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TOCRIS

Print Date: Mar 12th 2024

# Certificate of Analysis

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**Product Name:** **Azimilide dihydrochloride** **Catalog No.: 6318** **Batch No.: 1**

CAS Number: 149888-94-8

IUPAC Name: 1-[[[5-(4-Chlorophenyl)-2-furanyl]methylene]amino]-3-[4-(4-methyl-1-piperazinyl)butyl]-2,4-imidazolidinedione dihydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** $C_{23}H_{28}ClN_5O_3.2HCl.½H_2O$

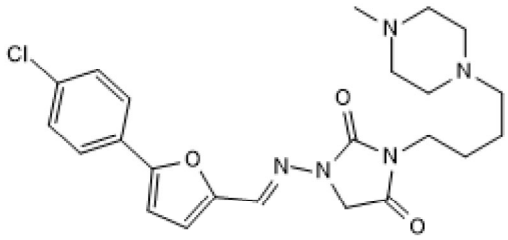
**Batch Molecular Weight:** 539.89

**Physical Appearance:** Yellow solid

**Solubility:** water to 50 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**




2HCl

## 2. ANALYTICAL DATA

**HPLC:** Shows 97.5% purity

**$^1$H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

| | Carbon | Hydrogen | Nitrogen |
|---|---|---|---|
| Theoretical | 51.17 | 5.79 | 12.97 |
| Found | 51.2 | 5.69 | 12.94 |



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**Description:**

Azimilide dihydrochloride is a $K_v$11.1 (hERG) channel blocker, blocks rapidly activating and slowly activating components of delayed rectifier $K^+$ currents ($IC_{50}$ of 0.4 mM and 3 mM, respectively). Also inhibits $Na^+/Ca^{2+}$ exchanger in vitro. Shows inhibition of $Na^+$ currents, L-type $Ca^{2+}$ currents and other $K^+$ currents at high concentrations.

**Physical and Chemical Properties:**

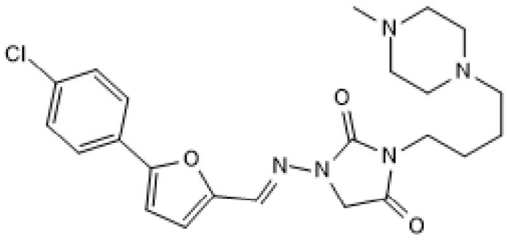
Batch Molecular Formula: $C_{23}H_{28}ClN_5O_3.2HCl.½H_2O$

Batch Molecular Weight: 539.89

Physical Appearance: Yellow solid

**Minimum Purity:** ≥97%

**Batch Molecular Structure:**




2HCl

**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 50 mM

Solutions may appear hazy.

**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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:**

**Watanabe and Kimura** (2010) Inhibitory Effect of Azimilide on $Na^+/Ca^{2+}$ Exchange Current in Guinae-Pig Cardiac Myocytes. J.Pharmacol.Sci. ***114*** 111. PMID: 20710119.

**Busch** *et al* (1998) Blockade of HERG channels by the class III antiarrhythmic Azimilide: mode of action. Br.J.Pharmacol. ***123*** 23. PMID: 9484850.

**Busch** *et al* (1995) Blockade of Human IsK channels expression in Xenopus oocytes by the novel class III antiarrhythmic NE-10064. Eur.J.Pharmacol. ***264*** 33. PMID: 7828640.



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