

Certificate of Certified Reference Material

NCS DC 86001 — NCS DC 86007

Barite Ore

Issued in 2008

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 these CRMS is for the quality control in Barite analysis, the evaluating methods of analysis and the calibration of analytical instruments.

Samples were crushed in jaw crusher and grinded to grains of the size less than 0.84mm, then grinded in ball mill until over 95% the grain sizes less then 0.074mm, then packed in bottle.

### Certified Values and Standard Deviation

(%)

No.		BaSO <sub>4</sub>	BaO	SO <sub>3</sub>	Sr	Cu
NCS DC 86001	Certified Value	42.41	28.34	15.94	0.39	109*
	Standard Deviation	0.34	0.46	0.21	0.02	3
NCS DC 86002	Certified Value	98.47	65.40	34.37	0.10	(2.9*)
	Standard Deviation	0.61	0.13	0.21	0.01	
NCS DC 86003	Certified Value	41.46	28.36	14.99	0.054	6.7*
	Standard Deviation	0.63	0.43	0.21	0.006	1.7
NCS DC 86004	Certified Value	86.14	57.36	31.44	1.22	42.1*
	Standard Deviation	0.67	0.16	0.18	0.08	3.1
NCS DC 86005	Certified Value	66.93	44.80	24.50	1.12	129*
	Standard Deviation	0.57	0.32	0.22	0.08	9
NCS DC 86006	Certified Value	18.87	13.00	51.33	0.058	0.14
	Standard Deviation	0.32	0.22	0.33	0.009	0.01
NCS DC 86007	Certified Value	40.54	27.01	13.95	0.059	10.2*
	Standard Deviation	0.32	0.28	0.21	0.005	2.1
		Pb	Zn	Salt	TFe <sub>2</sub> O <sub>3</sub>	CaF <sub>2</sub>
NCS DC 86001	Certified Value		22.3*	(0.28)	49.37	
	Standard Deviation		6.5		0.43	
NCS DC 86002	Certified Value		(6.0*)	(0.11)		
	Standard Deviation					
NCS DC 86003	Certified Value		12.4*	(0.37)		14.03
	Standard Deviation		2.6			0.16
NCS DC 86004	Certified Value		(5.6*)	(0.13)		
	Standard Deviation					
NCS DC 86005	Certified Value		26.9*	(0.21)		
	Standard Deviation		4.4			
NCS DC 86006	Certified Value	0.41	3.76	0.93	20.96	
	Standard Deviation	0.02	0.56	0.14	0.41	
NCS DC 86007	Certified Value		36.4*	(0.21)		
	Standard Deviation		3.2			

Note: Data in ( ) is for reference only, data with \* is in µg/g; salt is soluble salt.

1. 8 independent laboratories take part in the analysis work.
2. The sample is powder packed in bottle. The minimum package is 100 grams.  
The minimum weight for analysis is 0.5g. The sample should be stoved at 105 °C for one hour before use, then put in drier to room temperature for use.
3. The sample should be stored at dry and cool place.
4. The valid time of the sample is 10 years, although we reserve the right to make change as issue revisions.

## Analytical Methods

Analytical methods	Composition
GR	BaSO <sub>4</sub> ; BaO; SO <sub>3</sub> ; Salt
AAS	Cu, Pb, Zn, CaF <sub>2</sub>
ICP-AES	Sr, Cu, Pb, Zn
VOL	BaSO <sub>4</sub> ; BaO; TFe <sub>2</sub> O <sub>3</sub> ; CaF <sub>2</sub>
XRF	Sr, Cu, Pb, Zn, TFe <sub>2</sub> O <sub>3</sub>
EL	Salt

Note:

GR: Gravimetry

AAS: Atomic Absorption Spectrometry

ICP-AES: Inductively Coupled Plasma- Atomic Emission Spectrography

VOL: Volumetry

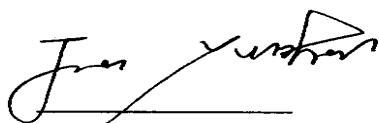
XRF: X-Ray Fluorescence spectrometry

EL: Electrical

## Statement:

This material is used only in labs and for analysis work, producer will be not responsible for any problem caused by misuse or not properly store.

Please check carefully the package, quantity and type of the material after receiving it. Related compensation is only limited in the certified materials, any other losses will be not included.



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