylamine or sodium sulphite
Calcium fluoride, CaF₂	Pyrohydrolysis Photometric with alizarinechelate Complexometric titration
Potassium oxide, K₂O	Atomic emission spectrometry Flame-photometric Atomic absorption spectrometry ICP-AES
Sodium oxide, Na₂O	Atomic emission spectrometry Flame-photometric Atomic absorption spectrometry ICP-AES