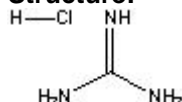


TECHNICAL INFORMATION

Catalog Number: 101905, 105696, 151210, 194826, 820512, 820539, 820540

Guanidine hydrochloride

Structure:



Molecular Formula: CH₅N₃ · HCl

Molecular Weight: 95.53

CAS # : 50-01-1

Synonyms: Aminomethanamidine hydrochloride; Aminoformamidine hydrochloride; Guanidinium chloride; Guanidium chloride

Physical Description: White crystalline powder

Solubility: Soluble in water (6 M - clear, colorless solution)

Description: A strong chaotropic agent useful for the denaturation^{8,10} and subsequent refolding of proteins.³ This strong denaturant can solubilize insoluble or denatured proteins⁵ such as inclusion bodies⁶ and be used for the recovery of periplasmic proteins.^{7,9} This can be used as the first step in refolding proteins or enzymes into their active form. Urea and dithiothreitol (DTT) may also be necessary. Also used in the isolation of RNA.⁴

Availability:

Catalog Number	Description	Size
101905	Guanidine Hydrochloride, practical grade, contains approximately 2-3% water insolubles	250 g 1 kg 5 kg
105696	Guanidine Hydrochloride, Ultra Pure	25 g 100 g 500 g 1 kg 5 kg
151210	Guanidine Hydrochloride, Optical Grade, purity approximately 99%	25 g 100 g 500 g 1 kg
194826	Guanidine Hydrochloride, Molecular Biology Reagent, purity not less than 99%	25 g 100 g 500 g 1 kg 3 kg
820512 820539 820540	Guanidine Hydrochloride, Ultra Pure, purity not less than 99%	100 g 500 g 1 kg

References:

- Bonnet, F., et al., *Biochim. Biophys. Acta*, **v. 623**, 57 (1980).
- Kawooya, J.K., et al., *Biochemistry*, **v. 28**, 6658 (1989).
- Levine, A.D., et al., "High level expression and refolding of mouse interleukin 4 synthesized in Escherichia coli." *J. Biol. Chem.*, **v. 270**, 7445-7452 (1995).
- MacDonald, R.J., et al., *Meths. Enzymol.*, **v. 152**, 219 (1987).
- Marston, F.A.O. and Hartley, D.L., "Solubilization of protein aggregates." *Meth. Enzymol.*, **v. 182**, 264-276 (1990).
- Mukhopadhyay, A., "Inclusion bodies and purification of proteins in biologically active forms." *Adv. Biochem. Eng. Biotechnol.*, **v. 56**, 61-109 (1997).
- Naglak, T.J. and Wang, H.Y., "Recovery of a foreign protein from the periplasm of Escherichia coli by chemical permeabilization." *Enzyme Microb. Technol.*, **v. 12**, 603-611 (1990).
- Pace, C.N., *Meths. Enzymol.*, **v. 131**, 266 (1986).
- Rudolph, R. and Lilie, H., "In vitro folding of inclusion body proteins." *FASEB J.*, **v. 10**, 49-56 (1996).
- Tashiro, R., et al., *Biochim. Biophys. Acta*, **v. 706**, 129 (1982).

