

## Certificate of Analysis

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**Product Name:** NS 1643

**Catalog No.:** 3062

**Batch No.:** 1

CAS Number: 448895-37-2

IUPAC Name: *N,N*-Bis[2-hydroxy-5-(trifluoromethyl)phenyl]urea

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>15</sub>H<sub>10</sub>F<sub>6</sub>N<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O

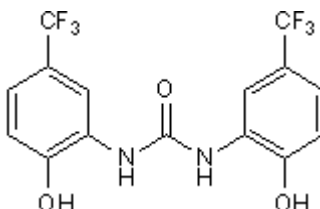
**Batch Molecular Weight:** 398.26

**Physical Appearance:** Off-white solid

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

**Storage:** Store at +4°C

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows >98.2% purity

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

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	45.24	3.04	7.03
Found	45.38	3.32	6.94

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

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**Description:**

Human ether-a-go-go related gene (hERG) K<sub>v</sub>11.1 channel activator (EC<sub>50</sub> = 10.5 μM). Exhibits different molecular mechanisms of action at K<sub>v</sub>11.1 (hERG1) and K<sub>v</sub>11.2 (hERG2) channels. Displays antiarrhythmic activity in vitro.

**Physical and Chemical Properties:**

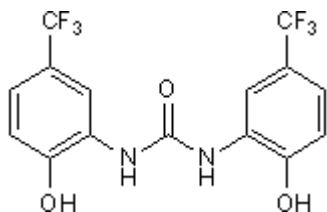
Batch Molecular Formula: C<sub>15</sub>H<sub>10</sub>F<sub>6</sub>N<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O

Batch Molecular Weight: 398.26

Physical Appearance: Off-white solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

ethanol to 100 mM

DMSO to 25 mM

CAUTION: This product has been shown to be unstable in physiological buffers and solutions should therefore be prepared and used as quickly as possible (Dinklo et. al. poster presented at the Strasbourg Safety Pharmacology meeting, 2009)

**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:**

**Hansen et al** (2006) Activation of human ether-a-go-go related gene potassium channels by the diphenylurea 1,3-bis-(2-hydroxy-5-trifluoromethyl-phenyl)-urea (NS1643). *Mol.Pharmacol.* **69** 266. PMID: 16219910.

**Casis et al** (2006) Mechanism of action of a novel human ether-a-go-go related gene channel activator. *Mol.Pharmacol.* **69** 658. PMID: 16284303.

**Elmedy et al** (2007) Activation of ERG2 potassium channel by the diphenylurea NS1643. *Neuropharmacology* **53** 283. PMID: 17610913.

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