TOCRIS
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Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **Furosemide** **Catalog No.: 3109** **Batch No.: 1**

CAS Number: 54-31-9 EC Number: 200-203-6

IUPAC Name: 5-(Aminosulfonyl)-4-chloro-2-([2-furanylmethyl]amino)benzoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{12}H_{11}ClN_2O_5S$

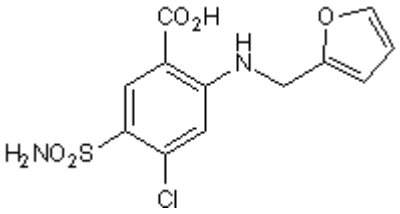
Batch Molecular Weight: 330.74

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	43.58	3.35	8.47
Found	43.6	3.33	8.3

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Description:

Loop diuretic that inhibits the $Na^+/2Cl^-/K^+$ (NKCC) symporter. Also acts as a non-competitive antagonist at $GABA_A$ receptors with ~ 100-fold greater selectivity for α6-containing receptors than α1-containing receptors.

Physical and Chemical Properties:

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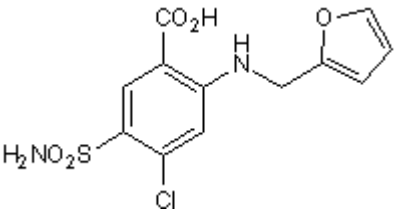
Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 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:

Thompson *et al* (1999) Residues in transmembrane domains I and II determine γ-aminobutyric acid type AA receptor subtype-selective antagonism by furosemide. Mol.Pharmacol. ***55*** 993. PMID: 10347239.

Gutschmidt *et al* (1999) Anticonvulsant actions of furosemide *in vitro*. Neuroscience ***91*** 1471. PMID: 10391452.