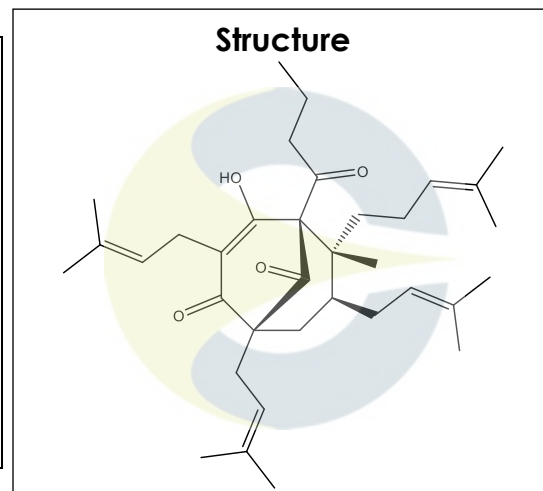


**Certificate of Analysis**
*For Laboratory Use Only*

<b>PRODUCT NAME</b>	Hyperforin mix
<b>PART NUMBER</b>	00008906
<b>STANDARD TYPE</b>	Primary (P)
<b>LOT NUMBER</b>	00008906-00137
<b>REPORT NUMBER</b>	CDXA-RSS-8942-00
<b>SAMPLE NUMBER</b>	CDXP-20-00137
<b>DATE OF SAMPLE</b>	03/10/2020
<b>DATE OF REPORT</b>	05/29/2020



<b>CHEMICAL NAMES</b>	(1R,5S,6R,7S)-4-Hydroxy-6-methyl-1,3,7-tris(3-methyl-2-butenyl)-5-(2-methyl-1-oxopropyl)-6-(4-methyl-3-pentenyl)bicyclo[3.3.1]-non-3-ene-2,9-dione
<b>CHEMICAL FORMULA</b>	C <sub>35</sub> H <sub>52</sub> O <sub>4</sub>
<b>MOLECULAR WEIGHT (MW)</b>	536.78
<b>CHEMICAL FAMILY</b>	Phloroglucinols
<b>CAS NUMBER</b>	[11079-53-1]
<b>EC#(EINECS)</b>	601-000-9
<b>RTECS</b>	DT4520000

**ANALYTICAL RESULTS**

TEST	METHOD	SPECIFICATION	RESULT
Adjusted Purity	NA	NA	56.2%
HPLC	0.700.10.2.METH22	NA	56.5%
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-3.0-000115	NA	EtOH – 0.5%
Water	0.700.12.37	NA	ND
Appearance	NA	NA	Yellow oil

ADJUSTED PURITY: 56.2% IS BASED ON (100 - 0.5 SOLVENTS - 0.0 WATER) X 56.5% HPLC

**STORAGE CONDITIONS**

<b>STORAGE</b>	-80 °C in a dry place away from light
<b>EXPIRATION DATE</b>	03/2025 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.

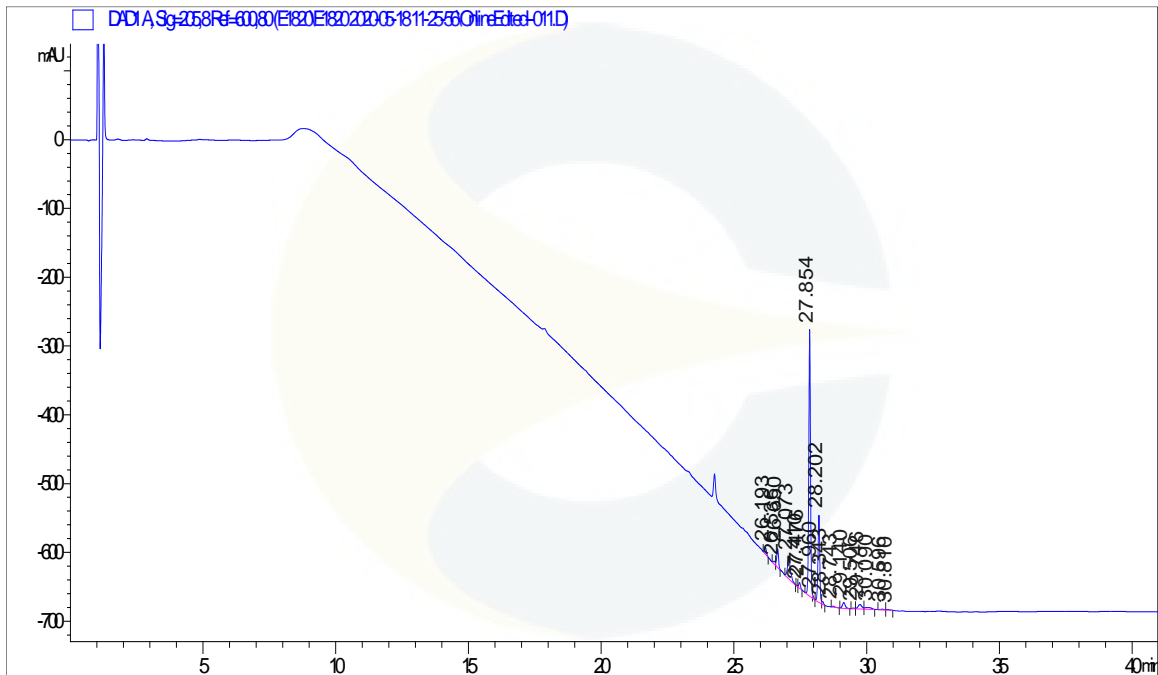
## Certificate of Analysis

*For Laboratory Use Only*

### ANALYTICAL CONDITIONS

<b>INSTRUMENT</b>	AGILENT 1260 HPLC UV-VIS (DAD); AGILENT 1100 ION TRAP
<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, then decreasing to 5% B over 1 minute.
<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>	0.97 mg/mL in Methanol
<b>DETECTION</b>	205 ± 4 nm

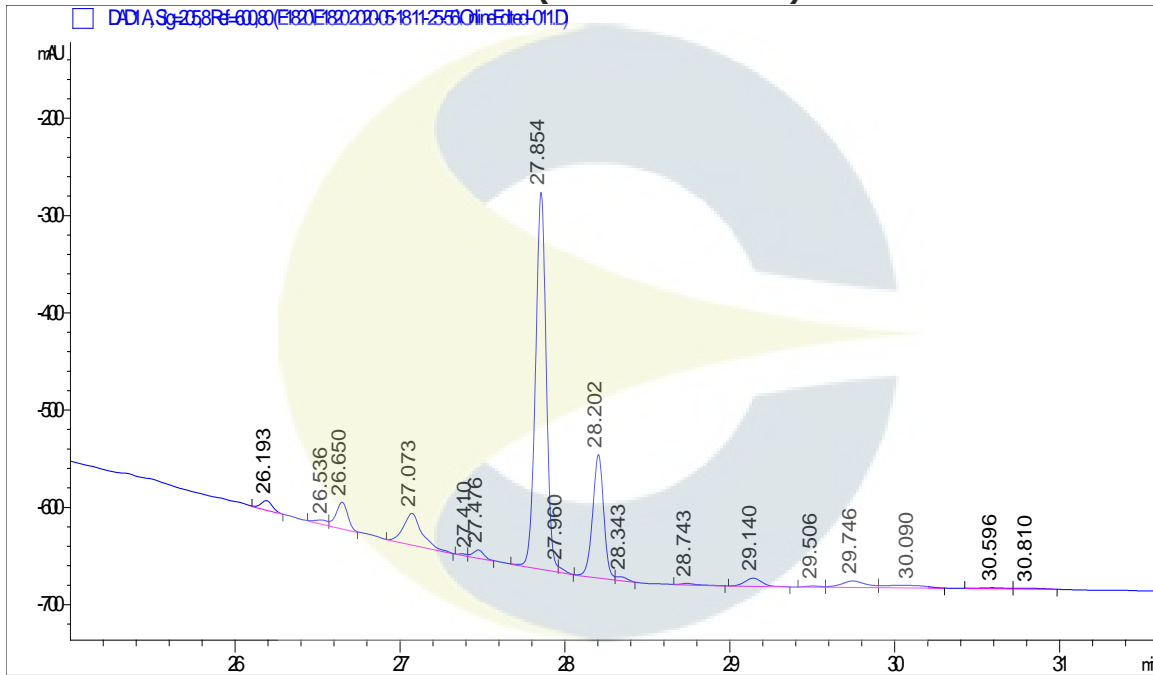
### HPLC CHROMATOGRAM OF HYPERFORIN MIX (CDXP-20-00137)



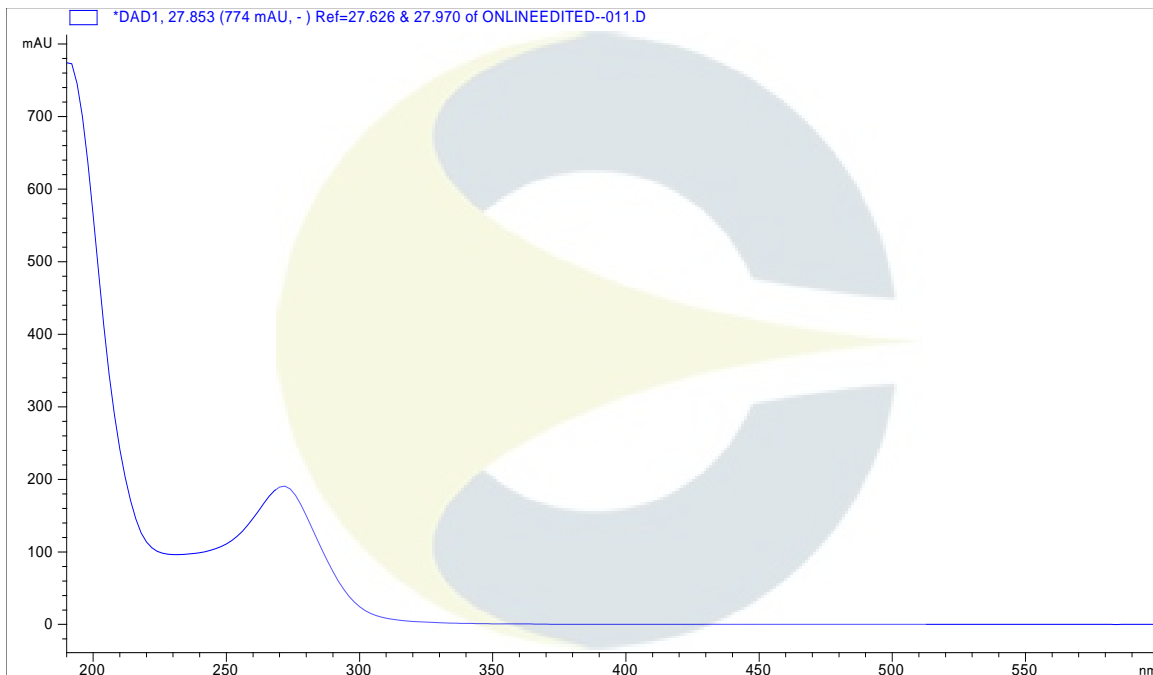
This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.

Certificate of Analysis For Laboratory Use Only

**HPLC CHROMATOGRAM OF HYPERFORIN MIX (CDXP-20-00137) 25-31.5 MINUTES**

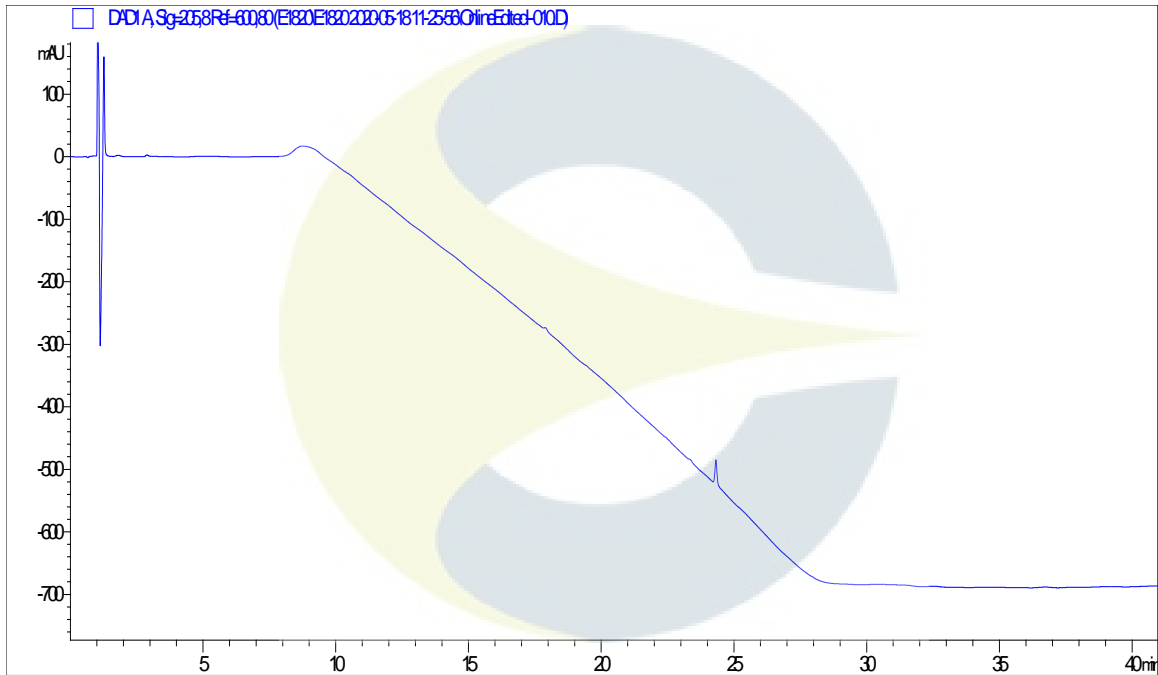


**UV SPECTRUM AT RT 27.9 MINUTES**

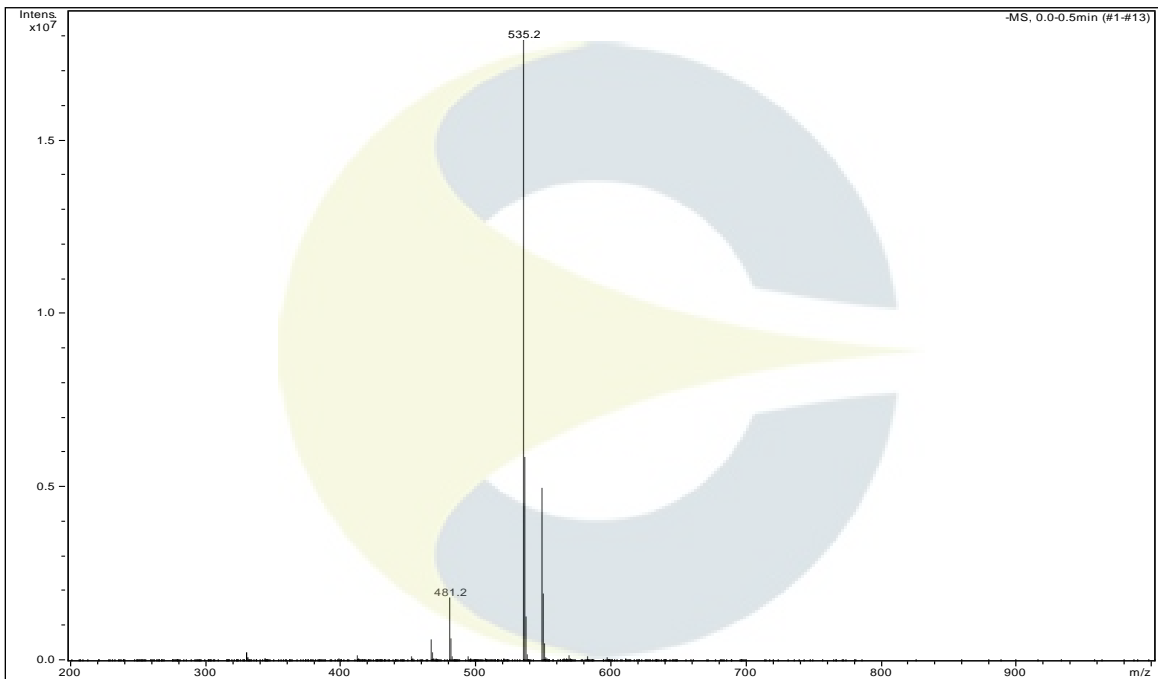


This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.

**HPLC CHROMATOGRAM OF DILUENT BLANK**

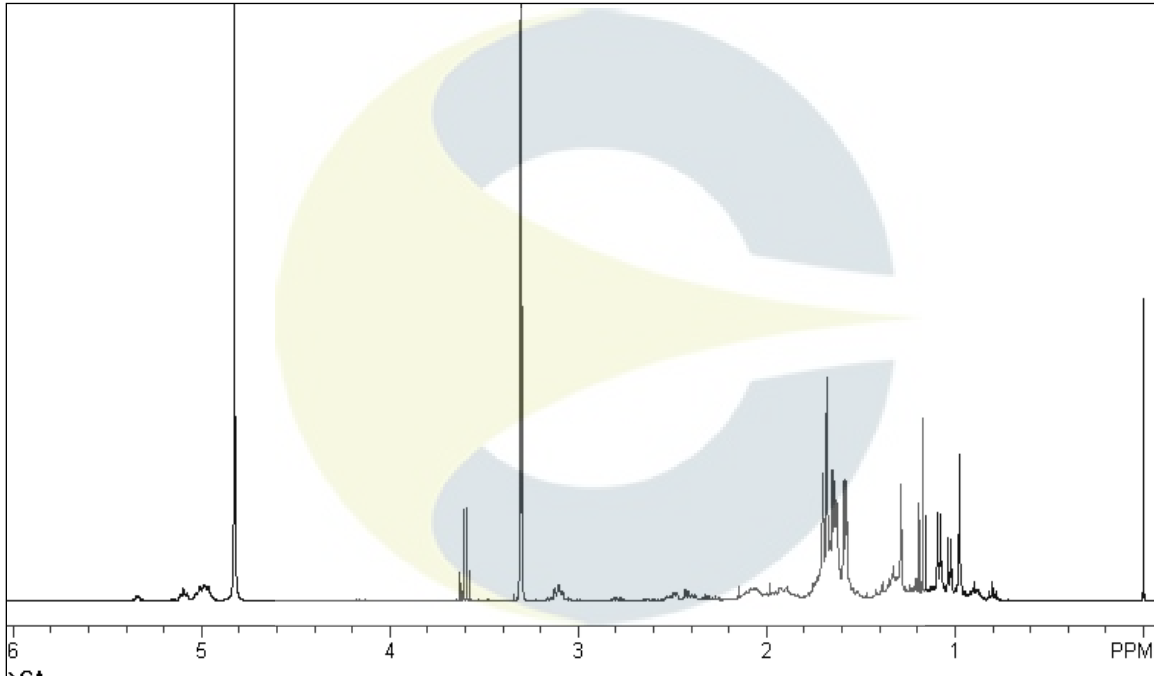


**MASS SPECTRUM OF HYPERFORIN MIX (CDXP-20-00137)**

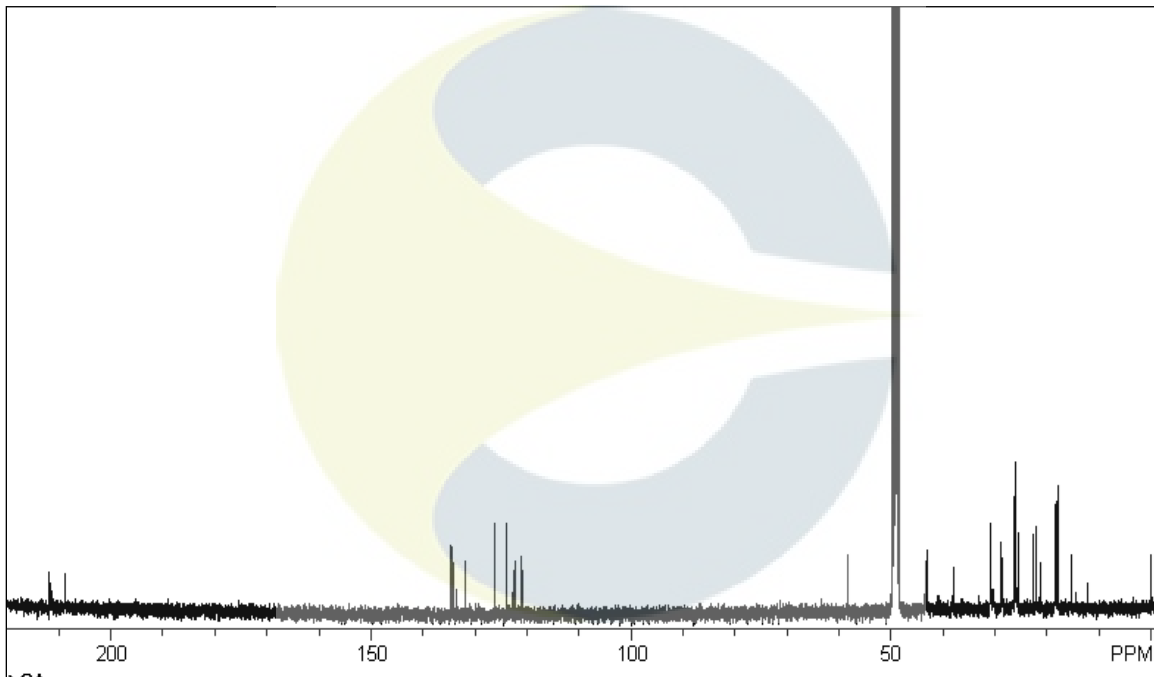


This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution or disclosure by or to others is strictly prohibited.

**<sup>1</sup>H-NMR SPECTRUM OF HYPERFORIN MIX (CDXP-20-00137) IN CD<sub>3</sub>OD**



**<sup>13</sup>C-NMR SPECTRUM HYPERFORIN MIX (CDXP-20-00137) IN CD<sub>3</sub>OD**



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

**REVISION HISTORY**

Revision History	Date of Revision	Document/Changes
00	05/29/2020	New report

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.