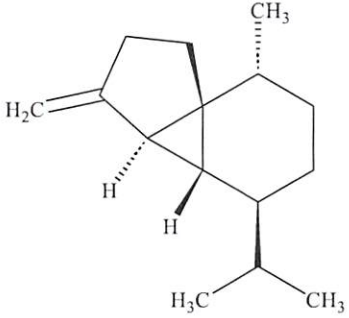


# Certificate of Analysis


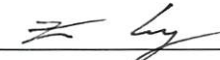
Certificate No.: 20251226029

Date: December 26, 2025

Retest date: December 24, 2028

<b>Compound Name:</b>	(-)-beta-Cubebene		
<b>Synonyms:</b>	(3aS,3bR,4S,7R,7aR)-4-isopropyl-7-methyl-3-methyleneoctahydro-1H-cyclopenta[1,3]cyclopropa[1,2]benzene		
<b>TLC Catalogue Number:</b>	S-178004		
<b>CAS Number:</b>	13744-15-5		
<b>Alternate CAS Number:</b>	N/A		
<b>Molecular Weight:</b>	204.36		
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>24</sub>		
<b>Source:</b>	TLC Pharmaceutical Standards		
<b>Source Lot No.:</b>	7198-088A3		
<b>Storage Conditions:</b>	Store at 2-8 °C		
<b>Solubility:</b>	Methanol, DMSO, Acetonitrile		

Test Description	Specifications	Results
<b>Visual Description</b>	Colorless liquid	<b>Conforms</b>
<b>Identification</b>		
IR	Conforms to structure	<b>Conforms</b>
MS	Conforms to structure	<b>Conforms</b>
<sup>1</sup> H NMR	Conforms to structure	<b>Conforms</b>
<b>Purity (GC)</b>	Not less than 95.0%	<b>99.2%</b>
<b>Impurity (GC)</b>	RT 9.89, 0.24%; RT 10.68, 0.15%; RT 11.06, 0.20%	
<b>Water Content (KF)</b>	N/A	<b>0.1%</b>
<b>Optical Rotation</b>	N/A	$[\alpha]_D^{25.0}(c=0.37, CH_3OH): -68.0^\circ$
<b>Residual Solvents (NMR)</b>	0.6% <i>n</i> -hexane	
<b>Assay (%)</b>	Not less than 90.0%	<b>98.5%</b>
<b>Recommendation:</b>	<b>Release.</b>	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		01/02/2026
Approved by:	Quality Assurance		01/02/2026

**Attachments:** Peak Attribution Table, Assay Calculation, GC, IR, MS and NMR spectra.