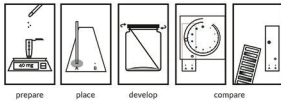


#### CONTENTS OF SUBSTANCE PURITY TEST

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. Percentage Ruler



#### BASIC STEPS GENERAL INSTRUCTIONS

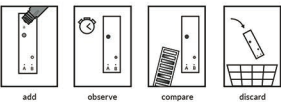
1. PREPARE YOUR SAMPLE: MEASURE AND DISSOLVE
2. PLACE YOUR SAMPLE ON TESTING CARD
3. PLACE CARD IN DEVELOPING JAR
4. REVEAL RESULTS AND COMPARE WITH INSTRUCTIONS

#### 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 spaces, 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 2 cm apart from Card bottom and 1 cm from each other and side edges.

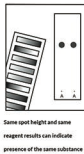


#### STEP 4.2 COMPARING QUALITATIVE RESULTS

1. Add 1 drop or scoop of reagent onto spot marked on Testing Card
2. Observe color change reaction for 1-2 minutes
3. Compare color change with reagent instructions
4. Don't litter, discard of the Testing Card safely

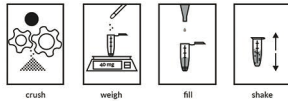
#### REFERENCE SAMPLES

- Cross-reference reagent color change with spots position height - If results are the same then both substances are likely the same too
- It is recommended to test a sample side by side with a second, earlier confirmed, "control" sample of the same kind (or caffeine, see pages 10-11)
- Compare spot position, same position suggests presence of the same substance, although still requires cross-referencing with reagent testing



#### TIPS & TRICKS

- Only 1-part reagents will work on Testing Cards
- Keep all liquids tightly closed to avoid evaporation
- Clean tools with alcohol/acetone/vinegar/Testing Liquid
- In case of any doubt do not hesitate to send a sample to a lab



#### STEP 1 PREPARING SAMPLE

1. If you have a crystal, powder or pill, crush it finely
2. Check Percentage Ruler for recommended mg/ml ratio
3. Add your substance inside a Small Vial
4. Fill the Small Vial with Testing Liquid
5. Close the Small Vial firmly and shake, dissolve as good as possible

#### CRYSTAL | PILL | POWDER

Prepare 40 mg in 0.5 ml of Primary Testing Liquid unless ruler says otherwise

#### BLOTTER | GEL TAB

Submerge 1/4th in the smallest possible amount of Primary Testing Liquid

#### PLANT

Prepare 100 mg in 1 ml of Primary Testing Liquid

#### FLUID

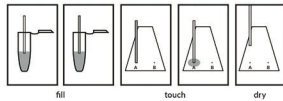
Weigh just like crystal/pill/powder samples

Unless instructed otherwise, use Primary Testing Liquid.

To detect all substances in your sample it might be necessary to use more than 1 type of Testing Liquid out of all available for purchase at protestkit.eu.

#### TIPS & TRICKS

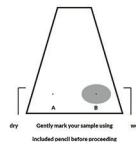
- Always test in a well ventilated area to avoid breathing in fumes
- Always wear gloves when handling Testing Cards, hold by top edges
- If testing a pill, crush the entire pill and mix to ensure a homogenous sample



#### STEP 2 PLACING SAMPLE

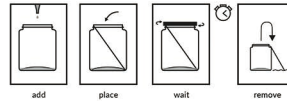
1. Place Glass Tube in Small Vial with just the tip barely submerged
2. Glass Tube will fill automatically, observe under good light conditions
3. Gently touch down Glass Tube on 1 of 4 dots on Testing Card
4. Allow Glass Tube to empty and pick it up
5. Wait 30 seconds for Testing Card to dry

If testing blotter or gel, repeat 4 times to apply 4 ul



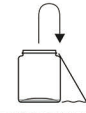
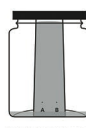
#### TIPS & TRICKS

- 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
- It might be easiest to submerge 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



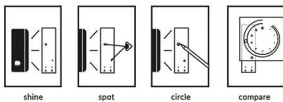
#### STEP 3 DEVELOPING TESTING CARD

1. Fill Developing Jar with 2 ml of fresh Testing Liquid
2. Evenly Insert Testing Card with white side facing up and dots at the bottom
3. Close Developing Jar. Wait 25 min. or until Testing Card is almost fully soaked
4. Remove Testing Card, close 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'



#### STEP 4.1 COMPARING SEMI-QUANTITATIVE RESULTS

1. Use UV-C flashlight to find spots on Testing Card
2. Use pencil to precisely circle around detected spots!
3. Put Percentage Ruler over detected spot
4. Compare results with Percentage Ruler

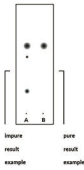
WARNING: DO NOT SHINE UV-C LIGHT ON SKIN OR EYES

#### HOW TO INTERPRET SPOT 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.

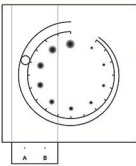
- If you don't see any spots no active substance was detected. To double check try another Testing Liquid. Insoluble cuts do not show up.

- A big dark patch in top part of a Testing Card indicates sweaty hands contamination or that sample was applied with a wrong tool. Run an empty Testing Card to check it or try to wash off contamination. Always use clean gloves and never touch white side of Testing Cards, hold only by top side edges.



#### TIPS & TRICKS

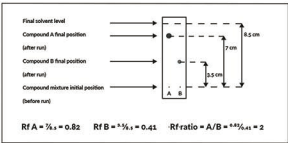
- If detected spots are too big double check used mg/ml ratio
- To lower spot comet-shaped tail reduce mg/ml ratio and multiply end result
- If you see streaks instead of spots check if you are using fresh Testing Liquid
- If cocaine % result seems too high sample likely contains coca plant impurities



#### ADVANCED: REFERENCE RATIOS

Pages 10-11 are for advanced researchers only

If reagents don't react and control sample is unavailable it is possible to use different substances as reference for substance identification. If spot height (Rf value of compound A is twice as big as of compound B you can expect them to keep that ratio at any value. Rf value (spot height) will change depending on many factors, but ratio will not. For best results please use our downloadable calculator at <http://protestkit.eu/calc>. Simply enter two available substances, one confirmed one not confirmed, enter spot height (Rf value) of the confirmed substance and check where the other one should appear.



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).

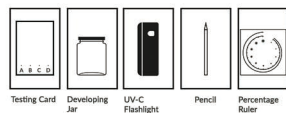
#### ADVANCED: REFERENCE RATIOS CALCULATOR

If <http://protestkit.eu/calc> is unavailable please use the chart below.

Using caffeine Rf ratios of 2 different substances you can calculate where one should appear knowing only Rf of the other (reagents are still highly recommended).


SUBSTANCE	CAFFEINE RATIO AVERAGE ± 0.3 cm	SPOT HEIGHT (Primary Testing Liquid)
zC-B	0.45	Caffeine Rf / ± 0.45
Amphetamine	0.69	Caffeine Rf / ± 0.69
CAFFEINE	1	Caffeine Rf / ± 1
Cocaine	0.95	Caffeine Rf / ± 0.95
Codeine	0.89	Caffeine Rf / ± 0.89
DMT	0.56	Caffeine Rf / ± 0.56
Ephedrine	0.91	Caffeine Rf / ± 0.91
Heroin	1.13	Caffeine Rf / ± 1.13
Ketamine	0.89	Caffeine Rf / ± 0.89
Levamisole	1	Caffeine Rf / ± 1
Lidocaine	1.03	Caffeine Rf / ± 1.03
LSD	1	Caffeine Rf / ± 1
Methamphetamine	0.61	Caffeine Rf / ± 0.61
Oxycodone	0.93	Caffeine Rf / ± 0.93
Paracetamol	1.15	Caffeine Rf / ± 1.15
Phenethylamine	0.64	Caffeine Rf / ± 0.64
MDA	0.64	Caffeine Rf / ± 0.64
MDMA	0.53	Caffeine Rf / ± 0.53
PMA	0.48	Caffeine Rf / ± 0.48
PMMA	0.65	Caffeine Rf / ± 0.65
Phenacetin	1.24	Caffeine Rf / ± 1.24
Tetracaine	0.95	Caffeine Rf / ± 0.95
.....	.....	Caffeine Rf / ± .....

#### Ratios for Primary Testing Liquid



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. Percentage Ruler



- 
- Testing Card almost fully soaked

- Wear gloves and never touch white side of Testing Card, hold by top edges
- Do not move Developing Jar while Testing Card is inside



- WARNING: DO NOT SHINE UV-C LIGHT ON SKIN OR EYES**

- You can reveal THC by exposing used Testing Card to strong normal light for 30 minutes
- You can reuse Testing Cards as long as they have an empty and not dyed "lane"
- Big dark patch on top part of Testing Card indicates sweaty hands contamination



- 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

Wearing gloves and using a pencil gently mark 4 dots on white side of Testing Cards. Space the dots at least 2 cm apart from Card bottom and 1 cm from each other and side edges.



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

- Wear gloves and never touch white side of Testing Card
- If Testing Card is too big cut off corners to fit Dipping Dish
- You can not reuse Testing Cards after revealing with Dye
- Dissolved Dye can be reused for 20 minutes



- LOW THC CONTENT (0.2-5% THC)

MEDIUM THC CONTENT (5-40% THC)

HIGH THC CONTENT (40-100% THC)

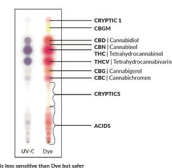
## TIPS & TRICKS

- 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

1. Put Percentage Ruler over detected spots
2. Align correct cannabinoid spot between two sloped lines
3. Read percentage result where spot fits best between sloped lines

Test shows full composition of cannabis products ("chemotype" or „phenotype”).  
You can use it to 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 one spot your sample is pure. If you only see a big flame-like streak on the bottom of your Testing Card that indicates the sample has not been fully decarboxylated (heated) in step 3 - or it is very old and degraded.



- A big dark patch in top part of a Testing Card indicates sweaty hands contamination, or that sample was applied using a different tool than one of included glass tubes.
- If detected spots are too big double check used mg/ml ratio
- If spots are too small, check if Testing Card was heated correctly
- Synthetic cannabinoids if present are usually found in trace amounts, therefore can be detected indirectly if a highly psychoactive sample turns out to contain no THC



- LOW THC CONTENT (0.2-5% THC)**  
Repeat 8 times to apply 8 ul in 1 dot

**MEDIUM THC CONTENT (5-40% THC)**

Repeat 2 times to apply 2 ul in 1 dot

**HIGH THC CONTENT (40-100% THC)**  
Apply 1 time (1 ul) in 1 dot

## 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 good light source
- It might be easiest to submerge Glass Tubes at a 30-45 degree angle
- Clean Glass Tubes by loading and emptying with solvent, discard if clogged

The Percentage Ruler features two ways to measure size of revealed spots. First align the spot that you marked with a pencil between the two sloped lines in an appropriate percentages range. When the spot fits just right check the value listed next to it - this is your purity percentage result. It is possible read results beyond printed numbers, 55% for example. You can also use printed spots as reference, but spot shapes can vary from perfectly round to comet-shaped, this is normal, only length is relevant.



**LOW THC CONTENT (0.2-5% THC)**  
If in Step 1 you prepared 200 mg / 1 ml and in Step 2 you applied sample 8 times (8 ul) then at the end multiply cannabinoid % result by 8

MEDIUM THC CONTENT (5-40% THC)

If in Step 1 you prepared 100 mg / 1 ml and in Step 2 you applied sample 2 times (2 ul), then at the end read cannabinoil % result as is (If the result exceeds Percentage Ruler's 20% scale then apply the Ruler twice to the same spot)

HIGH THC CONTENT (40-100% THC)

If in Step 1 you prepared 50 mg / 1 ml and in Step 2 you applied sample 1 time (1  $\mu$ l), then at the end multiply cannabinoid % result by 4

- To measure trace amounts of CBN, THCV, CBG or CBC in Step 2 apply your sample 4 times (4 ul) and at the end divide the approximate cannabinoid % result by 2