

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

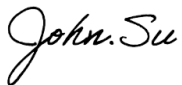
Date of Testing: 2022-03-18 17:33:13
 Date of Next Testing: 2023-03-18 17:33:13
 Product Name: **Ammonium formate**
 CAS Number: 540-69-2
 Specifications & Purity: for LC-MS, ≥99.0%
 Lot #: C2210087
 SKU #: **A100186**
Analysis: **083611**
 Storage Temperature: Desiccated

Parameter	Limit Values	Result
Bismuth(Bi)	0-1 (ppm)	0.83 ppm
Sulfate(SO42-)	0-50 (ppm)	48.20 ppm
Chromium(Cr)	0-1 (ppm)	0.72 ppm
Lithium(Li)	0-1 (ppm)	0.32 ppm
(As)Arsenic	0-0.1 (ppm)	0.08 ppm
Ignition Residue (as sulfate)	0-0.1 (%)	0.07 %
Cadmium(Cd)	0-1 (ppm)	1.00 ppm
Calcium(Ca)	0-5 (µg/mg)	4.93 µg/mg
Strontium(Sr)	0-1 (ppm)	0.49 ppm
Copper(Cu)	0-1 (ppm)	0.83 ppm
Manganese(Mn)	0-1 (ppm)	0.93 ppm
Iron(Fe)	0-1 (ppm)	0.96 ppm
Aluminum(Al)	0-1 (ppm)	0.23 ppm
Cobalt(Co)	0-1 (ppm)	0.65 ppm
Purity(Based on Trace Metals Impurities of ICP)	99.999-100 (%)	100.00 %
Magnesium(Mg)	0-1 (ppm)	0.92 ppm
Molybdenum(Mo)	0-1 (ppm)	0.32 ppm
Nickel(Ni)	0-1 (ppm)	0.60 ppm
Purity	99-100 (%)	100.00 %
Sodium(Na)	0-5 (ppm)	2.30 ppm
Zinc(Zn)	0-1 (ppm)	1.00 ppm
Lead(Pb)	0-1 (ppm)	0.72 ppm
Total Metallic Impuritie	0-20 (ppm)	1.00 ppm
Chloride (Cl-)	0-50 (ppm)	48.30 ppm
Barium(Ba)	0-1 (ppm)	0.71 ppm
Melting point	119-121 (°C)	120.84000 °C

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Parameter	Limit Values	Result
Potassium(K)	0-5 (ppm)	2.55 ppm
PH	5.5-7.5	6.62
Water by Karl Fischer	0-2 (%)	1.49 %
UV Absorbance 260nm	0-0.01	0.01
UV Absorbance 280nm	0-0.01	0.01
Appearance (A100186)	White crystals	White crystals
Infrared spectrum	Conforms to Structure	Conforms to Structure
Insoluble matter	pass	Pass

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

John Su
QA & QC Manager