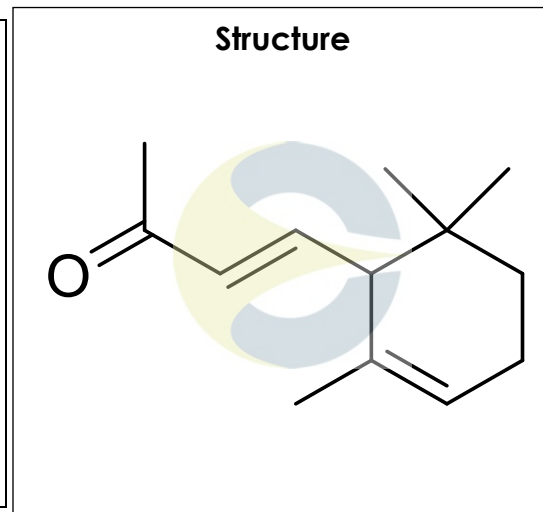


Certificate of Analysis

For Laboratory Use Only

PRODUCT NAME	alpha-Ionone
PART NUMBER	00009151
STANDARD TYPE	Analytical Standard (AS)
LOT NUMBER	00009151-MLI
REPORT NUMBER	CDXA-RSS-2775-02
SAMPLE NUMBER	CDXA-08-1008
DATE OF SAMPLE	05/14/2008
DATE OF RE-EVALUATION	05/14/2014 (1 st); 01/03/2020 (2 nd)
DATE OF REPORT	01/22/2020



CHEMICAL NAMES	(3E)-4-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-3-buten-2-one; α -Cyclocitrylideneacetone
CHEMICAL FORMULA	C ₁₃ H ₂₀ O
MOLECULAR WEIGHT (MW)	192.30
CHEMICAL FAMILY	Monoterpenes
CAS NUMBER	[127-41-3]
EC#(EINECS)	204-841-6
RTECS	EN0525000

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
GC	0.700.10.2.METH140	NA	96.3%
Mass Spectrum	0.700.10.2.METH140	Conforms	Conforms
Appearance	NA	NA	Liquid

STORAGE CONDITIONS

STORAGE	Room Temperature in a dry place.
EXPIRATION DATE	01/2025 under the above conditions.

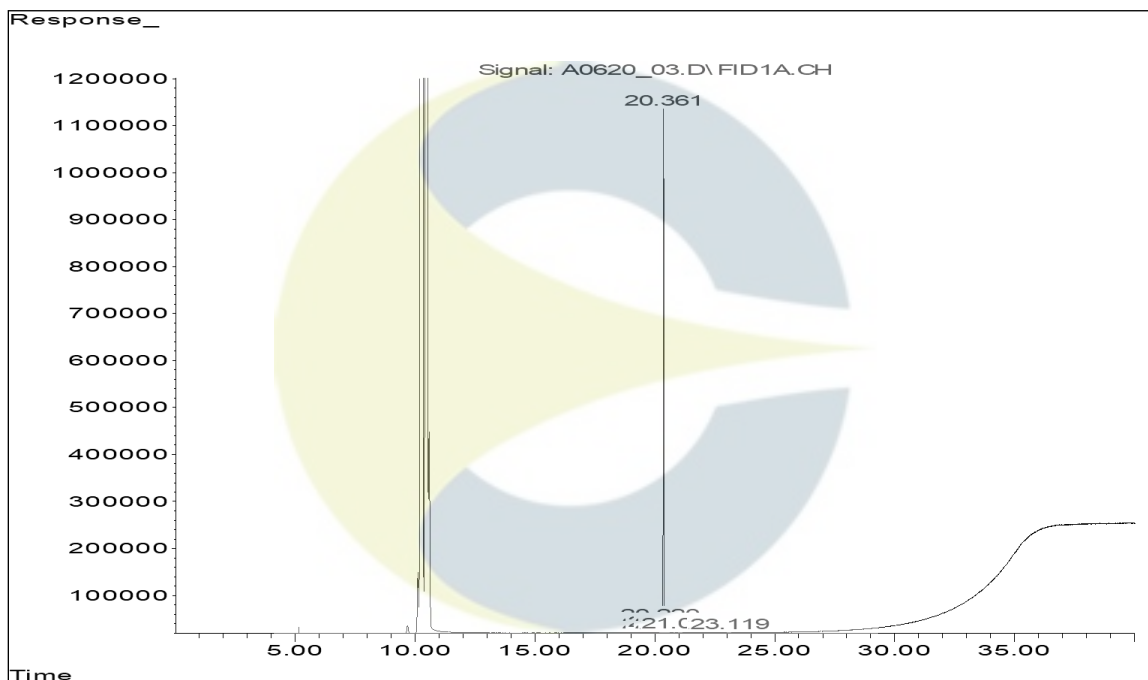
This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.

Certificate of Analysis

For Laboratory Use Only

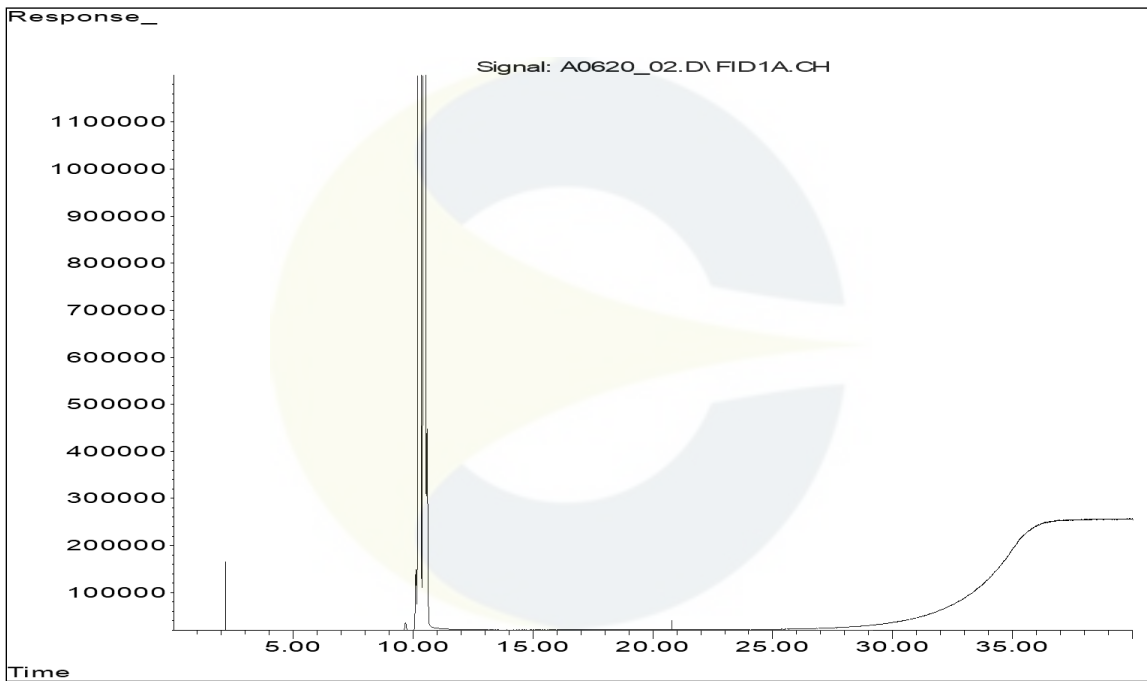
ANALYTICAL CONDITIONS

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 a 5 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.	2.8 mg/mL in CHCl ₃ : n-Hexane (50:50)
DETECTION	FID (350 °C) & MSD (Transfer line 300 °C, Source 250 °C, Quad 200 °C)

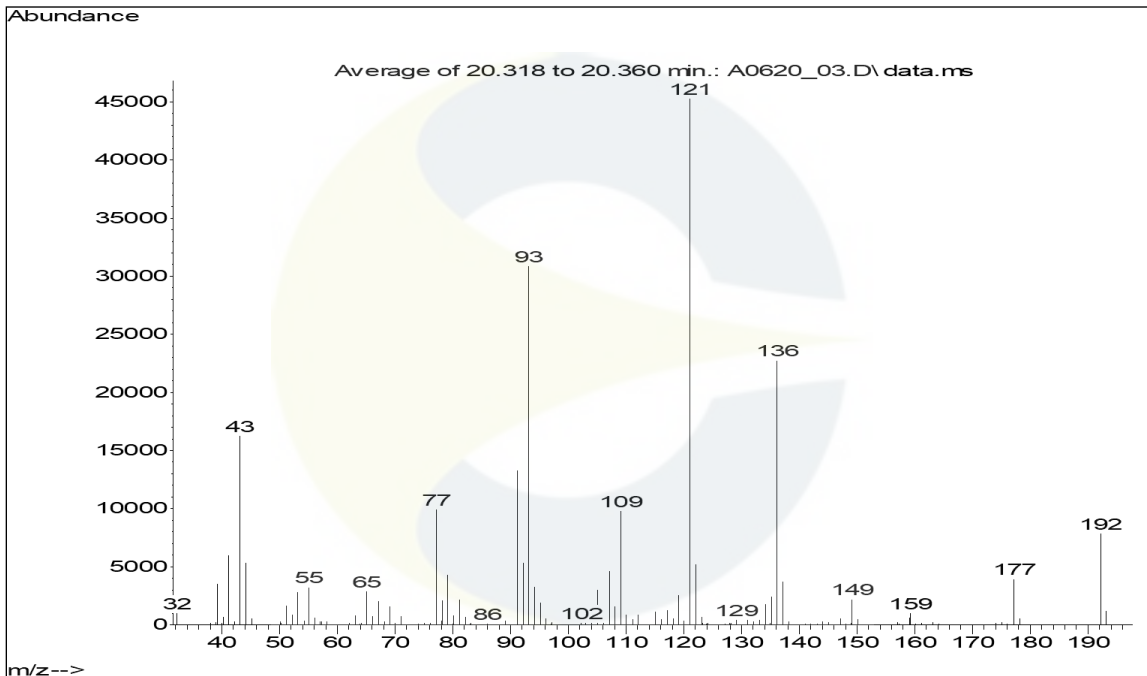
GC CHROMATOGRAM OF ALPHA-IONONE (CDXA-08-1008)


This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.

GC CHROMATOGRAM OF DILUENT BLANK



MASS SPECTRUM OF ALPHA-IONONE (CDXA-08-1008)



This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	07/22/2008	New report
01	06/05/2014	Material passed re-evaluation. Updated expiration date.
02	01/2/2020	Passed re-evaluation, removed melting point, updated method, chemical family, expiration date, chromatograms, and spectrum.

This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.