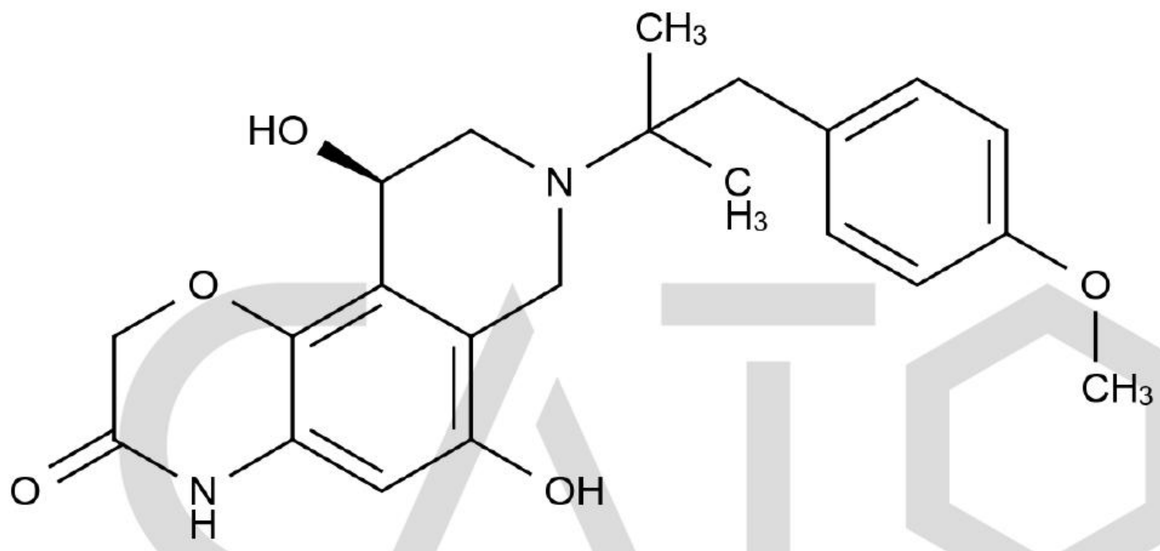
Certificate of Analysis

Reference Material & Standard

Product Name:	(R)-Olodaterol Impurity 4	**Catalogue Number:**	C4X-19434
Synonyms:	N/A	**Lot Number:**	1120-RH-0028
CAS Number:	3013645-18-3	**Expiry Date:**	Nov 16, 2030
Molecular Formula:	$C_{22}H_{26}N_2O_5$	**Storage:**	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	398.45	**Shipping Condition:**	Shipping at Room Temperature

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Yellow Solid
Identification	LCMS&UV&HNMR	Confirmed
Purity	HPLC	99.708%
Water Content	Karl Fischer	2.11%
Residual Solvents	NMR	0.72% acetonitrile
Assay	Mass Balance	96.9%

CATO Research Chemicals Inc.

Comment:

The calculation of the mass balance 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: Date: Nov 25, 2026

Reviewed by: Date: Nov 25, 2026

Approved by General Manager: Date: Nov 25, 2026

CATO Research Chemicals Inc.