ACIRS-S2B-2015

Sulfur Reference Material

PRODUCT INFORMATION LEAFLET

Sulfur Reference Material with selected trace elements intended to be used for quality control purposes. Total sulfur is traceable to SI units through NIST SRM 2693 and NIST SRM 1632d and is suitable for calibration purposes.

Higher rank bituminous coal, 125 g at a nominal top size of -212 µm.

Table 1 Assigned Property Values

	Property Value[1]	Standard Deviation[2]	Uncertainty[3]	Number of laboratories
Total Sulfur, % d	0.692	0.0237	0.0028	110
Chlorine, % d	0.027	0.0031	0.0006	48
Mercury, mg/kg d	0.057	0.0081	0.0016	40
Fluorine, mg/kg d	37	8.1	1.8	30

This sample should be thoroughly mixed by end-over-end rotation before sub-sampling. To minimise the risk of compositional changes due to oxidation store in a cool, dark place in original containers with the lid tightly sealed.

The full technical report and Safety Data Sheet for this product are available at www.acirs.com.au/products/acirs-sulfur-reference-materials-/

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Australian Coal Industry Reference Samples (ACIRS)

ADDITIONAL INFORMATION

ACIRS-S2B-2015 was tested in the Q1, 2015 CANSPEX proficiency test program. The values in Table 2 are provided from the proficiency test report for informational purposes only to allow the user to better understand the characteristics of this sample. Oxidation sensitive parameters are subject to change due to the normal oxidation processes for coals and will not be monitored.

Table 2 Informational Data

	Indicative Value[5]	Standard Deviation	Number of laboratories
Ash, % d	9.1	0.1	123
Volatile Matter, % d	34.0	0.6	102
Gross Calorific Value, MJ/kg d	31.05	0.08	112
Total Carbon, % d	75.4	0.6	65
Hydrogen, % d	4.90	0.12	60
Nitrogen, % d	1.79	0.06	58
Pyritic Sulfur, % d	0.12	0.02	22
Sulfate Sulfur, % d	0.02	0.01	18
Selenium, mg/kg d	0.4	0.1	13

NOTES

1 Property values are the best estimate of the true value for the measurand and are based on the robust mean of participant results (outliers excluded) from a proficiency test program conducted by CANSPEX. Parameters have been assigned from results of multiple analysis methods. Biases between methods were not observed. Results from in-house methods were included when within the normal distribution of standard national and international test methods.

2 Standard deviation (sd) is used to derive the likely range of results. The value for a measurand from a randomly chosen laboratory would be expected to lie within 2 sd of property values with 95% probability.

3 The uncertainty of this value has been calculated from 1.25x sd/√n where n= number of laboratories.

4 The stability of assigned property values will be monitored by ACIRS. It is the responsibility of the user to obtain the most recent Technical Report and Product Information Leaflet for this reference material.

5 Informational data / Indicative values are provided for information purposes only.

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Revision History

Document Number	Summary	Date
ACIRS-S2B-PIL	original	27/07/2015
ACIRS-S2B-PIL-rev01	Traceability statement added	02/12/2015
ACIRS-S2B-PIL-rev02	Revision history and minor editorial change	27/03/2017

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