

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-10-27 16:54:11  
 Date of Next Testing: 2023-10-27 16:54:11  
 Product Name: **Ammonia solution**  
 CAS Number: 1336-21-6  
 Specifications & Purity: for HPLC,  $\geq 25\%$  in H<sub>2</sub>O  
 Lot #: J2225307  
 SKU #: **A112080**  
**Analysis: 149269**

Parameter	Limit Values	Result
Germanium (Ge)	0-0.01 (ppm)	0.01 ppm
Indium (In)	0-0.01 (ppm)	0.01 ppm
Stannum (Sn)	0-0.01 (ppm)	0.01 ppm
Magnesium (Mg)	0-0.01 (ppm)	0.00 ppm
Lithium (Li)	0-0.01 (ppm)	0.01 ppm
Titanium (Ti)	0-0.01 (ppm)	0.01 ppm
Potassium (K)	0-0.01 (ppm)	0.01 ppm
Gallium (Ga)	0-0.01 (ppm)	0.01 ppm
Zirconium (Zr)	0-0.01 (ppm)	0.01 ppm
Manganese (Mn)	0-0.01 (ppm)	0.01 ppm
Evaporation Residue concentration (as NH <sub>3</sub> )	0-0.001 (%) 25-100 (%)	0.00 % 35.23 %
Copper (Cu)	0-0.01 (ppm)	0.01 ppm
Chromium (Cr)	0-0.01 (ppm)	0.01 ppm
As, Sb (as As)	0-0.01 (ppm)	0.01 ppm
Nickel (Ni)	0-0.01 (ppm)	0.01 ppm
Vanadium (V)	0-0.01 (ppm)	0.01 ppm
Strontium (Sr)	0-0.01 (ppm)	0.01 ppm
Boron (B)	0-0.01 (ppm)	0.00 ppm
Aurum (Au)	0-0.01 (ppm)	0.00 ppm
Chloride (Cl <sup>-</sup> )	0-0.2 (ppm)	0.10 ppm
Cobalt (Co)	0-0.01 (ppm)	0.01 ppm
Zinc (Zn)	0-0.01 (ppm)	0.00 ppm
Molybdenum (Mo)	0-0.01 (ppm)	0.01 ppm
Silver (Ag)	0-0.01 (ppm)	0.01 ppm
Bismuth (Bi)	0-0.01 (ppm)	0.01 ppm
Barium (Ba)	0-0.01 (ppb)	0.00 ppb

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Parameter	Limit Values	Result
Iron(Fe)	0-0.01 (ppm)	0.00 ppm
Platinum(Pt)	0-0.01 (ppm)	0.01 ppm
Calcium(Ca)	0-0.5 (ppm)	0.00 ppm
Phosphate(PO4)	0-0.2 (ppm)	0.03 ppm
Sulfate(SO42-)	0-1 (ppm)	0.20 ppm
Cadmium(Cd)	0-0.01 (ppm)	0.01 ppm
Sodium(Na)	0-0.01 (ppm)	0.00 ppm
(Pb)Lead	0-0.01 (ppm)	0.01 ppm
Beryllium(Be)	0-0.01 (ppm)	0.01 ppm
Appearance (A112080)	Colorless Liquid	Colorless liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager