

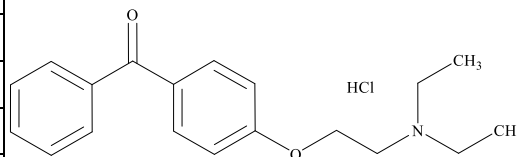
Certificate of Analysis

Certificate No.: 20200604023

Date: June 4, 2020

Retest date: June 2, 2023

Compound Name: Clomiphene Impurity 2 HCl	
Synonyms:	(4-(2-(diethylamino)ethoxy)phenyl)(phenyl)methanone, hydrochloride (1:1)
TLC Catalogue Number:	C-8221
CAS Number:	52047-56-0
Molecular Weight:	297.40 36.46
Molecular Formula:	C ₁₉ H ₂₃ NO ₂ . HCl
Source:	TLC Pharmaceutical Standards
Source Lot No.:	3851-081A3
Storage Conditions:	Store at 2-8 °C
Solubility:	Methanol, DMSO, DMF



Test Description	Specifications	Results
Visual Description	Off-white solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹ H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	99.8%
Impurity (HPLC)	RT 15.31, 0.17%	
Water Content (KF)	N/A	0.2%
Residual Solvents (NMR)	0.3% diethyl ether	
Assay (%)	Not less than 90.0%	99.3%
Recommendation:	Released.	

Name	Department	Signature	Date
Reviewed and approved by:	Analytical Services		
Approved by:	Quality Assurance		

Attachments: HPLC, IR, MS and NMR spectra.