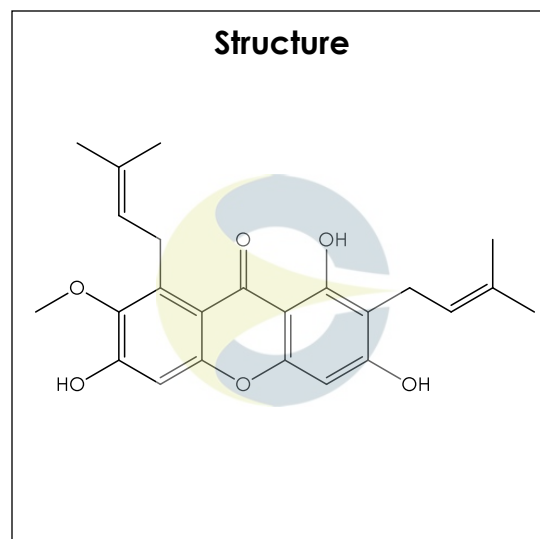


**Certificate of Analysis**

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<b>PRODUCT NAME</b>	alpha-Mangostin
<b>PART NUMBER</b>	00013096
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00013096-122
<b>REPORT NUMBER</b>	CDXA-RSS-1264-02
<b>SAMPLE NUMBER</b>	CDXA-11-0679
<b>DATE OF SAMPLE</b>	11/09/2006
<b>DATE OF RE-EVALUATION</b>	02/22/2011 (1 <sup>st</sup> ); 02/26/2015 (2 <sup>nd</sup> ); 05/14/2019 (3 <sup>rd</sup> )
<b>DATE OF REPORT</b>	06/03/2019



<b>CHEMICAL NAMES</b>	1,3,6-Trihydroxy-7-methoxy-2,8-bis(3-methyl-2-buten-1-yl)-9H-xanthen-9-one; $\alpha$ -Mangosten
<b>CHEMICAL FORMULA</b>	C <sub>24</sub> H <sub>26</sub> O <sub>6</sub>
<b>MOLECULAR WEIGHT (MW)</b>	410.46
<b>CHEMICAL FAMILY</b>	Xanthenes
<b>CAS NUMBER</b>	[6147-11-1]
<b>EC#(EINECS)</b>	683-120-1
<b>RTECS</b>	ZD6122420

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	94.6%
HPLC	99.1-04-1.0-000684	NA	94.6%
NMR	99.1-CD-1.0-000122	Conforms to structure	Conforms to structure
Mass Spectrum	Direct Infusion, ESI (+)	Conforms	Conforms
Residual Solvent	99.1-CD-4.0-000115	NA	ND
Water	99.1-04-10.0-000094	NA	ND
Appearance	NA	NA	Yellow powder

ADJUSTED PURITY: 94.6% IS BASED ON (100 - 0.0 SOLVENTS - 0.0 WATER) X 94.6% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	Room Temperature in a dry place.
<b>EXPIRATION DATE</b>	05/2024 under the above conditions.

**Matthew Thibault**  
 Digitally signed by Matthew Thibault  
 Date: 2019.06.03 08:45:54 -06'00'

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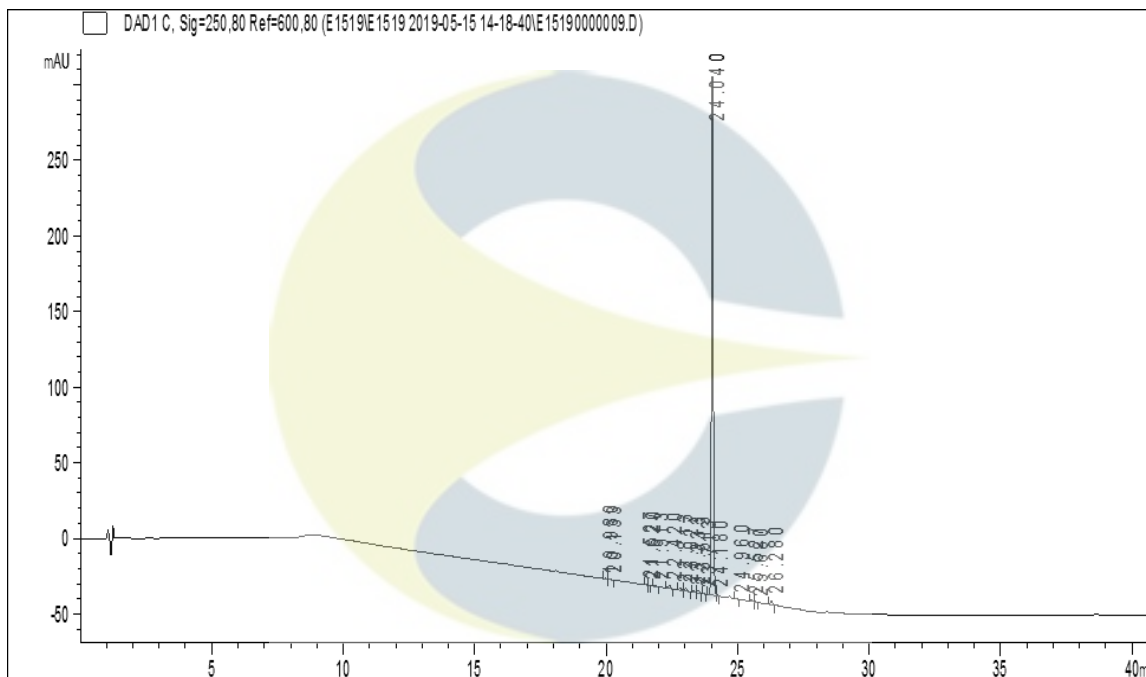
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## ANALYTICAL CONDITIONS

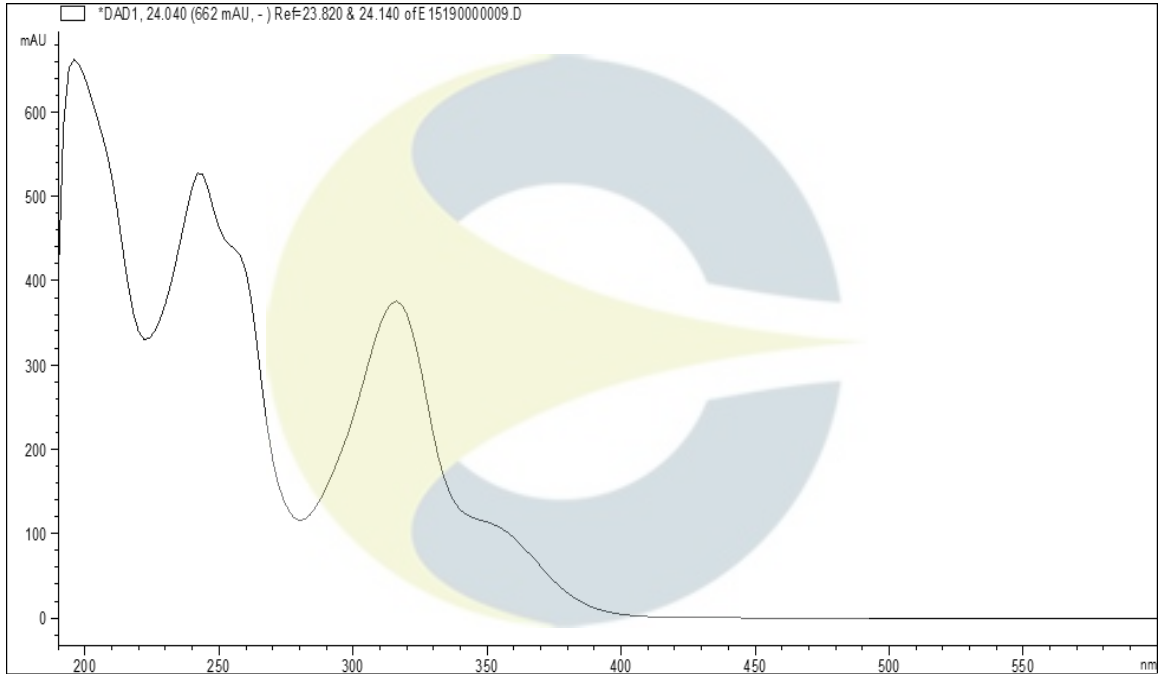
<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); AGILENT 6510 QTOF
<b>COLUMN</b>	Phenomenex Luna C18(2) 150 x 2.00 mm, 5 μm particle size
<b>MOBILE PHASE</b>	A - 0.1% Trifluoroacetic acid in Ultrapure water, B - Acetonitrile; Isocratic 5% B for 5 minutes, then increasing to 95% B over 20 minutes. Hold at 95% B for 15 minutes.
<b>COLUMN TEMP.</b>	60 °C
<b>FLOW RATE</b>	0.4 mL/minute
<b>INJECTION VOL.</b>	0.2 μL
<b>INJECTION CONC.</b>	1.1 mg/mL in Methanol
<b>DETECTION</b>	250 ± 40 nm

## HPLC CHROMATOGRAM OF ALPHA-MANGOSTIN (CDXA-11-0679)

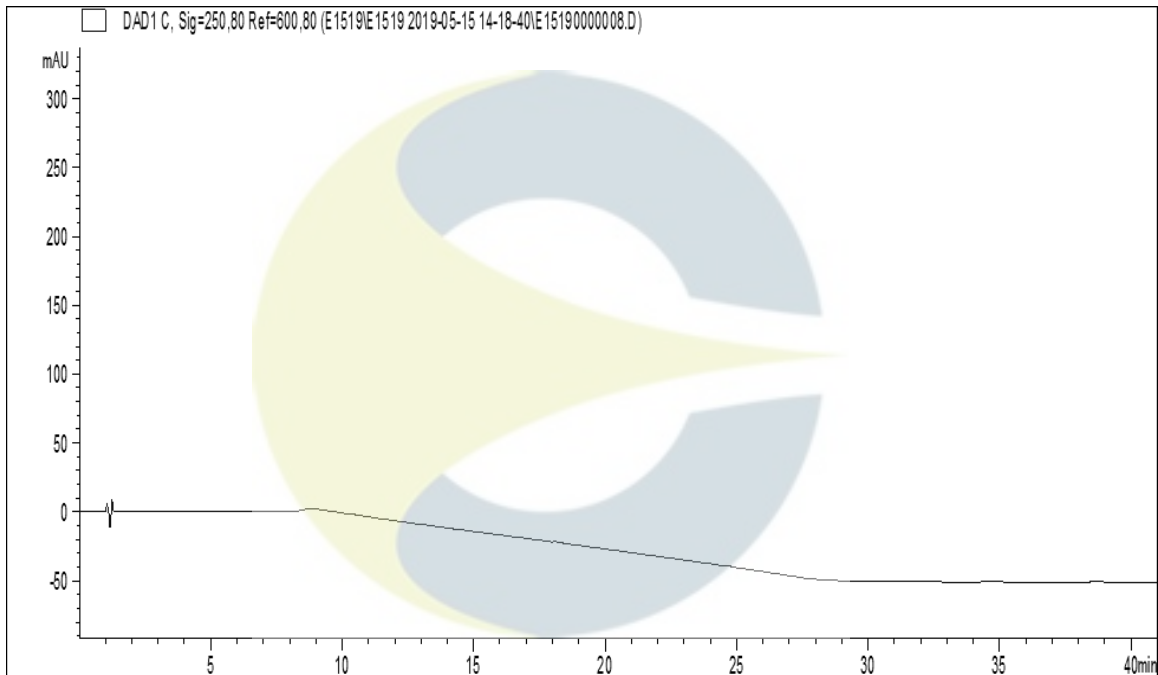


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**UV SPECTRUM AT RT = 24.0 MINUTES**

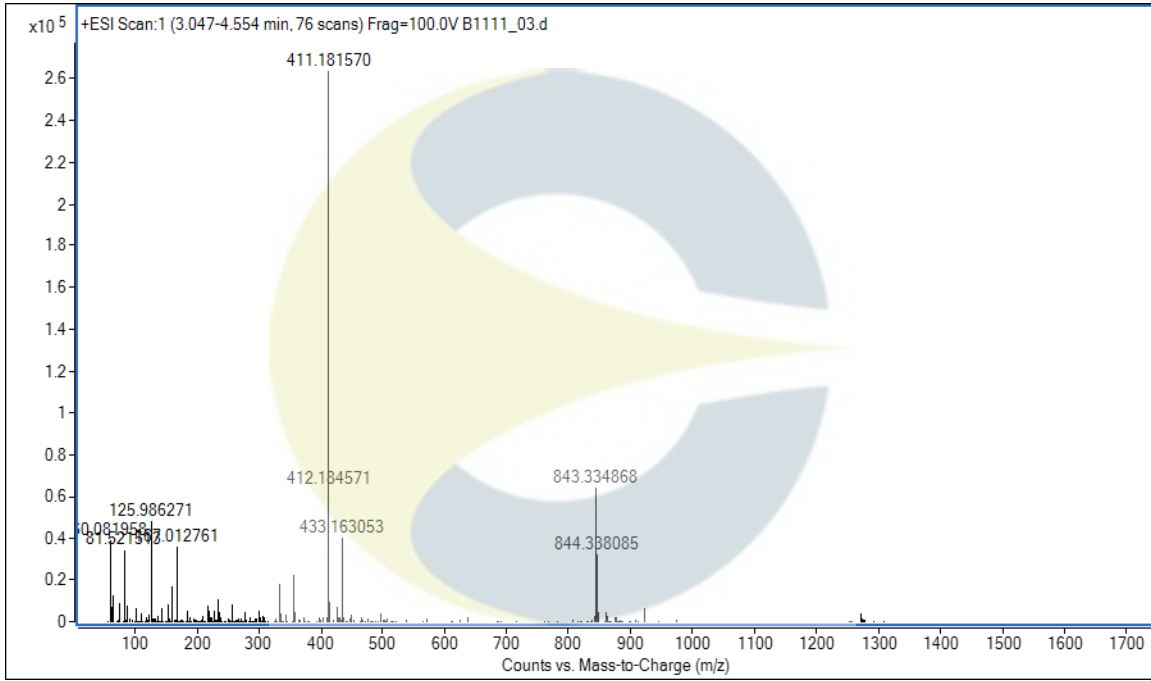


**HPLC CHROMATOGRAM OF DILUENT BLANK**

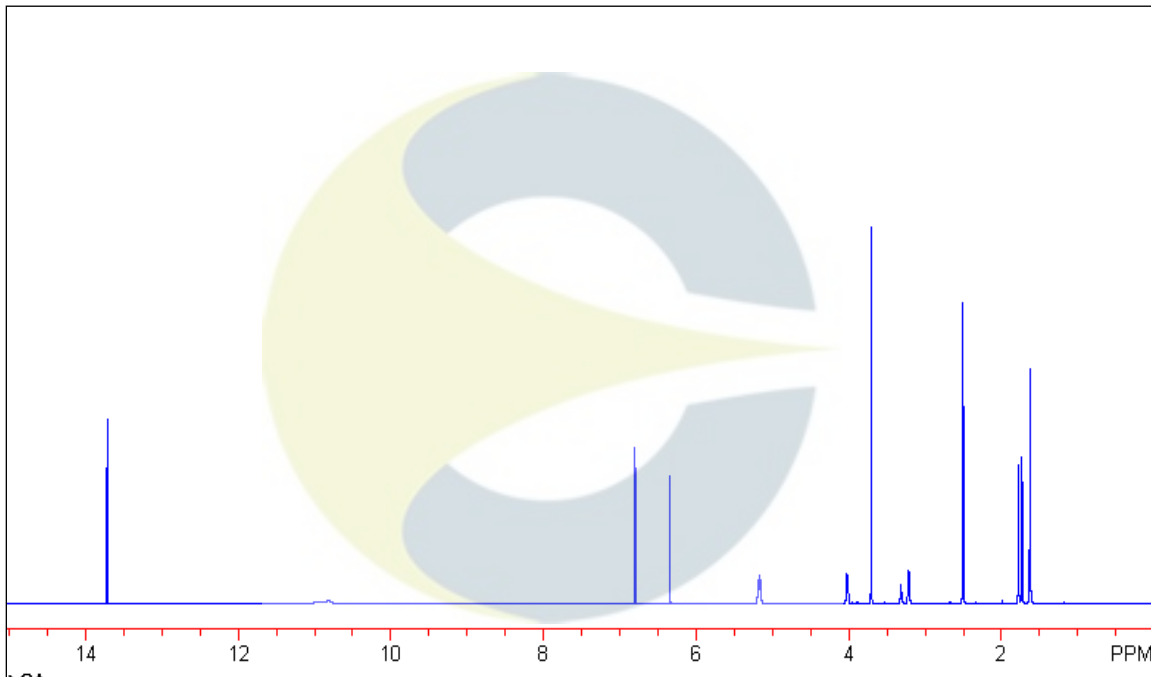


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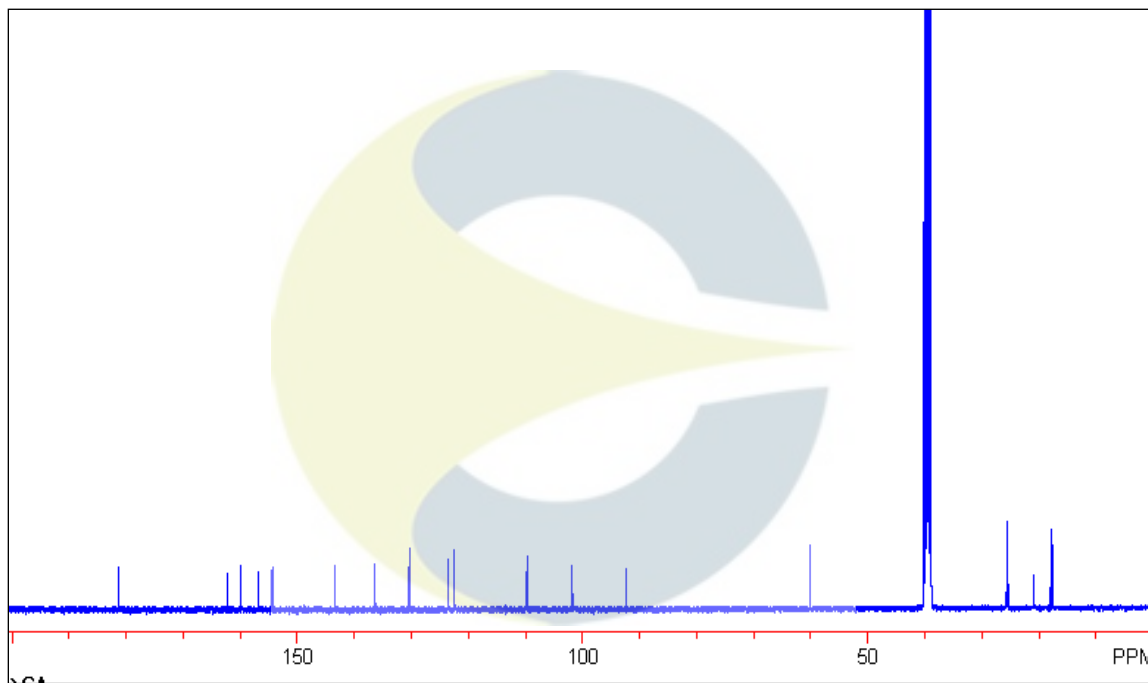
**MASS SPECTRUM OF ALPHA-MANGOSTIN (CDXA-11-0679)**



**<sup>1</sup>H-NMR SPECTRUM OF ALPHA-MANGOSTIN (CDXA-11-0679) IN DMSO-d<sub>6</sub>**



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**<sup>13</sup>C-NMR SPECTRUM OF ALPHA-MANGOSTIN (CDXA-11-0679) IN DMSO-d<sub>6</sub>**

**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	03/22/2011	New report and first re-evaluation.
01	03/25/2015	Passed second re-evaluation by HPLC. Updated expiration date, chemical names, molecular weight and EINECS number.
02	06/03/2019	Material passed re-evaluation by HPLC and water content. Corrected EC value. Added RTECS value. Updated Analytical Results, expiration date, chromatograms, UV spectrum, Chemical Names and Analytical Method. Removed melting point.

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