

Product Name: Benzamil

Catalog No.: 3380

Batch No.: 2

CAS Number: 161804-20-2

IUPAC Name: *N*-(Benzylamidino)-3,5-diamino-6-chloropyrazinecarboxamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₃H₁₄ClN₇O.HCl.¼H₂O

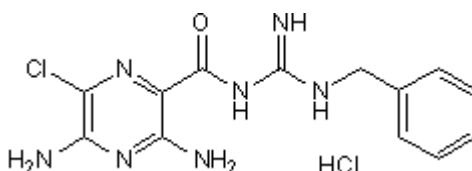
Batch Molecular Weight: 360.71

Physical Appearance: Yellow solid

Solubility: DMSO to 100 mM
water to 10 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.1% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	43.29	4.33	27.18
Found	43.16	4.5	27.14

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Description:

Na⁺/Ca²⁺ exchanger (NCX) inhibitor (IC₅₀ ~ 100 nM); TRPP3 channel blocker (IC₅₀ = 1.1 μM for inhibition of Ca²⁺-activated TRPP3 channel activity). Also non-selective Deg/ENaC family blocker; reduces mechanosensitivity of colonic afferents. More potent derivative of amiloride (Cat. No. 0890).

Physical and Chemical Properties:

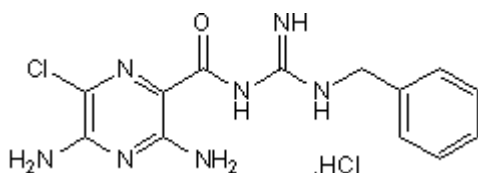
Batch Molecular Formula: C₁₃H₁₄ClN₇O.HCl.¼H₂O

Batch Molecular Weight: 360.71

Physical Appearance: Yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
water to 10 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:

Fischer et al (2002) Characterization of a Na⁺-Ca²⁺ exchanger in podocytes. *Nephrol.Dial.Transplant.* **17** 1742. PMID: 12270979.

Page et al (2007) Acid sensing ion channels 2 and 3 are required for inhibition of visceral nociceptors by benzamil. *Pain* **133** 150. PMID: 17467171.

Dai et al (2007) Inhibition of TRPP3 channel by amiloride and analogs. *Mol.Pharmacol.* **72** 1576. PMID: 17804601.

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