

Certificate of Analysis

Product Description:

Name:	Chromium +3	Source Material:	Chromium +3
Part Number:	100012-6	Material Purity:	99.998%
Lot Number:	SAMPLE	Matrix:	2% HCl

Certified Value: 1000 µg/mL ± 10 µg/mL

The Certified value is based on gravimetric preparation and verified using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval.

Density: 1.002 g/mL ± 0.002 g/mL @ 22.4°C

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 National Institute of Standards and Technology (NIST) for the preparation of SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene 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 eighteen months from the shipping date provided. For this reason, standards from the same lot may have different expiration dates.

Preparation Date: April 17, 2015

Shipped Date:

Expiration Date:

Lot No.: SAMPLE

Rev. No.: 3.2.0

Page 1 of 2

Certificate Issue Date: April 17, 2015

Angel Sellers

**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.

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Page 2 of 2