

Alpha Resources, LLC

Certificate Of Analysis

AR4108
LOT 1016D
LOSS ON IGNITION STANDARD

LOI = 30.0%
EXPANDED UNCERTAINTY = 0.3%
(k=2, 95% CONFIDENCE LIMIT)

Verified using ASTM C25-11 referee method

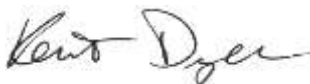
NOTES:

This standard was produced using high purity materials based upon their empirical and stoichiometric properties. These materials were blended and weighed on balances that are calibrated using NIST traceable weights. The values reported are in SI units and based on metrology and verification testing. No known materials of this type and LOI are available for testing traceability. The sample size used for the verification tests were 1g. Refer to your instrument manufacturer or test method for your required sample size and overall test method repeatability and reproducibility factors if needed. The overall coordination, direction, and calculation of statistical information was performed by K.E. Dyer Technical Manager.

The intended use of this standard is for the verification and quality check of LOI using ASTM methods utilizing a muffle furnace or TGA (Thermal Gravimetric Analysis) instrumentation. It is recommended this standard be dried per your test method, instrument manufacturer recommendations, or at 105° C to a constant mass prior to use. Ample amounts of air must be available for complete combustion, do not use covers. This standard does not contain any sulfur and no determination or corrections are needed. This bottle contains 100g powder material to be used directly and per your test method requirements. This reference standard has an indefinite shelf life. This certificate cannot be reproduced except in full. 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.

Produced in accordance to ISO Guide 34 and Guide 31. These test results are accredited under the Alpha Resources, LLC laboratory's ISO/IEC 17025 and ISO Guide 34 accreditation (RMP) issued by ANSI-ASQ/ANAB. Refer to certificate and scope of accreditation(s) AC-1200 and AR-1920.

Certified October 11, 2016



Technical Manager