

Certificate of Analysis

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Product Name: Carboxy-PTIO, potassium salt

Catalog No.: 0772

Batch No.: 6

CAS Number: 148819-94-7

IUPAC Name: 2-(4-Carboxyphenyl)-4,4,5,5-tetramethylimidazoline-1-oxyl-3-oxide, potassium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_{16}KN_2O_4 \cdot \frac{1}{2}H_2O$

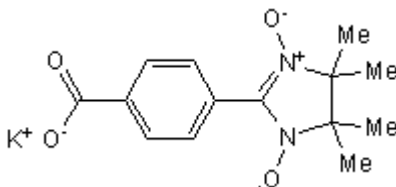
Batch Molecular Weight: 324.39

Physical Appearance: Dark blue solid

Solubility: ethanol to 25 mM
water to 10 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: $R_f = 0.75$ (Chloroform:Methanol [1:1])

Mass Spectrum: Consistent with structure

Microanalysis:

Carbon Hydrogen Nitrogen

Theoretical	51.84	5.28	8.64
Found	51.74	5.26	8.59

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

Product Information

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Description:

A stable, water-soluble free radical that reacts stoichiometrically with NO. Almost twice as strong an inhibitor as N(ω)-nitroarginine or N-methylarginine.

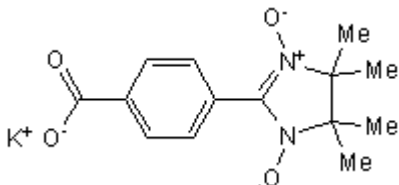
Physical and Chemical Properties:

Batch Molecular Formula: C₁₄H₁₆KN₂O₄·½H₂O

Batch Molecular Weight: 324.39

Physical Appearance: Dark blue solid

Batch Molecular Structure:



Storage: Desiccate at -20°C

Solubility & Usage Info:

ethanol to 25 mM

water 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:

Akaike *et al* (1993) Antagonistic action of imidazolineoxy N-oxides against endothelium-derived relaxing factor/NO through a radical reaction. *Biochemistry* **32** 827. PMID: 8422387.

Tsunoda *et al* (1994) Vasodilator effect of carboxy-2-phenyl-4,4,5,5-tetramethylimidazoline-1-oxyl in the coronary circulation: *in vivo* and *in vitro* studies. *Eur.J.Pharmacol.* **262** 55. PMID: 7813579.

Rand and Li (1995) Discrimination by the NO-trapping agent, carboxy-PTIO, between NO and the nitrergic transmitter but not between NO and EDRF. *Br.J.Pharmacol.* **116** 1906. PMID: 8528578.

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