



CERTIFICATE OF ANALYSIS

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1. Identification

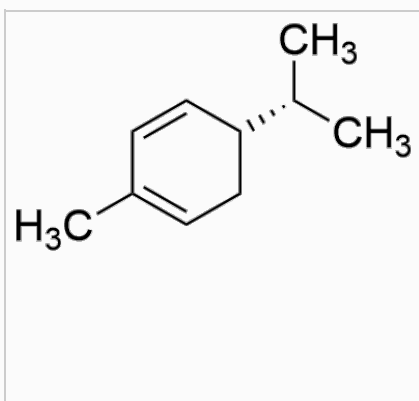
Catalogue Number: P294570

CAS Number: 4221-98-1

Product: (R)- α -Phellandrene (Technical Grade)

Synonym: (5R)-2-Methyl-5-(1-methylethyl)-1,3-cyclohexadiene; (R)-(-)-p-Mentha-1,5-diene; (-)-(R)- α -Phellandrene; (-)- α -Phellandrene; (R)-(-)- α -Phellandrene; l- α -Phellandrene

Structure:



Molecular Formula:

C₁₀H₁₆

Molecular weight:

136.13

Source of Product:

N/A

Solubility:

Benzene (Soluble),
Chloroform (Slightly),
Methanol (Sparingly)

Lot Number: 2023-JPO-363

Purity: Technical Grade

Shipping Condition: This Product Is Stable To Be Shipped At Room Temperature

Storage Condition: 4°C

2. Warning

Warning 1:

Warning 2:

Warning 3:

3. Analytical Information

Tests:	Specifications:	Results:
Appearance	Colourless Oil	Clear Colourless Oil
NMR	Conforms to Structure	Conforms
C NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 87.92, %H: 12.27
MS	Conforms to Structure	Conforms
Specific Rotation	Report Result	-183.5° (c = 0.6, Chloroform)

Additional Information: N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of $\pm 2\%$. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
swathi reddy	Toni Rantanen	Chanell Chu	9/12/2023	9/10/2027