

Analytical Results

(Dried Basis)

Proximate Analysis						
	ASTM Method	Mean	St Dev	Expanded Uncertainty	n	k
% Ash	D3174/D7582	19.18	0.12	0.24	21	2.09
% Volatile Matter	D3175/D7582	29.28	0.75	1.56	21	2.09
% Fixed Carbon (calc)	D3172	(51.16)	--	--	--	--
% Sulfur	D4239	3.31	0.13	0.27	40	2.02
BTU/lb	D5865	11377	33	78	8	2.36
Ultimate Analysis						
	ASTM Method	Mean	St Dev	Expanded Uncertainty	n	k
% Carbon	D5373	64.27	0.31	0.73	8	2.36
% Hydrogen	D5373	4.04	0.26	0.62	8	2.36
% Nitrogen	D5373	1.19	0.12	0.28	8	2.36
% Oxygen (calc)	D3176	(7.98)	--	--	--	--
MAF/DAF BTU (calc)	D3180	(14075)	--	--	--	--
Mineral Analysis						
	ASTM Method	Mean	St Dev	Expanded Uncertainty	N	k
% Silica	D4326/D6349	46.21	0.31	0.73	8	2.36
% Alumina	D4326/D6349	22.80	0.27	0.63	8	2.36
% Titania	D4326/D6349	1.13	0.05	0.13	8	2.36
% Ferric Oxide	D4326/D6349	19.63	0.26	0.63	8	2.36
% Calcium Oxide	D4326/D6349	2.49	0.08	0.20	8	2.36
% Magnesium Oxide	D4326/D6349	1.00	0.04	0.10	8	2.36
% Potassium Oxide	D4326/D6349	2.26	0.17	0.41	8	2.36
% Sodium Oxide	D4326/D6349	(0.32)	--	--	8	2.36
% Sulfur Trioxide	D4326/D6349	(3.35)	--	--	8	2.36
% Phosphorus Pentoxide	D4326/D6349	(0.31)	--	--	8	2.36
% Strontium Oxide	D4326/D6349	(0.07)	--	--	8	2.36
% Barium Oxide	D4326/D6349	(0.10)	--	--	8	2.36
% Manganese Oxide	D4326/D6349	(0.05)	--	--	8	2.36

Additional Values

Sulfur Forms			
	ASTM Method	Value	
% Pyritic	D2492	(1.34)	
% Organic (calc)	D2492	(0.96)	
% Sulfate	D2492	(1.01)	
Ash Fusion Temperature			
	ASTM Method	Degrees F Reducing	Degrees F Oxidizing
Initial Deformation	D1857	(2100)	(2485)
Softening	D1857	(2241)	(2521)
Hemispherical	D1857	(2353)	(2538)
Fluid/Final	D1857	(2422)	(2590)
Halogens			
	ASTM Method	Value	
% Chlorine	D4208/D6721	(0.121)	
% Fluorine	D3761/D5987	(0.0097)	

Note: Parentheses () indicate an information-only value

Primary (NMI Reference Standards Employed:	
Test	Primary Reference Standards
% Sulfur	NIST SRM 2684c, 2685c; NCS FC28009F; QAR CRM-9a; LQSI 8H0158
% C/H/N	EDTA, phenylalanine
Mineral Analysis	USGS AGV-2; NIST 634A, 2691, 16359
BTU	Benzoic acid
Volatile Matter	LQSI 200045
Ash Fusion	LQSI 200049
Halogens	QAR-CRM-3a; NIST 2682c, 2684c, 8499

**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 various tests using the above-mentioned test methods.

The minimum sample size to perform these intended uses is dependent on the test method and instrumentation used.

The Period of Validity for this RM is not able to be determined and should be reviewed every 20 years from the date below. Once opened this product is valid for 2 years.

This bottle contains 50g of fine coal powder (-60mesh) to be used per the test method you follow. This material is intended to be dried or corrected for moisture as per the test methods used. Keep sealed tightly and store under normal laboratory conditions.

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 19th of April 2024

Elemental Microanalysis Ltd