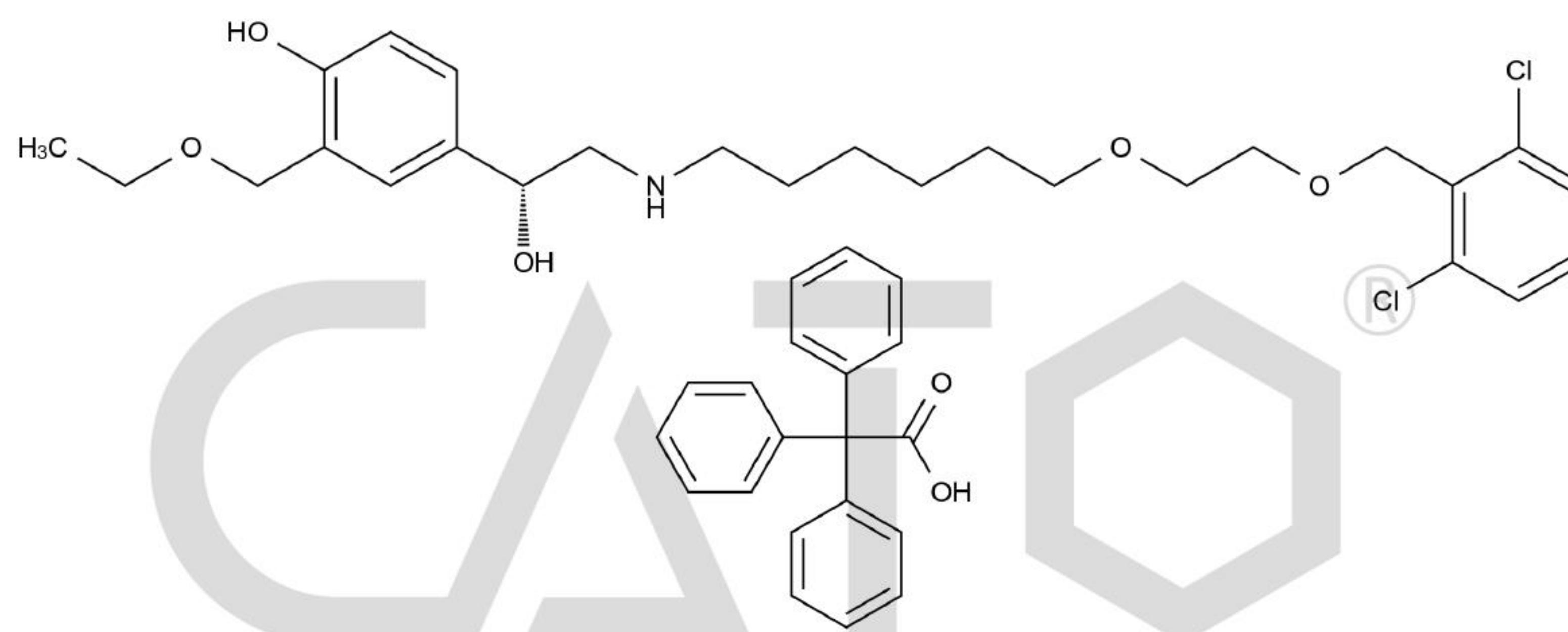


Certificate of Analysis

Reference Material & Standard

Product Name:	Vilanterol Impurity 5	Catalogue Number:	C4X-19355
Synonyms:	N/A	Lot Number:	0516-RD-0026
CAS Number:	1582675-85-1(free base)	Expiry Date:	Feb 07, 2024
Molecular Formula:	$C_{26}H_{37}Cl_2NO_5$ $C_{20}H_{16}O_2$	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	514.48 288.34	Shipping Condition:	Shipping at Room Temperature

Warning:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Identification	LCMS&IR&HNMR	Confirmed
Purity	HPLC	99.7731%
Water Content	Karl Fischer	0.1%
Residual Solvents	NMR	Not detected in NMR
Specific Rotation		$[\alpha]_D^{25.0}(c=0.54, CH_3OH)$: -13.6°
Assay		99.7%

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:

Hinlam

Reviewed by:

Cady

Approved by General Manager:

David



Date: May 17, 2022

Date: May 17, 2022

Date: May 17, 2022

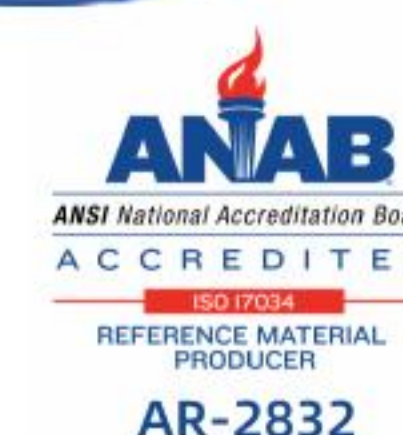
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