

## Certificate of Analysis

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**Product Name:** Minoxidil

**Catalog No.:** 0583

**Batch No.:** 3

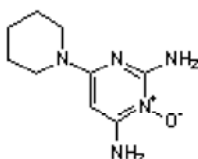
CAS Number: 38304-91-5

EC Number: 253-874-2

IUPAC Name: 6-(1-Piperidiny)-2,4-pyrimidinediamine 3-oxide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>9</sub>H<sub>15</sub>N<sub>5</sub>O  
**Batch Molecular Weight:** 209.25  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 25 mM  
DMSO to 25 mM with gentle warming  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.5% purity  
**<sup>1</sup>H NMR:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	51.66	7.23	33.47
Found	51.62	7.28	33.52

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

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IUPAC Name: 6-(1-Piperidiny)-2,4-pyrimidinediamine 3-oxide

**Description:**

Antihypertensive. Antialopecia agent.  $K_{ir6}$  channel ( $K_{ATP}$ ) activator.

**Physical and Chemical Properties:**

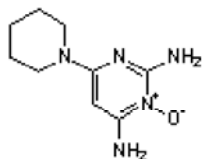
Batch Molecular Formula:  $C_9H_{15}N_5O$

Batch Molecular Weight: 209.25

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

ethanol to 25 mM

DMSO to 25 mM with gentle warming

**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:**

**Lachgar et al** (1998) Minoxidil upregulates the expression of vascular endothelial growth factor in human hair dermal papilla cells. *Br.J.Dermatol.* **138** 407. PMID: 9580790.

**Meisheri et al** (1993) Enzymatic and non-enzymatic sulfation mechanisms in the biological actions of minoxidil. *Biochem.Pharmacol.* **45** 271. PMID: 8435087.

**Tsoporis et al** (1993) Effects of the arterial vasodilator minoxidil on cardiovascular structure and sympathetic activity in spontaneously hypertensive rats. *J.Hypertens.* **11** 1337. PMID: 8133016.

Merck Index **12** 6290.

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