

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

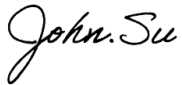
Date of Testing: 2021-12-02 12:03:48
 Date of Next Testing: 2022-12-02 12:03:48
 Product Name: **Ammonia solution**
 CAS Number: 1336-21-6
 Specifications & Purity: for LC-MS, ≥25% in H₂O
 Lot #: K2126366
 SKU #: **A112084**
Analysis: 054793

Parameter	Limit Values	Result
Sodium(Na)	0-0.01 (ppm)	0.01 ppm
Beryllium(Be)	0-0.01 (ppm)	0.01 ppm
(Pb)Lead	0-0.01 (ppm)	0.00 ppm
Sulfate(SO ₄ ²⁻)	0-1 (ppm)	0.18 ppm
Potassium(K)	0-0.01 (ppm)	0.01 ppm
Platinum(Pt)	0-0.01 (ppm)	0.01 ppm
Iron(Fe)	0-0.01 (ppm)	0.00 ppm
Gallium(Ga)	0-0.01 (ppm)	0.00 ppm
Barium(Ba)	0-0.01 (ppm)	0.01 ppm
Cobalt(Co)	0-0.01 (ppm)	0.01 ppm
Vanadium(V)	0-0.01 (ppm)	0.01 ppm
Nickel(Ni)	0-0.01 (ppm)	0.01 ppm
Boron(B)	0-0.01 (ppm)	0.00 ppm
Evaporation Residue	0-0.001 (%)	0.00 %
Cadmium(Cd)	0-0.01 (ppm)	0.01 ppm
concentration (as NH ₃)	24.5-25.5 (%)	24.65 %
Chromium(Cr)	0-0.01 (ppm)	0.00 ppm
Manganese(Mn)	0-0.01 (ppm)	0.00 ppm
Phosphate(PO ₄)	0-0.2 (ppm)	0.10 ppm
Bismuth(Bi)	0-0.01 (ppm)	0.00 ppm
Calcium(Ca)	0-0.5 (ppm)	0.49 ppm
Zirconium(Zr)	0-0.01 (ppm)	0.01 ppm
Titanium(Ti)	0-0.01 (ppm)	0.01 ppm
Molybdenum(Mo)	0-0.01 (ppm)	0.01 ppm
Stannum(Sn)	0-0.01 (ppm)	0.01 ppm
Magnesium(Mg)	0-0.01 (ppm)	0.01 ppm
Lithium(Li)	0-0.01 (ppm)	0.01 ppm

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Parameter	Limit Values	Result
Zinc(Zn)	0-0.01 (ppm)	0.01 ppm
Germanium (Ge)	0-0.01 (ppm)	0.01 ppm
As, Sb (as As):	0-0.01 (ppm)	0.01 ppm
Indium (In)	0-0.01 (ppm)	0.01 ppm
Strontium(Sr)	0-0.01 (ppm)	0.01 ppm
Copper(Cu)	0-0.01 (ppm)	0.01 ppm
Silver (Ag)	0-0.01 (ppm)	0.01 ppm
Aurum(Au)	0-0.01 (ppm)	0.01 ppm
Chloride (Cl-)	0-0.2 (ppm)	0.19 ppm
Appearance (A112084)	Colorless Liquid	Colorless liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure

A handwritten signature in black ink that reads "John Su".

John Su
QA & QC Manager