**KCA Laboratories** 232 North Plaza Drive Nicholasville, KY 40356

+1-833-KCA-LABS https://kcalabs.com KDA Lic.# P\_0058

## **H4-CBD Distillate GVL-TST596**

Sample ID: SA-230419-20686 Batch: 4/19/23 Type: In-Process Material Matrix: Concentrate -Distillate Unit Mass (g):

Received: 04/25/2023 Completed: 05/03/2023 Client



1 of 5



Summary

Test Cannabinoids Heavy Metals Microbials Pesticides Residual Solvents **Date Tested** 05/03/2023 04/26/2023 05/02/2023 05/02/2023 05/01/2023

Status Tested Tested Tested Tested **Tested** 

ND Total Δ9-THC

74.8 % 9R-H4-CBD

99.2 % Total Cannabinoids

**Not Tested** Moisture Content

**Not Tested** Foreign Matter

Internal Standard Normalization

Yes

# Cannabinoids by HPLC-PDA, LC-MS/MS, and/or GC-MS/MS

| Analyte      | LOD<br>(%) | LOQ<br>(%) | Result<br>(%) | Result<br>(mg/g) |   |
|--------------|------------|------------|---------------|------------------|---|
| CBC          | 0.0095     | 0.0284     | ND            | ND               |   |
| CBCV         | 0.006      | 0.018      | ND            | ND               | 1 In the second |
| CBD          | 0.0081     | 0.0242     | ND            | ND               |   |
| CBDV         | 0.0061     | 0.0182     | ND            | ND               | right and Sin   |
| CBG          | 0.0057     | 0.0172     | ND            | ND               |   |
| CBL          | 0.0112     | 0.0335     | ND            | ND               | 26  |
| CBN          | 0.0056     | 0.0169     | ND            | ND               | 20-   |
| CBT          | 0.018      | 0.054      | ND            | ND               | (6)   |
| Δ8-ΤΗС       | 0.0104     | 0.0312     | ND            | ND               |   |
| Δ9-THC       | 0.0076     | 0.0227     | ND            | ND               |   |
| Δ9-ΤΗCV      | 0.0069     | 0.0206     | ND            | ND               |   |
| 9R-H4-CBD    | 0.0067     | 0.02       | 74.8          | 748              | 30 40 50 60 70 80 90 100 110 120 130 140 150  |
| 9S-H4-CBD    | 0.0067     | 0.02       | 24.4          | 244              |   |
| Total Δ9-THC |            |            | ND            | ND               |   |
| Total        |            |            | 99.2          | 992              |   |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; RL = Reporting Limit;  $\Delta$  = Delta; Total  $\Delta$ 9-THC =  $\Delta$ 9-THC4 \* 0.877 +  $\Delta$ 9-THC; Total CBD = CBDA \* 0.877 + CBD;

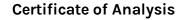
Generated By: Ryan Bellone

CCO Date: 05/04/2023 Tested By: Scott Caudill Senior Scientist Date: 05/03/2023





ISO/IEC 17025:2017 Accredited Accreditation #108651



kca labs

**KCA Laboratories** 232 North Plaza Drive Nicholasville, KY 40356

+1-833-KCA-LABS https://kcalabs.com KDA Lic.# P\_0058

2 of 5

## **H4-CBD Distillate GVL-TST596**

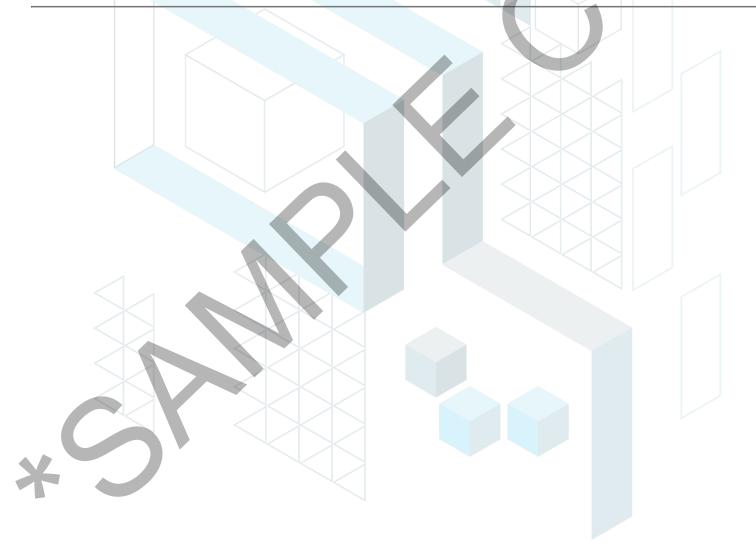
Sample ID: SA-230419-20686 Batch: 4/19/23 Type: In-Process Material Matrix: Concentrate -Distillate Unit Mass (g):

Received: 04/25/2023 Completed: 05/03/2023 Client

## **Heavy Metals by ICP-MS**

| Analyte | LOD (ppb) | LOQ (ppb) | Result (ppb) |
|---------|-----------|-----------|--------------|
| Arsenic | 2         | 20        | ND           |
| Cadmium | 1         | 20        | ND           |
| Lead    | 2         | 20        | ND           |
| Mercury | 12        | 50        | ND           |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit



Generated By: Ryan Bellone CCO Date: 05/04/2023 Tested By: Chris Farman Scientist Date: 04/26/2023

This product or substance has been tested by KCA Laboratories using validated testing methodologies and an ISO/IEC 170252017 accredited quality system. Values reported relate only to the product or substance tested. The reported result is based on a sample weight. Unless otherwise stated, results of tests performed on all quality control samples met criteria for acceptance established by KCA Laboratories. KCA Laboratories makes no claims as to the efficacy, safety or other risks associated with any detected or non-detected amounts of any substances reported herein. This Certificate of Analysis shall not be reproduced except in full, without the written approval of KCA Laboratories KCA Laboratories and provide measurement uncertainty upon request.

late only to the product or substance

+1-833-KCA-LABS https://kcalabs.com KDA Lic.# P\_0058

,

3 of 5

## **H4-CBD Distillate GVL-TST596**

Sample ID: SA-230419-20686 Batch: 4/19/23 Type: In-Process Material Matrix: Concentrate -Distillate Unit Mass (g): Received: 04/25/2023 Completed: 05/03/2023 Client



## Pesticides by LC-MS/MS

| Analyte              | LOD<br>(ppb) | LOQ<br>(ppb) | Result<br>(ppb) | Analyte            | (ppb) | LOQ<br>(ppb) | Result<br>(ppb) |
|----------------------|--------------|--------------|-----------------|--------------------|-------|--------------|-----------------|
| Acephate             | 30           | 100          | ND              | Hexythiazox        | 30    | 100          | ND              |
| Acetamiprid          | 30           | 100          | ND              | Imazalil           | 30    | 100          | ND              |
| Aldicarb             | 30           | 100          | ND              | Imidacloprid       | 30    | 100          | ND              |
| Azoxystrobin         | 30           | 100          | ND              | Kresoxim methyl    | 30    | 100          | ND              |
| Bifenazate           | 30           | 100          | ND              | Malathion          | 30    | 100          | ND              |
| Bifenthrin           | 30           | 100          | ND              | Metalaxyl          | 30    | 100          | ND              |
| Boscalid             | 30           | 100          | ND              | Methiocarb         | 30    | 100          | ND              |
| Carbaryl             | 30           | 100          | ND              | Methomyl           | 30    | 100          | ND              |
| Carbofuran           | 30           | 100          | ND              | Mevinphos          | 30    | 100          | ND              |
| Chloranthraniliprole | 30           | 100          | ND              | Myclobutanil       | 30    | 100          | ND              |
| Chlorfenapyr         | 30           | 100          | ND              | Naled              | 30    | 100          | ND              |
| Chlorpyrifos         | 30           | 100          | ND              | Oxamyl             | 30    | 100          | ND              |
| Clofentezine         | 30           | 100          | ND              | Paclobutrazol      | 30    | 100          | ND              |
| Coumaphos            | 30           | 100          | ND              | Permethrin         | 30    | 100          | ND              |
| Daminozide           | 30           | 100          | ND              | Phosmet            | 30    | 100          | ND              |
| Diazinon             | 30           | 100          | ND              | Piperonyl Butoxide | 30    | 100          | ND              |
| Dichlorvos           | 30           | 100          | ND              | Prallethrin        | 30    | 100          | ND              |
| Dimethoate           | 30           | 100          | ND              | Propiconazole      | 30    | 100          | ND              |
| Dimethomorph         | 30           | 100          | ND              | Propoxur           | 30    | 100          | ND              |
| Ethoprophos          | 30           | 100          | ND              | Pyrethrins         | 30    | 100          | ND              |
| Etofenprox           | 30           | 100          | ND              | Pyridaben          | 30    | 100          | ND              |
| Etoxazole            | 30           | 100          | ND              | Spinetoram         | 30    | 100          | ND              |
| Fenhexamid           | 30           | 100          | ND              | Spinosad           | 30    | 100          | ND              |
| Fenoxycarb           | 30           | 100          | ND              | Spiromesifen       | 30    | 100          | ND              |
| Fenpyroximate        | 30           | 100          | ND              | Spirotetramat      | 30    | 100          | ND              |
| Fipronil             | 30           | 100          | ND              | Spiroxamine        | 30    | 100          | ND              |
| Flonicamid           | 30           | 100          | ND              | Tebuconazole       | 30    | 100          | ND              |
| Fludioxonil          | 30           | 100          | ND              | Thiacloprid        | 30    | 100          | ND              |
|                      |              |              |                 | Thiamethoxam       | 30    | 100          | ND              |
|                      |              | *            |                 | Trifloxystrobin    | 30    | 100          | ND              |

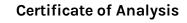
ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit

Generated By: Ryan Bellone CCO

Date: 05/04/2023

Tested By: Jasper van Heemst Principal Scientist Date: 05/02/2023

This product or substance has been tested by KCA Laboratories using validated testing methodologies and an ISO/IEC 170252017 accredited quality system. Values reported relate only to the product or substance tested. The reported result is based on a sample weight. Unless otherwise stated, results of tests performed on all quality control samples met criteria for acceptance established by KCA Laboratories KCA Laboratories makes no claims as to the efficacy, safety or other risks associated with any detected or non-detected amounts of any substances reported herein. This Certificate of Analysis shall not be reproduced except in full, without the written approval of KCA Laboratories KCA Laboratories can provide measurement uncertainty upon request.





**KCA Laboratories** 232 North Plaza Drive Nicholasville, KY 40356

+1-833-KCA-LABS https://kcalabs.com KDA Lic.# P\_0058

## **H4-CBD Distillate GVL-TST596**

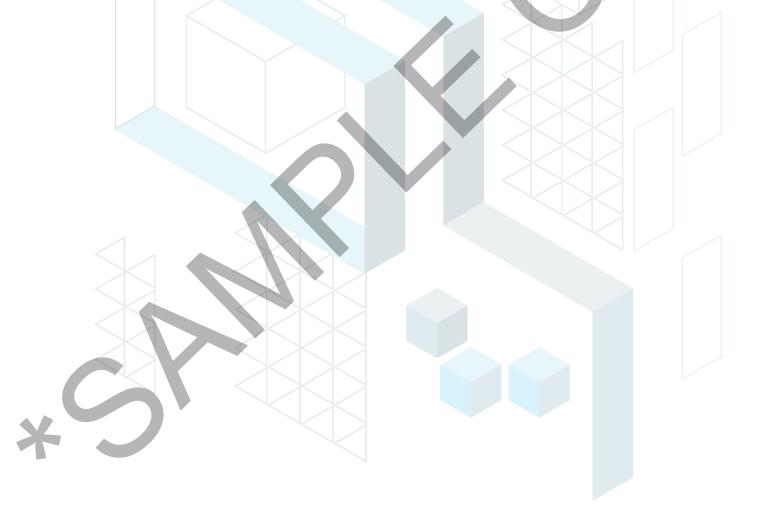
Sample ID: SA-230419-20686 Batch: 4/19/23 Type: In-Process Material Matrix: Concentrate -Distillate Unit Mass (g): Received: 04/25/2023 Completed: 05/03/2023 Client



## Microbials by PCR and Plating

| Analyte                              | LOD (CFU/g) | Result (CFU/g) | Result (Qualitative)    |
|--------------------------------------|-------------|----------------|-------------------------|
| Total aerobic count                  | 1           | ND             |                         |
| Total coliforms                      | 1           | ND             |                         |
| Generic E. coli                      | 1           | ND             |                         |
| Salmonella spp.                      | 1           |                | Not Detected per 1 gram |
| Shiga-toxin producing E. coli (STEC) | 1           |                | Not Detected per 1 gram |
|                                      |             |                | V 1                     |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; CFU = Colony Forming Units; P = Pass; F = Fail; RL = Reporting Limit



Generated By: Ryan Bellone CCO Date: 05/04/2023

Tested By: Lücy Jon Scientist Date: 05/02/2023

This product or substance has been tested by KCA Laboratories using validated testing methodologies and an ISO/IEC 170252017 accredited quality system. Values reported relate only to the product or substance tested. The reported result is based on a sample weight. Unless otherwise stated, results of tests performed on all quality control samples met criteria for acceptance established by KCA Laboratories. KCA Laboratories makes no claims as to the efficacy, safety or other risks associated with any detected or non-detected amounts of any substances reported herein. This Certificate of Analysis shall not be reproduced except in full, without the written approval of KCA Laboratories KCA Laboratories and provide measurement uncertainty upon request.

4 of 5





**KCA Laboratories** 232 North Plaza Drive Nicholasville, KY 40356

+1-833-KCA-LABS https://kcalabs.com KDA Lic.# P\_0058

5 of 5

## **H4-CBD Distillate GVL-TST596**

Sample ID: SA-230419-20686 Batch: 4/19/23 Type: In-Process Material Matrix: Concentrate -Distillate Unit Mass (g):

Received: 04/25/2023 Completed: 05/03/2023 Client



## Residual Solvents by HS-GC-MS

| Analyte               | LOD<br>(ppm) | LOQ<br>(ppm) | Result<br>(ppm) | Analyte                  | (ppm) | LOQ<br>(ppm) | Result<br>(ppm) |
|-----------------------|--------------|--------------|-----------------|--------------------------|-------|--------------|-----------------|
| Acetone               | 167          | 500          | ND ND           | Ethylene Glycol          | 21    | 62<br>62     | ND              |
| Acetonitrile          | 14           | 41           | ND              | Ethylene Oxide           | 0.5   | 1            | ND              |
| Benzene               | 0.5          | 1            | ND              | Heptane                  | 167   | 500          | ND              |
|                       | 167          | F00          |                 | n-Hexane                 | 10    | 500          |                 |
| Butane                |              | 500          | ND              |                          |       | 29           | ND              |
| 1-Butanol             | 167          | 500          | ND              | Isobutane                | 167   | 500          | ND              |
| 2-Butanol             | 167          | 500          | ND              | Isopropyl Acetate        | 167   | 500          | ND              |
| 2-Butanone            | 167          | 500          | ND              | Isopropyl Alcohol        | 167   | 500          | ND              |
| Chloroform            | 2            | 6            | ND              | Isopropylbenzene         | 167   | 500          | ND              |
| Cyclohexane           | 129          | 388          | ND              | Methanol                 | 100   | 300          | ND              |
| 1,2-Dichloroethane    | 0.5          | 1            | ND              | 2-Methylbutane           | 10    | 29           | ND              |
| 1,2-Dimethoxyethane   | 4            | 10           | ND              | Methylene Chloride       | 20    | 60           | ND              |
| Dimethyl Sulfoxide    | 167          | 500          | ND              | 2-Methylpentane          | 10    | 29           | ND              |
| N,N-Dimethylacetamide | 37           | 109          | ND              | 3-Methylpentane          | 10    | 29           | ND              |
| 2,2-Dimethylbutane    | 10           | 29           | ND              | n-Pentane                | 167   | 500          | ND              |
| 2,3-Dimethylbutane    | 10           | 29           | ND              | 1-Pentanol               | 167   | 500          | ND              |
| N,N-Dimethylformamide | 30           | 88           | ND              | n-Propane                | 167   | 500          | ND              |
| 2,2-Dimethylpropane   | 167          | 500          | ND              | 1-Propanol               | 167   | 500          | ND              |
| 1,4-Dioxane           | 13           | 38           | ND              | Pyridine                 | 7     | 20           | ND              |
| Ethanol               | 167          | 500          | ND              | Tetrahydrofuran          | 24    | 72           | ND              |
| 2-Ethoxyethanol       | 6            | 16           | ND              | Toluene                  | 30    | 89           | ND              |
| Ethyl Acetate         | 167          | 500          | ND              | Trichloroethylene        | 3     | 8            | ND              |
| Ethyl Ether           | 167          | 500          | ND              | Tetramethylene Sulfone   | 6     | 16           | ND              |
| Ethylbenzene          | 3            | Y            | ND              | Xylenes (o-, m-, and p-) | 73    | 217          | ND              |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit



Generated By: Ryan Bellone CCO Date: 05/04/2023

Tested By: Scott Caudill Senior Scientist

Date: 05/01/2023