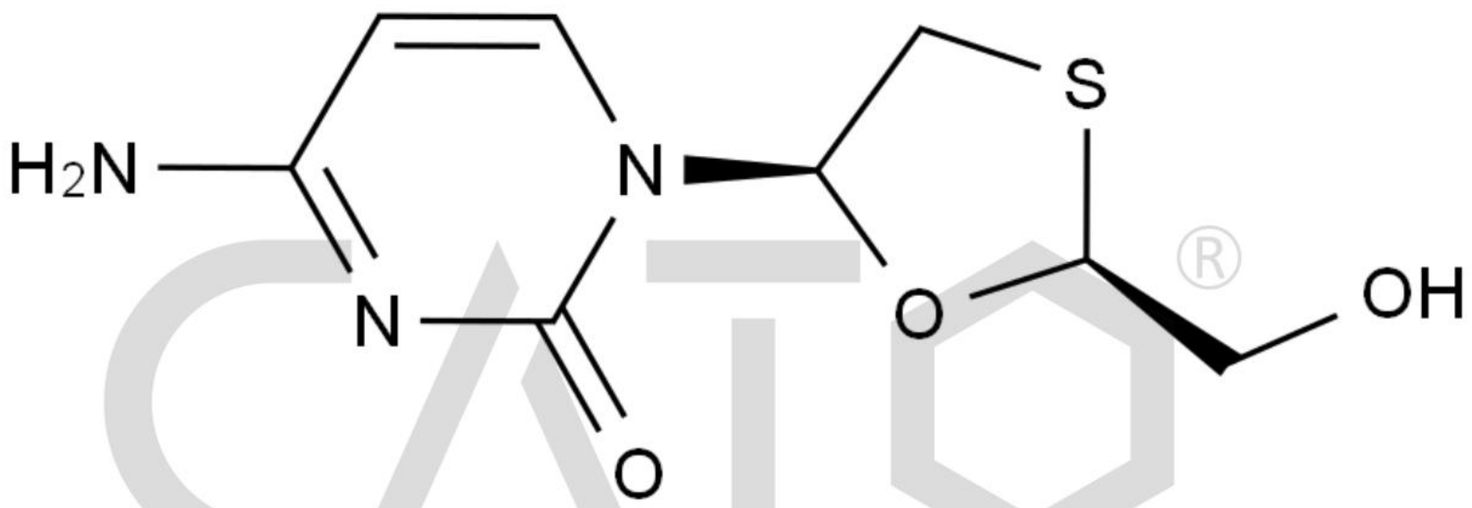
Certificate of Analysis

Reference Material & Standard

Product Name:	Lamivudine EP Impurity D (Ent-Lamivudine)	**Catalogue Number:**	C4X-11947
Synonyms:	N/A	**Lot Number:**	0911-RH-0034
CAS Number:	134680-32-3	**Expiry Date:**	Aug 28, 2030
Molecular Formula:	$C_8H_{11}N_3O_3S$	**Storage:**	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	229.26	**Shipping Condition:**	Shipping at Room Temperature

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&UV&HNMR	Confirmed
Purity	HPLC	99.662%
Water Content	Karl Fischer	1.48%
Residual Solvents	NMR	0.19% methanol and 0.76% ethanol
Assay		97.2%

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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: Sep 11, 2026

Reviewed by: Date: Sep 11, 2026

Approved by General Manager: Date: Sep 11, 2026

CATO Research Chemicals Inc.