

Alpha Resources, Inc.

Certificate Of Analysis

AR-100

RESIDUAL OIL STANDARD

	LOT #100110	LID ID# 100110	
Weight Percent Carbon	=	88.03	ASTM D5291
Standard Deviation	=	+/-1.68	
Weight Percent Hydrogen	=	10.49	ASTM D5291
Standard Deviation	=	+/-0.36	
Weight Percent Nitrogen	=	0.20	ASTM D5762, D4629
Standard Deviation	=	+/- 0.04	
Weight Percent Sulfur	=	0.96	ASTM D2622, D5453, D4294
Standard Deviation	=	+/-0.08	
Gross BTU/Pound	=	18397	ASTM D240, D4809
Standard Deviation	=	+/- 58	

This standard was produced gravimetrically using high purity materials, with balances calibrated and checked by precision NIST traceable weights, and verified using the above ASTM testing methods. The precision value represents the expanded standard deviation (k=2, 95% confidence limits) derived from analysis. 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. Normal ASTM procedures should be employed when using this standard. This includes using the *reproducibility* and *repeatability* factors for the ASTM method you wish to employ.

Notes:

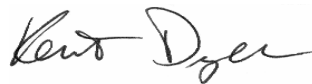
Before use, the contents of the bottle should be mixed through vigorous shaking. The contents should not be exposed to air for a lengthy period of time. Store tightly sealed, and upright, in a cool dry location

This is a Certified Reference Material (CRM), and is verified by the above-mentioned testing standards. For good laboratory practice it is recommended that all standards be verified 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 Alpha Resources be liable for incidental or consequential damages.

EXPIRATION DATE

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

February 5, 2010



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www.alpharesources.com

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