

## Certificate of Analysis

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**Product Name:** NS 398

**Catalog No.:** 0942

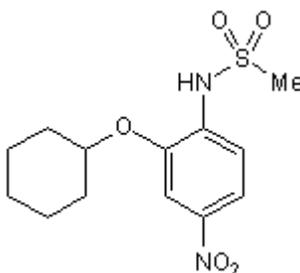
**Batch No.:** 2

CAS Number: 123653-11-2

IUPAC Name: *N*-[2-Cyclohexyloxy-4-nitrophenyl]methanesulfonamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>5</sub>S  
**Batch Molecular Weight:** 314.36  
**Physical Appearance:** Pale cream crystalline solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.76 (Ethyl acetate:Petroleum ether [2:8])  
**Melting Point:** At 142°C  
**HPLC:** Shows 100% purity  
<sup>1</sup>H NMR: Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	49.67	5.77	8.91
Found	49.67	5.87	8.59

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

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**Description:**

Selective cyclooxygenase-2 inhibitor (IC<sub>50</sub> values are 3.8 and > 100 μM for COX-2 and COX-1 respectively). Induces apoptosis in colorectal tumor cells and elevates COX-2 protein expression *in vitro*. Orally active and non-ulcerogenic analgesic and anti-inflammatory *in vivo*.

**Physical and Chemical Properties:**

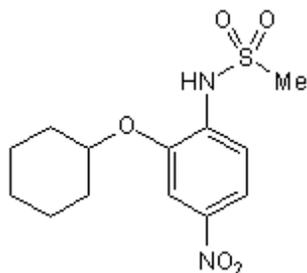
Batch Molecular Formula: C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>5</sub>S

Batch Molecular Weight: 314.36

Physical Appearance: Pale cream crystalline solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO 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:**

**Elder *et al* (2002)** The MEK/ERK pathway mediates COX-2-selective NSAID-induced apoptosis and induced COX-2 protein expression in colorectal carcinoma cells. *Int.J.Cancer* **99** 323. PMID: 11992399.

**Futaki *et al* (1994)** NS-398, a new anti-inflammatory agent, selectively inhibits prostaglandin G/H synthase/cyclooxygenase (COX-2) activity *in vitro*. *Prostaglandins* **47** 55. PMID: 8140262.

**Futaki *et al* (1993)** NS-398, a novel non-steroidal anti-inflammatory drug with potent analgesic and antipyretic effects, which causes minimal stomach lesions. *Gen.Pharmacol.* **24** 105. PMID: 8482483.

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