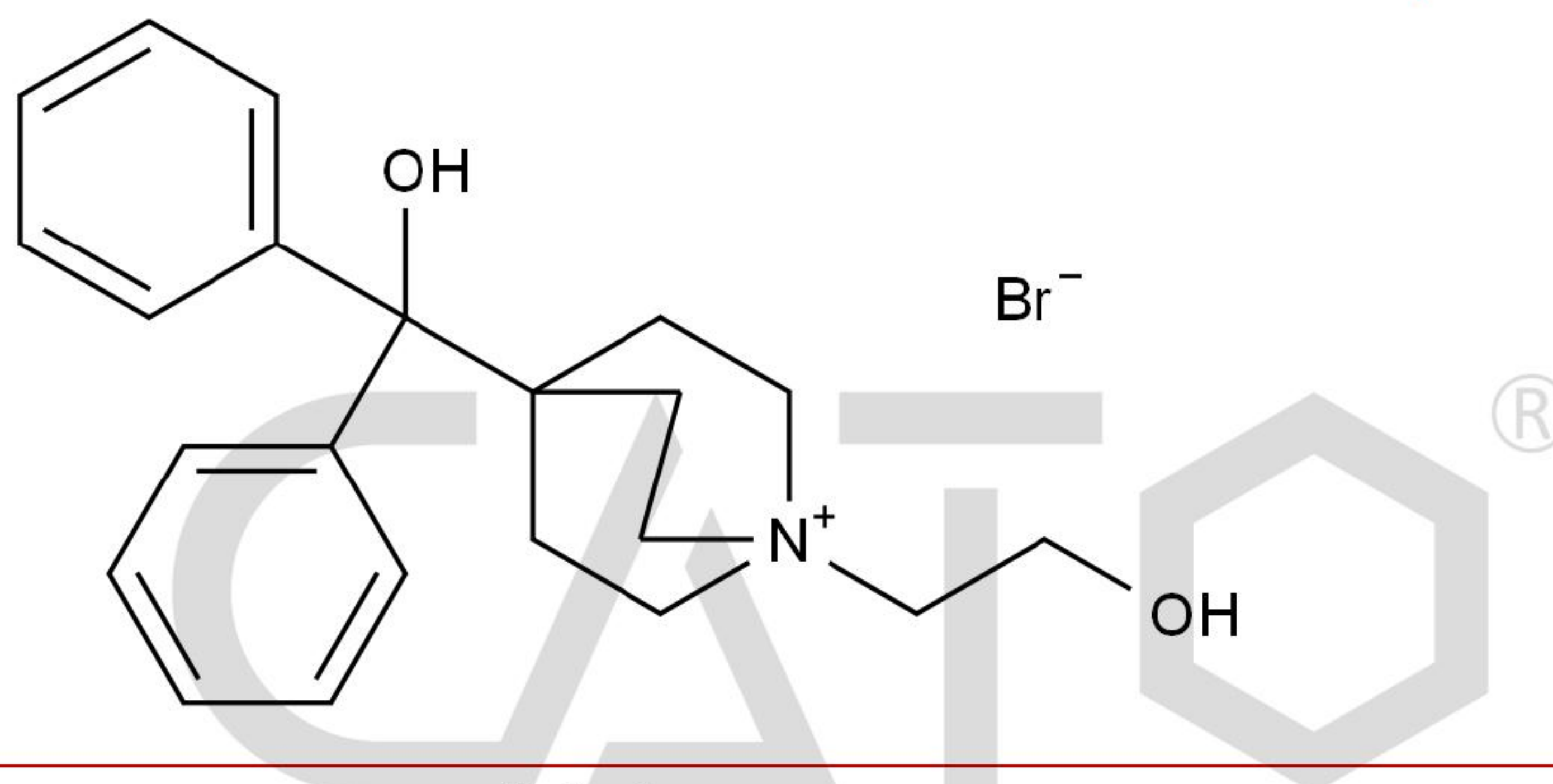


Certificate of Analysis

Reference Material & Standard

Product Name:	Umeclidinium Impurity 4	Catalogue Number:	C4X-13394
Synonyms:	N/A	Lot Number:	0520-RF-0081
CAS Number:	869112-31-2	Expiry Date:	Dec 20, 2025
Molecular Formula:	C ₂₂ H ₂₈ NO ₂ Br	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	338.46 79.90	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	98.285%
Water Content	Karl Fischer	0.14%
Residual Solvents	NMR	Not detected in NMR
Assay		98.1%

Comment:

The calculation of the 100% method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Water Content - Residual Solvents) * Purity HPLC (%) / 100%

Water Content and Residual Solvents are considered as absolute effect, HPLC purity is considered as relative effect.

Signature:

Prepared by:

Lily

Reviewed by:

Hinlam

Approved by General Manager:

David

Date: May 22, 2024

Date: May 22, 2024

Date: May 22, 2024

