

CERTIFICATE OF ANALYSIS



SAMPLE NAME: REFRAME - TROPICAL
SAMPLE CODE: HEM-250516-004
CLIENT: REFRAME BEVERAGE
BATCH RESULT: PASS

1230 Woodmere Ave
Traverse City, MI 49686
231.252.3669
cambiumanalytica.com



MATRIX NAME: Beverage
SAMPLE TYPE: Compliance
RECEIVED DATE: Fri, May 23, 2025
PUBLISHED DATE: Fri, May 30, 2025
BATCH/LOT CODE: N/A
BATCH SIZE: 3lbs
SAMPLE SIZE: 1423.30g
AVERAGE UNIT WEIGHT: 806.4g (12.5 servings/package.)

TOTAL CANNABINOIDS 9.99 mg / serv

TOTAL THC 9.31 mg / serv

TOTAL CBD 0 mg / serv

TOTAL TERPENES ND

POT



Cannabinoids
Potency

TRP



Terpenes

SOL



Residual Solvents
USP <467>

ASP



Aspergillus
qPCR

ECOLI



Total Coliforms & E. coli
Plate

TAMC



Total Aerobic Bacteria
Plate

SS



Salmonella & STEC
qPCR

BRX



Brix of Liquids

PH



pH

TURB



Turbidity
Liquids

TYMFD



Total Yeast & Mold
Plate

HPMET



Heavy Metals
7

CAPLC



Chemical Residue
CA Hemp

CAPGC



Chemical Residue
CA Hemp

APPROVALS

RESULTS REVIEWED BY:

Leslie Varela
Laboratory Director

Cambium Analytica
Friday, May 30, 2025

RESULTS CERTIFIED BY:

Douglas Smith
VP - Scientific Operations

Cambium Analytica
Friday, May 30, 2025

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ANALYTE	VALUE	VALUE (MG/G)	PER SERVING	PER PACKAGE	ACTION LIMIT	LOD	LOQ	STATUS
Delta-9 THC	0.0144 %	0.1442 mg/g	9.31 mg	116.32 mg	N/A	0.5 ug/g	1 ug/g	N/A
CBN	0.0008 %	0.0077 mg/g	0.49 mg	6.18 mg	N/A	0.5 ug/g	1 ug/g	N/A
CBC	0.0001 %	0.0014 mg/g	0.09 mg	1.13 mg	N/A	0.5 ug/g	1 ug/g	N/A
CBG	0.0001 %	0.0015 mg/g	0.10 mg	1.21 mg	N/A	0.5 ug/g	1 ug/g	N/A
(6aR,9R)-Delta-10 THC	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
(6aR,9S)-Delta-10 THC	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
CBD	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
CBDA	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
CBDV	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
CBGA	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Delta-8 THC	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Delta-8 THCV	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Delta-9 THCV	<LOQ	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
THCA	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Total Cannabinoids*	0.0155 %	0.1548 mg/g	9.99 mg	124.83 mg	N/A	N/A	N/A	N/A
Delta-9 THC + Delta-8 THC	0.0144 %	0.1442 mg/g	9.31 mg	116.32 mg	N/A	N/A	N/A	N/A
Total THC*	0.0144 %	0.1442 mg/g	9.31 mg	116.32 mg	N/A	N/A	N/A	N/A
Total CBD*	0.0000 %	0.0000 mg/g	0 mg	0.0 mg	N/A	N/A	N/A	N/A
Total THCV*	0.0000 %	0.0000 mg/g	0 mg	0.0 mg	N/A	N/A	N/A	N/A

*Total Cannabinoids is calculated as the sum of all quantified cannabinoids.
Total THC is calculated as the sum of Delta-9 THC, Delta-8 THC, and 0.877(THCA).
Total CBD is calculated as the sum of CBD and 0.877(CBDA).
*Total THCV is calculated as the sum of Delta-8 THCV and Delta-9 THCV.





ANALYTE	VALUE	VALUE (MG/G)	PER SERVING	PER PACKAGE	ACTION LIMIT	LOD	LOQ	STATUS
1,R-Endo-Fenchyl Alcohol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Bisabolol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Cedrene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Humulene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Phellandrene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Pinene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Terpinene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Alpha Terpineol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Beta Myrcene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Beta Pinene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Borneol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Camphene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Camphor	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Caryophyllene Oxide	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Cedrol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Cis Beta Ocimene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Cis Nerolidol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
DL-Menthol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Delta-3 Carene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Eucalyptol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Fenchone	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Gamma Terpinene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Geraniol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Geranyl Acetate	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Guaiol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Isoborneol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Isopulegol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Limonene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Linalool	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Nerol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Pulegone	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Sabinene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Sabinene Hydrate	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Terpinolene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Trans Beta Ocimene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A





ANALYTE	VALUE	VALUE (MG/G)	PER SERVING	PER PACKAGE	ACTION LIMIT	LOD	LOQ	STATUS
Trans Caryophyllene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Trans Nerolidol	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Valencene	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A
Total Terpenes	ND	N/A	N/A	N/A	N/A	0.5 ug/g	1 ug/g	N/A





ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
1,2-Dichloroethane	ND	N/A	0.4 ug/g	1.00 ug/g	N/A
2-Methylbutane	ND	N/A	1.54 ug/g	5.14 ug/g	N/A
2-Methylpentane	ND	N/A	0.046 ug/g	0.154 ug/g	N/A
2,2-Dimethylbutane	ND	N/A	0.98 ug/g	3.27 ug/g	N/A
2,3-Dimethylbutane	ND	N/A	2.19 ug/g	7.32 ug/g	N/A
3-Methylpentane	ND	N/A	0.73 ug/g	2.44 ug/g	N/A
Acetone	ND	N/A	10.5 ug/g	31.25 ug/g	N/A
Acetonitrile	ND	N/A	5.15 ug/g	10.25 ug/g	N/A
Benzene	ND	N/A	0.18 ug/g	0.50 ug/g	N/A
Butane	ND	N/A	1.68 ug/g	5.59 ug/g	N/A
Chloroform	ND	N/A	0.78 ug/g	1.00 ug/g	N/A
Ethanol	1961.019 ug/g	N/A	15.6 ug/g	31.8 ug/g	N/A
Ethyl Acetate	ND	N/A	1.95 ug/g	6.49 ug/g	N/A
Ethyl Ether	ND	N/A	1.37 ug/g	4.55 ug/g	N/A
Ethylene Oxide	ND	N/A	0.15 ug/g	0.49 ug/g	N/A
Heptane	ND	N/A	1.31 ug/g	4.37 ug/g	N/A
Hexane	ND	N/A	1.42 ug/g	4.74 ug/g	N/A
Isobutane	ND	N/A	1.6 ug/g	5.34 ug/g	N/A
Isopropyl Alcohol	ND	N/A	10.93 ug/g	30.24 ug/g	N/A
Methanol	ND	N/A	10.2 ug/g	30.6 ug/g	N/A
Methylene Chloride	ND	N/A	1.36 ug/g	4.53 ug/g	N/A
Neopentane	ND	N/A	1.49 ug/g	4.97 ug/g	N/A
Pentane	ND	N/A	1.46 ug/g	4.87 ug/g	N/A
Propane	ND	N/A	1.95 ug/g	6.51 ug/g	N/A
Toluene	ND	N/A	12.5 ug/g	25.2 ug/g	N/A
Total Xylenes	ND	N/A	10.25 ug/g	30.75 ug/g	N/A
Trichloroethylene	ND	N/A	0.29 ug/g	0.96 ug/g	N/A
Butanes (Sum of Butane and Isobutane)	0.000 ug/g	N/A	N/A	N/A	N/A
Hexanes (Sum of Hexane, 2,2-Dimethylbutane, 2,3-Dimethylbutane, 2-Methylpentane, and 3-Methylpentane)	0.000 ug/g	N/A	N/A	N/A	N/A
Pentanes (Sum of Pentane, 2-Methylbutane, and Neopentane)	0.000 ug/g	N/A	N/A	N/A	N/A



ASP

ASPERGILLUS - QPCR
LAB-TM-006 - MICROBIAL ANALYSIS BY QPCR
ASP-HEM-250516-004-01 - FRI, MAY 30, 2025



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Aspergillus Flavus	ND	N/A	N/A	N/A	N/A
Aspergillus Fumigatus	ND	N/A	N/A	N/A	N/A
Aspergillus Niger	ND	N/A	N/A	N/A	N/A
Aspergillus Spp	ND	N/A	N/A	N/A	N/A
Aspergillus Terreus	ND	N/A	N/A	N/A	N/A

ECOLI

TOTAL COLIFORMS & E. COLI - PLATE - 25G - FULL RANGE
LAB-TM-059 - ENUMERATION OF ESCHERICHIA COLI AND TOTAL COLIFORM IN FOODS AND DIETARY SUPPLEMENTS
ECOLI-HEM-250516-004-01 - WED, MAY 28, 2025



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
E. coli	ND	N/A	10 CFU/g	10 CFU/g	N/A
Total Coliforms	ND	N/A	10 CFU/g	10 CFU/g	N/A

TAMC

TOTAL AEROBIC BACTERIA - PLATE - 25G - FULL RANGE
LAB-TM-060 - ENUMERATION OF TOTAL AEROBIC COUNT IN FOODS AND DIETARY SUPPLEMENTS
TAMC-HEM-250516-004-01 - WED, MAY 28, 2025



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Total Aerobic Count	ND	N/A	10 CFU/g	10 CFU/g	N/A

SS

SALMONELLA & STEC- QPCR
LAB-TM-006 - MICROBIAL ANALYSIS BY QPCR
SS-HEM-250516-004-01 - THU, MAY 29, 2025



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Salmonella Spp	ND	N/A	N/A	N/A	N/A
Shiga Toxin Producing E. coli	ND	N/A	N/A	N/A	N/A

BRX

BRIX OF LIQUIDS
LAB-TM-017 - BRIX & DENSITY ANALYSIS
BRX-HEM-250516-004-01 - WED, MAY 28, 2025

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Brix	11.3 bx	N/A	N/A	N/A	N/A

PH

PH
LAB-TM-018 - DETERMINATION OF PH
PH-HEM-250516-004-01 - WED, MAY 28, 2025



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
pH	2.986	N/A	N/A	N/A	N/A

TURB

TURBIDITY - LIQUIDS
LAB-TM-021 - TURBIDITY BY UV-VIS
TURB-HEM-250516-004-01 - WED, MAY 28, 2025

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Turbidity	22.607 %	N/A	N/A	N/A	N/A



TYMFD

TOTAL YEAST & MOLD - PLATE - 25G - FULL RANGE

LAB-TM-061 - ENUMERATION OF YEAST AND MOLD IN FOODS AND DIETARY SUPPLEMENTS

TYMFD-HEM-250516-004-01 - THU, MAY 29, 2025



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Total Mold	ND	N/A	10 CFU/g	10 CFU/g	N/A
Total Yeast	ND	N/A	10 CFU/g	10 CFU/g	N/A
Total Yeast and Mold	ND	N/A	10 CFU/g	10 CFU/g	N/A

HPMET

HEAVY METALS - 7

LAB-TM-044 - DETERMINATION OF HEAVY METALS BY ICP-MS

HPMET-HEM-250516-004-01 - WED, MAY 28, 2025



ANALYTE	VALUE	VALUE (MG/G)	PER SERVING	PER PACKAGE	ACTION LIMIT	LOD	LOQ	STATUS
Arsenic	ND	N/A	N/A	N/A	N/A	0.509 ug/kg	2.062 ug/kg	N/A
Cadmium	ND	N/A	N/A	N/A	N/A	0.256 ug/kg	0.509 ug/kg	N/A
Chromium	0.021 ug/g	0.000 mg/g	1.36 ug	17.00 ug	N/A	0.259 ug/kg	0.509 ug/kg	N/A
Copper	0.002 ug/g	0.000 mg/g	0.11 ug	1.32 ug	N/A	0.255 ug/kg	1.015 ug/kg	N/A
Lead	ND	N/A	N/A	N/A	N/A	0.255 ug/kg	0.515 ug/kg	N/A
Mercury	ND	N/A	N/A	N/A	N/A	0.025 ug/kg	0.057 ug/kg	N/A
Nickel	0.008 ug/g	0.000 mg/g	0.54 ug	6.77 ug	N/A	0.251 ug/kg	1.071 ug/kg	N/A



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Abamectin	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Acephate	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Acequinocyl	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Acetamiprid	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Aldicarb	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Azoxystrobin	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Bifenazate	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Bifenthrin	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Boscalid	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Carbaryl	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Carbofuran	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Chlorantraniliprole	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Chlorpyrifos	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Clofentezine	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Coumaphos	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Cyfluthrin	ND	N/A	0.313 ug/g	0.625 ug/g	N/A
Cypermethrin	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Daminozide	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Diazinon	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Dichlorvos	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Dimethoate	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Dimethomorph	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Ethoprophos	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Etofenprox	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Etoxazole	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Fenhexamid	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Fenoxycarb	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Fenpyroximate	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Fipronil	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Flonicamid	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Fludioxonil	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Hexythiazox	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Imazalil	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Imidacloprid	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Kresoxim Methyl	ND	N/A	0.063 ug/g	0.125 ug/g	N/A



CAPLC

CHEMICAL RESIDUE - CA HEMP - LC/TQ
LAB-TM-105 - DETERMINATION OF CHEMICAL RESIDUE BY LC-TQ - CALIFORNIA RESIDUAL PESTICIDE LIST
CAPLC-HEM-250516-004-01 - WED, MAY 28, 2025

ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Malathion	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Metalaxyl	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Methiocarb	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Methomyl	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Mevinphos	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Myclobutanil	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Naled	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Oxamyl	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Paclobutrazol	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Permethrins (Sum of Cis- and Trans-Permethrin)	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Phosmet	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Piperonyl Butoxide	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Prallethrin	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Propiconazole	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Propoxur	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Pyrethrins (Sum of Cinerin 1, Jasmolin 1, and Pyrethrin 1)	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Pyridaben	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Spinetoram	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Spinosad	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Spiromesifen	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Spirotetramat	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Spiroxamine	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Tebuconazole	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Thiacloprid	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Thiamethoxam	ND	N/A	0.063 ug/g	0.125 ug/g	N/A
Trifloxystrobin	ND	N/A	0.063 ug/g	0.125 ug/g	N/A



ANALYTE	VALUE	ACTION LIMIT	LOD	LOQ	STATUS
Captan	ND	N/A	0.030 ug/g	0.102 ug/g	N/A
Chlordane-cis	ND	N/A	0.004 ug/g	0.013 ug/g	N/A
Chlordane-trans	ND	N/A	0.003 ug/g	0.011 ug/g	N/A
Chlorfenapyr	ND	N/A	0.014 ug/g	0.048 ug/g	N/A
Methyl Parathion	ND	N/A	0.008 ug/g	0.022 ug/g	N/A
Pentachloronitrobenzene	ND	N/A	0.012 ug/g	0.041 ug/g	N/A
Chlordane (Sum of -Cis, Trans)	0.000 ug/g	N/A	N/A	N/A	N/A

