

Certificate of Analysis

Product Description:

Name:	Manganese Metallo-Organic Standard	Source Material:	High Purity Metallo Organic
Part Number:	MNOMS	Material Purity:	99.5%
Lot Number:	SAMPLE	Matrix:	Mineral Oil

Certified Value:

<u>Element</u>	<u>($\mu\text{g/g}$)</u>
Mn	1000 \pm 10

The Certified value is based on gravimetric preparation. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

Preparation Information:

The highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines. This standard was prepared using methods developed at the National Institute of Standards and Technology for the preparation of SRM Spectrometric Standard Solutions.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedural and measurement uncertainties.

- Analytical Balance Calibration:** All balances are calibrated weekly by in-house method using NBS weights Inventory No 20231A. The balances are calibrated yearly, and the calibration weights are checked biennially by a qualified metrology company with weights traceable to the primary standards developed by NIST.
- Volumetric Device Calibration:** The calibration of all volumetric vessels is checked using ASTM method E542.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned glass amber bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Lot No.: SAMPLE
Rev. No.: 3.2.2
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Preparation Date: May 26, 2015

Shipped Date:

Expiration Date:

Certificate Issue Date: May 27, 2015

Quality Information:



**ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529**



**Angel Sellers
Quality Manager**

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards