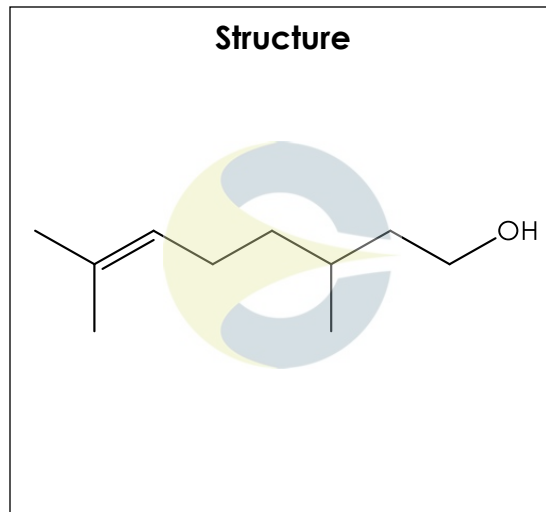


Certificate of Analysis
For Laboratory Use Only

PRODUCT NAME	DL-Citronellol
PART NUMBER	00003668
STANDARD TYPE	Analytical Standard (AS)
LOT NUMBER	00003668-M01
REPORT NUMBER	CDXA-RSS-3661-02
SAMPLE NUMBER	CDXA-09-4223
DATE OF SAMPLE	09/08/2009
DATE OF RE-EVALUATION	10/02/2014 (1 st); 08/07/2019 (2 nd)
DATE OF REPORT	09/16/2019



CHEMICAL NAMES	3,7-Dimethyl-6-octen-1-ol; (±)-Citronellol; 2,6-Dimethyl-2-octen-8-ol; 2,3-Dihydrogeraniol; Dihydrogeraniol
CHEMICAL FORMULA	C ₁₀ H ₂₀ O
MOLECULAR WEIGHT (MW)	156.27
CHEMICAL FAMILY	Oils
CAS NUMBER	[106-22-9]
EC#(EINECS)	203-375-0
RTECS	RH3400000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
GC	0.700-10.2 Meth 140	NA	97.5%
Mass Spectrum	0.700-10.2 Meth 140	Conforms	Conforms
Appearance	NA	NA	Clear liquid

STORAGE CONDITIONS

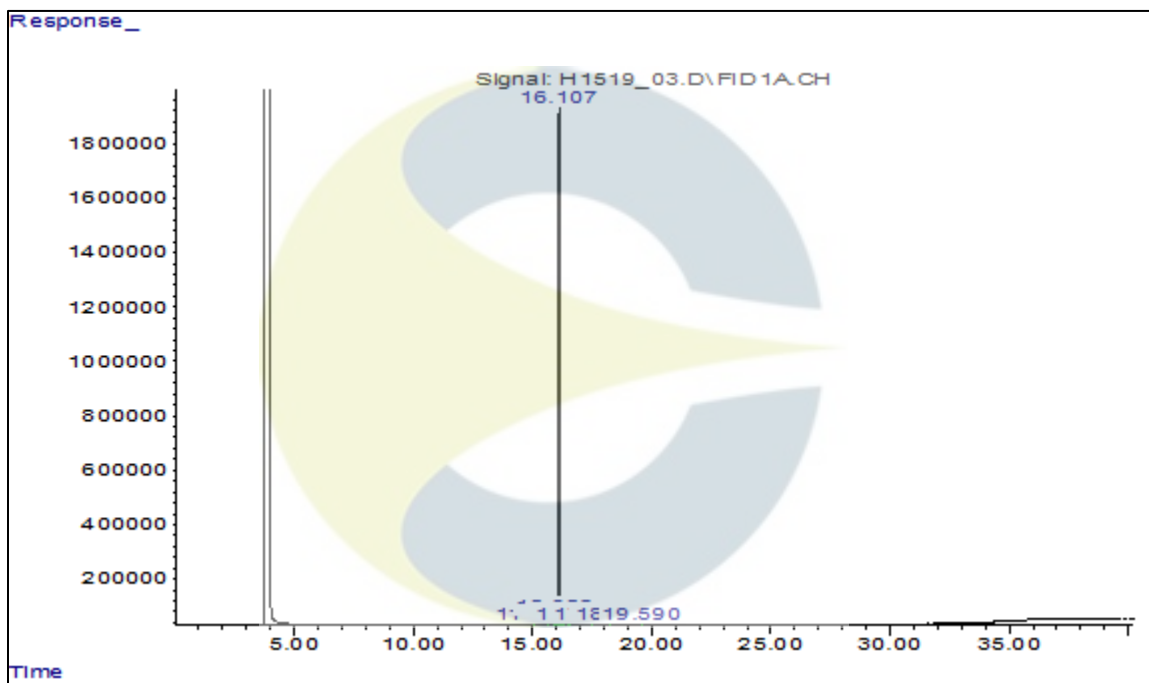
STORAGE	+4 °C in a dry place.
EXPIRATION DATE	08/2024 under the above conditions.

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ANALYTICAL CONDITIONS

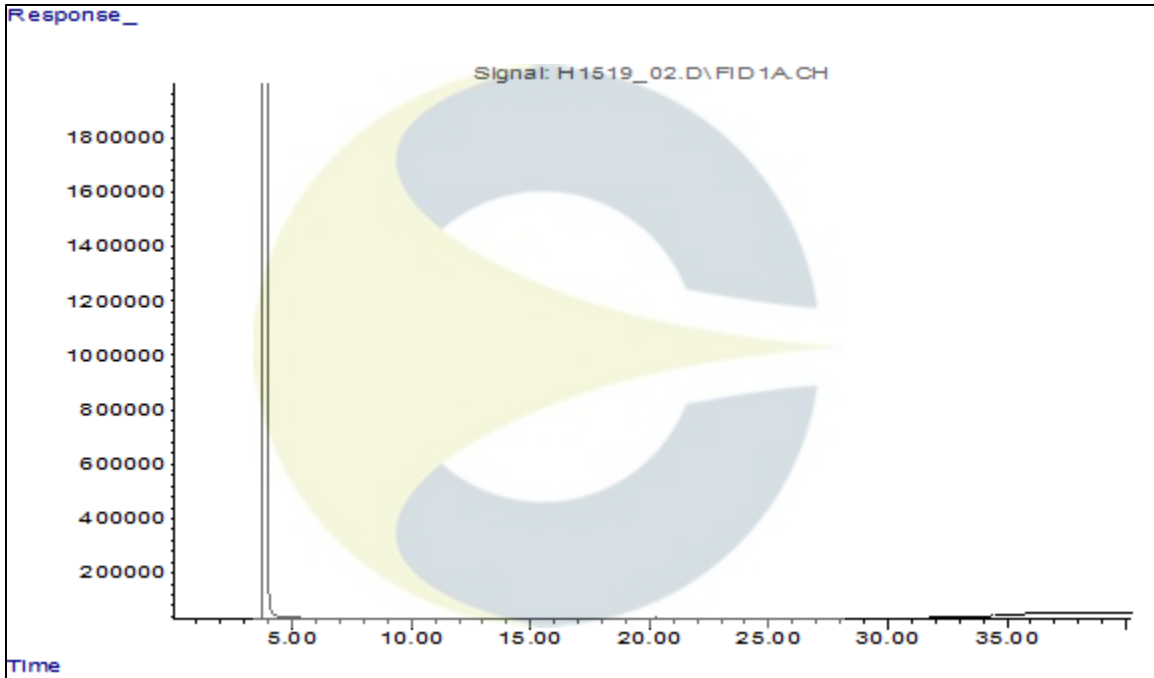
INSTRUMENT	AGILENT 6890N WITH FLAME IONIZATION DETECTOR (FID) AND AGILENT 5973N MASS SELECTIVE DETECTOR (MSD)
COLUMN	Phenomenex Zebron ZB-5HT Inferno, 30 m x 0.32 mm x 0.25 µm; connected to an MXT Y-union, connected to a Restek Siltek deactivated guard column: 10 m x 0.25 mm to FID; and an Agilent 5.0 m x 100 µm transfer line to MSD.
CARRIER GAS	Helium
COLUMN TEMP.	Isothermic 40 °C for 5.0 minutes, then increasing at 10.0 °C/minute to 340 °C. Hold at 340 °C for 5.0 minutes.
FLOW RATE	2.0 mL/minute
INJECTOR TEMP.	300 °C
INJECTOR SPLIT RATIO	20:1
INJECTION VOL.	1.0 µL
INJECTION CONC.	1.4 mg/mL in Isopropyl alcohol
DETECTION	FID (350 °C) & MSD (Interface: 300 °C, Source: 250 °C, Quad: 200 °C)

GC CHROMATOGRAM OF DL-CITRONELLOL (CDXA-09-4223)

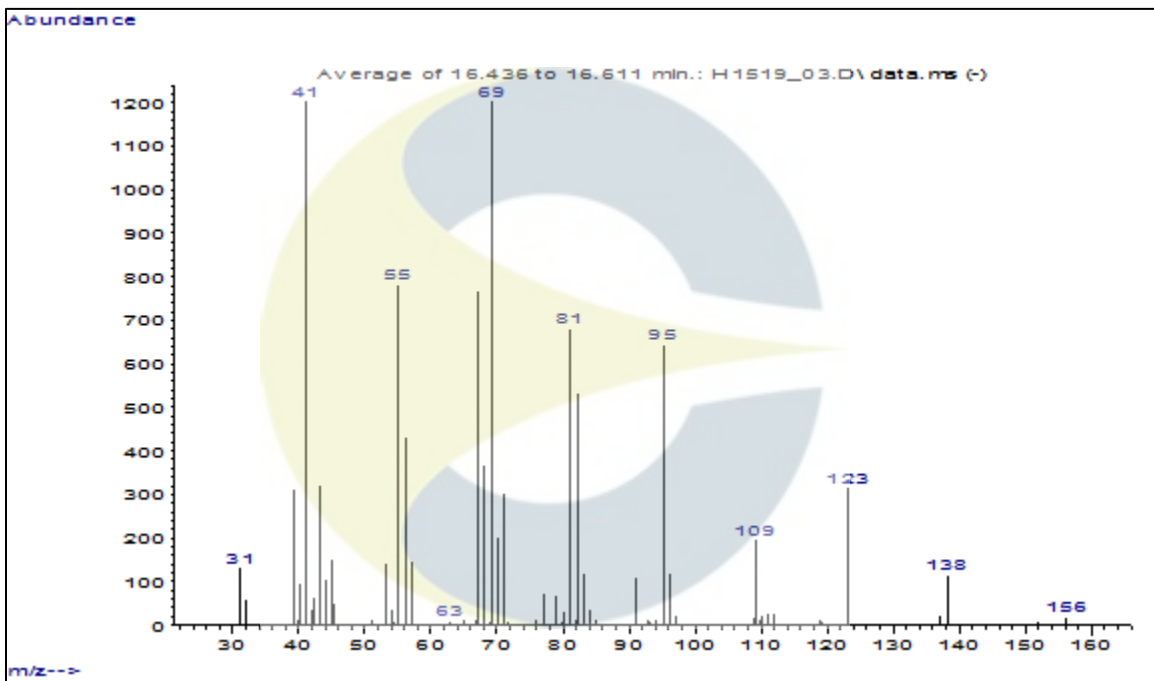


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GC CHROMATOGRAM OF DILUENT BLANK



MASS SPECTRUM OF DL-CITRONELLOL (CDXA-09-4223)



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REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	10/20/2009	New report
01	11/26/2014	Passed re-evaluation by GC-FID. Extended expiration date, updated structure.
02	09/16/2019	Material passed re-evaluation by GCMS/FID. Updated expiration date, chromatograms, spectra, Analytical Conditions, Analytical Method and Results.

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