

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

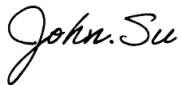
Date of Testing:	2022-07-14 17:13:51
Date of Next Testing:	2026-07-13 17:13:51
Product Name:	<b>BES</b>
CAS Number:	10191-18-1
Specifications & Purity:	≥99.5%(T)
Lot #:	G2213514
SKU #	<b>B105116</b>
Version	<b>0</b>
<b>Analysis #:</b>	<b>100027</b>
Storage Temperature:	Room temperature

Parameter	Limit Values	Result
Potassium(K)	0-50 (ppm)	0.00 ppm
Iron(Fe)	0-5 (ppm)	0.00 ppm
Zinc(Zn)	0-5 (ppm)	0.00 ppm
Calcium(Ca)	0-10 (ppm)	9.00 ppm
Ignition Residue(900°C)	0-0.05 (%)	0.03 %
useful PH range	6.4-7.8	6.50
Sodium(Na)	0-50 (ppm)	9.00 ppm
Barium(Ba)	0-5 (ppm)	0.00 ppm
Manganese(Mn)	0-5 (ppm)	0.00 ppm
PH(25 °C, 1 M in Water)	2.5-5	3.03
Cobalt(Co)	0-5 (ppm)	0.00 ppm
Nickel(Ni)	0-5 (ppm)	0.00 ppm
Bismuth(Bi)	0-5 (ppm)	0.00 ppm
Chloride (Cl-)	0-50 (ppm)	23.80 ppm
Cadmium(Cd)	0-5 (ppm)	0.00 ppm
UV Absorbance 280nm	0-0.08	0.04
Copper(Cu)	0-5 (ppm)	0.00 ppm
Chromium(Cr)	0-5 (ppm)	0.00 ppm
Strontium(Sr)	0-5 (ppm)	0.00 ppm
Molybdenum(Mo)	0-5 (ppm)	0.00 ppm
Sulfate(SO42-)	0-100 (ppm)	56.20 ppm
(As)Arsenic	0-0.1 (ppm)	0.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Lithium(Li)	0-5 (ppm)	0.00 ppm
UV Absorbance 260nm	0-0.095	0.04

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Parameter	Limit Values	Result
Aluminum(Al)	0-5 (ppm)	0.00 ppm
(Pb)Lead	0-5 (ppm)	0.00 ppm
Assay	99.5-100 (%)	99.61%
Appearance (B105116)	White to Off-White Solid, Powder, or Crystals	White to Off-White Solid, Powder, or Crystals
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , soluble , 1M , 20°C, clear, colorless	pass	Pass
λ,1 M in H <sub>2</sub> O	Pass	Pass

John Su  
QA & QC Manager