

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

STOCK STANDARD SOLUTION

IV-ACID-BLANK

5% (v/v) HNO₃

Starting Material: Nitric Acid
Starting Material Purity: Doubly Distilled
Starting Material Lot No: 24028780

TRACEABILITY DOCUMENTATION FOR STANDARD SOLUTION Lot No: X2-ACD762836

We use 18 megohm deionized water & deionized water rinsed LDPE bottles, with less than 0.5ppb total impurities in the manufacturing of this ICP standard. We always use "in-house calibration checked" Class A Glassware. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

ANALYZED DENSITY OF SOLUTION (measured at 20 ± 5° C): 1.024 g/mL

TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP/MS AND ICP-OES IN µg/mL

CRM's solutions are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm. The following data is representative of an analysis for a typical blank solution.

<u>M</u> Al < 0.00010	<u>M</u> Sb < 0.00001	<u>M</u> As < 0.00010	<u>M</u> Ba < 0.00010	<u>M</u> Be < 0.00001
<u>M</u> Bi < 0.00001	<u>M</u> B < 0.00070	<u>M</u> Cd < 0.00003	<u>M</u> Ca < 0.00005	<u>M</u> Ce < 0.00005
<u>M</u> Cs < 0.00001	<u>M</u> Cr < 0.00005	<u>M</u> Co < 0.00003	<u>M</u> Cu < 0.00006	<u>M</u> Dy < 0.00006
<u>M</u> Er < 0.00005	<u>M</u> Eu < 0.00003	<u>M</u> Gd < 0.00001	<u>M</u> Ga < 0.00001	<u>M</u> Ge < 0.00006
<u>M</u> Au < 0.00003	<u>M</u> Hf < 0.00002	<u>M</u> Ho < 0.00001	<u>M</u> In < 0.00010	<u>M</u> Ir < 0.00005
<u>M</u> Fe < 0.00200	<u>M</u> La < 0.00001	<u>M</u> Pb < 0.00003	<u>M</u> Li < 0.00010	<u>M</u> Lu < 0.00001
<u>M</u> Mg < 0.00030	<u>M</u> Mn < 0.00004	<u>M</u> Hg < 0.00001	<u>M</u> Mo < 0.00002	<u>M</u> Nd < 0.00002
<u>M</u> Ni < 0.00008	<u>M</u> Nb < 0.00001	<u>n</u> Os < 0.00001	<u>M</u> Pd < 0.00005	<u>M</u> P < 0.00001
<u>M</u> Pt < 0.00002	<u>M</u> K < 0.00005	<u>M</u> Pr < 0.00001	<u>M</u> Re < 0.00001	<u>M</u> Rh < 0.00001
<u>M</u> Rb < 0.00001	<u>M</u> Ru < 0.00002	<u>M</u> Sm < 0.00001	<u>M</u> Sc < 0.00010	<u>M</u> Se < 0.00008
<u>M</u> Si < 0.00001	<u>M</u> Ag < 0.00002	<u>M</u> Na < 0.00005	<u>M</u> Sr < 0.00001	<u>M</u> S < 0.00001
<u>M</u> Ta < 0.00007	<u>M</u> Te < 0.00030	<u>M</u> Tb < 0.00001	<u>M</u> Tl < 0.00001	<u>M</u> Th < 0.00001
<u>M</u> Tm < 0.00001	<u>M</u> Sn < 0.00005	<u>M</u> Ti < 0.00050	<u>M</u> W < 0.00010	<u>M</u> U < 0.00002
<u>M</u> V < 0.00002	<u>M</u> Yb < 0.00001	<u>M</u> Y < 0.00040	<u>M</u> Zn < 0.00020	<u>M</u> Zr < 0.00005

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference n - Not Checked For s - Solution Standard Element

THERMOMETER CALIBRATION

All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

Certification Date: June 1, 2026

Expiration Date: June 1, 2031

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Justin DiRico, Stock Processing Supervisor



Certificate Approved By: Shalin Presgraves, Stock VS Coordinator



Certifying Officer: Paul Gaines, Chairman / Senior Technical Director

