

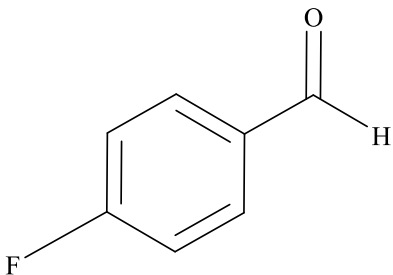
Certificate of Analysis

Certificate No.: 20210901013

Date: September 1, 2021

Retest date: August 30, 2024

Compound Name: Atorvastatin Impurity 54	
Synonyms:	4-fluorobenzaldehyde
TLC Catalogue Number:	A-1295
CAS Number:	459-57-4
Molecular Weight:	124.11
Molecular Formula:	C ₇ H ₅ FO
Source:	TLC Pharmaceutical Standards
Source Lot No.:	3866-057A1
Storage Conditions:	Protect from air, store at -20 °C
Solubility:	Methanol, DMSO, Acetonitrile



Test Description	Specifications	Results
Visual Description	Colorless clear liquid	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%	99.6%
Impurity (HPLC)	RT 6.69, 0.40%	
Residual Solvents (NMR)	No residual solvent	
Assay (qNMR)	Not less than 90.0%	96.9%
Recommendation:	Release. The sample for MS is derived with hydrazine hydrate. The compound is unstable and easily oxidized to 4-fluorobenzoic acid.	

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

Attachments: HPLC, IR, MS and NMR spectra.