

## Certificate of Analysis

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**Product Name:** Modafinil

**Catalog No.:** 1811

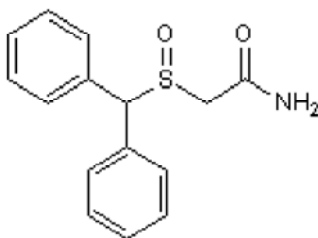
**Batch No.:** 3

CAS Number: 68693-11-8

IUPAC Name: 2-[(Diphenylmethyl)sulfinyl]acetamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>15</sub>H<sub>15</sub>NO<sub>2</sub>S  
**Batch Molecular Weight:** 273.35  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 75 mM  
ethanol to 10 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.3% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.91	5.53	5.12
Found	65.75	5.51	5.3

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

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**Description:**

Modafinil is a psychostimulant that displays neuroprotective and antiparkinsonian activity in a primate model of Parkinson's disease. Modafinil promotes vigilance and wakefulness without the central and peripheral side effects associated with conventional dopaminergic psychostimulants. Mechanism of action is not fully understood, possibly via modulation of catecholamine/GABAergic neurotransmission.

**Physical and Chemical Properties:**

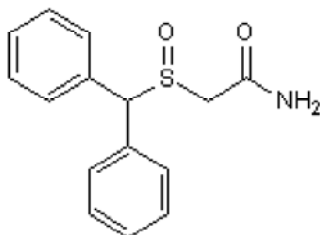
Batch Molecular Formula: C<sub>15</sub>H<sub>15</sub>NO<sub>2</sub>S

Batch Molecular Weight: 273.35

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 75 mM

ethanol to 10 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:**

**Madras *et al*** (2006) Modafinil occupies DA and NE transporters in vivo and modulates the transporters and trace amine activity in vitro. *J.Pharmacol.Exp.Ther.* **319** 561. PMID: 16885432.

**Jenner *et al*** (2000) Antiparkinsonian and neuroprotective effects of moda. in the mptp-treated common marmoset. *Exp.Brain Res.* **133** 178. PMID: 10968218.

**Ferraro *et al*** (1997) Modafinil: an antinarcotic drug with a different neurochemical profile to d-amphetamine and DA uptake blockers. *Biol.Psychiatry* **42** 1181. PMID: 9426889.

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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956