

Certificate of Analysis

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Product Name: Ipratropium bromide

Catalog No.: 0692

Batch No.: 4

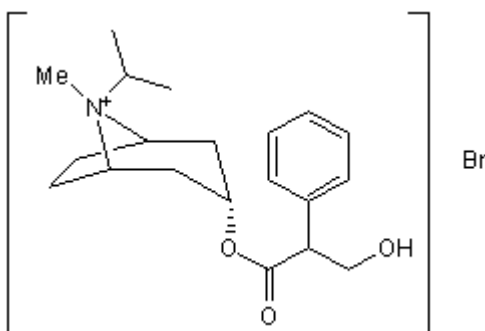
CAS Number: 22254-24-6

EC Number: 244-873-8

IUPAC Name: (*endo, syn*)-(±)-3-(3-Hydroxy-1-oxo-2-phenylpropoxy)-8-methyl-8-(1-methylethyl)-8-azoniabicyclo[3.2.1]octane bromide

1. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------------|---|
| Batch Molecular Formula: | C ₂₀ H ₃₀ BrNO ₃ ·H ₂ O |
| Batch Molecular Weight: | 430.39 |
| Physical Appearance: | White solid |
| Solubility: | water to 50 mM DMSO to 100 mM with gentle warming |
| Storage: | Store at +4°C |
| Batch Molecular Structure: | |



2. ANALYTICAL DATA

| | |
|---------------------------|--|
| TLC: | R _f = 0.44 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33]) |
| HPLC: | Shows 98% purity |
| ¹H NMR: | Consistent with structure |
| Microanalysis: | |

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 55.82 | 4.49 | 3.25 |
| Found | 55.94 | 7.66 | 3.11 |

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

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Description:

Muscarinic antagonist, bronchodilator. N-Isopropyl salt of atropine.

Physical and Chemical Properties:

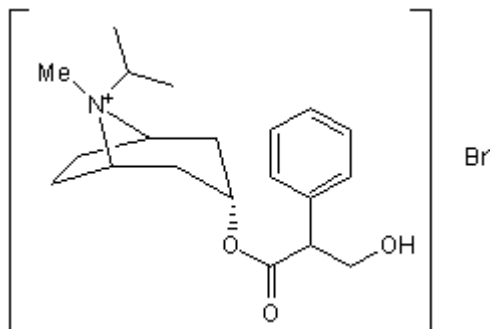
Batch Molecular Formula: C₂₀H₃₀BrNO₃.H₂O

Batch Molecular Weight: 430.39

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 50 mM

DMSO to 100 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:

Merck Index **12** 5089.

Fryer and Maclagan (1987) Ipratropium bromide potentiates bronchoconstriction induced by vagal nerve stimulation in the guinea-pig. *Eur.J.Pharmacol.* **139** 187. PMID: 2958300.

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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