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Certificate of Certified Reference Material

NCS DC 60114

Gypsum

Reissued in 2013

Approved by China National Analysis Center for Iron and Steel

(Beijing China)

Certified Values and Uncertainty

(%)

No.		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	K_2O	Na_2O
NCS DC 60114	Certified Value	4.16	1.14	0.38	30.28	3.19	0.23	0.014
	Standard Deviation	0.04	0.07	0.01	0.11	0.05	0.01	0.002
		TiO_2	SO_3	H_2O^+	Cl^-	CO_2	SrO	L.O.I
	Certified Value	0.058	37.64	16.62	0.013	(5.80)	(0.077)	(22.88)
	Standard Deviation	0.002	0.07	0.02	0.002			

Note: 1. Data in () is for reference only. Each certified value is the mean of analytical results of 14 independent laboratories.

2. Dried at 45°C for 2 hours before using.

3.The sample is powder packed glass bottle .The minimum package is 50 grams.

Analytical Methods

Element	Methods
SiO_2	Gravimetric method by drying with the vapor of HCI;Gravimetric method by drying with perchloric acid; Colorimetric method with molybdenum blue
Al_2O_3	Colorimetric method with aluminium reagent; Colorimetric method with chromium green S
Fe_2O_3	Colorimetric method with sulfo-salicylic acid; Colorimetric method with O-phenanthroline
CaO	Gravimetric method with oxalate;EDTA titration method
MgO	Gravimetric method with pyrophosporic magnesium; EDTA titration method
K_2O	Atomic absorption method; Flame emission spectrometric method
Na_2O	Atomic absorption method; Flame emission spectrometric method
TiO_2	Colorimetric method with diantipyrylmethane; Colorimetric method with chromotropic acid
SO_3	Gravimetric method with barium aulphate
H_2O^+	Gravimetric method by drying in 220°C
Cl^-	Colorimetric method with mercury thiocyanate; Couloumb method
CO_2	Absorption gravimetric method
SrO	Atomic absorption Spectrometric method
L.O.I	800°C - Combustion gravimetric method

Professor Wang Haizhou, Chief

China National Analysis Center for Iron and Steel