

THE INSTITUTE FOR CERTIFIED REFERENCE MATERIALS
ICRM

CERTIFICATE OF ANALYSIS

CERTIFIED REFERENCE MATERIAL

No. W8/4

FLUX FOR ELECTROSLAG REMELTING

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

Silicon dioxide	1.77	± 0.02	Sulphur	0.013	± 0.001
Calcium oxide	3.4	± 0.2	Phosphorus	0.013	± 0.001
Alumina	26.5	± 0.1	Calcium fluoride	68.6	± 0.2
Iron (total)	0.147	± 0.006	Carbon	0.039	± 0.002
			Calcium _{total} oxide	(52.7)	(± 0.2)

ADDITIONAL DATA:

Calcium fluoride content in CRM were calculated from established total content of fluorine.
Minimum weight for analysis is 0.1 g.
Analytical methods used are given in Supplement.

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ANALYTICAL METHODS USED

SILICON DIOXIDE	Photometry, as blue Si-Mo complex, reduction by ascorbic acid. ICP-AES AAS.
ALUMINA	Complexometric titration. Gravimetry, benzoate method. ICP-AES AAS.
IRON (total)	Photometry, with 4,5-phenanthroline or sulphosalicylic acid. ICP-AES AAS.
SULPHUR	Iodometry. Infra-red absorption spectrometry.
PHOSPHORUS	Photometry, as blue P-Mo complex, reduction by tiocarbamide, or iron (II) ions with hydroxylamine, or ascorbic acid with potassium antimonyl tartrate. ICP-AES. Extraction - photometry, as blue P-Mo complex, reduction by stannous chloride.
CALCIUM FLUORIDE	Pyrogenic hydrolysis method. Complexometric titration. Potentiometry.
CARBON	Coulometry. Infra-red absorption spectrometry