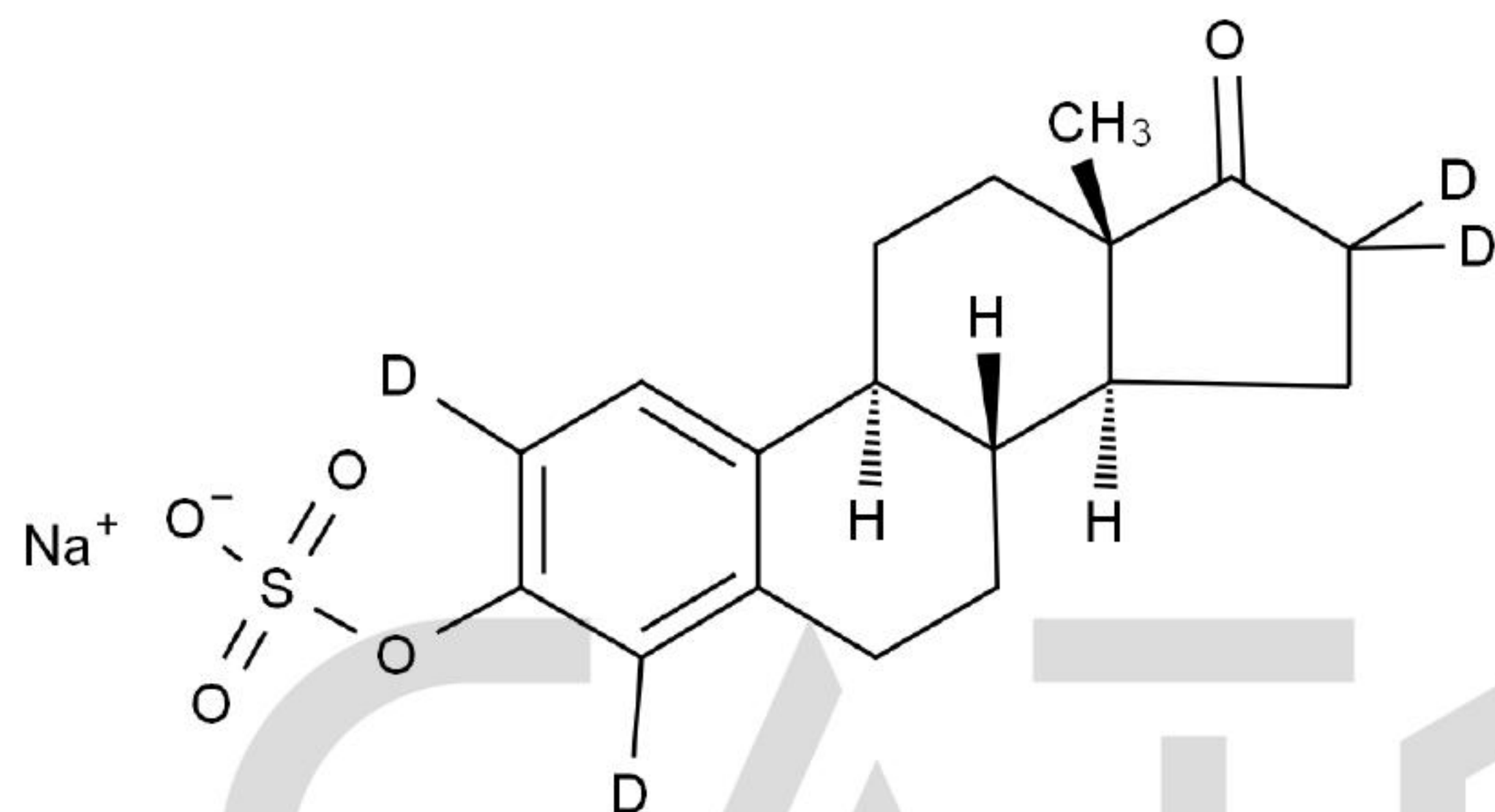


Certificate of Analysis

Reference Material

Product Name:	Estrone-d4 3-Sulfate Sodium Salt	Catalogue Number:	C4X-21054
Chemical Name:	N/A	Lot Number:	0629-RE-0018
CAS Number:	285979-80-8	Expiry Date:	Mar 10, 2025
Molecular Formula:	C ₁₈ H ₁₇ D ₄ O ₅ S Na	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	353.45 22.99		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Identification	LCMS&IR&HNMR	Confirmed
Chemical Purity	HPLC	98.9%
Isotopic Purity		97.6%
Residual Solvents	NMR	Not detected in NMR
Assay	qNMR	48.4%

Comment:

1. The compound contains 50.5% tris(hydroxymethyl)aminomethane as stabilizer according to its proton NMR.
2. Assay was determined by quantitative ¹H-NMR.

Signature:

Prepared by:

Lily

Reviewed by:

Hinlam

Aporoved by General manager:

David

Date: Mar 11, 2022

Date: Jul 03, 2023

Date: Jul 03, 2023

