

Analytical Results

% Oxygen
Value = 0.0453
Expanded Uncertainty = 0.0120
Method & Detection = Inert Gas Fusion/IR
n = 59
k \approx 2 (95% confidence)

% Hydrogen
Value = 0.0046
Expanded Uncertainty = 0.0013
Method & Detection = Inert Gas Fusion/TC
n = 60
k \approx 2 (95% confidence)

% Nitrogen (Reference only)
Value = 0.0025
Method & Detection = Inert Gas Fusion/TC or IR
n = 59

Primary Reference Standards Used:

NIST 360b
NCS NS 11091, NS 11107, NS11108, NS 11107, NS 11090, NS111089

Methods Employed:

ASTM E1409 – Standard Test Method for Determination of Oxygen and Nitrogen in Titanium and Titanium Alloys by Inert Gas Fusion
ASTM E1447 – Standard Test Method for Determination of Hydrogen in Reactive Metals and Reactive Metal Alloys by Inert Gas Fusion with Detection by Thermal Conductivity or Infrared Spectrometry

**The analytical results above are provided by an accredited reference material manufacturer with a current certification in ISO 17025 and 17034.*

The intended use of this Reference Material (RM) is for the verification of and calibration of inert gas fusion and other appropriate analysis methods for the determination of oxygen, nitrogen, and hydrogen.

The minimum sample size to perform this intended use is dependent upon the test method and instrumentation used. It is recommended that no less than 1 pin of CRM material be used for destructive test methods.

The Period of Validity for this RM is 20 years after opening, if handling and storage instructions are followed and should be reviewed 20 years after the date below.

This bottle contains 10g of nominal 0.1g pins to be used per the test method you follow. Keep sealed tightly and store under normal laboratory conditions.

Refer to your test methods and or manufacturer manual for expanded uncertainties, repeatability/reproducibility factors.

For good laboratory practice, we recommend that all reference materials be verified as fit for purpose 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 Elemental Microanalysis Ltd. be liable for incidental or consequential damages.

Certified on the 6th of January 2025

Elemental Microanalysis Ltd