

Calcium Carbonate Reference Material

Product No: AR1034/AR1034-100

Lot No: 250723

Material and Intended Use

AR1034/AR1034-100 is a calcium carbonate reference material. The intended use of this RM is for the verification of methods of elemental analysis for the determination of carbon. This RM can also be used to verify value assignment of in-house reference materials. A unit consists of one bottle containing 50 g (AR1034) or 100 g (AR1034-100) of reference material as a fine powder. All reference materials should be verified as fit for purpose prior to use.

Instructions for Use

This product should be dried at 210°C to constant mass before use. The minimum sample size for analysis is dependent upon the test method and instrumentation used. It is recommended that no less than 0.25 g of material be used for destructive test methods. Bottles of powder should be kept sealed tight and stored in a cool, dry location. Reported values are valid until **March 25, 2030** if handling and storage instructions are followed. The validity of property values is rendered null and void if the RM is in any way modified or damaged.

Reported Values

Assigned values indicate the amount of each element present in the overall material matrix and are metrologically traceable to the International System of Units (SI) derived unit of mass fraction expressed as a percent (%). Assigned values are reported as the mean property value and an estimate of uncertainty derived from empirical stoichiometry and product purity (99.9%) consistent with guidance from the International Union of Pure and Applied Chemistry (IUPAC).

Table 1. Reference values for AR1034/AR1034-100, Lot 250723.

Property	Value	+/-
%Carbon	11.99	0.03

Homogeneity

This product was manufactured from a single lot of bulk material of purity 99.9%.

Methods and References

ISO/IEC 17025:2017 – General requirements for the competence of testing and calibration laboratories

ISO 17034:2016 – General requirements for the competence of reference material producers

ISO 33401:2024 – Reference materials – Contents of certificates, labels, and accompanying documentation

ISO Guide 30:2015 – Terms and definitions used in connection with reference materials

ISO Guide 35:2017 – Reference materials – General and statistical principles for certification



Dustin Jenkins, Ph.D.
Global Technical Director

Certification Date: September 15, 2025



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