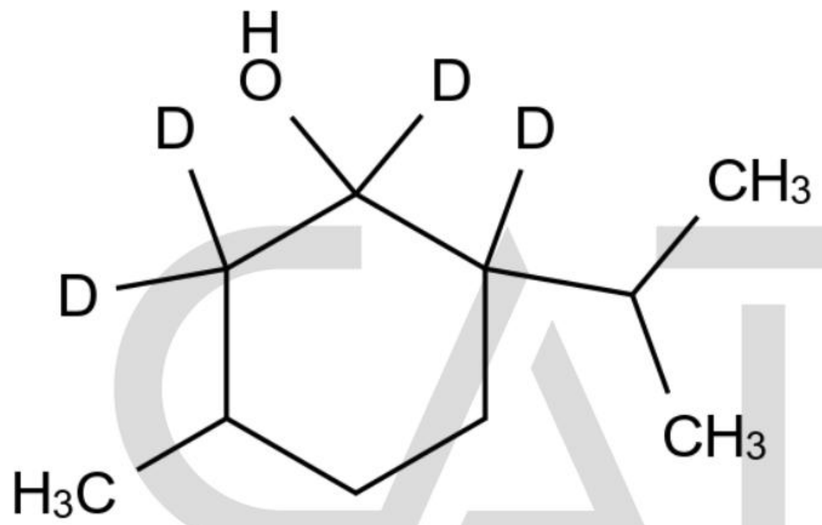
Certificate of Analysis

Reference Material & Standard

Product Name:	Menthol-d4 (mixture of diastereomers)	**Catalogue Number:**	C1130231
Synonyms:	N/A	**Lot Number:**	1016-RH-0006
CAS Number:	1217765-02-0	**Expiry Date:**	Sep 07, 2033
Molecular Formula:	$C_{10}H_{16}D_4O$	**Storage:**	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	160.29	**Shipping Condition:**	Shipping at Room Temperature
		Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Clear Colourless Oil
Identification	HRMS&CNMR&HNMR	Confirmed
Chemical Purity	GC	99.4%
Isotopic Purity		98.8%
Uncertainty		±0.1%

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Comment:

The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by: Lisa Date: Oct 19, 2026

Reviewed by: Hinlam Date: Oct 19, 2026

Approved by General Manager: David Date: Oct 19, 2026

CATO Research Chemicals Inc.