

Certificate of Analysis

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Product Name: Tempol

Catalog No.: 3082

Batch No.: 3

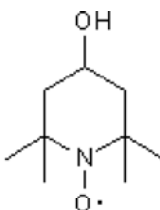
CAS Number: 2226-96-2

EC Number: 218-760-9

IUPAC Name: 1-Oxyl-2,2,6,6-tetramethyl-4-hydroxypiperidine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₁₈NO₂
Batch Molecular Weight: 172.24
Physical Appearance: Orange solid
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

GC: Shows 99.9% purity
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.76	10.53	8.13
Found	62.8	10.58	8.21

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

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IUPAC Name: 1-Oxyl-2,2,6,6-tetramethyl-4-hydroxypiperidine

Description:

Tempol is a superoxide scavenger that displays neuroprotective, anti-inflammatory and analgesic effects. Tempol reduces γ -radiation-induced damage in hematopoietic stem cells in vitro and in vivo.

Physical and Chemical Properties:

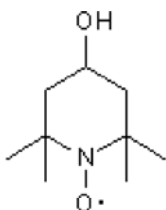
Batch Molecular Formula: C₉H₁₈NO₂

Batch Molecular Weight: 172.24

Physical Appearance: Orange solid

Minimum Purity: $\geq 99\%$

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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:

Ramachandran et al (2012) Prevention of γ -radiation induced cellular genotoxicity by tempol: Protection of hematopoietic system Environ.Toxicol.Pharmacol. **34** 253. PMID: 22609778.

Deng-Bryant et al (2008) Neuroprotective effect of tempol, a catalytic scavenger of peroxynitrite-derived free radicals, in a mouse traumatic brain injury model. J.Cereb.Blood Flow Metab. **28** 1114. PMID: 18319733.

Francis and Sehgal (2006) The superoxide scavenger TEMPOL induces urok. receptor (uPAR) expression in human prostate cancer cells. Mol.Cancer **5** 21. PMID: 16756681.

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