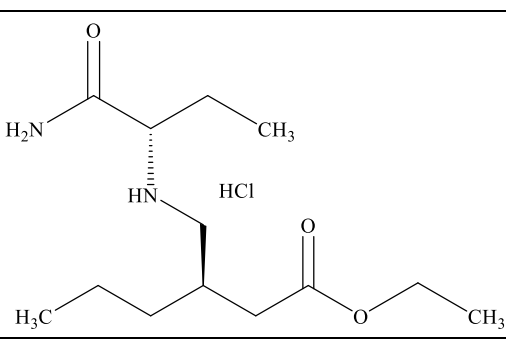


# Certificate of Analysis

Certificate No.: 20200826009

Date: August 26, 2020

Retest date: August 19, 2023

<b>Compound Name:</b>	<b>Brivaracetam Impurity 7 HCl</b>	
<b>Synonyms:</b>	ethyl (R)-3-(((S)-1-amino-1-oxobutan-2-yl)amino)methyl)hexanoate, hydrochloride (1:1)	
<b>TLC Catalogue Number:</b>	B-105013	
<b>CAS Number:</b>	357338-46-6	
<b>Molecular Weight:</b>	258.36 36.46	
<b>Molecular Formula:</b>	C <sub>13</sub> H <sub>26</sub> N <sub>2</sub> O <sub>3</sub> · HCl	
<b>Source:</b>	TLC Pharmaceutical Standards	
<b>Source Lot No.:</b>	3944-052A10	
<b>Storage Conditions:</b>	Store at 2-8 °C	
<b>Solubility:</b>	DMSO, Water	

Test Description	Specifications	Results
<b>Visual Description</b>	White to off-white solid	<b>Conforms</b>
<b>Identification</b>		
<b>IR</b>	Conforms to structure	<b>Conforms</b>
<b>MS</b>	Conforms to structure	<b>Conforms</b>
<b><sup>1</sup>H NMR</b>	Conforms to structure	<b>Conforms</b>
<b>Purity (HPLC)</b>	Not less than 95.0%	<b>100.0%</b>
<b>Impurity (HPLC)</b>	N/A	
<b>Water Content (KF)</b>	N/A	<b>1.0%</b>
<b>Optical Rotation</b>	N/A	$[\alpha]_D^{25.0}(c=0.47, H_2O): +6.1^\circ$
<b>Residual Solvents (NMR)</b>	No residual solvent	
<b>Assay (%)</b>	Not less than 90.0%	<b>99.0%</b>
<b>Recommendation:</b>	<b>Released.</b>	

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

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