

# Alpha Resources, Inc.

## Certificate Of Analysis

AR-1906

COAL STANDARD

LOT # 906514      LID # 780713

### DRIED BASIS VALUE

WEIGHT PERCENT CARBON	=	60.98
EXPANDED UNCERTAINTY	=	0.85
WEIGHT PERCENT HYDROGEN	=	4.16
EXPANDED UNCERTAINTY	=	0.43
WEIGHT PERCENT NITROGEN	=	1.09
EXPANDED UNCERTAINTY	=	0.08

Method:  
ASTM D 5373

The material used in production of this standard was prepared and sampled in accordance with ARI 031 and ISO Guide 34-2009. The uncertainty values represent the expanded uncertainty ( $k=2$ , two sigma, 95% confidence) obtained through analytical testing by the mentioned ASTM method, and may not reflect your testing capabilities. Normal test procedures should be employed when using this standard; this includes using the *reproducibility* and *repeatability* factors of the method for establishing analytical uncertainty if needed. 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, Technical Manager at Alpha Resources.

The samples for round robin testing were selected in accordance with ARI 014. This bottle contains 25g, fine -60 mesh (250 $\mu$ ) coal powder. The analytical samples should be dried or corrected for moisture as per the test method you are using. Kept sealed this item has an indefinite shelf life. Once opened this certificate is valid for 2 years.

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 (Working Standard). 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 May 22, 2014

