

# Product Specification

## MISA Standard 5, Fluoride Soluble Group

**Lot Number:** SAMPLE

**Product Number:** RMISA5

**Manufacture Date:** N/A

**Expiration Date:** N/A

This is a multielement solution that was prepared volumetrically to contain the elements and concentrations stated below. The uncertainty associated with the certified values is  $\pm 0.5\%$  relative. The concentrations are confirmed by ICP or ICP-MS.

**Matrix:** 5% Nitric Acid/trace HF

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Nitric Acid	7697-37-2	Trace Metals
Hydrofluoric Acid	7664-39-3	Trace Metals
Ammonium Sulfate	7783-20-2	High Purity
Rhenium	7440-15-5	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	N/A	
Rhenium (Re)	99.5-100.5 ppm	N/A	3143
Sulfur (S)	99.5-100.5 ppm	N/A	3154

Analyte	Analysis (ppm)	Solute	CAS#	Grade	NIST SRM#
Boron (B)	99.5-100.5 ppm	Ammonium Tetrafluoroborate	13826-83-0	High Purity	3107
Phosphorus (P)	99.5-100.5 ppm	Ammonium Dihydrogen Phosphate	7722-76-1	High Purity	3139
Germanium (Ge)	99.5-100.5 ppm	Ammonium Hexafluorogermanate	16962-47-3	High Purity	3120
Zirconium (Zr)	99.5-100.5 ppm	Zirconyl Nitrate	13826-66-9	High Purity	3169
Niobium (Nb)	99.5-100.5 ppm	Ammonium Hexafluoronioate	12062-13-4	High Purity	3137
Tantalum (Ta)	99.5-100.5 ppm	Ammonium Heptafluorotantalate	12022-02-5	High Purity	3155
Antimony (Sb)	99.5-100.5 ppm	Antimony Trioxide	1309-64-4	High Purity	3102
Hafnium (Hf)	99.5-100.5 ppm	Hafnium Oxide	12055-23-1	High Purity	3122
Silicon (Si)	99.5-100.5 ppm	Silicon	7440-21-3	High Purity	3150
Tungsten (W)	99.5-100.5 ppm	Tungsten	7440-33-7	High Purity	3163
Titanium (Ti)	99.5-100.5 ppm	Titanium	7440-32-6	High Purity	3162
Tin (Sn)	99.5-100.5 ppm	Tin	7440-31-5	High Purity	3161
Molybdenum (Mo)	99.5-100.5 ppm	Molybdenum	7439-98-7	High Purity	3134

This standard is guaranteed to be stable and accurate provided the product is kept tightly capped and stored under normal laboratory conditions. Balances are calibrated using NIST traceable weights whose verification of maintenance and recalibration is documented per in-house Standard Operating Procedures. Class A glassware is also calibrated and routinely rechecked per in-house Standard Operating Procedures. Trace metal analyzed acids and Trace Metals Analyzed Water are used in the manufacture of this product. Triple cleaned containers are used in the manufacture of this product.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
-------------	---------------------	---------------------------------

RMISA5-100	100 mL natural LDPE	12 months
------------	---------------------	-----------

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.