

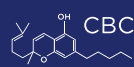
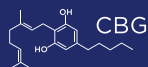
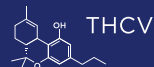
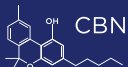
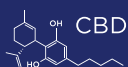
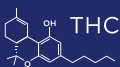


ALPHA-CAT[®]

THE RECOGNIZED STANDARD

Cannabinoid Analysis Test

Laboratory Protocol Manual



ONLINE PDF HERE

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WARNING:

1. Do not inhale, drink or ingest any of the kit components.
2. Do not leave any chemicals unattended.
3. Always wear nitrile gloves when handling chemicals.
4. Only perform tests in very well-ventilated area, or under a carbon filter fume hood.
5. Prepare some paper towels to use as an absorbent in case of spill.
6. If the test fluids are spilled put some paper towel on the spill and immediately leave the room and allow the room to ventilate until there is no detectable odor.
Use nitrite gloves during the cleanup.
7. Store coloring dye in the fridge at 5° Celsius as it is prone to degradation when exposed to light & heat.
8. Store the test fluids in a cool dark place. If left in a heated area and the test fluids may be destroyed, and will need to be disposed of properly.
9. Keep the test plates in a dry environment away from moisture at room temperature.

WARNING:

This kit contains 2 chemicals that require specific handling. When handling chemicals always wear a pair of nitrile gloves. It is also recommended to wear **protective eye** wear and **face mask** whenever handling chemicals. These chemicals have a limited shelf life. Please use before one year from manufacturing date on bottom.

Recommendations

Keep all kit components away from children and animals. Test fluid is prone to evaporate quickly; be sure to close the bottle tightly immediately after use.

Chemical Disposal

To dispose of any unused or used chemicals or materials that have been contaminated by any of the chemicals contained in the kit please follow the appropriate local procedures with respect to environmentally friendly hazardous waste disposal.

INTRODUCTION TO ALPHA-CAT

The ALPHA-CAT (Cannabinoid Analysis Test) is part of an international collaborative effort to provide scientific support for all cannabis crafters & active persons in the medical cannabis community.

Our Mission

ALPHA-CAT is committed to the advancement and normalization of medical cannabis to create standardized dosage recommendations for patients and to educate the end-user about natural cannabinoid compounds.

Our Method

The ALPHA-CAT testing kit utilizes **High Performance Thin Layer Chromatography** for the purpose of analyzing the cannabinoids present in sample from cannabis or cannabinoid derived products. It has been scientifically validated by the University of Leiden in the Netherlands in accordance with ICH guidelines to provide fast and accurate results. The ALPHA-CAT test kit gives quantitative percentages of CBD, CBN, THC, THCV, CBG and CBC). It also analyses acidic counterparts such as THCA and CBDA which provide insight into sample age and quality of curing. It requires only a 100mg sample to provide results in less than 45 minutes and multiple samples may be analysed simultaneously. It is a mobile test that can be taken anywhere and tests flowers, extracts, kief/hash and other concentrate extracts providing data necessary to accurately titrate dosages for labeling products.

Our Goal

To provide the means for patients, physicians and growers. To have a comprehensive analysis reference to understand the relationship between the sample cannabinoid profile and its effect relationship.

C.A.T. INCLUDED COMPONENTS:

MINI KIT CONTENT:

REGULAR KIT CONTENT:

Pipettes
(2ml)



x2
x5



x9
x42
Capillary
Tubes

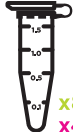


x1
Test Fluid

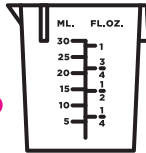
(15ml)
x2
(30ml)



x1
Pipette
Bulb



x8
x40
Eppendorf



x1
Beaker (30ml)



x2
x10
Dye

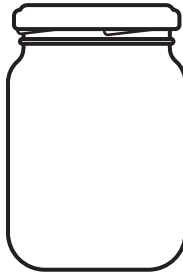


x2
TLC
Test
Plate
x10



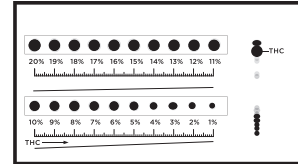
x4
Nitrile
Gloves
x20

Developing Jar



x1
x1

THC & CBD Cannabinoid
Percentage Ruler x2 x2



Dipping Tray x1 x1



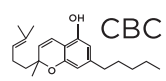
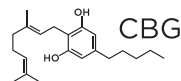
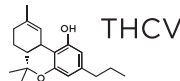
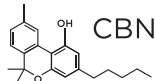
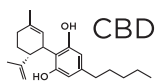
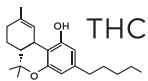
PLEASE READ THROUGH THIS ENTIRE MANUAL BEFORE PROCEEDING WITH YOUR FIRST TEST

Tutorial Video : <https://vimeo.com/203071844>

or search for: "Alpha-CAT Cannabinoid Analysis Test Kit Demo Video" keywords directly in Youtube.

THC & CBD Cannabinoid Percentage Ruler are included with the Alpha-Cat test kits. These rulers will enable you to easily determine the cannabinoid percentages as well as the Cannabinoid ratio in your sample.

TEST TO KNOW WHAT IS IN YOUR MEDICINE!



DEFINITIONS

Cannabinoids: The pharmacological active compounds present in Cannabis.

Cannabis: Plant producing cannabinoids in leaves and flower clusters.

Cannabinoid matrix: any materials containing cannabinoids.

Raw print: The spots of origin are not heated; a natural fingerprint will be the result after developing the plate. The acids and the neutral cannabinoids will be revealed. It measures the freshness of the sample.

Hashish: A cannabis product made from cured trichomes of cannabis flowers.

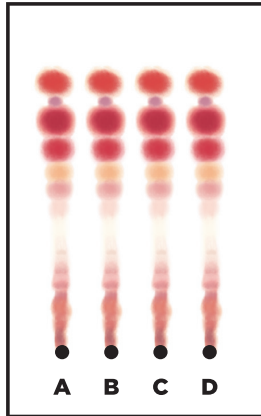
Hemp: Cannabis strain cultivated for fiber with minimal levels of THC. A non-drug type of cannabis.

Heated Print: Prior to developing the plates, the spots on the plate are heated for 1 minute (with heating device) in order to transform the cannabinoid acids into their neutral states.

Origin: Extraction fluid application spot. The place on the TLC plate where 1 or 2 μ l of extraction fluid will be applied with a capillary tube.

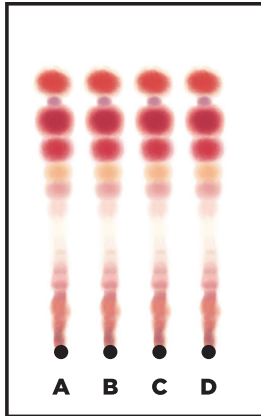
Trichome: Fine structured outgrowth of cannabis. Cannabis (stalked glandular) trichomes contain a resin excreting head-cell: a crystal-like bulge will be formed during flowering, trichomes produce the cannabinoids.

POTENCY TESTING



LANE 1	LANE 2	LANE 3	LANE 4
Origin position A	Origin position B	Origin position C	Origin position D
Sample 1	Sample 2	Sample 3	Sample 4
1 μ l heated print	1 μ l heated print	1 μ l heated print	1 μ l heated print
CBD, CBN, THC, THCV, CBG, CBC%	CBD, CBN, THC, THCV, CBG, CBC%	CBD, CBN, THC, THCV, CBG, CBC%	CBD, CBN, THC, THCV, CBG, CBC%
Multiply x2 the reading result measured by the cannabinoid ruler.	Multiply x2 the reading result measured by the cannabinoid ruler.	Multiply x2 the reading result measured by the cannabinoid ruler.	Multiply x2 the reading result measured by the cannabinoid ruler.

CHEMOTYPE PROFILING



LANE 1	LANE 2	LANE 3	LANE 4
Origin position A	Origin position B	Origin position C	Origin position D
Sample 1	Sample 1	Sample 1	Sample 1
4µl heated print	2µl heated print	1µl heated print	2µl raw print
CBD, CBN, THC, THCV, CBG, CBC%	CBD, CBN, THC, THCV, CBG, CBC%	CBD, CBN, THC, THCV, CBG, CBC%	CBD, CBN, THC, THCV, CBG, CBC%
Divide ÷2 the reading result measured by the cannabinoid ruler.	Final reading result measured by the cannabi- noid ruler.	Multiply x2 the reading result measured by the cannabinoid ruler.	Final reading result measured by the cannabi- noid ruler.

PREPARATION FOR TESTING

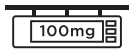
Before proceeding with testing make sure to identify and familiarize yourself with all the test components and prepare them for their appropriate use in the process. Only perform this test in a well-ventilated area or under a carbon filtered fume hood. Always wear nitrile gloves when handling chemicals.

1. Make sure all the measuring utensils, pipettes and test tubes are within easy reach.
2. Make sure all the chemicals are within reach.
3. Lay out the number of test plates that are needed. Up to four tests can be performed simultaneously once the operator is skilled in the test procedure. Do not touch the test plates with bare hands, use gloves.
4. Set out the developing jar(s). One developing jar is needed for each test plate used.
5. Set out the scale and a timer.
6. Read through the test procedure as many times as necessary to become comfortable with the procedure and methods before performing the first test.

The following should be supplied by the user:



Timer



Scale weighing from
0.001g to 0.01g



600dpi Scan



Paper Towels



A well ventilated working area
(ideally a carbon-filtered fume hood)



All cannabinoid matrix samples

IMPORTANT: The test plate images fade with time and do so faster under light. Scan of the plate should be taken as the plate is dry after colorization (15 Mins).

1. EXTRACTION

1.

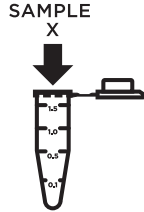


Put on gloves

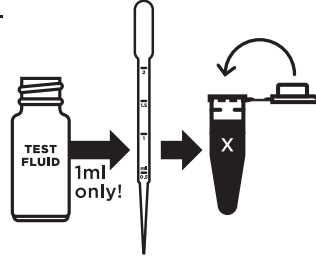
2.



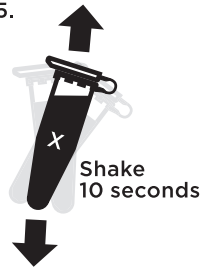
3.



4.

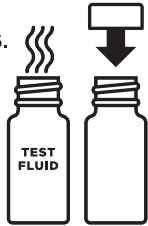


5.

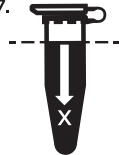


Shake
10 seconds

6.



7.




Submerged
Sample

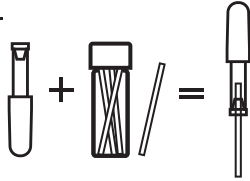
8.

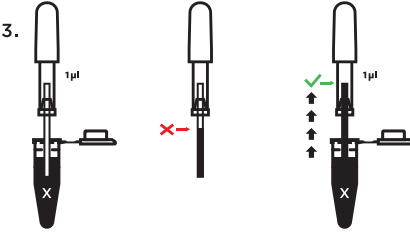



2 Minutes

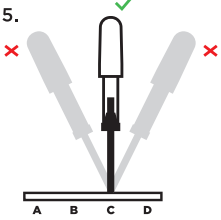
2. TEMPLATE LAYOUT

- 

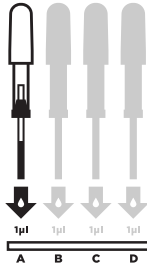
1. TESTING AREA
A B C D
- 

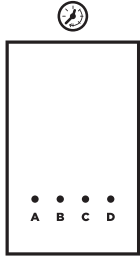
2.
- 

3. 1 μ l
X
- 

4. X
- 

5. X X X


A B C D
- 

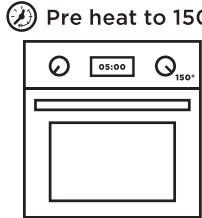
6. 1 μ l 1 μ l 1 μ l 1 μ l
A B C D
- 

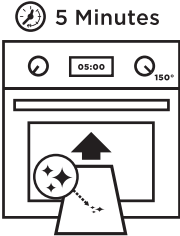
7. A B C D

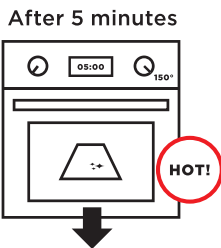
30 Seconds to dry

3. OVEN HEATING

- 

20 Seconds
- 

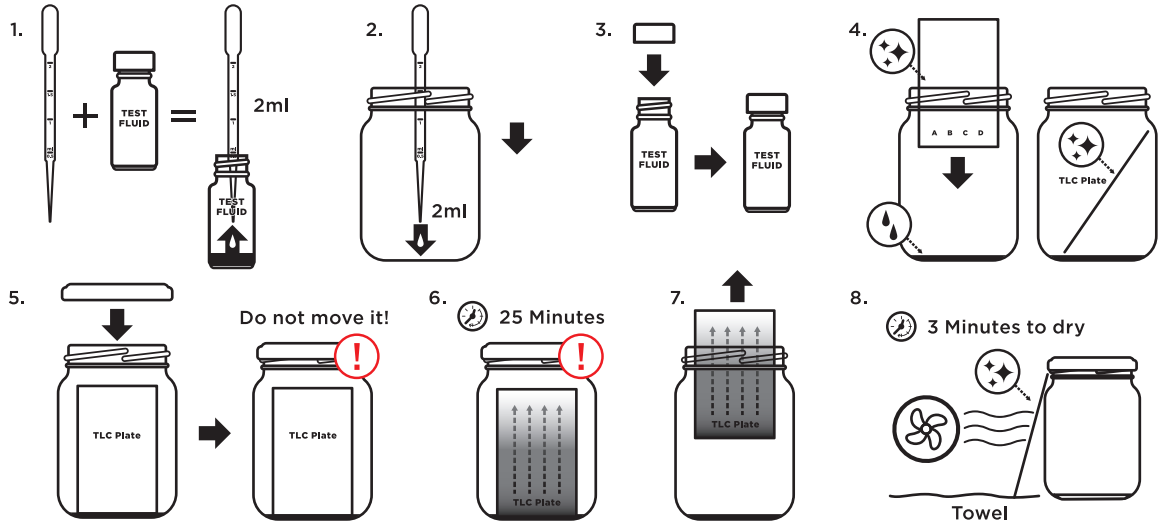
Pre heat to 150°
- 

5 Minutes
- 

After 5 minutes

HOT!

4. DEVELOPING



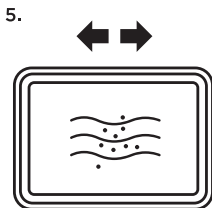
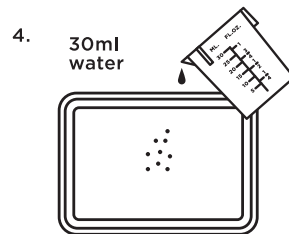
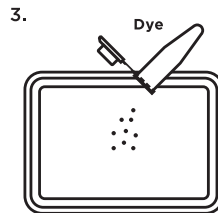
5. REVEALING



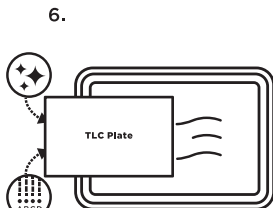
Put on gloves



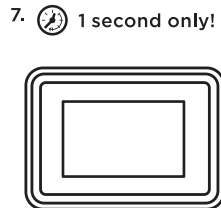
Set up the
drying area



Mix it!

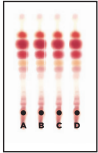


Shine Side Down



6. UPLOADING

9.



10.



Scan it



11.



Email to Database

info@alpha-cat.org

CALCULATION FOR MULTIPLICATION FACTOR

Multiplication factor = $(100\text{mg} \times 2 \mu\text{l}) / (\text{samples weight (mg)} \times \text{extraction fluid} (\mu\text{l}))$

Extract Concentrated samples (high THC concentration)

In a case of a concentrate sample when you expect between 40% and 100% THC, you will take 40mg of sample with 1 μl extraction fluid with the suitable capillary tube, using the following multiplication factor: $(100 \times 2) / (40 \times 1) = 5$ (multiplication factor)

Then after reading the cannabinoid % on the plate with the ruler, calculate with the multiplication factor the true %, for example when you read 13% THC with the ruler then multiply by 5 which will result in 65% THC.

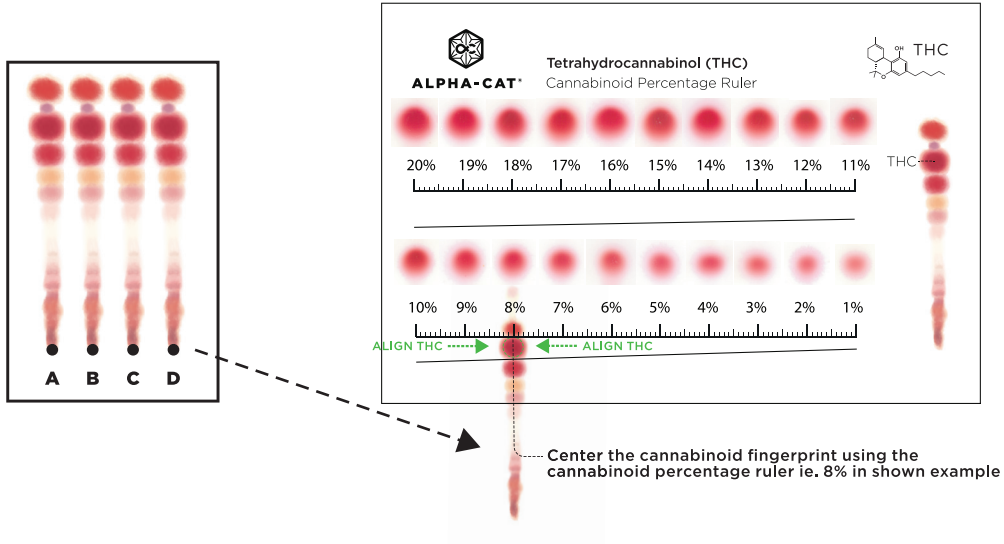
Diluted samples (Low THC concentration)

In a case of a diluted samples when you expect between 0,2% and 5% THC you will take 200 mg of samples with 8 μl extraction fluid with the suitable capillary tube, then: The multiplication factor will be $(100 \times 2) / (200 \times 8) = 0.125$ (multiplication factor)

Then after reading the cannabinoid % on the plate with the ruler, calculate with the multiplication factor the true %, for example when you read 5% THC with the ruler then multiply by 0.125 which will result in 0.63% THC.

* Extra capillary tube of 1, 2 or 4ul can be purchased online at www.alpha-cat.org

CANNABINOID PERCENTAGE RULER



HOW TO USE THE CANNABINOID PERCENTAGE RULER

HOW TO USE THE ALPHA-CAT CANNABINOID PERCENTAGE RULER

The Percentage Ruler tool is printed on clear plastic and has two ways to measure the size of all Cannabinoid dots.

There are two rows of dots that gradually get larger from right to left: The bottom row dots (from 1% to 10%), the top row of dots (from 11% to 20%). Underneath these dots you see a line with percentage marks on it. This line runs parallel with the size of the dots and works together with the sloped line underneath which runs closer at the 1% dot and slowly moves further apart as the dots get larger.

How to use the Percentage Ruler:

The ruler works by using the percentage line and the sloped line below the percentage ruler. Lay the ruler over dot you want to measure - the dot should fit snug between the two lines. Move the ruler until the dot fits snug, the place where the dot fits snug is the % reading above the ruler. The ruler can be used to work beyond a whole number, like 8% in this sample.


CHEMOTYPE PROFILING INFORMATION

HOW TO MEASURE THE CANNABINOID ACID

By doing a chemotype profiling you can calculate the acid form for each cannabinoid by making the difference between the cannabinoids measured in position B (2µl heated print) and position D (2µl raw print). For example if you obtain 16% THC on position B and 5% THC on position D, then THCA = 16% - 5% = 11%.

HOW TO MEASURE THE SECONDARY CANNABINOID (CBN, THCV, CBG, CBC)

By doing a chemotype profiling you will be able to visualize and measure the secondary cannabinoids by looking at position A (4µl heated print) and dividing the reading result by 2

For any questions, please contact:  info@alpha-cat.org







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