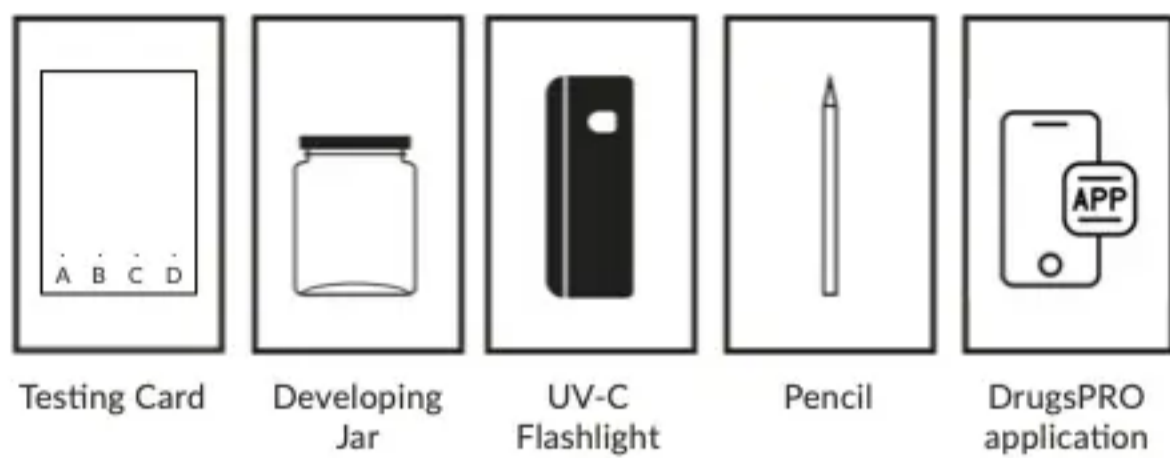
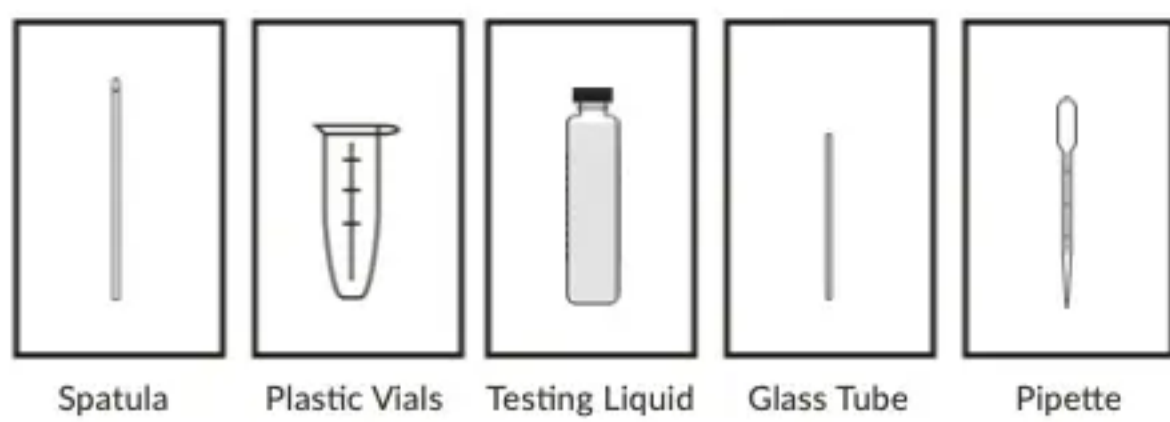


CHEMICAL SAFETY

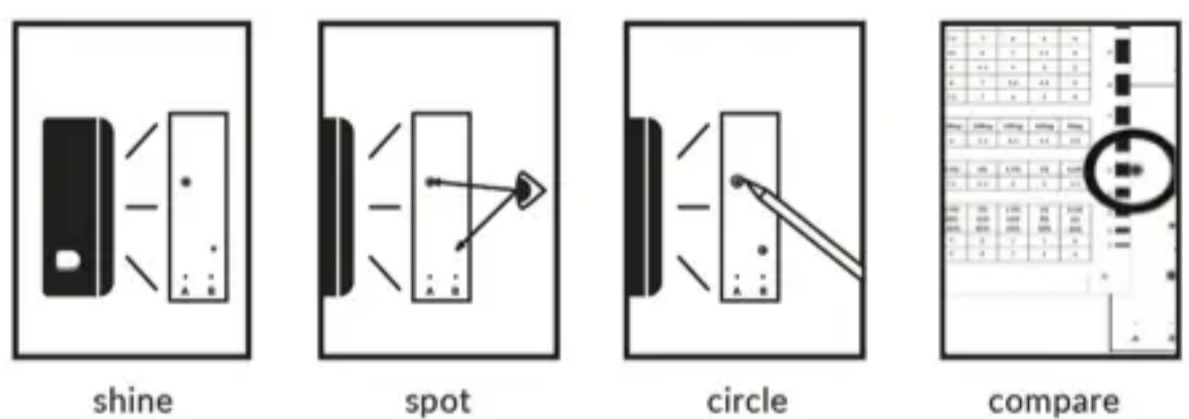
PURITY PRO TEST

Detect all ingredients and estimate potency of any substance



CONTENTS OF SUBSTANCE PURITY TEST

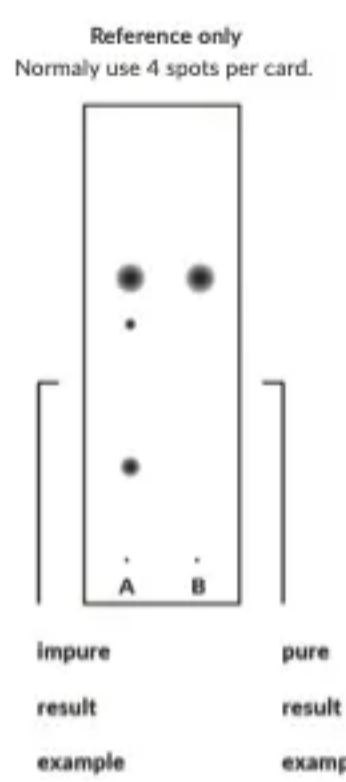
- Spatula
- Plastic Vials
- Testing Liquid
- Glass Tubes
- Pipette
- Testing Cards
- Developing Jar
- UV-C Flashlight
- Pencil
- DrugsPRO application



STEP 4 COMPARING RESULTS

- Use UV-C flashlight to find spots on Testing Card
- Notice every, even faint spot visible under UV-C light
- Use pencil to draw a circle around spot(s) length
- Compare purity and potency results

- Each spot that shows up indicates a different substance separated from your original sample.
- If there is only one spot your sample is pure. If you see multiple spots your sample is not pure. Some exceptions are heroin, which might contain partially converted morphine, or 4-ACO compounds with harmless residual fumeric acid. LSD often contains degradation products such as iso-LSD.
- If you see a comet shaped spot, this is normal. Circle it around as best and precise as possible.
- If you don't see any spots no active substance was detected. Insoluble cuts do not show up.



STEP 4.1 COMPARING PURITY RESULTS

RECOMMENDED: IDENTIFICATION WITH REAGENT TESTS

- Add 1 drop or pile of reagent onto substance
- Observe color change reaction for 1-2 minutes
- Compare color change with reagent instructions
- Clean up using running water, wash with detergent

REAGENT TESTS

Use reagent tests to confirm if sample contains the expected substance. If purity test shows multiple spots (impure sample), use additional references described in this booklet to identify which spot is the expected compound.

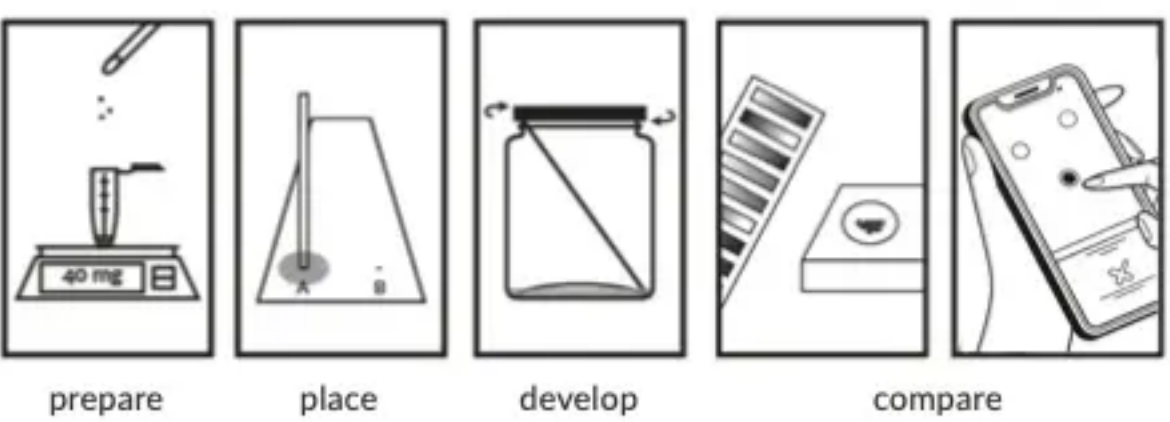
REFERENCE SAMPLES

It is recommended to test a sample side by side with a second, already confirmed „control“ sample of the same kind. Compare spot position, same height on the same Testing Card suggests spots can be the same substance.

Cross-reference reagent test results (color change) with TLC test spot position height - if both results are the same then both substances are likely the same.

TIPS & TRICKS

- For best results use reagents separately, not on Testing Card
- Only reagents Ehrlich, Hofmann and Morris A can work on Testing Cards
- Using reagent on Testing Card makes the card non-reusable
- In case of any doubt do not hesitate to send a sample to a lab



BASIC STEPS

GENERAL INSTRUCTIONS

- PREPARE YOUR SAMPLE: MEASURE AND DISSOLVE
- PLACE YOUR SAMPLE ON TESTING CARD
- PLACE CARD IN DEVELOPING JAR
- REVEAL RESULTS AND COMPARE WITH INSTRUCTIONS

OPTIONAL BUT RECOMMENDED: REAGENT TESTS

HANDLING | STORAGE | DISPOSAL

- Wear clean gloves while handling test kit components
- Never touch white side of Testing Cards, hold by top edges
- Keep away from any heat source: sunlight, open flame, etc.
- Only test in well-ventilated space, avoid fumes
- Never open more than one testing liquid at once
- Do not leave test kit unattended, keep out of reach of children and animals
- Test kit can be stored indefinitely without degradation
- Clean any spills with plenty of running water and soap
- Dispose of unused or used contents following normal waste disposal procedures. Testing Liquids evaporate cleanly, untwist before disposal.

STEP 0

MARK 4 DOTS

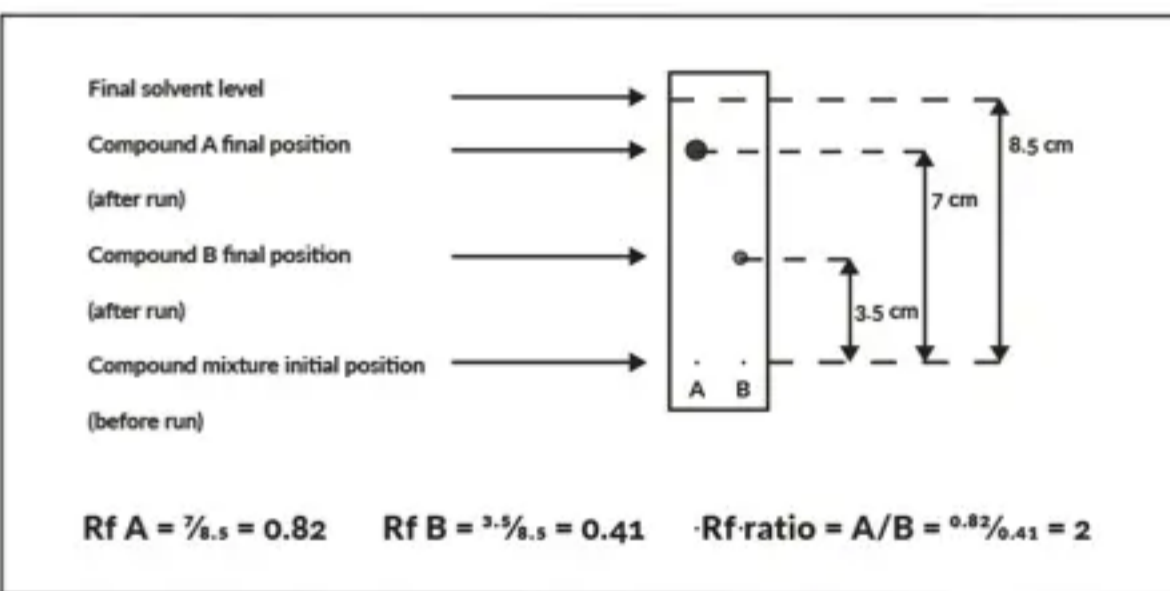
Wearing gloves and using a pencil gently mark 4 dots on white side of Testing Cards. Space the dots at least 1,5 cm from Card bottom and 1 cm from both each other and side edges.



OPTIONAL: IDENTIFICATION WITH REFERENCE RATIOS

If reagent results are inconclusive, and/or a confirmed (control) sample is unavailable it is possible to use different substances as reference for substance identification.

If spot height value (Rf) of compound A is for example twice as big as of compound B you can expect them to keep that ratio at any other value too. Rf value (spot height) will change depending on many factors, but ratio will not.

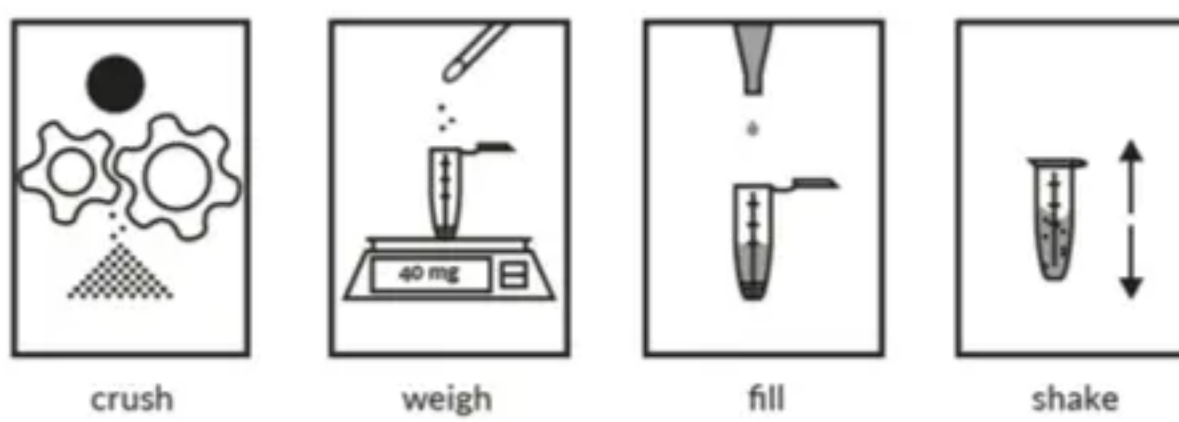


Example:

If after developing a Testing Card substance A shows up at Rf 0.82 and substance B shows up at Rf 0.41, their Rf ratio = A/B = 0.82/0.41 = 2. Therefore if substance A shows up at 3 cm, substance B will appear at 1.5 cm (+-3 mm).

TIPS & TRICKS

- Spot height result on a Testing Card can vary +-3mm
- Spot height result on a Testing Card can vary +-6mm if spot size differs a lot



STEP 1

PREPARING SAMPLE

- If you have a crystal, powder, pill or mushroom, crush it finely
- Add your substance inside a Plastic Vial
- Fill the Plastic Vial with Testing Liquid
- Close the Plastic Vial firmly and shake, dissolve as good as possible

CRYSTAL | PILL | POWDER

Prepare 40 mg in 0.5 ml of testing liquid, with the following exceptions: for cocaine use 40 mg in 2.5 ml and for CMC or MMC use 40 mg in 4 ml

PLANT | CANNABINOID PRODUCTS

Prepare 100 mg in 1 ml of Primary Testing Liquid
For testing cannabinoids see the cannabinoid test kit booklet

LIQUID

Prepare just like crystal/pill/powder samples

TIPS & TRICKS

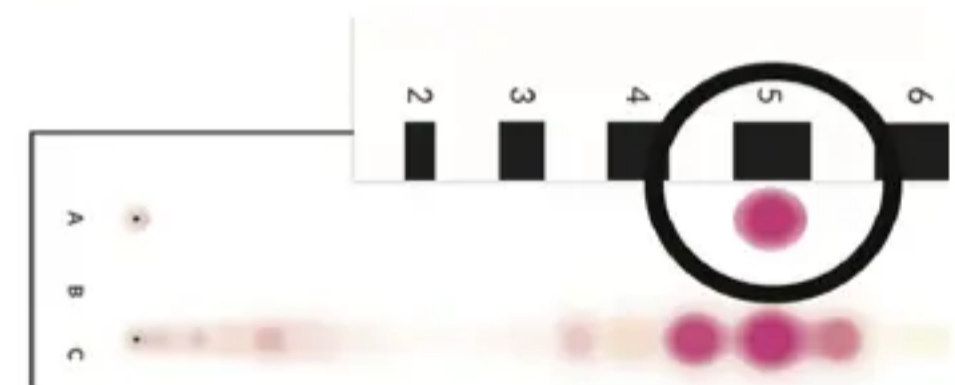
- You can save testing liquid by extracting or diluting sample with ethanol
- If testing cocaine use Ehrlich reagent to rule out procaine (orange reaction indicates presence of procaine or benzocaine) to ensure reliable potency % result

STEP 4.2

COMPARING POTENCY (%) RESULTS

- Compare substance spot size with the provided scale (pages 11-12)
- Make sure you are measuring the correct (usually lowest) spot
- If spot size doesn't fit scale exactly, assume values in between

Compare with protestkit.eu/drugspro/tlc/results if uncertain which spot to measure. Often the lowest spot is the expected one, even if it is hard to see.



AMPHETAMINE

If testing amphetamine, the typical purity is 15%. Most common result is a big round spot in the upper part of a testing card which is caffeine, and a small, barely visible amphetamine spot usually below the center of testing card.

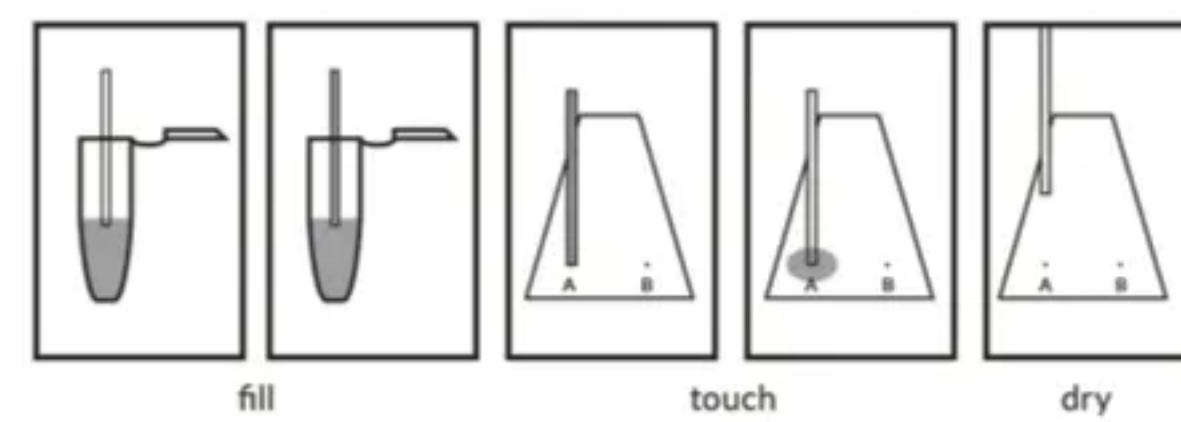
COCAINE

If cocaine % result seems too high sample likely contains procaine (rule out with negative Ehrlich reagent result, orange reaction would indicate procaine). If only one spot is visible and reagent tests come up clean then sample is pure.

For more references and help see the app at protestkit.eu/drugspro/tlc.

TIPS & TRICKS

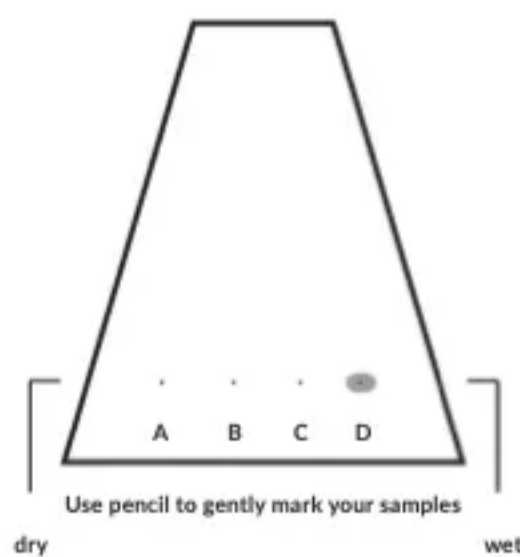
- If detected spots are too big double check used mg/ml ratio
- If sample is pure but % result is not 100%, water or fillers are likely the cause
- If a spot is not straight, measure the spot's radius at the longest angle
- Psilocin spot turns grey fast and is visible without UV-C within hours



STEP 2

PLACING SAMPLE

- Place Glass Tube in Small Vial with just the tip barely submerged
- Glass Tube fills automatically, observe under good light conditions
- Gently touch down Glass Tube on 1 of 4 dots on Testing Card
- Allow Glass Tube to empty and pick it up
- Wait 30 seconds for Testing Card to dry



TIPS & TRICKS

- Never touch white side of Testing Cards, hold by top edges
- Do not close Glass Tubes with your finger
- It might be easiest to use Glass Tubes at a 30-45 degree angle
- Practice using Glass Tubes with water, paper towel and good light source
- Clean Glass Tubes by loading and emptying with solvent, discard if clogged

ESTIMATING POTENCY PERCENTAGE

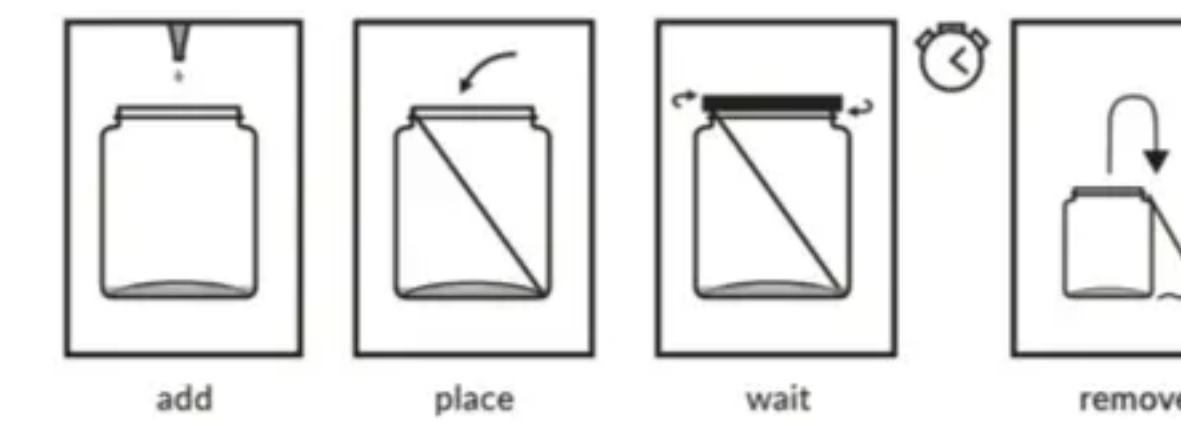
Align detected spot with the scale on the right and compare with chart below
After confirming which of the detected spots is your expected compound compare spot's length with reference scale below. Chart applies if correct testing liquid was used.

You can estimate amounts in-between, such as 50%.

1 ul (see page 4)	100%	80%	60%	40%	20%
AMPHETAMINE	8	7	5.5	4.5	3
CMC	7.5	7	6	5	4
COCAINE	10	8	7	5.5	4
KETAMINE	5	4.5	4	3	2
MDMA	8	7	5.5	4.5	3
MMC	7.5	7	6	5	4

8 ul of (200 mg / 1 ml)	2.5%	2%	1.5%	1%	0.5%
2 ul of (100 mg / 1 ml)	20%	16%	12%	8%	4%
1 ul of (40 mg / 1 ml)	100%	80%	60%	40%	20%
CBD	9	8	7	6	4
THC	9	8	7	6	4

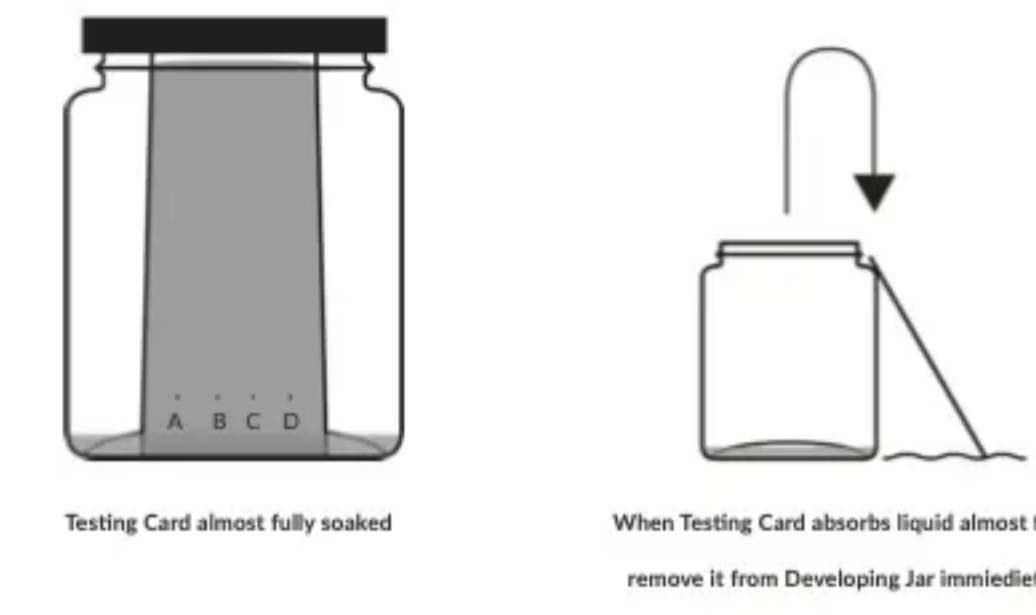
We recommend to use the DrugsPRO app for result interpretation. For assistance send us a photo of your result, see protestkit.eu/contact-us.



STEP 3

DEVELOPING TESTING CARD

- Fill Developing Jar with 2 ml of appropriate Testing Liquid
- Evenly insert Testing Card with white side facing up and dots at the bottom
- Close Developing Jar, wait 25 min. or until Testing Card is almost fully soaked
- Remove Testing Card, clean Developing Jar, air-dry for 3 minutes



TIPS & TRICKS

- Never touch white side of Testing Cards, hold by top edges
- Do not move Developing Jar while Testing Card is inside
- You can reuse Testing Cards as long as they have an empty „lane“

RECOMMENDED: DRUGSPRO APP AUTOMATIC RESULTS ANALYSIS

- Open DrugsPRO app and navigate to TLC -> Analysis
- Upload a photo of your results, mark the spots and choose expected result
- Read the results, contact PRO Test for any help with interpretation

DrugsPRO includes all instructions, photos, videos and automatic analysis tool, on top of many other drug checking and harm reduction content and features.



After uploading your result photo mark the visible spots:

- Starting point(s) (where you applied sample)
- Detected spots visible after developing test results (even if barely visible)



Tap repeatedly to adjust spot size. Finally scroll down to choose the expected sample. And that's all, read the result.

GET DRUGSPRO APP

Go to <https://protestkit.eu/drugspro>

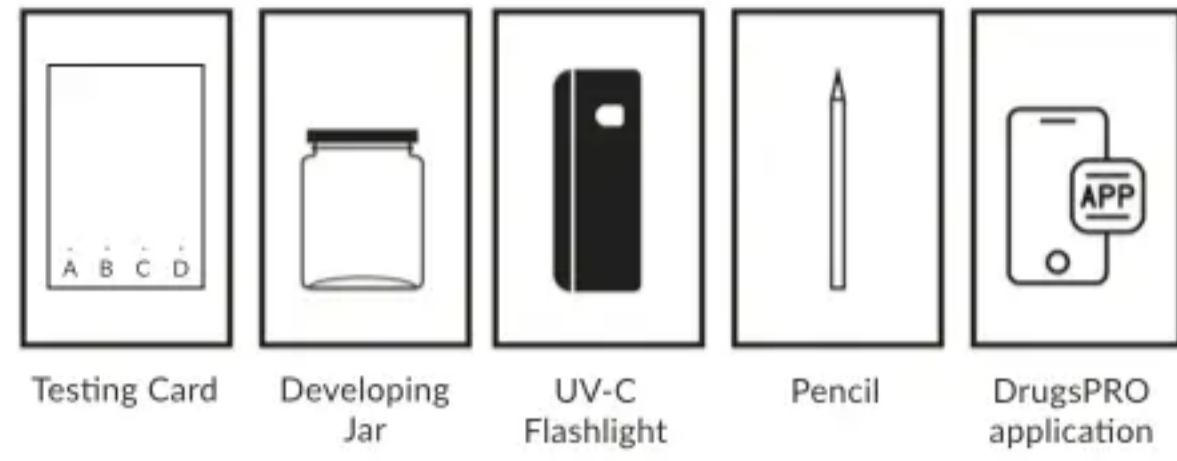
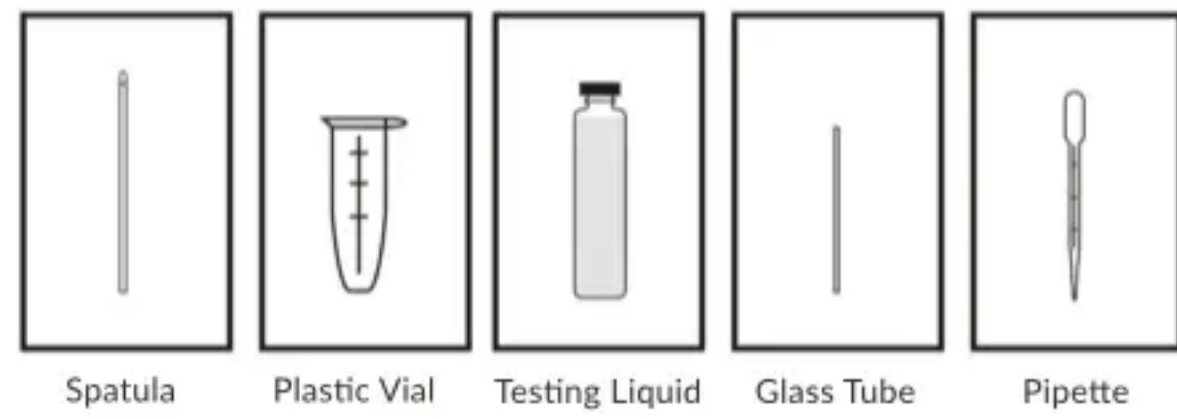


Available both online and offline, can be installed on any moden device: Windows, Mac, Linux, Android and iOS. Visit app website for instructions.



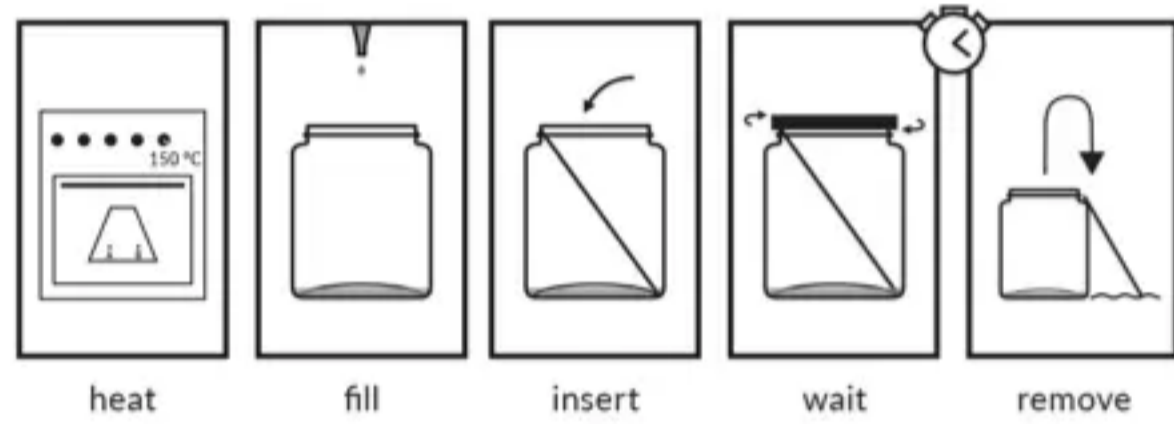
CANNABINOID PRO TEST

Estimate cannabis potency and identify cannabinoids



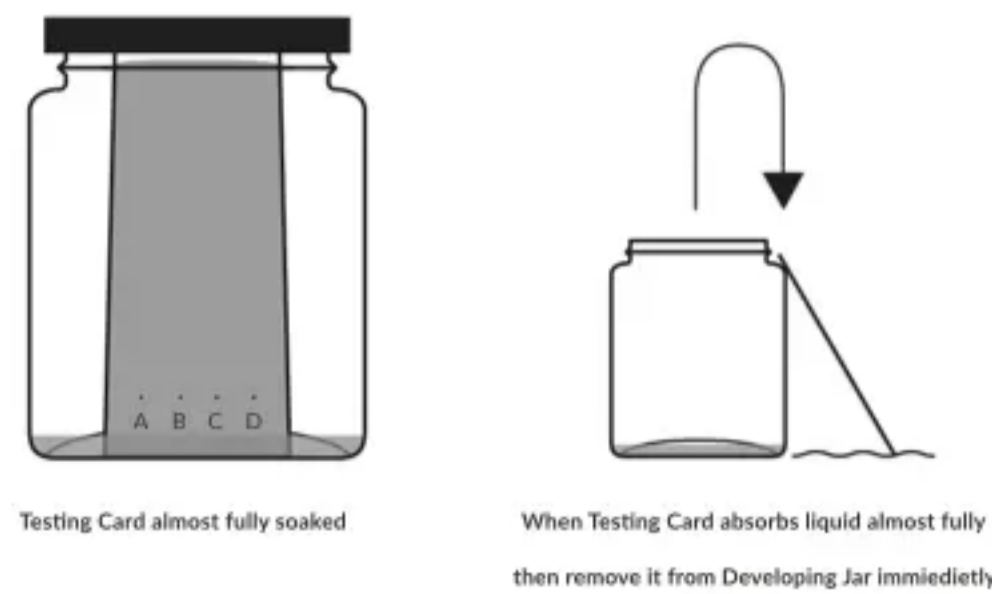
CONTENTS OF CANNABINOID PRO TEST

1. Spatula
2. Plastic Vials
3. Testing Liquid
4. Glass Tubes
5. Pipette
6. Testing Cards
7. Developing Jar
8. UV-C Flashlight
9. Pencil
10. DrugsPRO application



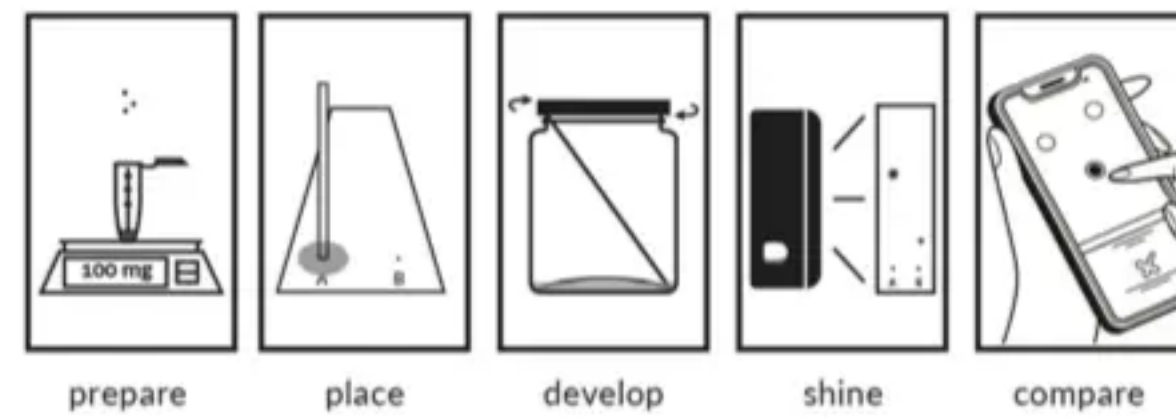
STEP 3 DEVELOPING TESTING CARD

1. Put prepared Testing Card for 5 minutes in an oven at 150C to decarboxylate
2. Fill Developing Jar with 2 ml of fresh Testing Liquid
3. Evenly insert Testing Card with white side facing up and dots at the bottom
4. Close Developing Jar. Wait 25 min. or until Testing Card is almost fully soaked
5. Remove Testing Card, close Developing Jar, air-dry for 3 minutes



TIPS & TRICKS

- Wear gloves and never touch white side of Testing Card, hold by top edges
- Do not move Developing Jar while Testing Card is inside
- If sample was decarboxylated before, for example when drying fresh plant material in an oven heated above 100C before testing then no need to heat again in Step 3



BASIC STEPS GENERAL INSTRUCTIONS

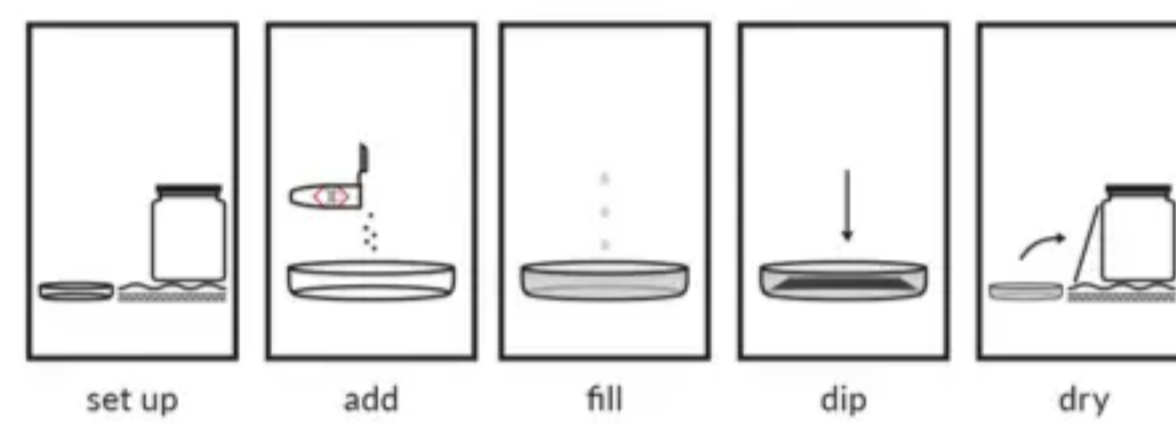
1. PREPARE YOUR SAMPLE: MEASURE AND DISSOLVE
 2. PLACE YOUR SAMPLE ON TESTING CARD
 3. HEAT TESTING CARD AND PLACE IN DEVELOPING JAR
 4. REVEAL RESULTS AND CIRCLE AROUND DETECTED SPOTS
 5. COMPARE RESULTS WITH INSTRUCTIONS
- OPTIONAL BUT RECOMMENDED: REAGENTS

HANDLING | STORAGE | DISPOSAL

- Wear clean gloves while handling test kit components
- Never touch white side of Testing Cards, hold by top edges
- Keep away from any heat source: sunlight, open flame, etc.
- Only test in well-ventilated space, avoid fumes
- Never open more than one testing liquid at once
- Do not leave test kit unattended, keep out of reach of children and animals
- Test kit can be stored indefinitely without degradation
- Clean any spills with plenty of running water and soap
- Dispose of unused or used contents, container or material that have been contaminated according to the appropriate local procedures, with respect to environmentally friendly hazardous waste disposal

STEP 0 MARK 4 DOTS

Wearing gloves and using a pencil gently mark 4 dots on white side of Testing Cards. Space the dots at least 1,5 cm from Card bottom and 1 cm from both each other and side edges.

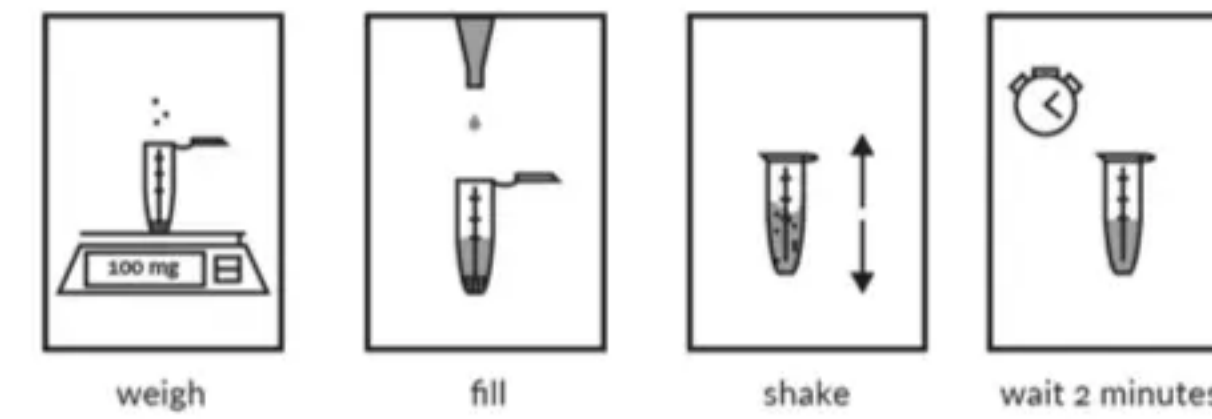


OPTIONAL REVEALING WITH DYE

1. Set up a drying and dipping area in a clean sink with paper towels
2. Add 1 Dye vial to Dipping Dish and carefully fill 3/4 with water to mix
3. By its edges press prepared Testing Card into Dipping Dish for 5 seconds
4. Dry the Testing Card for 15 minutes in the prepared drying area

TIPS & TRICKS

- Wear gloves and never touch white side of Testing Card
- If Testing Card is too big cut Testing Card to fit in Dipping Dish
- If you cut Testing Card it can not be used to run new samples
- You can not reuse Testing Cards after revealing with Dye
- Dissolved Dye can be reused for 20 minutes



STEP 1 PREPARING SAMPLE

1. Add cannabis product inside a Plastic Vial
2. Fill the Plastic Vial with Testing Liquid
3. Close the Small Vial firmly and shake briefly
4. Wait 2 minutes for any sediment to fall down

LOW CBD/THC CONTENT (0.2-2.5% THC)

Add 200 mg inside Plastic Vial and 1 ml of Testing Liquid. In Step 2 apply your sample 8 times (8 ul) on 1 dot. At the end of Step 4 divide your result by 8.

MEDIUM CBD/THC CONTENT (2-20% THC)

Add 100 mg inside Plastic Vial and 1 ml of Testing Liquid. In Step 2 apply sample 2 times (2 ul) on 1 dot. At the end of Step 4 read result normally.

HIGH CBD/THC CONTENT (20-100% THC)

Add 40 mg inside Plastic Vial and 1 ml of Testing Liquid. In Step 2 apply your sample once (1 ul) on 1 dot. At the end of Step 4 multiply your result by 5. Recommended only for oils, not flowers or hash.

TIPS & TRICKS

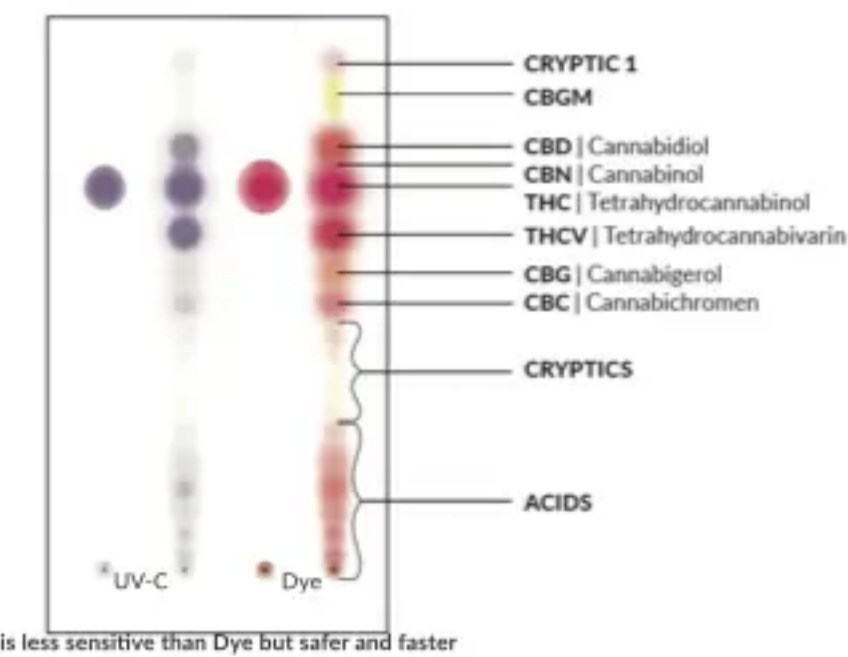
- If testing resin that doesn't easily dissolve, pulverize it
- Extraction instructions for CBD and THC are the same
- Always test in a well ventilated area to avoid breathing in fumes
- Always wear gloves when handling Testing Cards, hold by top edges
- Keep all filled vials and bottles tightly closed to avoid evaporation
- To test fresh plant dry 1 hour in 110C and multiply result by 1,25

STEP 5 COMPARING RESULTS

1. Compare substance spot length with the scale on the next page
2. Make sure you are measuring the correct spot, THC is below CBD
3. If spot size doesn't fit scale exactly, assume values in between

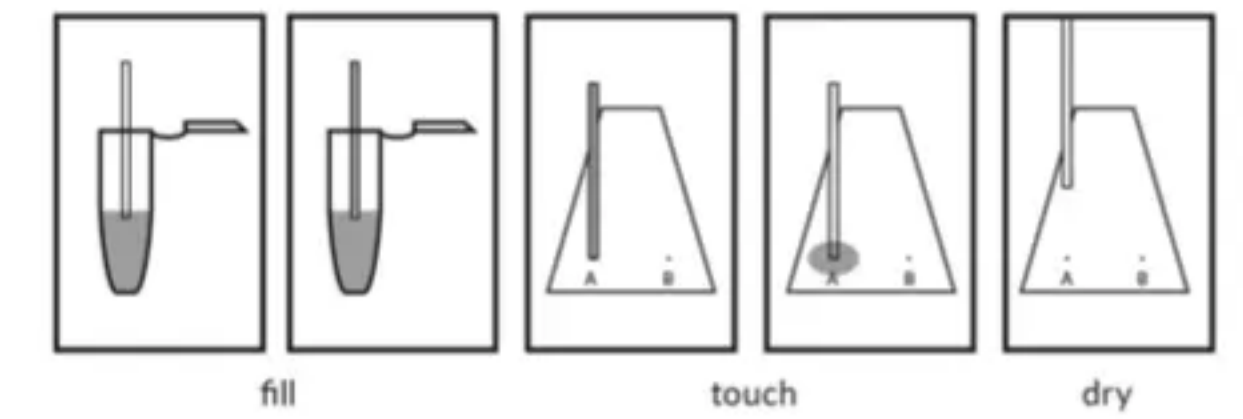
HOW TO INTERPRET DETECTED SPOTS

Test shows composition of cannabis products ("chemotype" or "phenotype"). You can distinguish strains, estimate potency and predict effects. Each spot that shows up indicates a different substance separated from your original sample. If there is only 1 spot your sample is pure. If you only see a big flame-like streak on the bottom of your Testing Card then the sample has not been fully decarboxylated (heated) in step 3, or it is very old and degraded.



TIPS & TRICKS

- A big dark patch in top part of a Testing Card indicates either contamination or that sample was applied using a different tool than a Glass Tube
- If detected spots are too big double check used mg/ml ratio (page 4)
- If spots are too small, check if Testing Card was heated correctly (page 5)
- The most reliable way to detect synthetic cannabinoids is to check if sample expected to be psychoactive contains only trace amount of THC



STEP 2 PLACING SAMPLE

1. Place Glass Tube in Plastic Vial with just the tip barely submerged
2. Glass Tube will fill automatically, observe closely under strong light
3. Gently touch down Glass Tube on 1 of 4 dots on Testing Card
4. Allow Glass Tube to empty and pick it up
5. Wait 30 seconds for Testing Card to dry

LOW CBD/THC CONTENT (0.25-2.5% THC)

Repeat 8 times to apply 8 ul on 1 dot

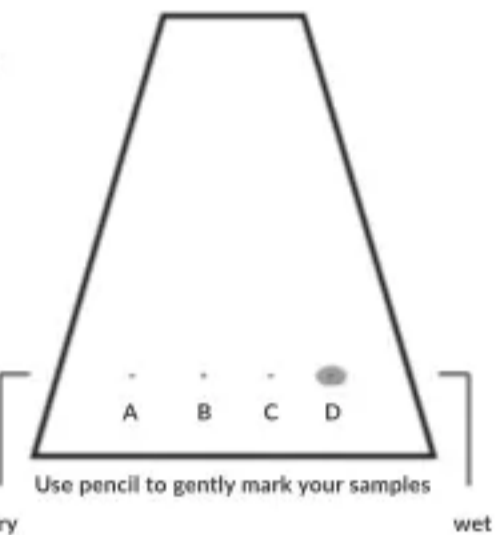
MEDIUM CBD/THC CONTENT (2-20% THC)

Repeat 2 times to apply 2 ul on 1 dot

HIGH CBD/THC CONTENT (20-100% THC)

Apply 1 time (1 ul) on 1 dot

If expecting lower end of % range consider doubling the sample size.



TIPS & TRICKS

- Never touch white side of Testing Cards, hold by top edges
- Do not close Glass Tubes with your finger
- Do not press Glass Tubes (just touch), they break easily
- Practice using Glass Tubes with water, paper towel and strong light
- It might be easiest to use Glass Tubes at a 30-45 degree angle
- Clean Glass Tubes by loading and emptying solvent, discard if clogged

ANALYZING RESULTS

Align spots with the scale on the right and compare with chart below. After confirming which of the detected spots is your expected compound (see reference image on page 8) compare spot's length with the scale on the right and with the chart below. You can estimate amounts in-between, such as 50%.

8 ul of (200 mg / 1 ml)	2.5%	2%	1.5%	1%	0.5%
2 ul of (100 mg / 1 ml)	20%	16%	12%	8%	4%
1 ul of (40 mg / 1 ml)	100%	80%	60%	40%	20%

LOW THC CONTENT (0.25-2.5% THC)

If you applied 200 mg / 1 ml sample 8 times (8 ul), divide result by 8.

MEDIUM THC CONTENT (2-20% THC)

If you applied 100 mg / 1 ml sample 2 times (2 ul), divide result by 2.

HIGH THC CONTENT (20-100% THC)

If you applied 40 mg / 1 ml sample 1 times (1 ul), divide result by 5.

To measure trace amounts of CBN, THCV, CBG or CBC in Step 2 apply your sample twice and at the end divide the cannabinoid % result by 2.

RECOMMENDED: DRUGSPRO APP AUTOMATIC RESULTS ANALYSIS

DrugsPRO includes all instructions, photos, videos and automatic analysis tool, on top of many other drug checking and harm reduction content and features.

GET DRUGSPRO APP

Available both online and offline for Windows, Mac, Linux, Android and iOS. Visit <https://protestkit.eu/drugspro>.

