

# Certificate of Analysis

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**Product Name:** Ranitidine hydrochloride

**Catalog No.:** 1967

**Batch No.:** 1

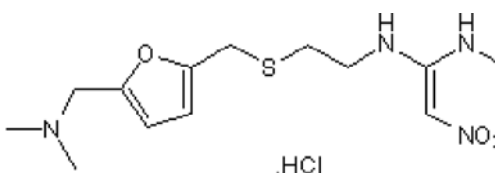
CAS Number: 66357-59-3

EC Number: 266-332-5

IUPAC Name: *N*-[2-[[[5-[(Dimethylamino)methyl]-2-furanyl]methyl]thio]ethyl]-*N*-methyl-2-nitro-1,1-ethanediamine hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>S.HCl  
**Batch Molecular Weight:** 350.86  
**Physical Appearance:** Pale yellow solid  
**Solubility:** water to 50 mM  
 ethanol to 25 mM  
 DMSO to 25 mM with gentle warming  
**Storage:** Desiccate at +4°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.31 (Dichloromethane:Methanol [10:1])  
**Melting Point:** Between 157 - 158°C  
**HPLC:** Shows 99.2% purity  
<sup>1</sup>H NMR: Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	44.5	6.61	15.96
Found	44.43	6.76	16.09

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Potent, selective and competitive histamine H<sub>2</sub> receptor antagonist (pA<sub>2</sub> = 6.95 - 7.2). Inhibits gastric acid secretion induced by histamine, pentagastrin, bethanecol and food *in vivo*. Also inhibits aspirin-induced gastric lesions.

**Physical and Chemical Properties:**

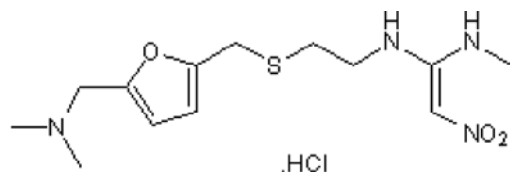
Batch Molecular Formula: C<sub>13</sub>H<sub>22</sub>N<sub>4</sub>O<sub>3</sub>S.HCl

Batch Molecular Weight: 350.86

Physical Appearance: Pale yellow solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**Storage:** Desiccate at +4°C

**Solubility & Usage Info:**

water to 50 mM  
ethanol to 25 mM  
DMSO to 25 mM with gentle warming

**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:**

**Brittain and Daly** (1981) A review of the animal pharmacology of ranitidine - a new, selective histamine H<sub>2</sub>-antagonist. *Scand.J.Gastroenterol.Suppl.* **69** 1.

**Daly et al** (1981) Antagonism of vasodepressor and gastric secretory responses to histamine by the H<sub>2</sub>-receptor antagonists, ranitidine and cimetidine, in the anaesthetized dog. *Br.J.Pharmacol.* **72** 55. PMID: 6112035.

**Daly et al** (1981) Some *in vitro* and *in vivo* actions of the new histamine H<sub>2</sub>-receptor antagonist, ranitidine. *Br.J.Pharmacol.* **72** 49. PMID: 6112034.

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