

# GUANIDINE HYDROCHLORIDE

## NF, GMP

CAS #: 50-01-1

 Formula:  $\text{NH}_2\text{C}(\text{NH})\text{NH}_2 \cdot \text{HCl}$ 

F.W.: 95.53 g/mol

**GHCL-4223**
**BIO PHARMA GRADE**

ANALYSIS	SPECIFICATIONS
Acidity (NF)	< = 0.01%
Appearance and Color	White Crystals
Assay, Dried Basis (NF)	99.5 – 101.0%
Enzymes	DNase: None Detected Protease: None Detected RNase: None Detected
Identification A, IR (NF)	Conforms to Reference Standard
Identification B, Absorbance (6M) (NF)	230 nm: < = 0.2000 a.u. 260 nm: < = 0.0300 a.u. 275 nm: < = 0.0300 a.u.
Identification C, Chloride (NF)	Passes Test
Limit of Nitrate (NF)	< = 50 ppm
Loss on Drying (NF)	< = 0.5%
Melting Range (NF)	184 – 188°C
pH (6M)	4.5 – 6.0
Residue on Ignition (NF)	< = 0.05%
Solubility (6M)	Passes Test
Sulfate (NF)	< = 50 ppm
Trace Metals	Aluminum (Al): < = 5 ppm Arsenic (As): < = 5 ppm Barium (Ba): < = 5 ppm Bismuth (Bi): < = 5 ppm Calcium (Ca): < = 10 ppm Cadmium (Cd): < = 5 ppm Cobalt (Co): < = 5 ppm Chromium (Cr): < = 5 ppm Copper (Cu): < = 5 ppm Iron (Fe): < = 5 ppm Potassium (K): < = 50 ppm Lithium (Li): < = 5 ppm Magnesium (Mg): < = 5 ppm Manganese (Mn): < = 5 ppm Molybdenum (Mo): < = 5 ppm Sodium (Na): < = 150 ppm Nickel (Ni): < = 5 ppm Lead (Pb): < = 5 ppm Strontium (Sr): < = 5 ppm Zinc (Zn): < = 5 ppm
Water, KF	< = 0.3%
Water Insoluble Substances (NF)	< = 0.05%

### General Product Overview

Guanidine Hydrochloride is a strong protein denaturant that functions as a chaotropic agent. As a denaturant, it acts to unfold proteins and turn them into their original polypeptide chains. As a chaotropic agent, it breaks down the structure of proteins. It is commonly used in the purification of RNA by dissociating the RNA into its nucleic acids and protein forms. At higher concentrations, Guanidine HCl decreases enzyme activity. It is also used to increase the solubility of hydrophobic molecules.

### Industry Application

Suitable for use in biological and biotech chemical process applications from R&D through scale cGMP production.

### Key Product Features

- Appears as a white crystalline product
- Manufactured in accordance with IPEC
- Manufactured in an enzyme free, hormone free and animal free environment
- Contains no known major food allergens (as defined by FDA and WHO)
- The final product and its raw materials are not derived from nor come into contact with animal parts, animal products, and/or animal byproducts or derivatives.
- Is not subject to genetic modification
- Synonyms: Guanidine Monohydrochloride; Guanidinium Chloride; Guanidinium Hydrochloride

### Storage and Shipping Conditions

Refer to SDS.

### Standard Shelf-Life Policy

Unless otherwise noted on the Shelf-Life Statement and CoA, this product has a 2-year retest date supported by a 3-year ICH Q1 Stability Study (if one is completed).

### Package Sizes

100g, 500g, 1kg, 5kg, 10kg, 25kg, 50kg

[Click here to view SDS, CoAs and other supporting regulatory documents on our website.](#)

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