



CERTIFICATE OF ANALYSIS

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1. Identification

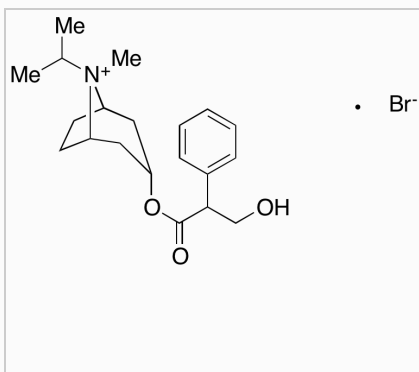
Catalogue Number: I740505

CAS Number: 58073-59-9

Synonym: (3-endo,8-anti)-3-(3-Hydroxy-1-oxo-2-phenylpropoxy)-8-methyl-8-(1-methylethyl)-8-Azoniabicyclo[3.2.1]octane Bromide; 8-Azoniabicyclo[3.2.1]octane, (endo,anti)-(±)-3-(3-Hydroxy-1-oxo-2-phenylpropoxy)-8-methyl-8-(1-methylethyl)-, Bromide; (endo,anti)-3-(3-Hydroxy-1-oxo-2-phenylpropoxy)-8-methyl-8-(1-methylethyl)-8-azoniabicyclo[3.2.1]octane Bromide; Sch 1178; USP Ipratropium Bromide Related Compound B; Ipratropium EP Impurity B

Product: 8-anti-Ipratropium Bromide

Structure:



Molecular Formula:

$C_{20}H_{30}BrNO_3$

Molecular weight:

412.36

Source of Product:

Synthetic

Solubility:

DMSO (Slightly), Methanol (Slightly)

Lot Number: 16-EQJ-4-6

Purity: 95%

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: -20°C

2. Warning

Warning 1:

Warning 2:

Warning 3:

3. Analytical Information

Tests:	Specifications:	Results:
Appearance	White to Off-White Solid	White to Off-White Solid
NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 56.07, %H: 7.25, %N: 3.50
MS	Conforms to Structure	Conforms
HPLC Purity	Report Result	95.23% (205 nm)

Additional Information: N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of $\pm 2\%$. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Evan Burns	Toni Rantanen	Christina Gouliaras	6/30/2022	6/28/2026
