











## CERTIFICATE OF ANALYSIS

**Date:** 31-10-2025

<b>Product Name</b>	Tramadol EP Impurity D (HCl salt)				
Chemical Name	(1RS,2RS)-2-[(dimethylamino)methyl]-1-(3-hydroxyphenyl)cyclohexan-1-ol hydrochloride				
Structure	OH N	DH H——CI			
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	-
1H-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			

## CLEANCHEM LABORATORIES LLP