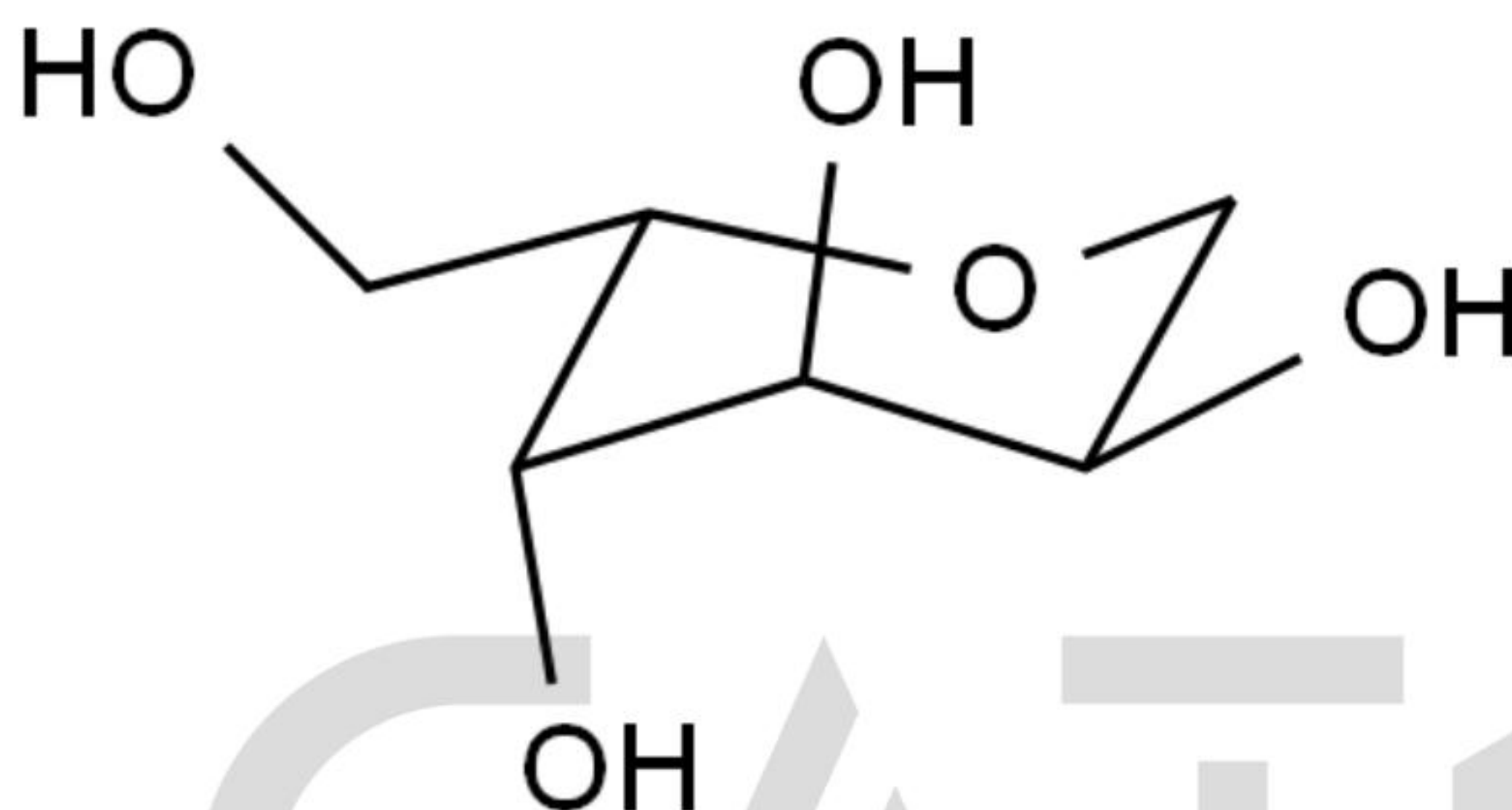


Certificate of Analysis

Reference Material

Product Name:	Isosorbide Impurity 24	Catalogue Number:	C4X-223824
Chemical Name:	N/A	Lot Number:	0727-RE-0017
CAS Number:	52485-66-2	Expiry Date:	Jul 19, 2026
Molecular Formula:	C ₆ H ₁₂ O ₅	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	164.16		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Colourless Liquid
Identification	LCMS&IR&HNMR	Confirmed
Purity	HPLC	100.0000%
Water Content	Karl Fischer	6.40%
Residual Solvents	NMR	Not detected in NMR
Optical Rotation		[α] _D ^{25.0} (c=0.31, CH ₃ OH): +10.8°
Assay		93.6%

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

Aporoved by General manager:

David

Date: Jul 20, 2023

Date: Jul 27, 2023

Date: Jul 27, 2023

