INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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

CLP-MS-RINSE

2% (v/v) HNO_3

Starting Material:	Nitric Acid
Starting Material Purity:	Doubly Distilled
Starting Material Lot No:	22490146

TRACEABILITY DOCUMENTATION FOR STANDARD SOLUTION Lot No: U2-MEB732503

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 ± 4° C): 1.008 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.

M	Al	<	0.00010	M	Sb	<	0.00001	M	As	<	0.00010	M	Ba	<	0.00010	M	Be	<	0.00001
M	Bi	<	0.00001	M	B	<	0.00070	M	Cd	<	0.00003	M	Ca	<	0.00005	M	Ce	<	0.00005
M	Cs	<	0.00001	M	Cr	<	0.00005	M	Co	<	0.00003	M	Cu	<	0.00006	M	Dy	<	0.00006
M	Er	<	0.00005	M	Eu	<	0.00003	M	Gd	<	0.00001	M	Ga	<	0.00001	M	Ge	<	0.00006
M	Au	<	0.00003	M	Hf	<	0.00002	M	Ho	<	0.00001	M	In	<	0.00010	M	Ir	<	0.00005
M	Fe	<	0.00200	M	La	<	0.00001	M	Pb	<	0.00003	M	Li	<	0.00010	M	Lu	<	0.00001
M	Mg	<	0.00030	M	Mn	<	0.00004	M	Hg	<	0.00001	M	Mo	<	0.00002	M	Nd	<	0.00002
M	Ni	<	0.00008	M	Nb	<	0.00001	n	Os	<	0.00001	M	Pd	<	0.00005	M	P	<	0.00001
M	Pt	<	0.00002	M	K	<	0.00005	M	Pr	<	0.00001	M	Re	<	0.00001	M	Rh	<	0.00001
M	Rb	<	0.00001	M	Ru	<	0.00002	M	Sm	<	0.00001	M	Sc	<	0.00010	M	Se	<	0.00008
M	Si	<	0.00001	M	Ag	<	0.00002	M	Na	<	0.00005	M	Sr	<	0.00001	M	S	<	0.00001
M	Ta	<	0.00007	M	Te	<	0.00030	M	Tb	<	0.00001	M	Tl	<	0.00001	M	Th	<	0.00001
M	Tm	<	0.00001	M	Sn	<	0.00005	M	Ti	<	0.00050	M	W	<	0.00010	M	U	<	0.00002
M	V	<	0.00002	M	Yb	<	0.00001	M	Y	<	0.00040	M	Zn	<	0.00020	M	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: May 1, 2023

Expiration Date: May 1, 2028

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Uyen Truong, Product Documentation Supervisor	
Certificate Approved By:	Nicholas Plymale, Lead Quality Control Technician	
Certifying Officer:	Paul Gaines, Chairman / Senior Technical Director