

Certificate of Analysis

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Product Name: Zonisamide

Catalog No.: 2625

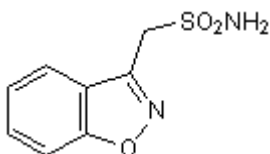
Batch No.: 1

CAS Number: 68291-97-4

IUPAC Name: 1,2-Benzisoxazole-3-methanesulfonamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₈N₂O₃S
Batch Molecular Weight: 212.22
Physical Appearance: White crystalline solid
Solubility: water to 10 mM
 1.1eq. NaOH to 100 mM
 DMSO to 100 mM
 ethanol to 25 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 164 - 166°C
HPLC: Shows >99.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	45.28	3.8	13.2
Found	45.09	3.72	13.06

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

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Description:

Antiepileptic that possesses a broad spectrum anticonvulsant and mechanistic profile. Blocks voltage-sensitive Na⁺ and T-type Ca²⁺ channels, stimulates BK_{Ca} channels, modulates GABA, glutamate and monoamine neurotransmission, inhibits lipid peroxidation and scavenges hydroxyl and nitric oxide free radicals. Displays neuroprotective and antiParkinsonian activity.

Physical and Chemical Properties:

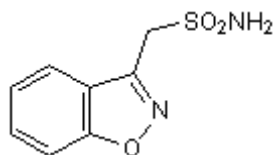
Batch Molecular Formula: C₈H₈N₂O₃S

Batch Molecular Weight: 212.22

Physical Appearance: White crystalline solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 10 mM
1.1eq. NaOH to 100 mM
DMSO to 100 mM
ethanol to 25 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:

Tokumaru *et al* (2000) In vivo evaluation of hippocampal anti-oxidant ability of zonisamide in rats. *Neurochem.Res.* **25** 1107. PMID: 11055748.

Sobieszek *et al* (2003) Zonisamide: a new antiepileptic drug. *Pol.J.Pharmacol.* **55** 683. PMID: 14704463.

Gluck *et al* (2004) Novel dopamine releasing response of an anti-convulsant agent with possible anti-Parkinson's activity. *J.Neural Transm.* **111** 713. PMID: 15168218.

Huang *et al* (2007) Activation by Zonisamide, a newer antiepileptic drug, of large-conductance calcium-activated potassium channel in differentiated hippocampal neuron-derived H19-7 cells. *J.Pharmacol.Exp.Ther.* **321** 98. PMID: 17255467.

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