Print Date: Jan 13th 2016

Certificate of Analysis

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Product Name: **Arcaine sulfate** **Catalog No.: 0389** **Batch No.: 2**

CAS Number: 14923-17-2

IUPAC Name: *N*,*N*'-1,4-Butanediyl*bis*guanidine sulfate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_6H_{16}N_6.H_2SO_4$

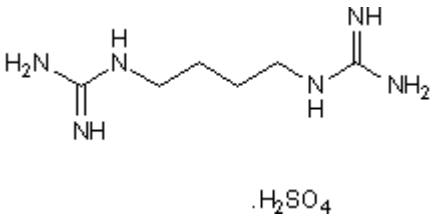
Batch Molecular Weight: 270.31

Physical Appearance: White solid

Solubility: water to 25 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.39 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

Melting Point: Greater than 280°C

HPLC: Shows >99.7% purity

^{1}H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	26.66	6.71	31.08
Found	26.44	6.76	30.89

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CAS Number: 14923-17-2

IUPAC Name: *N*,*N*'-1,4-Butanediyl*bis*guanidine sulfate

Description:

NO synthase inhibitor. An NMDA antagonist acting as a competitive inhibitor at the polyamine site.

Physical and Chemical Properties:

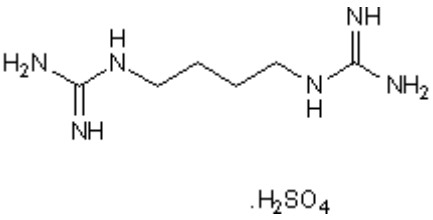
Batch Molecular Formula: $C_6H_{16}N_6.H_2SO_4$

Batch Molecular Weight: 270.31

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 25 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Reynolds (1990) Arcaine is a competitive antagonist of the polyamine site on the NMDA receptor. Eur.J.Pharmacol. ***177*** 215. PMID: 2155812.

Yokoi *et al* (1994) Structure-activity relationships of arginine analogues on nitric oxide synthase activity in the rat brain. Neuropharmacology ***33*** 1261. PMID: 7532812.

Doyle and Shaw (1998) Investigation of the actions and antagonist activity of some polyamine analogues *in vivo*. Br.J.Pharmacol. ***124*** 386. PMID: 9641557.