

125 Market Street
New Haven, CT 06513
USA



AccuStandard, Inc.

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www.AccuStandard.com

CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: AA08N-1

Description: Cadmium AA Standard

Element: Cadmium (Cd)

SRM: 3108

Lot: Z16035044

Matrix: 2-5% Nitric acid

Hazards: **CORROSIVE** - Refer to SDS for safety info

Date Certified: Mar 21, 2016

Expiration: Mar 21, 2021

Concentration: 1000 µg/mL

Sample Size: 100 mL

Components: 1

Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes



Danger 1

Component	SRM #	Prepared Concentration (µg/mL)
Cd Cadmium	3108	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±5%. See reverse side for details.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

This standard was prepared using ACS grade or better starting materials, high purity acids and ASTM Type I 18 megohm deionized water.

All glassware used in preparation is Class A and calibrated regularly.

All weights are traceable through NIST Test No. 822-275872-11.

Use good laboratory procedure when diluting this product. Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.

We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By:

Lydia Snyder

Lydia Snyder, Inorganic QC Manager

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For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

QR-OR/INO-001
Rev. 7/11

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CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: AA15N-1

Description: Copper AA Standard

Element: Copper (Cu)

SRM: 3114

Lot: 214095086

Matrix: 2-5% Nitric acid

Hazards: **CORROSIVE** - Refer to SDS for safety info.

Date Certified: Sep 24, 2014

Expiration: Sep 24, 2019

Concentration: 1000 µg/mL

Sample Size: 100 mL

Components: 1

Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes



Danger 1

Component	SRM #	Prepared Concentration (µg/mL)
Cu Copper	3114	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±5%. See reverse side for details.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

This standard was prepared using ACS grade or better starting materials, high purity acids and ASTM Type 1 18 megohm deionized water.

All glassware used in preparation is Class A and calibrated regularly.

Balances used during preparation are calibrated regularly using NIST traceable weights.

Use good laboratory procedure when diluting this product. Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.

We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By:

Lydia Snyder

Lydia Snyder, Inorganic QC Manager

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CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: ICP-29N-1
Description: Lead ICP Standard
Element: Lead (Pb)
SRM: 3128
Lot: 215045013
Matrix: 2% Nitric acid
Hazards: **CORROSIVE** - Refer to SDS for safety info

Date Certified: Apr 8, 2015
Expiration: Apr 8, 2020
Concentration: 1000 µg/mL
Density: 1.013 g/mL
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes



Danger 1

Elements in µg/mL

Ag	nd<0.02	Ce	nd<0.2	Gd	nd<0.02	Lu	nd<0.02	Pb	*	Sc	nd<0.02	Tl	nd<0.02
Al	nd<0.02	Co	nd<0.02	Ge	nd<0.2	Mg	nd<0.02	Pd	nd<0.2	Se	nd<0.2	Tl	nd<0.2
As	nd<0.2	Cr	nd<0.02	Hf	nd<0.02	Mn	nd<0.02	Pt	nd<0.2	Si	N/A	Tm	nd<0.02
Au	nd<0.02	Cs	N/A	Hg	nd<0.2	Mo	nd<0.02	Pb	nd<0.2	Sm	nd<0.2	U	nd<0.2
B	nd<0.2	Cu	nd<0.02	Ho	nd<0.02	Na	N/A	Rb	N/A	Sn	nd<0.02	V	nd<0.02
Ba	nd<0.02	Dy	nd<0.02	In	nd<0.2	Nb	nd<0.2	Rc	nd<0.2	Sr	nd<0.02	W	nd<0.2
Be	nd<0.02	Er	nd<0.02	Ir	nd<0.2	Nd	nd<0.02	Rh	nd<0.2	Ta	nd<0.2	Y	nd<0.02
Bi	nd<0.2	Eu	nd<0.02	K	nd<0.2	Ni	nd<0.02	Ru	nd<0.02	Tb	nd<0.02	Yb	nd<0.02
Ca	nd<0.02	Fe	nd<0.02	La	nd<0.02	Os	N/A	S	N/A	Te	nd<0.2	Zn	nd<0.02
Cd	nd<0.02	Ga	nd<0.02	Li	nd<0.02	P	N/A	Sb	nd<0.2	Th	nd<0.02	Zr	N/A

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±5%. See reverse side for details.

In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as high purity acids and ASTM Type I 18 megohm deionized water.

All trace level elemental impurities were determined via plasma emission spectroscopy on the concentrate.

All glassware used in preparation is Class A and calibrated regularly.

Balances used during preparation are calibrated regularly using NIST traceable weights.

All bottles are acid leached and triple rinsed with deionized water prior to use.

Use good laboratory procedure when utilizing this product. Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.

We certify the accuracy of this standard to be ±0.5% of the stated value until its expiration date provided it is kept tightly capped and stored under the conditions stated above.

Certified By: *Lydia Snyder*
Lydia Snyder, Inorganic QC Manager

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CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: ICP-34N-1
Description: Mercury ICP Standard
Element: Mercury (Hg)
SRM: 3133
Lot: 215105125
Matrix: 10% Nitric acid
Hazards: **CORROSIVE** - Refer to SDS for safety info

Date Certified: Nov 17, 2015
Expiration: Nov 17, 2020
Concentration: 1000 µg/mL
Density: 1.059 g/mL
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes



Elements In µg/mL

Ag	nd<0.02	Ce	nd<0.2	Gd	nd<0.02	Lu	nd<0.02	Pb	nd<0.2	Sc	nd<0.02	Ti	nd<0.02
Al	nd<0.02	Co	nd<0.02	Ge	nd<0.2	Mg	nd<0.02	Pd	nd<0.2	Se	nd<0.2	Tl	nd<0.2
As	nd<0.2	Cr	nd<0.02	Hf	nd<0.02	Mn	nd<0.02	Pt	nd<0.2	Bi	nd<0.2	Tm	nd<0.02
Au	nd<0.02	Cs	N/A	Hg	*	Mo	nd<0.02	Rf	nd<0.2	Sm	nd<0.2	U	nd<0.2
B	nd<0.2	Cu	nd<0.02	Ho	nd<0.02	Na	nd<0.02	Rb	N/A	Sr	nd<0.02	V	nd<0.02
Ba	nd<0.02	Dy	nd<0.02	In	nd<0.2	Nb	nd<0.2	Ra	nd<0.2	Sr	nd<0.02	W	nd<0.2
Be	nd<0.02	Er	nd<0.02	Ir	nd<0.2	Nd	nd<0.02	Rh	nd<0.2	Ta	N/A	Y	nd<0.02
Bi	nd<0.2	Eu	nd<0.02	K	nd<0.2	Ni	nd<0.02	Ru	nd<0.02	Tb	nd<0.02	Yb	nd<0.02
Ca	nd<0.02	Fe	nd<0.02	La	nd<0.02	Os	N/A	S	N/A	Te	nd<0.2	Zn	nd<0.02
Cd	nd<0.02	Ga	nd<0.02	Li	nd<0.02	P	N/A	Sb	nd<0.2	Th	nd<0.02	Zr	nd<0.02

This solution was assayed gravimetrically, using a balance calibrated against weight sets, ID #88270, traceable to NIST. This product contains mercury and MUST be disposed of in accordance with all federal, state and local regulations. The gravimetric uncertainty for this product is ±0.24%. The SRM uncertainty is ±5%. See reverse side for details. In order to verify the concentration(s), the final solution was checked by plasma emission spectroscopy (ICP) against material traceable to the above listed NIST SRM(s).

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as high purity acids and ASTM Type I 18 megohm deionized water.

All trace level elemental impurities were determined via plasma emission spectroscopy on the concentrate.

All glassware used in preparation is Class A and calibrated regularly.

All weights are traceable through NIST Test No. 822-275872-11.

All bottles are acid leached and triple rinsed with deionized water prior to use.

Use good laboratory procedure when diluting this product. Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.

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