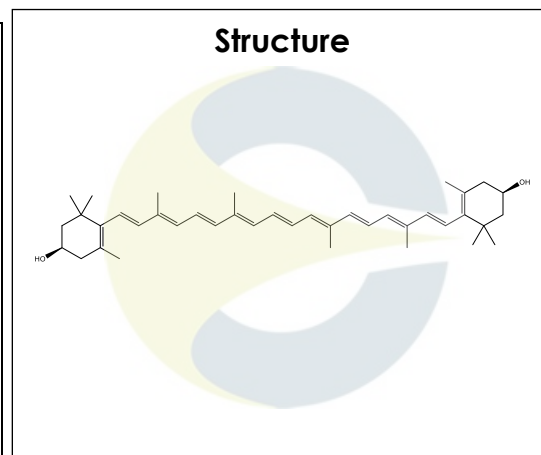


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PRODUCT NAME	Zeaxanthin
PART NUMBER	00026504
STANDARD TYPE	Primary (P)
LOT NUMBER	00026504-3E1
REPORT NUMBER	CDXA-RSS-9285-01
SAMPLE NUMBER	CDXP-20-00956
DATE OF SAMPLE	01/15/2021
DATE OF REPORT	03/23/2021



CHEMICAL NAMES	(3R,3'R)-all-trans-β-Carotene-3,3'-diol; (3R,3'R)-Zeaxanthin; Zeaxanthol; all-trans-Zeaxanthin
CHEMICAL FORMULA	C ₄₀ H ₅₆ O ₂
MOLECULAR WEIGHT (MW)	568.87
CHEMICAL FAMILY	Carotenoids
CAS NUMBER	[144-68-3]
EC#(EINECS)	205-636-4
RTECS	FI0329850

ANALYTICAL RESULTS

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	97.2%
HPLC	0.700.10.2.METH72	≥ 90%	97.7%
NMR	0.700.12.4	Conforms to structure	Conforms to structure
Mass Spectrum	0.700.12.27	Conforms	Conforms
Residual Solvent*	USP <467>	NA	Ethyl Acetate - 2700 ppm Methylene Chloride - 2390 ppm
Water	0.700.12.37	NA	ND
Appearance	NA	NA	Purple/Red powder

*Testing performed at an ISO 17025 accredited subcontracted laboratory.

ADJUSTED PURITY: 97.2% IS BASED ON (100 - 0.5 SOLVENTS - 0.0 WATER) X 97.7% HPLC

STORAGE CONDITIONS

STORAGE	-80 °C in a dry place.
EXPIRATION DATE	01/2024 under the above conditions.

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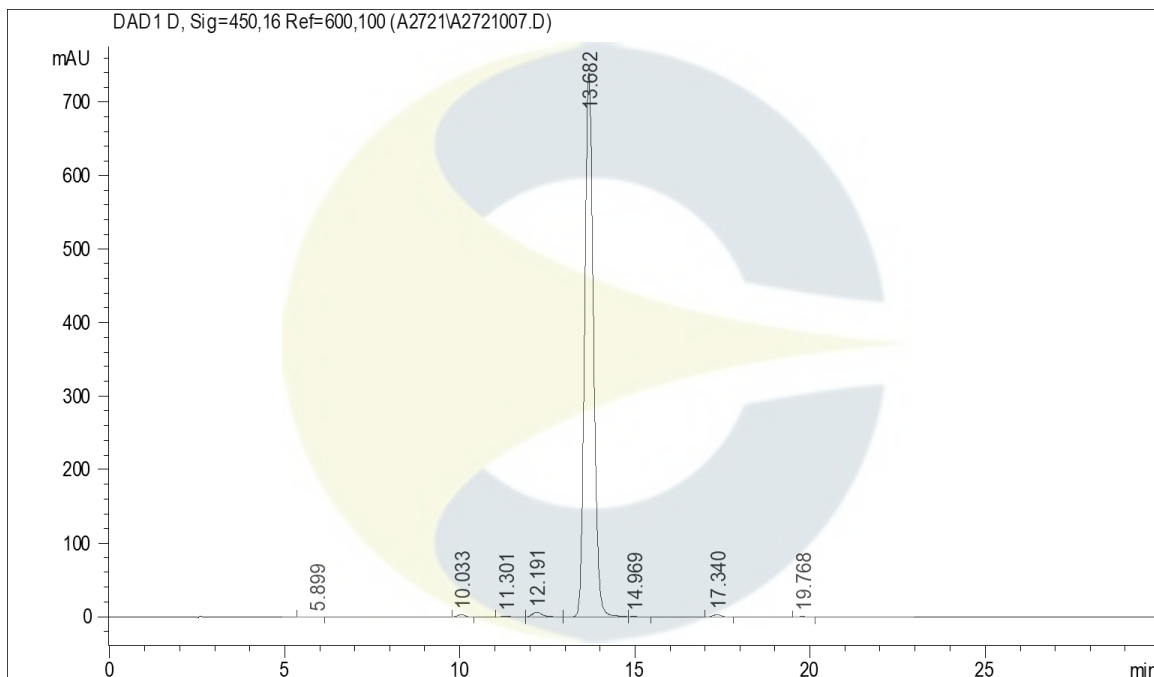
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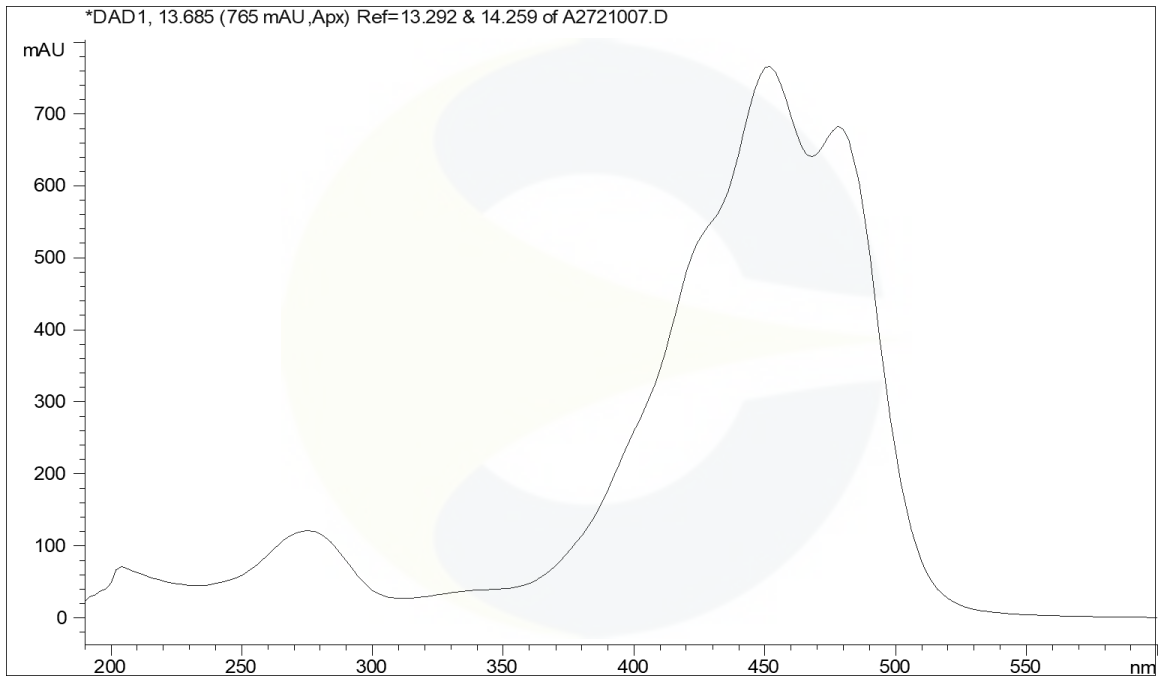
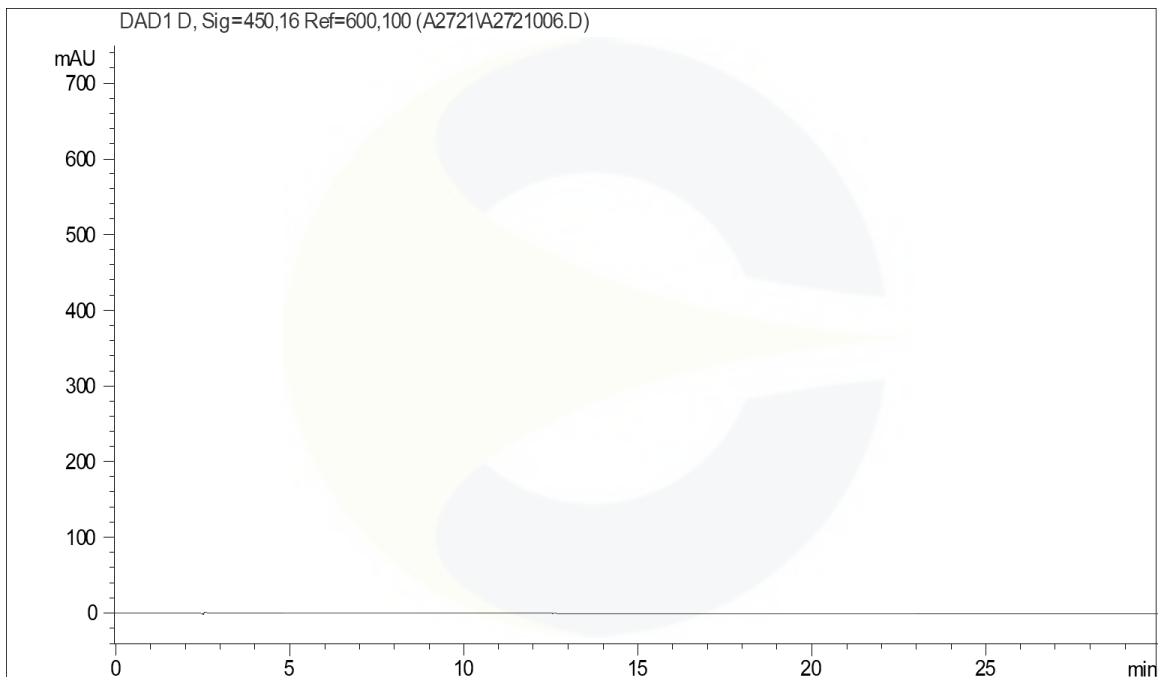
ANALYTICAL CONDITIONS

INSTRUMENT	AGILENT 1100 HPLC UV-VIS (DAD); AB-SCIEX 6600 TRIPLE TOF
COLUMN	YMC Carotenoids 250 x 4.6 mm, 3 µm particle size
MOBILE PHASE	A – Methanol: Methyl t-Butyl ether: Ultrapure water [81:15:4], B – Methanol: Methyl t-Butyl ether: Ultrapure water [7:90:3]; 0% B increasing to 50% B over 25 minutes. Hold at 50% B for 4 minutes. Return to 0% B over 1 minute.
COLUMN TEMP.	15 °C
FLOW RATE	1.2 mL/minute
INJECTION VOL.	1.0 µL
INJECTION CONC.	1.2 mg/mL in Chloroform
DETECTION	450 ± 8 nm

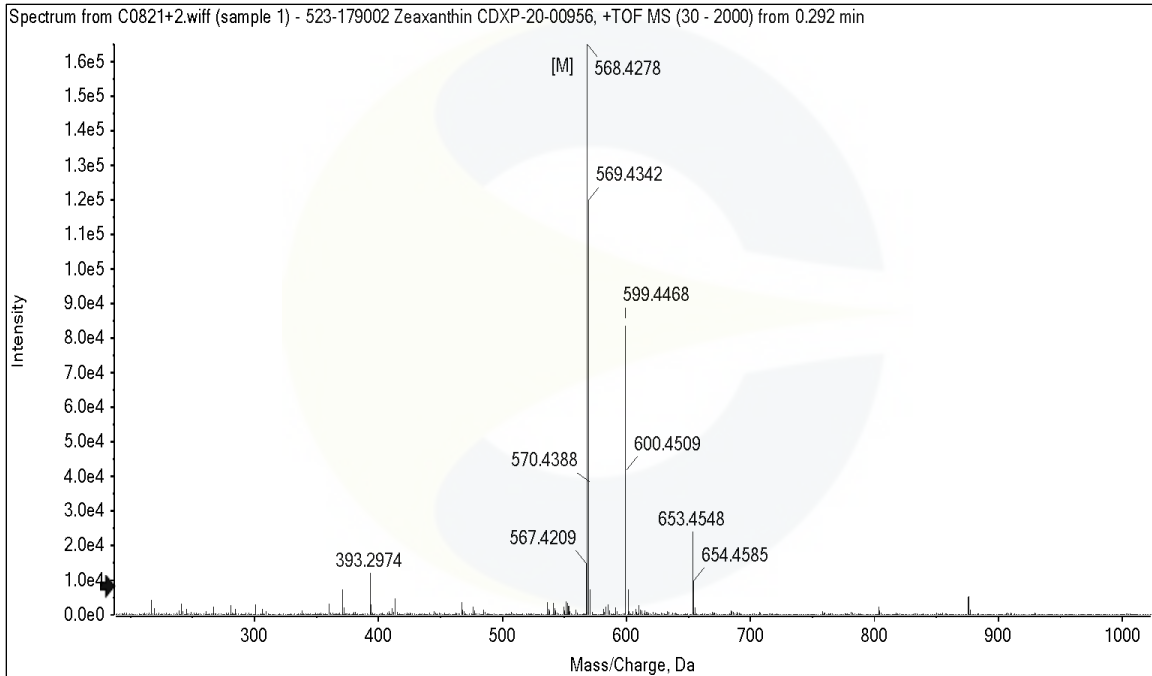
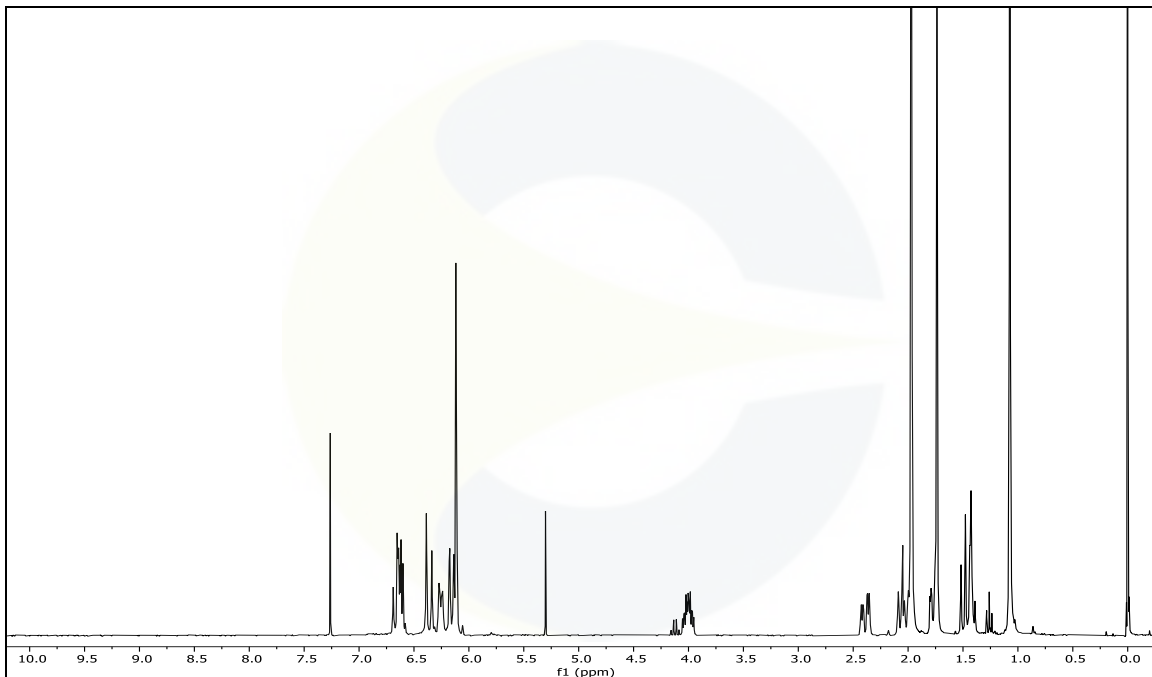
HPLC CHROMATOGRAM OF ZEAXANTHIN (CDXP-20-00956)



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UV SPECTRUM AT RT = 13.7 MINUTES

HPLC CHROMATOGRAM OF DILUENT BLANK


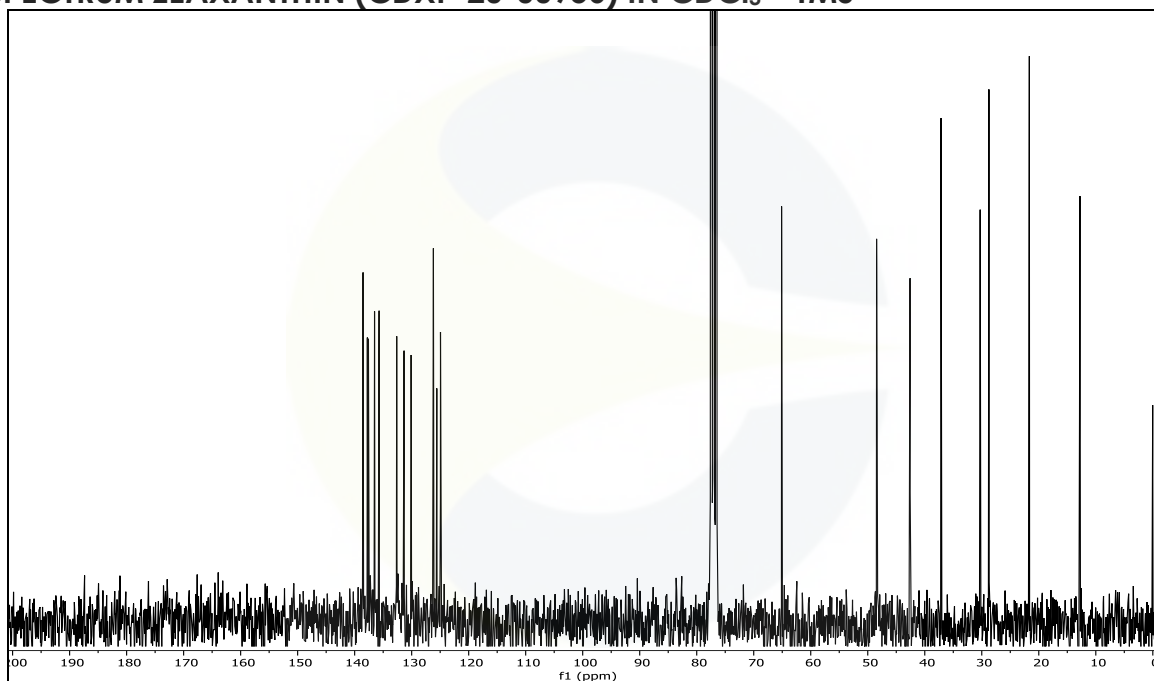
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MASS SPECTRUM OF ZEAXANTHIN (CDXP-20-00956)

¹H-NMR SPECTRUM OF ZEAXANTHIN (CDXP-20-00956) in CDCl₃ + TMS


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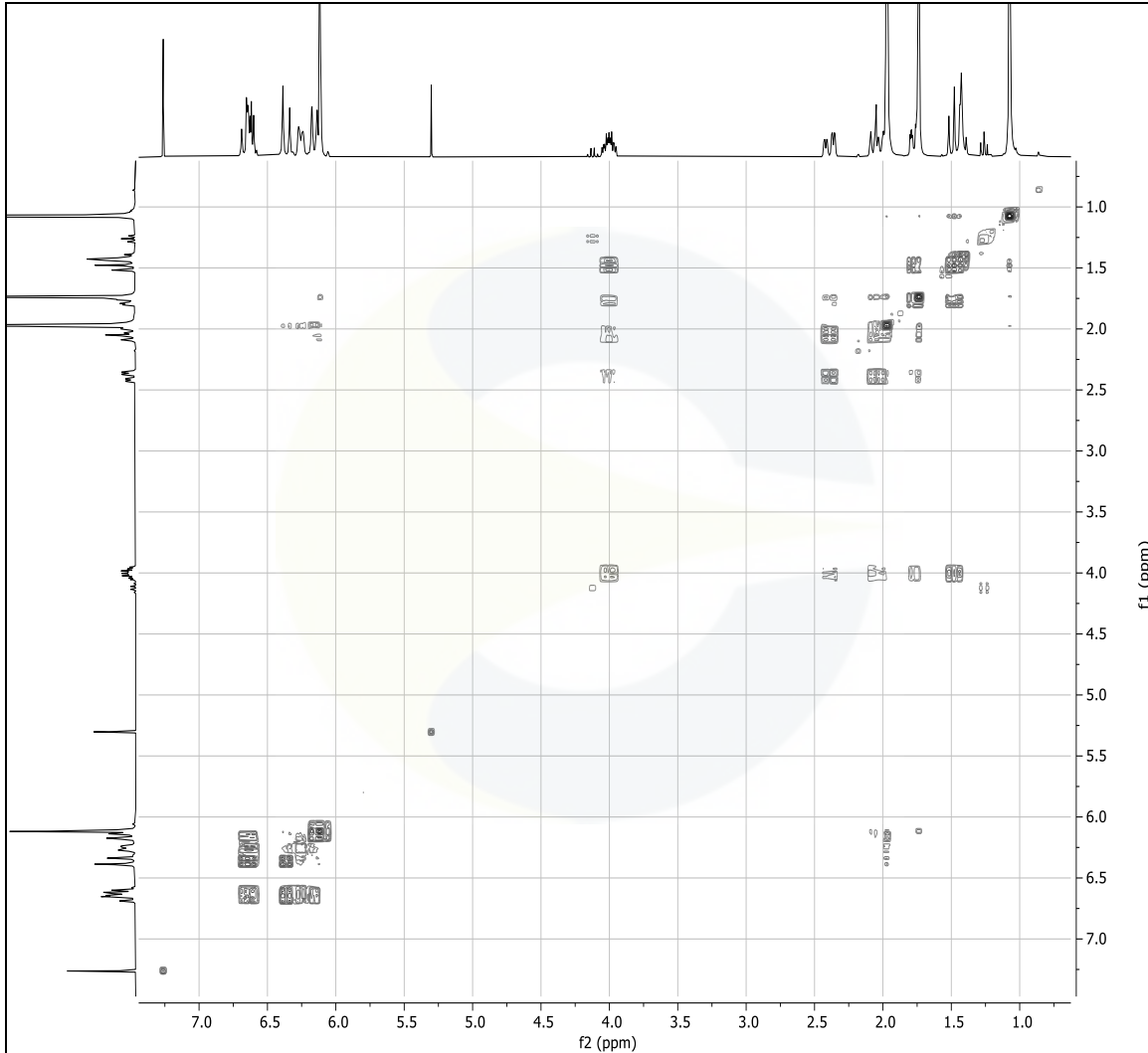
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¹³C-NMR SPECTRUM ZEAXANTHIN (CDXP-20-00956) IN CDCl₃ + TMS

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COSY-NMR SPECTRUM OF ZEAXANTHIN (CDXP-20-00956) IN CDCl₃ + TMS

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	03/11/2021	New report
01	03/23/2021	Corrected expiration date

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