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Certificate of Analysis
Part No. B2354
Proximate Plus Coal Standard

RM Doc Number: 250825

Analytical Results

Property	Value	Expanded Uncertainty	Method and Detection	Minimum sample size	
% Ash	13.53	0.31	Combustion/Gravimetry	1.0 g	k ≈ 2(95% confidence)
% Volatile Matter	24.96	0.78	Gravimetry	1.0 g	k ≈ 2(95% confidence)
% Fixed Carbon	61.51	0.75	-	-	k ≈ 2(95% confidence)
% Carbon	71.37	0.30	Combustion	0.10 g	k ≈ 2(95% confidence)
% Hydrogen	3.25	0.19	Combustion	0.10 g	k ≈ 2(95% confidence)
% Nitrogen	0.932	0.028	Combustion	0.10 g	k ≈ 2(95% confidence)
% Sulfur	0.511	0.073	Combustion	0.10 g	k ≈ 2(95% confidence)
BTU/lb (J/g)	11671 (27147)	72 (167)	Combustion	0.8 g	k ≈ 2(95% confidence)
% Chlorine	(0.0130)	Reference value	Combustion	0.01 g	N/A
% Fluorine	(0.0105)	Reference value	Combustion	0.05 g	N/A

Methods Employed:

JCGM 100:2008; Evaluation of Measurement Data – Guide to the Expression of Uncertainty in Measurement; (GUM 1995 with Minor Corrections), Joint Committee for Guides in Metrology (JCGM) (2008); available at https://www.bipm.org/utils/common/documents/jcgm/JCGM_100_2008_E.pdf (accessed February 2025)

JCGM 101:2008; Evaluation of Measurement Data – Supplement 1 to the Guide for the Expression of Uncertainty in Measurement; Propagation Distributions Using a Monte Carlo Method; Joint Committee for guides in Metrology (JCGM) (2008); available at https://www.bipm.org/utils/common/documents/jcgm/JCGM_100_2008.pdf (accessed February 2025).

**The analytical results above are provided by an accredited reference material manufacturer with a current certification in ISO 17025 and 17034.*

The intended use of this Reference Material (RM) is for the verification of methods of analysis listed above for the determination of the corresponding property values.

Refer to the table above for the minimum sample size required for this intended use.

This certification is valid for 15 years from the initial certification date, provided the RM is handled and stored in accordance with the instructions given in this certificate.

This reference material should be dried to constant mass at 105°C before use. Bottles of powder should be kept sealed tight and stored in a cool, dry location.

This bottle contains 50g of powdered coal to be used per the test method you follow.

Refer to your test methods and or manufacturer manual for expanded uncertainties, repeatability/reproducibility factors.

For good laboratory practice, we recommend that all reference materials be verified as fit for purpose prior to use. Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Elemental Microanalysis Ltd. be liable for incidental or consequential damages.

Certified on the 28th of January 2026

Elemental Microanalysis Ltd