

## Certificate of Analysis

Date of Testing: 2022-01-25 11:35:32  
Date of Next Testing: 2026-01-24 11:35:32  
Product Name: **Piperazine-2-carboxylic acid dihydrochloride**  
CAS Number: 3022-15-9  
Specifications & Purity: 98%  
Lot #: C1829131  
SKU #: **P119067**  
Analysis: **070018**

Parameter	Limit Values	Result
Purity(HPLC)	98-100 (%)	98.32800 %
Purity(Titration by AgNO <sub>3</sub> )	97.5-102.5 (%)	98.11 %
Appearance (P119067)	white to light yellow solid	white to light yellow solid
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager