

Certificate of Analysis

Date of Testing: 2022-09-21 10:25:58
 Date of Next Testing: 2026-09-20 10:25:58
 Product Name: **1,4-Piperazinediethanesulfonic acid(PIPES)**
 CAS Number: 5625-37-6
 Specifications & Purity: 99.5%
 Lot #: I2215682
 SKU #: **P105093**
 Analysis: **126235**

Parameter	Limit Values	Result
Molybdenum(Mo)	0-0.0005 (%)	0.00 %
Potassium(K)	0-0.005 (%)	0.00 %
Bismuth(Bi)	0-0.0005 (%)	0.00 %
Calcium(Ca)	0-0.005 (%)	0.00 %
Aluminum(Al)	0-0.005 (%)	0.00 %
Purity	99.5-100 (%)	99.56 %
Lithium(Li)	0-0.0005 (%)	0.00 %
Nickel(Ni)	0-0.0005 (%)	0.00 %
Ignition Residue(Ash)(SO ₄ , 900°C)	0-0.5 (%)	0.33 %
loss on drying, 110 °C	0-0.5 (%)	0.00 %
Iron(Fe)	0-0.0005 (%)	0.00 %
Magnesium(Mg)	0-0.0005 (%)	0.00 %
Chromium(Cr)	0-0.0005 (%)	0.00 %
Lead(Pb)	0-0.0005 (%)	0.00 %
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



ALADDIN SCIENTIFIC CORPORATION

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

John Su
QA & QC Manager