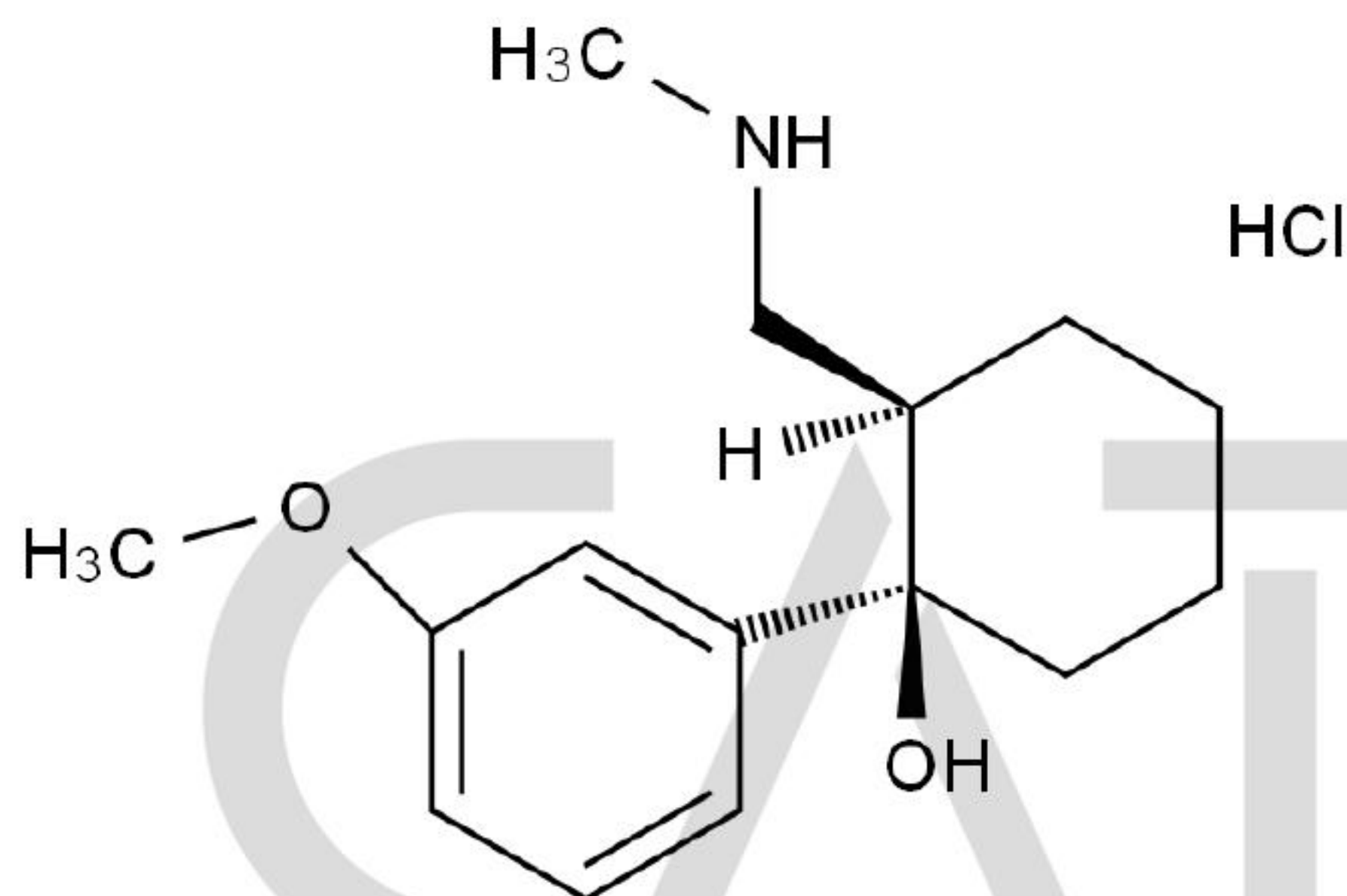


Certificate of Analysis

Reference Material & Standard

Product Name:	N-Desmethyl Tramadol HCl (Enantiomer)	Catalogue Number:	C4X-14985
Synonyms:	N/A	Lot Number:	1211-RE-0058
CAS Number:	1018989-94-0	Expiry Date:	Sep 06, 2026
Molecular Formula:	C15H23NO2 HCl	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	249.35 36.46	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Identification	LCMS&IR&HNMR	Confirmed
Purity	HPLC	99.8050%
Water Content	Karl Fischer	1.90%
Residual Solvents	NMR	0.7% diethyl ether
Assay		97.2%

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

Aproved by General Manager:

David

Date: Dec 13, 2023

Date: Dec 14, 2023

Date: Dec 14, 2023

