Certificate of Analysis

Product Name: Cannabinoid Mix A - CBD, CBN, delta9-THC Standard

Product Number: 5190-9430 **Release Date:** 12-Jan-2021

Lot Number: 0006582362 **Expiration Date:** 28-Feb-2022

Description:
This analytical Reference Material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration +/- Uncertainty
Cannabidiol (CBD)	013956-29-1	RM16497	1.00 ± 0.01 mg/mL
Cannabinol (CBN)	000521-35-7	RM16504	1.00 ± 0.01 mg/mL
delta-9-Tetrahydrocannabinol (delta9-THC)	001972-08-3	RM16505	1.00 ± 0.01 mg/mL

Matrix: methanol (methyl alcohol)

Storage Conditions: Store Frozen (-25°C to -10°C)

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Handling and Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Not Intended for Human or Animal Use

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

CSD-QA-038.0

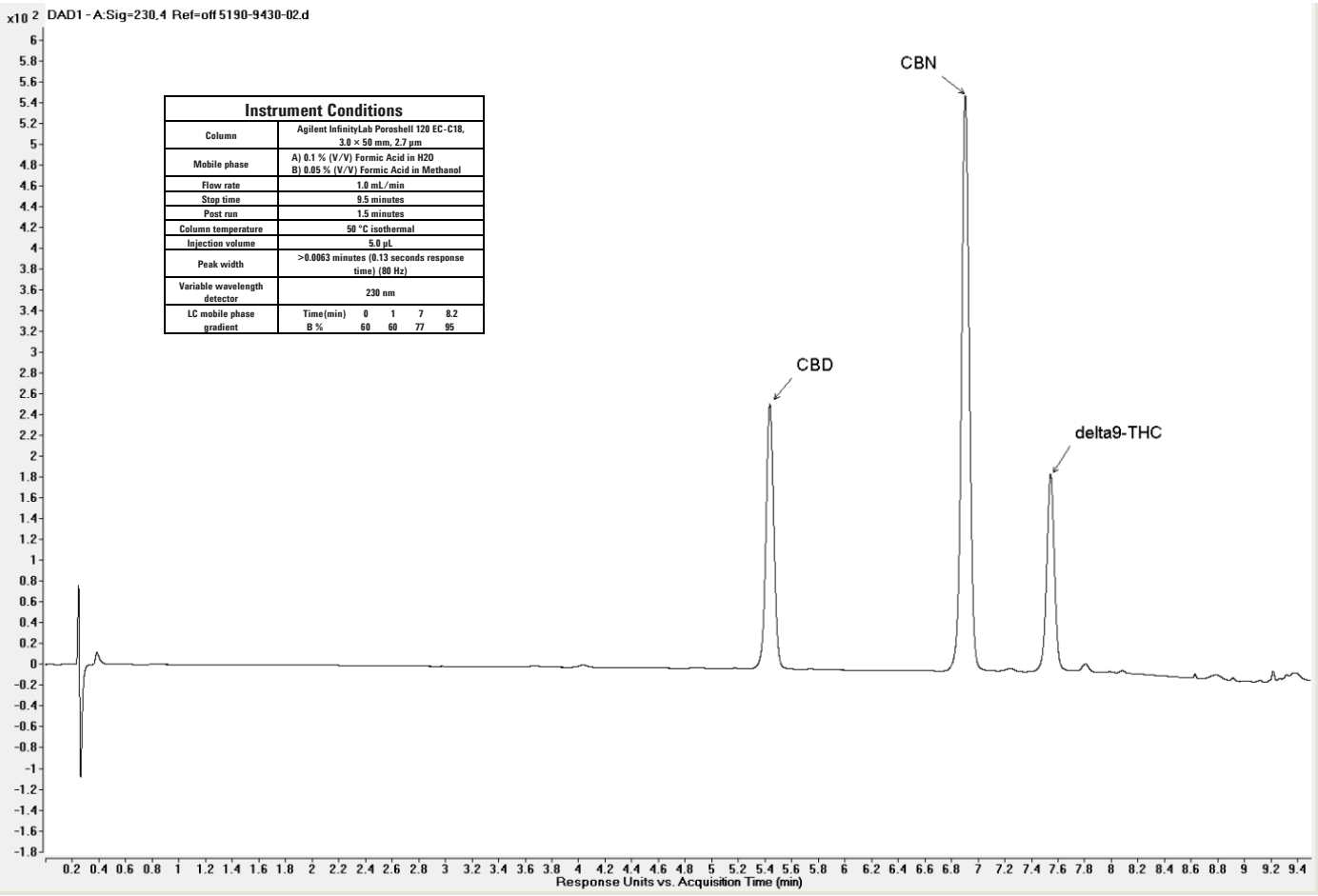
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO17025 Cert No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 **www.agilent.com/quality**

Certificate of Analysis

Typical HPLC Chromatogram



Instrument Conditions	
Column	Agilent InfinityLab Poroshell 120 EC-C18, 3.0 × 50 mm, 2.7 µm
Mobile phase	A) 0.1 % (V/V) Formic Acid in H2O B) 0.05 % (V/V) Formic Acid in Methanol
Flow rate	1.0 mL/min
Stop time	9.5 minutes
Post run	1.5 minutes
Column temperature	50 °C isothermal
Injection volume	5.0 µL
Peak width	>0.0063 minutes (0.13 seconds response time) (80 Hz)
Variable wavelength detector	230 nm
LC mobile phase gradient	Time(min) 0 1 7 8.2 B % 60 60 77 95

Sample lot approver:

Monica Bourgeois

QMS Representative

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