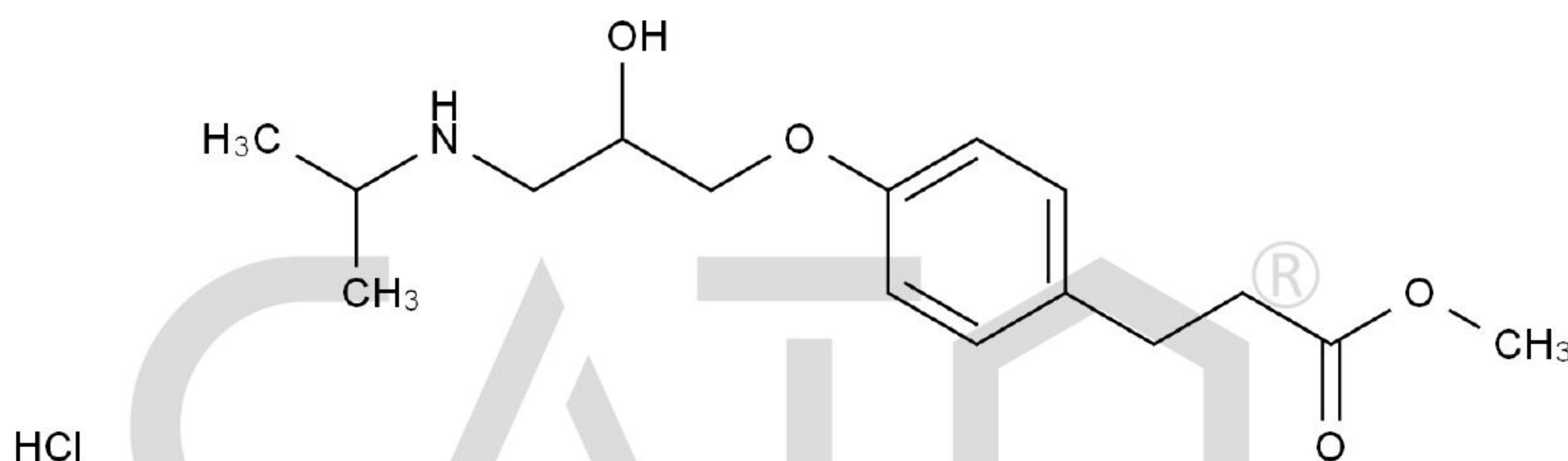


Certificate of Analysis

Reference Material & Standard

Product Name:	Esmolol Hydrochloride	Catalogue Number:	CCAD302955
Synonyms:	N/A	Lot Number:	0407-RH-0069
CAS Number:	81161-17-3	Expiry Date:	Apr 06, 2030
Molecular Formula:	C ₁₆ H ₂₅ NO ₄ HCl	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	295.37 36.46	Shipping Condition:	Shipping at Room Temperature
Solubility:	Acetonitrile	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	92.840%
Loss on Drying	TGA	0.3008%
Assay		92.6%
Uncertainty		±0.2%

Comment:

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

$$\text{Assay (\%)} = (100\% - \text{Loss on Drying}) * \text{Purity HPLC (\%)} / 100\%$$

Loss on Drying is considered as absolute effect, HPLC purity is considered as relative effect.
- The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by:

Nice

Reviewed by:

Hinlam

Approved by General Manager:

David

Date: Apr 07, 2026

Date: Apr 07, 2026

Date: Apr 07, 2026



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