

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-11-24 10:21:16  
 Date of Next Testing: 2024-11-13 10:21:16  
 Product Name: **Imidazole**  
 CAS Number: 288-32-4  
 Specifications & Purity: 99.5%,for molecular biology  
 Lot #: K2215883  
 SKU #: **I108706**  
**Analysis:** **127432**  
 Storage Temperature: Argon charged,Desiccated

Parameter	Limit Values	Result
Cobalt(Co)	0-5 (ppm)	1.36 ppm
(Pb)Lead	0-5 (ppm)	2.08 ppm
Manganese(Mn)	0-5	3.08
Magnesium(Mg)	0-5 (ppm)	1.32 ppm
Barium(Ba)	0-5 (ppm)	1.08 ppm
Melting point	86-92 (°C)	91.92000 °C
(As)Arsenic	0-0.1 (ppm)	0.07 ppm
UV Absorbance 260nm	0-0.1	0.02
UV Absorbance 280nm	0-0.1	0.02
Aluminum(Al)	0-10 (ppm)	3.36 ppm
Strontium(Sr)	0-5 (ppm)	2.52 ppm
Calcium(Ca)	0-50 (ppm)	31.62 ppm
Ignition Residue (as sulfate)	0-0.05 (%)	0.03 %
PH	9.5-11	9.98
Sodium(Na)	0-50 (ppm)	23.58 ppm
Chloride (Cl-)	0-50 (ppm)	35.28 ppm
Lithium(Li)	0-5 (ppm)	2.42 ppm
Molybdenum(Mo)	0-5 (ppm)	3.02 ppm
Copper(Cu)	0-5 (ppm)	1.26 ppm
Sulfate(SO42-)	0-50 (ppm)	22.81 ppm
Chromium(Cr)	0-5 (ppm)	2.06 ppm
Cadmium(Cd)	0-5 (ppm)	4.28 ppm
Bismuth(Bi)	0-5 (ppm)	3.15 ppm
Zinc(Zn)	0-5 (ppm)	1.26 ppm
Iron(Fe)	0-5 (ppm)	2.08 ppm
Potassium(K)	0-50 (ppm)	21.51 ppm

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Parameter	Limit Values	Result
Nickel(Ni)	0-5 (ppm)	2.47 ppm
Purity(GC)	99.5-100 (%)	99.58 %
Water by Karl Fischer	0-0.2 (%)	0.20 %
Appearance (I108706)	White Powder or Crystals	White Powder or Crystals
Fluorescence, $\lambda_{ex}$ 200-600 nm; $\lambda_{em}$ 300-800 nm (corresponds)	Conforms	Conforms
Infrared spectrum	Conforms to Structure	Conforms to Structure
Insoluble matter	pass	Pass
phosphatases	none detected	none detected
pKa	6.8	6.8
$\lambda$ ,0.1 M in H <sub>2</sub> O	Pass	Pass
DNases	none detected	none detected
proteases	none detected	none detected
RNases	none detected	none detected

John Su  
QA & QC Manager