

GUANIDINE HYDROCHLORIDE

MEETS 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
	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.](#)

This is not considered a controlled document. We are not responsible for any errors or omissions, and the user is responsible for any decisions based on the information herein.