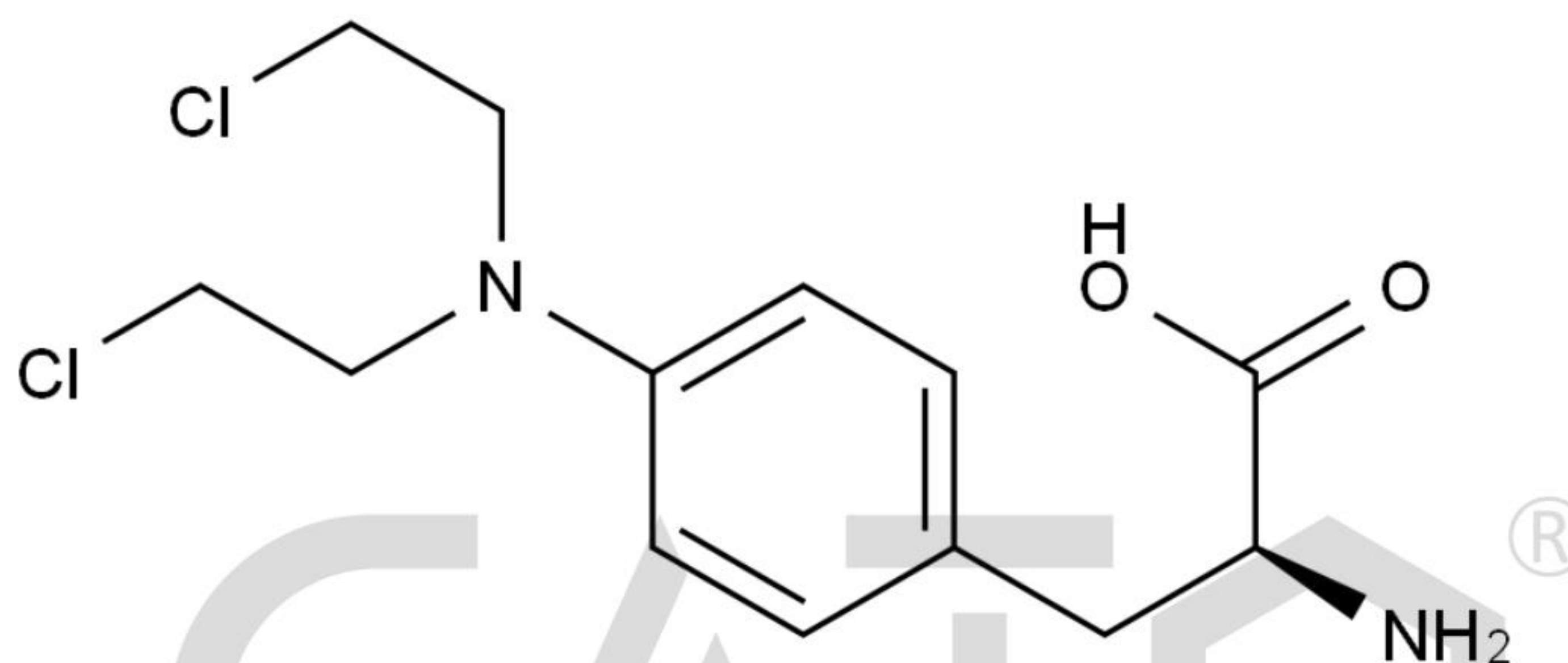


Certificate of Analysis

Reference Material

Product Name:	Melphalan	Catalogue Number:	C4X-1988
Chemical Name:	N/A	Lot Number:	0317-RE-0041
CAS Number:	148-82-3	Expiry Date:	Mar 08, 2026
Molecular Formula:	C ₁₃ H ₁₈ Cl ₂ N ₂ O ₂	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	305.20		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Identification	LCMS&IR&HNMR	Confirmed
Purity	HPLC	99.4482%
Water Content	Karl Fischer	5.0%
Residual Solvents	NMR	0.4% methanol
Residue on Ignition	TGA	0.3%
Optical Rotation		[α] _D ²⁰ 0.0(c=0.24, CH ₃ OH): -34.8°
Assay		93.8%

Comment:

The calculation of the 100% method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Water Content - Residual Solvents - Residue on Ignition) * Purity HPLC (%) / 100%

Water Content, Residual Solvents and Residue on Ignition are considered as absolute effect, HPLC purity is considered as relative effect.

Signature:

Prepared by:

Nacy

Reviewed by:

Xenia

Aproved by General manager:

David

Date: Mar 09, 2023

Date: Mar 23, 2023

Date: Mar 23, 2023

