

## Certificate of Analysis

Date of Testing: 2023-05-27 13:14:30  
Date of Next Testing: 2027-05-26 13:14:30  
Product Name: **Piperazine hexahydrate**  
CAS Number: 142-63-2  
Specifications & Purity: 98%  
Lot #: E2310036  
SKU #: **P105279**  
**Analysis:** **000358**  
Storage Temperature: Desiccated

Parameter	Limit Values	Result
Purity(HPLC)	98-100 (%)	98.52400 %
Melting point	42-46 (°C)	44.28000 °C
Water by Karl Fischer	53-57.5 (%)	53.28 %
Appearance (P105279)	White to light yellow powder,crystals or solid	White to light yellow powder,crystals or solid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager