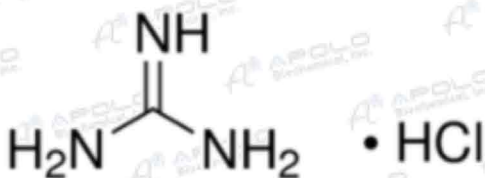


CERTIFICATE OF ANALYSIS

Product Name: Guanidine hydrochloride

Chemical Structure:



Lot Number: VR20G3156599

CAT Number: APL-0040

CAS Registry Number: 50-01-1

Manufacture Date: 10/2021

Expiry Date: 10/2024

Molecular Formula: $\text{CH}_5\text{N}_3 \cdot \text{HCl}$

Molecular Weight: 95.53

Storage: Store between 15-30°C

Grade: Technical grade

Analysis Data

Items	Specification	Results
Appearance	White to slightly yellow granular crystalline powder	Conforms
Purity (NMR)	≥ 98.0 %	99.7 %
Ammonium Chloride	≤ 0.5 %	0.2 %
Ash	≤ 0.4 %	0.3 %
Moisture (KF)	≤ 0.3 %	0.1 %

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Jennifer LaBrecque

Jennifer LaBrecque 10/2021
Quality Assurance Manager

Conclusion: The above product meets the specifications of APOLO