

**Total Hydrogen (melted/fused)**

**Mean Value** = 4.5 (µg/g) (0.00045 wt. %)  
**Standard Deviation** = 0.5 (µg /g) (+/- 0.00005 wt. %)  
**Expanded Uncertainty** = 1.0(µg /g) (+/-0.0001 wt. %)  
**(Expanded uncertainty k=2, @ 95% confidence, n=50)**

**Method of analysis:**

LECO RH-404, ELTRA ONH 2000 Inert Gas Fusion, TC Detection

**Reference materials used for certification:**

NCS NS20041, NS20042  
JSS GS-7a, SS-5-18, GS 9-1  
ALPHA – AR556-812C, AR556-916E, AR555-1013A, AR558-716B

**Notes**

The intended use of this reference standard is for the calibration and continued quality verification of hydrogen in steel by inert gas fusion thermal conductivity detection analysis. The precision values represent the standard deviation, and expanded uncertainty (k=2, 95% confidence).

The material used in production of this standard was sampled in accordance with ARI 032. The samples used for round robin testing were selected in accordance with ARI 014. This standard is intended to be used for Hydrogen gas analysis of steel and minimum/typical sample size is 1g. The above values relate only to the material used to produce this standard. This bottle contains 100, 1g pins (nominal), to be used directly from the bottle. This standard has an indefinite shelf life, kept sealed and stored under normal laboratory conditions.

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.

This is a Certified Reference Material (Working Standard) and is traceable to the above-mentioned standards. For good laboratory practice it is recommended that all standards be verified prior to use.

Elemental Microanalysis Limited

Certified August 15, 2017