

**Product Name:** Bendamustine hydrochloride

**Catalog No.:** 3681

**Batch No.:** 1

**CAS Number:** 3543-75-7

**IUPAC Name:** 5-[Bis(2-chloroethyl)amino]-1-methyl-1*H*-benzimidazole-2-butanoic acid hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>16</sub>H<sub>21</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub>.HCl.1½H<sub>2</sub>O

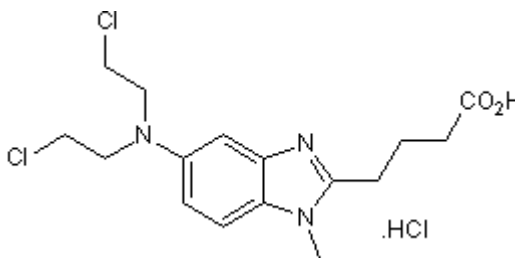
**Batch Molecular Weight:** 421.74

**Physical Appearance:** white solid

**Solubility:** water to 25 mM  
DMSO to 100 mM  
ethanol to 100 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.5% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	45.57	5.97	9.96
Found	45.6	5.67	10.02

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

**Product Name:** Bendamustine hydrochloride

**Catalog No.:** 3681

**Batch No.:** 1

**CAS Number:** 3543-75-7

**IUPAC Name:** 5-[Bis(2-chloroethyl)amino]-1-methyl-1H-benzimidazole-2-butanoic acid hydrochloride

**Description:**

Cytostatic agent that displays activity in non-Hodgkin's lymphomas. Exhibits bifunctionality; combines DNA alkylating properties with those of purine analogs.

**Physical and Chemical Properties:**

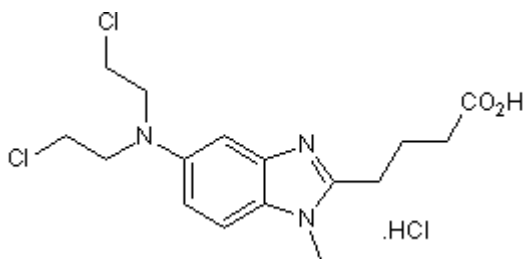
Batch Molecular Formula: C<sub>16</sub>H<sub>21</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>2</sub>.HCl.1½H<sub>2</sub>O

Batch Molecular Weight: 421.74

Physical Appearance: white solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 25 mM  
DMSO to 100 mM  
ethanol 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:**

**Schwanen et al (2002)** *In vitro* evaluation of bendamustine induced apoptosis in B-chronic lymphocytic leukemia. *Leukemia*. **16** 2096. PMID: 12357363.

**Keating et al (2008)** Bendamustine. *Nat.Rev.Drug Discov.* **7** 473. PMID: 18511926.

**Masiello and Tulpule (2009)** Bendamustine therapy in chronic lymphocytic leukemia. *Expert Opin.Pharmacother.* **10** 1687. PMID: 19527193.

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

Tocris Bioscience is an R&D Systems company  
USA & CANADA Tel: (800) 343-7475 EUROPE Tel: +44 (0)1235 529449 CHINA Tel: +86 (21) 52380373  
[www.RnDSystems.com](http://www.RnDSystems.com)

**R&D**  
SYSTEMS®