

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-09-14 09:07:42

Date of Next Testing: 2027-09-13 09:07:42

Product Name: **1,4-Piperazinediethanesulfonic acid(PIPES)**

CAS Number: 5625-37-6

Specifications & Purity: $\geq 99.5\%$

Lot #: I2311750

SKU # **P105093**

Version **1**

Analysis #: **276051**

Storage Temperature: Room temperature

Parameter	Limit Values	Result
Molybdenum(Mo)	0-0.0005 (%)	0.00020 %
Potassium(K)	0-0.005 (%)	0.00000 %
Bismuth(Bi)	0-0.0005 (%)	0.00000 %
Calcium(Ca)	0-0.005 (%)	0.00000 %
Aluminum(Al)	0-0.005 (%)	0.00020 %
Purity	99.5-100 (%)	99.64000 %
Lithium(Li)	0-0.0005 (%)	0.00002 %
Nickel(Ni)	0-0.0005 (%)	0.00000 %
Ignition Residue(Ash)(SO ₄ , 900°C)	0-0.5 (%)	0.00000 %
loss on drying, 110 °C	0-0.5 (%)	0.11000 %
Iron(Fe)	0-0.0005 (%)	0.00000 %
Magnesium(Mg)	0-0.0005 (%)	0.00005 %
Chromium(Cr)	0-0.0005 (%)	0.00000 %
Lead(Pb)	0-0.0005 (%)	0.00000 %
Appearance (P105093)	White powder	White powder
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in 1 M NaOH , Colorless,Clear,0.5 M	pass	Pass



QualityAssurance@aladdinsci.com

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

John Su
QA & QC Manager