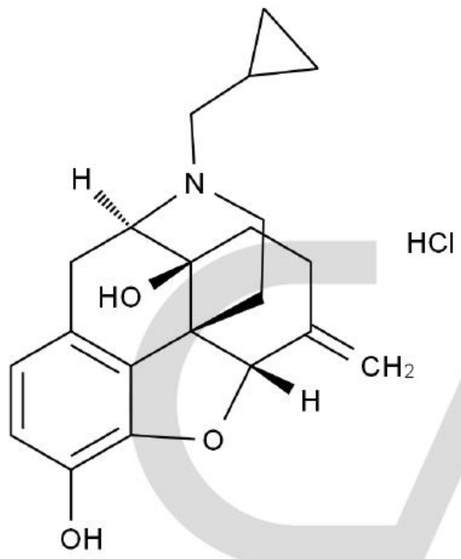
Certificate of Analysis

Reference Material & Standard

Product Name:	Nalmefene HCl	**Catalogue Number:**	C4X-12682
Synonyms:	N/A	**Lot Number:**	1-F-74
CAS Number:	58895-64-0	**Expiry Date:**	Oct 11, 2030
Molecular Formula:	$C_{21}H_{25}NO_3$ HCl	**Storage:**	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	339.43 36.46	**Shipping Condition:**	Shipping at Room Temperature
Solubility:	Water	**Warning:**	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&IR&HNMR	Confirmed
Purity	HPLC	100.000%
Residue on Ignition	TGA	0.2797%
Loss on Drying	TGA	4.4915%
Assay	Mass Balance	95.2%

CATO Research Chemicals Inc.

Comment:

The calculation of the mass balance method follows the formula (calculated on the non-dried basis):
*Assay (%) = (100%-Residue on Ignition-Loss on Drying) * Purity HPLC (%) /100%*
Residue on Ignition and Loss on Drying are considered as absolute effect, HPLC purity is considered as relative effect.

Signature:

Prepared by: Alice — Date: Oct 15, 2026

Reviewed by: Koi — Date: Oct 15, 2026

Approved by General Manager: David — Date: Oct 15, 2026

CATO Research Chemicals Inc.