

Alpha Resources, LLC

Certificate Of Analysis

AR-3505

SULFUR AND CHLORINE IN LUBE OIL STANDARD

LOT #505317

LID # 505317

WEIGHT PERCENT SULFUR	=	1.00
EXPANDED UNCERTAINTY	=	0.01
WEIGHT PERCENT CHLORINE	=	0.50
EXPANDED UNCERTAINTY	=	0.01

This standard was produced gravimetrically using high purity materials with balances calibrated and checked by precision NIST traceable weights. The precision value represents the expanded degree of uncertainty based on errors from assay and weighing of raw materials at a 95% confidence level ($k=2$). 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 test method you wish to employ.

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. This bottle contains 100ml prepared mineral oil to be used as per your test method. Kept sealed this reference has an indefinite shelf life, once opened this certificate is valid for 2 years. Produced in accordance to ISO Guide 31 and ISO 17034.

This is a prepared Reference Material (RM), 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.

This standard was produced under Alpha Resources Reference Material Production (RMP) Program, which has been accredited by ANSI-ASQ/ANAB, refer to scope of accreditation for further details AR-1920.

EXPIRATION DATE

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

Certified March 17, 2017



Technical Manager