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## Product Data Sheet

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Product Name: Guanethidine

Cat. No.: GC66202

### Chemical Properties

Cas. No. 55-65-2

Formula  $C_{10}H_{22}N_4$

M.Wt

198.31

Solubility

Storage

Store at -20°C

General tips

For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Guanethidine is an antihypertensive compound that competes with norepinephrine for transport into presynaptic terminals of adrenergic neurons by the norepinephrine transporter.<sup>1</sup> Once guanethidine has entered the nerve, it becomes concentrated in synaptic vesicles, depleting endogenous norepinephrine, and thus, reducing the release of norepinephrine in response to action potentials.<sup>1</sup> Guanethidine's actions are restricted to peripheral nerve terminals because its basic guanidine group does not allow passage through the blood brain barrier.<sup>1</sup> Its use has been explored in the relief of chronic pain caused by complex regional pain syndrome.<sup>2</sup>

1. Gerber, J.G., Freed, C.R., and Nies, A.S. Antihypertensive pharmacology West. J. Med. 132(5)430-439(1980) 2. Livingstone, J.A., and Atkins, R.M. Intravenous regional guanethidine blockade in the treatment of post-traumatic complex regional pain syndrome type 1 (algodystrophy) of the hand J. Bone Joint Surg. Br. 84(3)380-386(2002)

**Caution: Product has not been fully validated for medical applications. For research use only.**

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