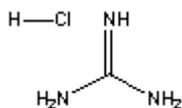


Catalog Number: 101905, 105696, 151210, 194826, 820512, 820539, 820540

## Guanidine hydrochloride

### Structure:



**Molecular Formula:** CH<sub>5</sub>N<sub>3</sub> • 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<sup>8,10</sup> and subsequent refolding of proteins.<sup>3</sup> This strong denaturant can solubilize insoluble or denatured proteins<sup>5</sup> such as inclusion bodies<sup>6</sup> and be used for the recovery of periplasmic proteins.<sup>7,9</sup> 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.<sup>4</sup>

### Availability:

Catalog Number	Description	Size
101905	Guanidine	250 g
	Hydrochloride,	1 kg
	practical grade, contains approximately 2-3% water insolubles	5 kg
105696	Guanidine	25 g
	Hydrochloride, Ultra	100 g
	Pure	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:

1. Bonnet, F., et al., *Biochim. Biophys. Acta*, v. **623**, 57 (1980).
2. Kawooya, J.K., et al., *Biochemistry*, v. **28**, 6658 (1989).
3. 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).
4. MacDonald, R.J., et al., *Meths. Enzymol.*, v. **152**, 219 (1987).
5. Marston, F.A.O. and Hartley, D.L., "Solubilization of protein aggregates." *Meth. Enzymol.*, v. **182**, 264-276 (1990).
6. Mukhopadhyay, A., "Inclusion bodies and purification of proteins in biologically active forms." *Adv. Biochem. Eng. Biotechnol.*, v. **56**, 61-109 (1997).
7. 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).
8. Pace, C.N., *Meths. Enzymol.*, v. **131**, 266 (1986).
9. Rudolph, R. and Lilie, H., "In vitro folding of inclusion body proteins." *FASEB J.*, v. **10**, 49-56 (1996).
10. Tashiro, R., et al., *Biochim. Biophys. Acta*, v. **706**, 129 (1982).