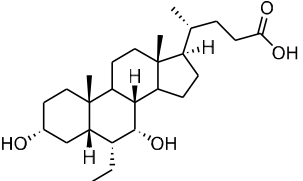


# Certificate of Analysis

<b>Compound Name</b>	Obeticholic acid		
<b>CAS No.</b>	459789-99-2	<b>Manufacturing Date</b>	2020-02-10
<b>Batch No.</b>	20200201	<b>Re-test Date</b>	2022-02-09
<b>Batch quantity</b>	5kg	<b>Reference Standard</b>	In-house
<b>Structure</b>			

Items	Specifications	Results
<b>Appearance</b>	White powder	Conforms
<b>Loss on drying</b>	3.0%~4.5%	1.6%
<b>Residue on ignition</b>	NMT 0.2%.	0.05%
<b>Identification</b>	1H NMR spectrum of sample corresponds to that of standard preparation	Conforms
	MS spectrum of sample corresponds to that of standard preparation	Conforms
	The retention time of the major peak in the chromatogram of sample corresponds to that in the chromatogram of standard preparation	Conforms
<b>Solubility</b>	70 mg/mL in DMSO	Conforms
	5 mg/mL in H2O	Conforms
<b>Residual Solvent</b>	Ethanol: NMT 5000ppm	N.D
<b>Heavy Metal</b>	NMT 20ppm	Conforms
<b>Max Single impurity</b>	NMT 0.2%	0.19%
<b>Total impurity</b>	NMT 1.0%	0.48%
<b>Particle size</b>	D90: NMT 20um	Conforms
<b>Assay (HPLC)</b>	99.0%~101.0%	99.40%

**Storage condition: Store in a tightly closed container, at controlled 25°C.**

**Analyst: Lee**

**Checker: Sue**

**QA Approved :ChenSheng**

SHANGHAI HOPE-CHEM CO., LTD