

Okehampton Business Park
 Exeter Road
 Okehampton
 Devon EX20 1UB
 Telephone: 01837 54446
 Fax: 01837 54544
 Web: www.elementalmicroanalysis.com

Certificate Number 561117
 Page 1 of 1

All analysis reported on dry basis value	Mean	Exp. Unc.	Method used
Mean Weight Percent Sulphur*	5.00	± 0.11	ASTM D4239
Mean Weight Percent Ash	(0.60)		ASTM D3174, D4422
Mean Weight Percent Volatile Matter	6.85	± 1.54	ASTM D3175
Mean BTU/Pound	14,204	± 81	ASTM D5865
Fixed Carbon (Calculated)	(92.55)		ASTM D3172
Mean Weight Percent Carbon	87.89	± 1.19	ASTM D5373
Mean Weight Percent Hydrogen	1.89	± 0.29	ASTM D5373
Mean Weight Percent Nitrogen	1.79	± 0.19	ASTM D5373
PPM- µg/g Nickel	281	± 52	ASTM D5056, D6376
PPM- µg/g Iron	282	± 54	ASTM D5056, D6376
PPM- µg/g Vanadium	1651	± 77	ASTM D5056, D6376
PPM- µg/g Calcium	91	± 22	ASTM D5056, D6376
PPM- µg/g Silicon	343	± 64	ASTM D5056, D6376

Numbers in brackets are for reference only.

*Sulphur value of this Certified Reference Material is traced to NIST SRM 2718, and CANMET PC-2. The BTU is traceable to Benzoic Acid NIST 39j

The intended use of this material is for the verification of test analysis by the above listed or other valid methods. The precision value represents the expanded degree of uncertainty based on errors from analytical assay by a consensus of ISO 17025 accredited labs, at a 95% confidence level (k=2) utilizing ANOVA, ISO Guide 35, and the Guide to Uncertainty Measurement. When necessary, professional judgment is applied toward consideration of data and statistical information. Normal testing procedures should be employed when using this standard; this includes using the reproducibility and repeatability factors based upon your test method.

The samples for round robin testing were selected in accordance with ARI 031. The above values relate only to the material used to produce this standard. The analytical samples are recommended to be dried per the test method used. This bottle contains 50g, fine -60 mesh (250u) green petroleum coke powder. Keep sealed tightly and store under normal laboratory conditions. Values are valid for 15 years from the date of certification, if storage instructions are followed.

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. The above values relate only to the material used to produce this standard. This certificate cannot be reproduced except in full.

This Reference Material (RM) is traceable to the above-mentioned standards and or methods. For good laboratory practice it is recommended that all reference standards be verified as fit for purpose prior to use.

Certified January 30, 2018

Elemental Microanalysis Ltd