

Certificate of Analysis

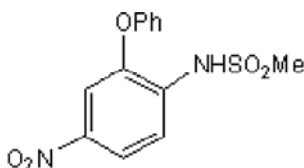
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Product Name: Nimesulide
CAS Number: 51803-78-2
IUPAC Name: *N*-(4-Nitro-2-phenoxyphenyl)methanesulfonamide

Catalog No.: 2470 **Batch No.:** 1
EC Number: 257-431-4

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₃H₁₂N₂O₅S
Batch Molecular Weight: 308.31
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
 ethanol to 25 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.64	3.92	9.09
Found	50.62	3.88	8.99

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

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Batch No.: 1

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IUPAC Name: *N*-(4-Nitro-2-phenoxyphenyl)methanesulfonamide

Description:

Selective, orally active cyclooxygenase-2 (COX-2) inhibitor. Produces potent analgesic, anti-inflammatory and antipyretic activities in vivo. Reported to produce fewer gastrointestinal side effects than standard NSAIDs. Also inhibits sodium-dependent neutral amino acid transporter B0AT1 (SLC6A19; IC₅₀ = 23 μM).

Physical and Chemical Properties:

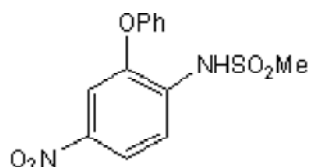
Batch Molecular Formula: C₁₃H₁₂N₂O₅S

Batch Molecular Weight: 308.31

Physical Appearance: Yellow solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

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:

Pochini *et al* (2014) Nimesulide binding site in the B0AT1 (SLC6A19) amino acid transporter. Mechanism of inhibition revealed by proteoliposome transport assay and molecular modelling. *Biochem.Pharmacol.* **89** 422. PMID: 24704252.

Cullen *et al* (1998) Selective cyclooxygenase-2 inhibition by nimesulide in man. *J.Pharmacol.Exp.Ther.* **287** 578. PMID: 9808683.

Famaey (1997) In vitro and in vivo pharmacological evidence of selective cyclooxygenase-2 inhibition by nimesulide: an overview. *Inflamm.Res.* **46** 437. PMID: 9427063.

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