Certificate of Certified Reference Material

NCS FC 82013b

Coal Ash

Issued in 2022

Approved by China National Analysis Center for Iron and Steel

(Beijing China)

These Certified Reference Materials are prepared in accordance with the ISO guides 30-35. The intended use for this CRM is for the quality control in coal ash analysis, the evaluating methods of analysis and the calibration of analytical instruments.

Certified Values and Uncertainty (%)

No.		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	SO_3	TiO_2	K_2O	Na_2O	P_2O_5
NCS FC 82013b	Certified Value	48.70	27.61	10.76	4.62	0.66	3.16	1.05	1.18	1.32	0.05
	Uncertainty	0.42	0.26	0.23	0.06	0.05	0.20	0.07	0.02	0.06	0.01

Note:

1.Each certified value is the mean of analytical results of 8 independent laboratories.

Uncertainty is extended uncertainty (k=2) $U= t_{\alpha(m-1)}S_T$, S_T is standard deviation.

2.The sample is packed in bottle with size less than 80 meshes. The package is about 30 grams.

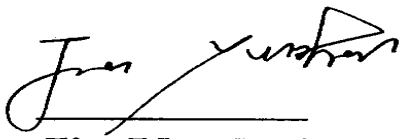
3.The sample should be protected from contamination when use. It should be stored at dry and cool place.

4.The sample should be grinded to less 160 meshes and stoved at 815°C±10°C to constant weight before analysis. The minimum weight for analysis is 0.10g.

5.The valid time of the sample is 5 years, although we reserve the right to make change as issue revisions.

Analytical Methods

Composition	Analytical method
SiO_2	Silicon-molybdenum blue photometric method; Inductively coupled plasma method; Gravimetric method
Al_2O_3	Fluoride replacement-EDTA titrimetric method; Inductively coupled plasma method
Fe_2O_3	EDTA volumetric method; Atomic absorption spectrophotometry Photometric method after separation with titaniumferron
CaO	EGTA volumetric method; EDTA volumetric method; Atomic absorption spectrophotometry
MgO	EDTA volumetric method; Atomic absorption spectrophotometry
SO_3	Coulomb-titrimetric method; Gravimetric method
TiO_2	Photometric method after separation with titaniumferron; H_2O_2 photometric method
K_2O	Atomic absorption spectrophotometry; Flame spectrometry; ICP-AES
Na_2O	Atomic absorption spectrophotometry; Flame spectrometry; ICP-AES
P_2O_5	Phosphorus molybdenum blue photometric method; Inductively coupled plasma method



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