

ICRM-Center, Ltd.

# CERTIFICATE OF ANALYSIS

CERTIFIED REFERENCE MATERIAL

№ SH8/4

## FLUX

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

Silicon oxide, $\text{SiO}_2$	$1.77 \pm 0.02$	Phosphorus, <b>P</b>	$0.013 \pm 0.001$
Calcium oxide, <b>CaO</b>	$3.4 \pm 0.2$	Calcium fluoride, $\text{CaF}_2$	$68.6 \pm 0.2$
Aluminium oxide, $\text{Al}_2\text{O}_3$	$26.5 \pm 0.1$	Carbon, <b>C</b>	$0.039 \pm 0.002$
Ferrum total, <b>Fe t</b>	$0.147 \pm 0.006$	Calcium oxide total, <b>CaO t</b>	$(52.7 \pm 0.2)^*$
Sulphur, <b>S</b>	$0.013 \pm 0.001$		

\*The values in parentheses are given for information only.

**ADDITIONAL DATA:**

Powder, less than 0.1mm.

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:** December, 2014.

Supplied by: ICRM-Center Ltd, Moscow.

**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 METODS USED**

Silicon oxide, <b>SiO<sub>2</sub></b>	Photometry, as blue Si-Mo complex, reduction by ascorbic acid ICP-AES; AAS
Aluminium oxide, <b>Al<sub>2</sub>O<sub>3</sub></b>	Complexometric titration Gravimetric benzoate ICP-AES; AAS
Ferrum total, <b>Fe t</b>	Photometric with sulphosalicylic acid, with O-phenanthroline AAS; ICP-AES
Sulphur, <b>S</b>	Titrimetric Iodometric Infrared-absorption
Phosphorus, <b>P</b>	Photometry, as blue Si-Mo complex, reduction by thiourea, by Fe(II)ions with hydroxylamine, by ascorbic acid with tartrated antimony Extraction-photometric, as blue P-Mo complex, reduction bystannous chloride
Calcium fluoride, <b>CaF<sub>2</sub></b>	Pyrohydrolysis Complexometric titration Potentiometric
Carbon, <b>C</b>	Coulometric Infrared-absorption