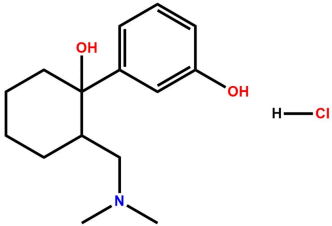




CERTIFICATE OF ANALYSIS

Date: 10-05-2026

Product Name	Tramadol EP Impurity D (HCl salt)		
Chemical Name	(1R,2R)-2-[(dimethylamino)methyl]-1-(3-hydroxyphenyl)cyclohexan-1-ol hydrochloride		
Structure			
Batch No.	-	CAS No.	185453-02-5 ; 80456-81-1 (free base)
Analysis Date	-	Retest Date	3
Mol. Formula	C ₁₅ H ₂₃ NO ₂ : HCl	Molecular Wt.	249.4 : 36.5
Long term Storage Condition	Store at 2-8 °C in well closed container		
Handling and Transit Condition	25-30 °C in well closed container		

Test	Result
Appearance	-
Solubility	-
¹ H-NMR	Conforms to structure
MASS	Conforms to structure
Chromatographic Purity	>90%

Note: This material should be used for research purpose and not for human or animal consumption. Any patent applicable for this product in any country is not applicable for this analytical standard/research chemical.

	Prepared By	Checked By	Approved By
Signature			
Date			

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