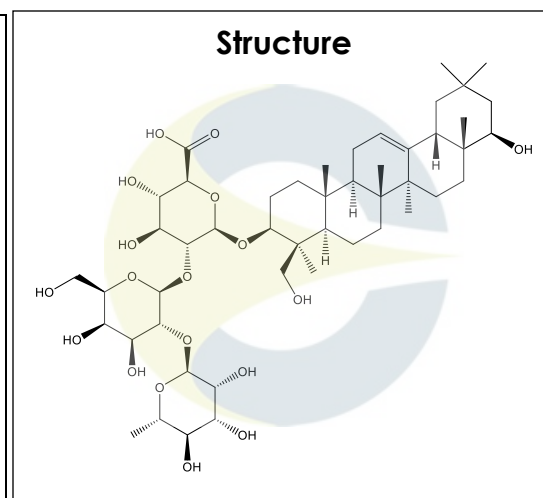


**Certificate of Analysis**
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<b>PRODUCT NAME</b>	Soyasaponin I
<b>PART NUMBER</b>	00019336
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00019336-103
<b>REPORT NUMBER</b>	CDXA-RSS-7567-01
<b>SAMPLE NUMBER</b>	CDXA-17-006572
<b>DATE OF SAMPLE</b>	05/23/2017
<b>DATE OF RE-EVALUATION</b>	04/15/2021
<b>DATE OF REPORT</b>	05/06/2021



<b>CHEMICAL NAMES</b>	(3β,4β,22β)-22,23-Dihydroxyolean-12-en-3-yl O-6-deoxy-α-L-mannopyranosyl-(1→2)-O-β-D-galactopyranosyl-(1→2)-β-D-glucopyranosiduronic acid; Soyasaponin Bb
<b>CHEMICAL FORMULA</b>	C <sub>48</sub> H <sub>78</sub> O <sub>18</sub>
<b>MOLECULAR WEIGHT (MW)</b>	943.12
<b>CHEMICAL FAMILY</b>	Saponins
<b>CAS NUMBER</b>	[51330-27-9]
<b>EC#(EINECS)</b>	NA
<b>RTECS</b>	LZ6500570

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	≥ 85%	93.8%
HPLC	0.700.10.2.METH22	≥ 90%	98.5%
NMR	4.5.3-CD-4.0-000338	Conforms to structure	Conforms to structure
Mass Spectrum	99.1-CDXA-2.0-000126	Conforms	Conforms
Residual Solvent	99.1-CD-9.0-000115	NA	ND
Water	0.700.12.37	NA	4.8%
Appearance	NA	NA	White powder

ADJUSTED PURITY: 93.8% IS BASED ON (100 - 0.0 SOLVENTS - 4.8 WATER) X 98.5% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	-20 °C in a dry place.
<b>EXPIRATION DATE</b>	04/2026 under the above conditions.

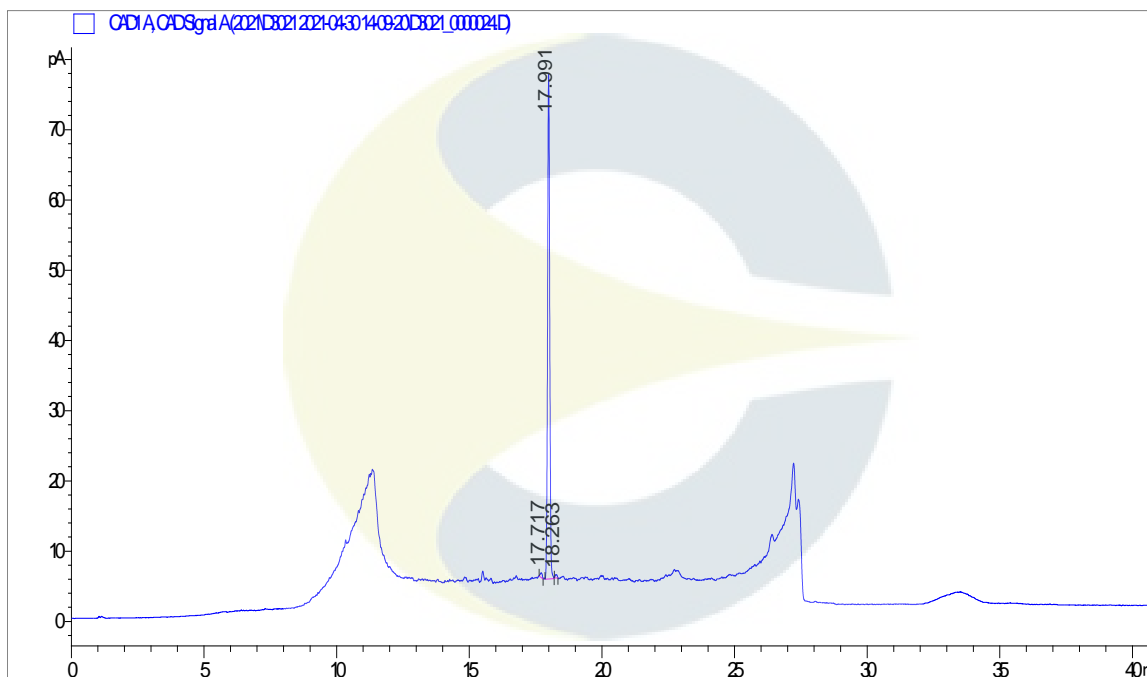
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**ANALYTICAL CONDITIONS**

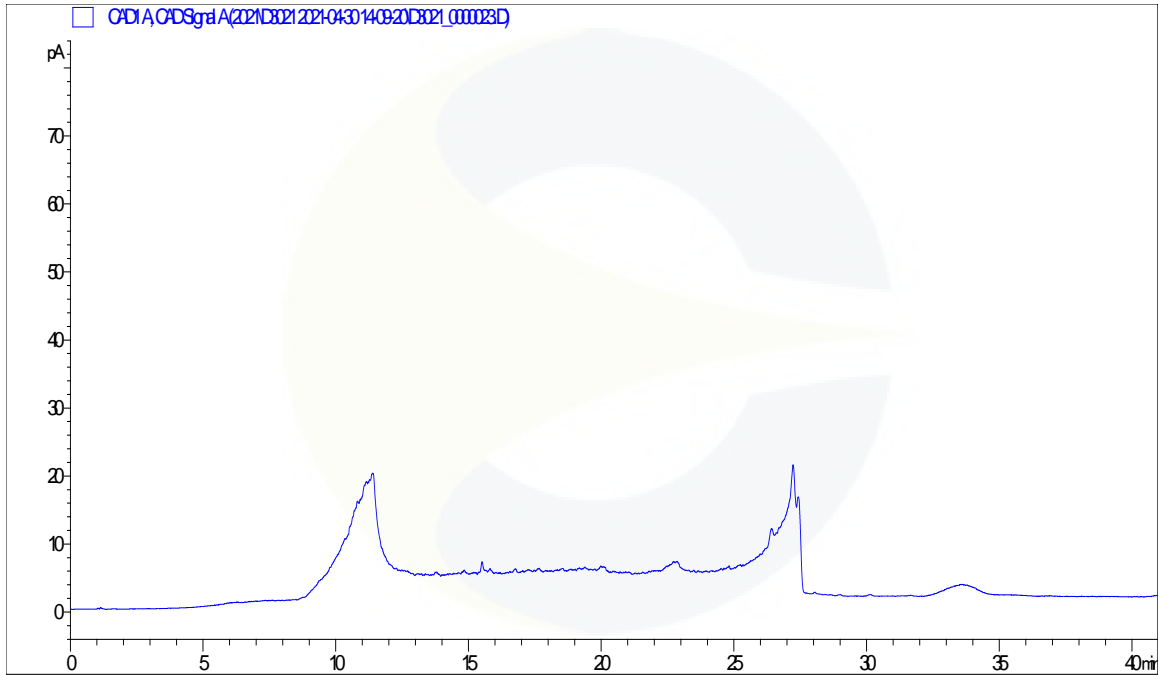
<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD) CONNECTED TO DIONEX CORONA VEO CHARGED AEROSOL DETECTOR (CAD); AGILENT 6510 QTOF
<b>COLUMN</b>	Phenomenex Luna C18(2) 150 x 2.00 mm, 5 µm particle size
<b>MOBILE PHASE</b>	A - 0.1% Trifluoroacetic acid in Ultrapure water, B - Acetonitrile; Isocratic 5% 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>	1.0 µL
<b>INJECTION CONC.</b>	1.0 mg/mL in Dimethyl Sulfoxide
<b>DETECTION</b>	CAD

**HPLC CHROMATOGRAM OF SOYASAPONIN I (CDXA-17-006572)**


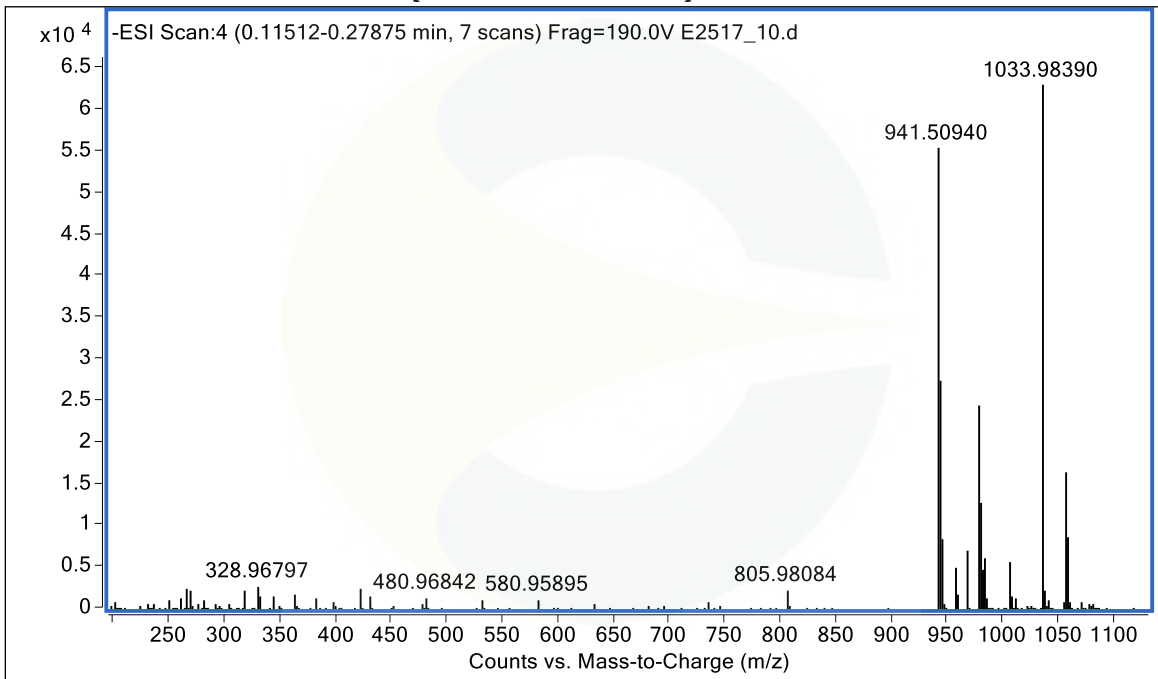
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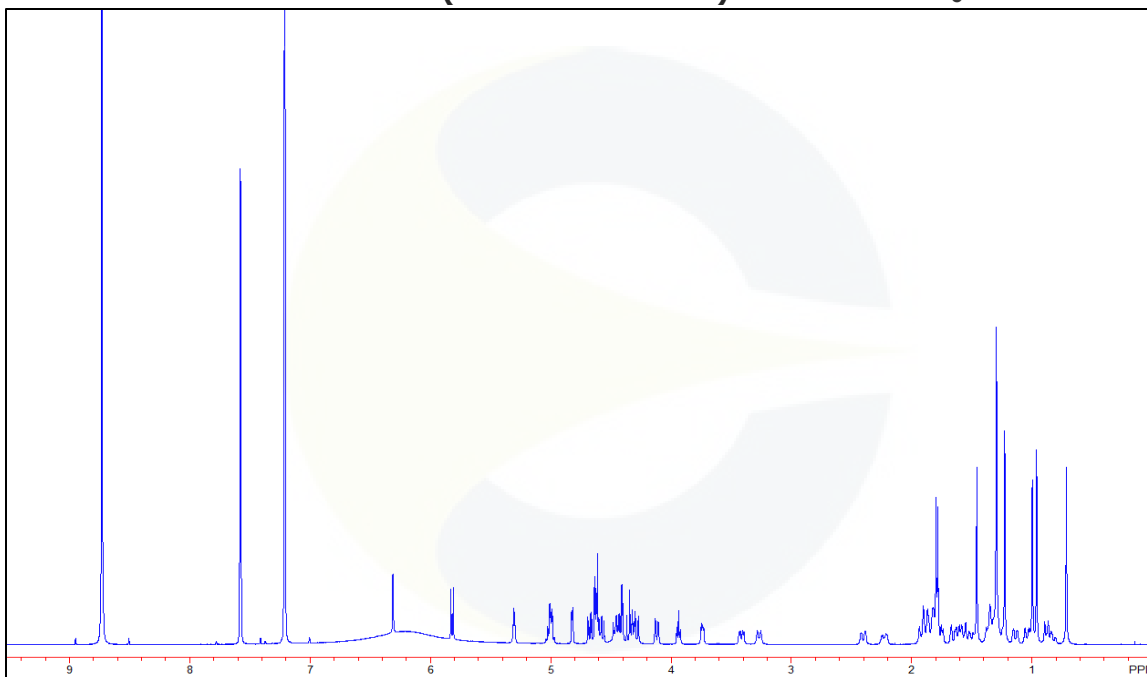
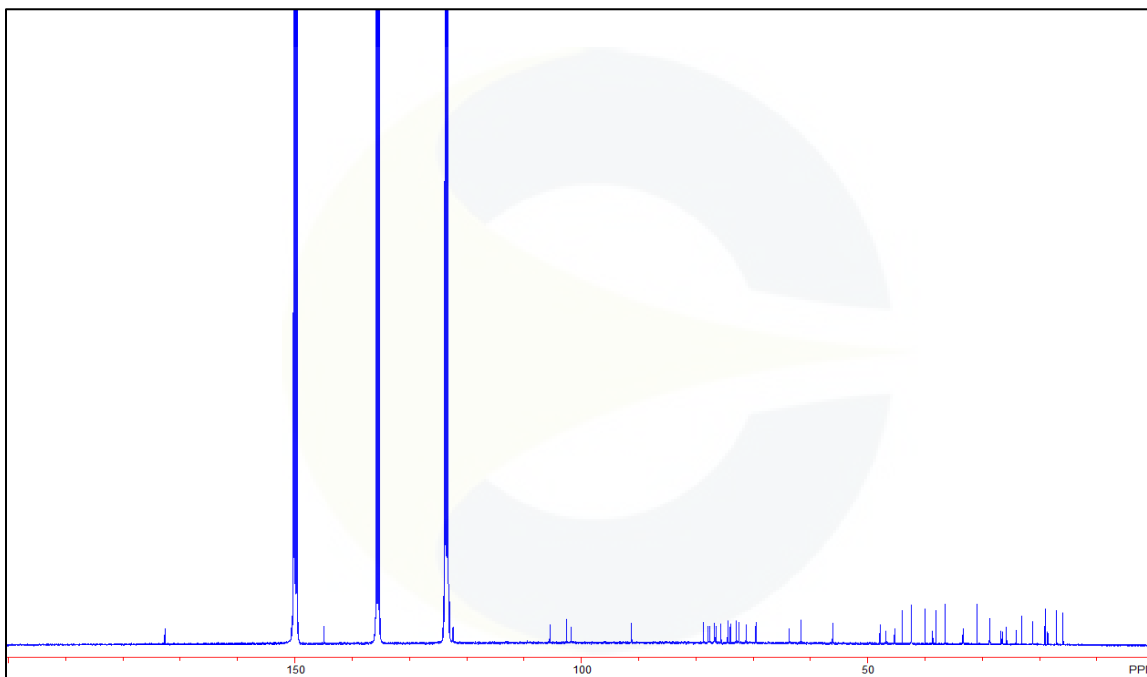
**HPLC CHROMATOGRAM OF DILUENT BLANK**



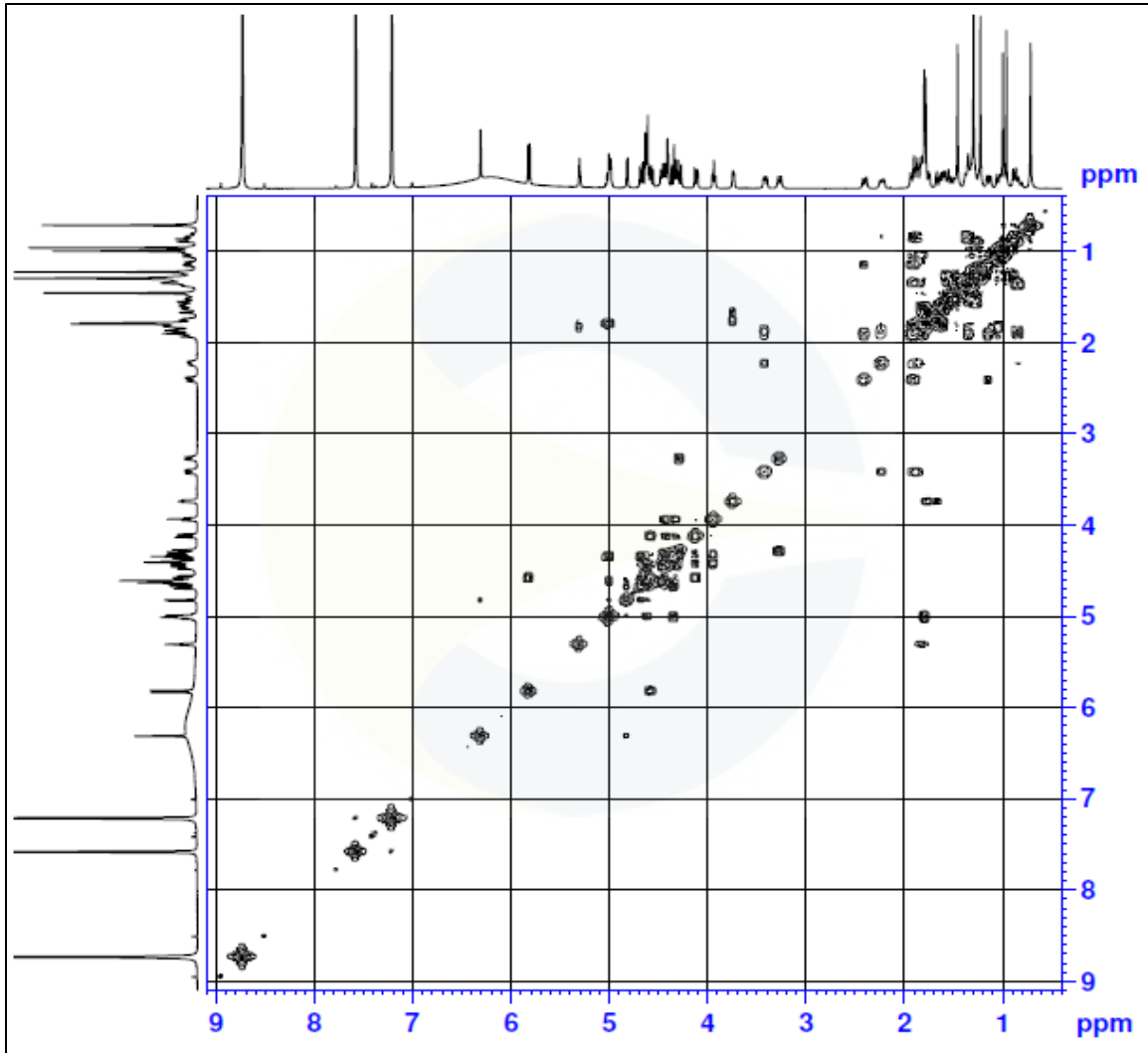
**MASS SPECTRUM OF SOYASAPONIN I (CDXA-17-006572)**



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**<sup>1</sup>H-NMR SPECTRUM OF SOYASAPONIN I (CDXA-17-006572) IN PYRIDINE-*d*<sub>5</sub>****<sup>13</sup>C-NMR SPECTRUM OF SOYASAPONIN I (CDXA-17-006572) IN PYRIDINE-*d*<sub>5</sub>**

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**COSY-NMR SPECTRUM OF SOYASAPONIN I (CDXA-17-006572) IN PYRIDINE-d<sub>5</sub>**

**REVISION HISTORY**

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	06/30/2017	New report
01	05/06/2021	Passed re-evaluation by HPLC, KF. Updated expiration date, analytical conditions, chromatograms, and results. Added RTECS number.

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