



Certificate of Certified Reference Material

NCS FC 28117a

Coke

Reissued in 2013

Approved by China National Analysis Center for Iron and Steel

(Beijing China)

This Certified Reference Materials is prepared in accordance with the ISO guides 30-35. The intended use for this CRMS is for the quality control in coke analysis, the evaluating methods of analysis and the calibration of analytical instruments.

Certified Values and Uncertainty

No.		Sulfur(%) St, d	Ash(%) Ad	Volatile matter Vd (%)	Calorific Value(MJ/kg)	P (%)
NCS FC	Certified Value	0.60	15.15	1.62	28.19	0.022
28117a	Uncertainty	0.03	0.20	0.30	0.18	0.004

Note:

- 8 independent laboratories take part in the analysis work.
The values are dry bases, calorific value is high value of dry bases.
Uncertainty is expanded uncertainty at 95% confidence level.
Uncertainty(U) is calculated by $U = t_{\alpha(m-1)} S_T$. In above formula, $t_{\alpha(m-1)}$ is confidence coefficient of t-distribution, α is confidence level and S_T is standard deviation.
- The sample is powder with size less 0.180 mm packed in glass bottle.
The minimum package is 50 grams.
- The sample should be stored at dry, clean, cool and dark place.
- The minimum weight for analysis Sulfur is 30 mg, for Ash, Volatile matter, Calorific value is 0.5g.
- The certification will expire in Dec.2018, although we reserve the right to make change as issue revisions.

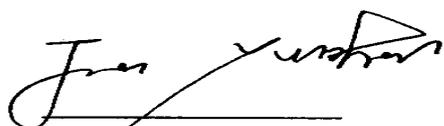
Analytical Methods

Item	Analytical method
Total Sulfur	GB/T2286-1991 Gravimetric method; High temperature combustion method GB/T214-2007 Coulomb titrimetric method
Ash and Volatile	GB/T2001-1991 Gravimetric method
Calorific Value	GB/T213-2003 Oxygen bomb calorimetric method
P	GB/T216-2003 Method of Determination of Phosphorus of Coal (Phosphorus-Molybdenum blue photometric method); ICP-AES

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.



Jia Yunhai

Laboratory Director