



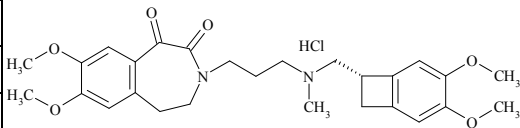
# TLC PHARMACEUTICAL STANDARDS

## Certificate of Analysis

Certificate No.: 20160329B

Date: March 29, 2016

Retest date: March 25, 2019

<b>Compound Name:</b> Ivabradine Impurity 15 HCl		
<b>TLC Catalogue Number:</b>	I-3030	
<b>CAS Number:</b>	1616710-50-9	
<b>Molecular Weight:</b>	482.58 36.46	
<b>Molecular Formula:</b>	C27H34N2O6. HCl	
<b>Source:</b>	TLC Pharmaceutical Standards	
<b>Source Lot No.:</b>	2196-032A5	
<b>Storage Conditions:</b>	Hygroscopic, store at 2-8 °C.	

Test Description	Specifications	Results
<b>Visual Description</b>	Pale yellow solid	<b>Conforms</b>
<b>Identification</b>		
MS	Conforms to structure	<b>Conforms</b>
<sup>1</sup> H NMR	Conforms to structure	<b>Conforms</b>
<b>Purity (HPLC)</b>	Not less than 98.0%	<b>99.0%</b>
<b>[α]<sub>D</sub><sup>25.0</sup> (c=0.50, CH3OH)</b>	No reference	<b>+3.0°</b>
<b>Recommendation:</b>	<b>Released.</b> The compound contains 3.1% 2-propanol according to its proton NMR.	

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

**Attachments:** HPLC, MS and NMR spectra.