Certificate of Certified Reference Material

NCS HC 93609--93611

High Carbon Ferrochromium

Issued in 2012

Approved by China National Analysis Center for Iron and Steel

(Beijing　China)

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

Certified Values and uncertainty (%)

No.		C	S	Si	Mn	P	Cr
NCS HC 93609	Certified value	8.36	0.068	1.15	0.207	0.023	58.28
	Uncertainty	0.05	0.002	0.05	0.007	0.002	0.12
NCS HC 93610	Certified value	7.99	0.030	0.26	0.225	0.018	70.15
	Uncertainty	0.04	0.002	0.02	0.008	0.001	0.12
NCS HC 93611	Certified value	8.13	0.059	0.92	0.21	0.022	60.42
	Uncertainty	0.04	0.002	0.02	0.01	0.001	0.12

Note:

1. 6 independent laboratories take part in the analysis work.
2. The sample is powder with size less 0.074mm packed in glass bottle.
   The minimum package is 50 grams. The sample should be dried at 105℃ before use.
3. The sample should be stored at cool, dry and dark place.
4. The valid time of the sample is 10 years, although we reserve the right to make change as issue revisions.

Analytical Methods

Element	Analytical method
C	The gravimetric method; Infrared absorption method
S	Infrared absorption method; The combustion-potassium iodate titrimetric method
Si	The perchloric acid dehydration-gravimetric method; ICP-AES.
Mn	ICP-AES; AAS.
P	Bismuth-phosphorus-molybdenum blue photometric method; ICP-AES
Cr	Ammonium persulfate volumetric method; Electric potential titrimetric method

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