

Alpha Resources, Inc.

Certificate Of Analysis

AR-1722

PROXIMATE COAL STANDARD

LOT #722714 LID # 703714
DRIED BASIS VALUE – MASS FRACTION

MEAN WEIGHT % SULFUR	=	0.79
STANDARD DEVIATION	=	0.02
MEAN WEIGHT % ASH	=	22.42
STANDARD DEVIATION	=	0.20
MEAN WEIGHT % VOL. MATTER	=	21.60
STANDARD DEVIATION	=	0.6
BTU/lb	=	11667
STANDARD DEVIATION	=	64
FIXED CARBON (calculated)	=	55.98

Methods Employed:

SULFUR	ASTM	D 4239
ASH	ASTM	D 3174, D5142
VOL. MATTER	ASTM	D 3175, D5142
BTU	ASTM	D 5865

Notes:

The material used in production of this standard was sampled in accordance with ARI 031. The precision values represent the standard deviation ($k=1$, 68% confidence limit) obtained through analytical testing. Normal ASTM procedures should be employed when using this standard, this includes using the *reproducibility* and *repeatability* factors of the method for establishing method based analytical uncertainty. When necessary, professional judgment is applied toward consideration of data and statistical information. The statistical analysis and the overall direction and coordination of the analytical measurements leading to certification were performed by K.E. Dyer at Alpha Resources.

The samples for round robin testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard. The analytical samples were dried or calculated for moisture as defined by the test method. This bottle contains 50g fine mesh (-250 μ) coal powder. Kept sealed this bottle has an indefinite shelf life. Once opened this certificate is valid for 2 years only. This certificate cannot be reproduced except in full. Keep closed and store under normal laboratory conditions.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages. This is a Certified Reference Material (CRM), for good laboratory practice it is recommended that all standards be verified prior to use.

EXPIRATION DATE

THIS CRM IS VALID FOR TWO YEARS FROM THE DATE OF OPENING

CERTIFIED September 24, 2014

