

**Product Name:** Furamide dihydrochloride

**Catalog No.:** 5202

**Batch No.:** 2

CAS Number: 55368-40-6

IUPAC Name: 4,4'-(2,5-Furandiyl)bis-benzenecarboximidamide dihydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>18</sub>H<sub>16</sub>N<sub>4</sub>O·2HCl·1½H<sub>2</sub>O

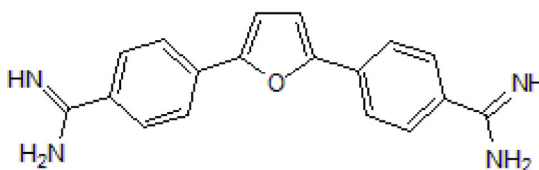
**Batch Molecular Weight:** 404.29

**Physical Appearance:** Yellow solid

**Solubility:** water to 50 mM  
DMSO to 50 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



2HCl

**2. ANALYTICAL DATA**

**HPLC:** Shows 99.7% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	53.48	5.24	13.86	17.54
Found	54.1	4.84	13.47	17.04

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

**Product Name:** Furamide dihydrochloride

**Catalog No.:** 5202

**2**

CAS Number: 55368-40-6

IUPAC Name: 4,4'-(2,5-Furandiyl)bis-benzenecarboximidamide dihydrochloride

**Description:**

Furamide dihydrochloride is a selective protein arginine methyltransferase 1 (PRMT1) inhibitor ( $IC_{50} = 9.4 \mu M$ ). Exhibits selectivity over PRMT5, PRMT6 and CARM1 ( $IC_{50}$  values are 166, 283 and  $>400 \mu M$  respectively). Inhibits tyrosyl-DNA phosphodiesterase 1 (TDP-1) ( $IC_{50} = 1.2 \mu M$ ). Inhibits cell proliferation in leukemia cell lines, suppresses neuroblastoma tumor growth, and reduces mis-splicing in in vitro and in vivo models of myotonic dystrophy type 1. Also shows dose-dependent inhibition of platelet aggregation ( $IC_{50} = 14.8 \mu M$ ). Cell-permeable.

**Physical and Chemical Properties:**

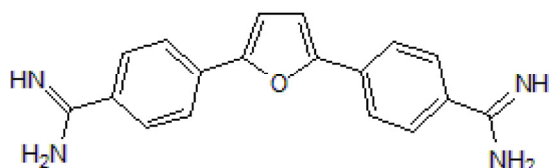
Batch Molecular Formula:  $C_{18}H_{16}N_4O \cdot 2HCl \cdot 1\frac{1}{2}H_2O$

Batch Molecular Weight: 404.29

Physical Appearance: Yellow solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



2HCl

**References:**

**Marsden et al** (2021) Inhibition of arginine methylation impairs platelet function. *ACS Pharmacol. Transl. Sci.* **4** 1567. PMID: 34661075.

**Hua et al** (2020) PRMT1 promotes neuroblastoma cell survival through ATF5. *Oncogenesis* **9** 50. PMID: 32415090.

**Jenquin et al** (2018) Furamide rescues myotonic dystrophy type I associated mis-splicing through multiple mechanisms. *ACS Chem. Biol.* **13** 2708. PMID: 30118588.

**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 50 mM

DMSO 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.

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956