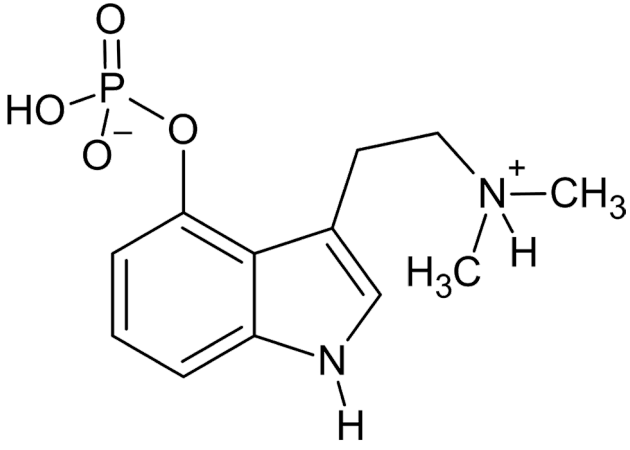
Psilocybin QTest



miraculix

- INSTRUCTION MANUAL -

FIRST QUANTITATIVE PSILOCYBIN TEST KIT
for determining the potency of dried mushrooms and extracts

IMPORTANT INFORMATION - READ THIS FIRST!

- Use this kit at room temperature (if stored in a refrigerator, let it warm up for one hour first).
- Perform the test on a flat surface during the daytime.
- Evaluate the result in good light conditions immediately after the 15-minute development time (the color can change if you wait too long).
- Use a white, letter-sized sheet of paper as a background when evaluating the color (see section 4 for evaluation details).
- This kit only works with dried fungal material (solid or powdery substances). It does not work with fresh mushrooms.
- **Do not open the sealed glass vial.**
- **Cautious handling of the semi blunt needle and hot water (risk of injury/burn).**
- Read all the instructions at least once before beginning the test.

INSTRUCTIONS FOR USE

1. BACKGROUND INFORMATION

Psilocybin/Psilocin are the main active ingredients in live fungal tissue. When mushrooms are dried and stored correctly, psilocybin is preserved. However, sometimes, a little bit of the psilocybin will degrade into psilocin. Psilocin is also active but unstable. When mushrooms are dried and stored incorrectly for an extended period, psilocin further degrades into inactive compounds, reducing the potency of the mushrooms.

The Psilocybin QTest totals the amount of both active ingredients (psilocybin and psilocin) in your fungal sample. Although we present the total in terms of psilocybin — only because this is the most well-known alkaloid — the results give you the potency of your mushrooms, including both psilocybin and psilocin.

IMPORTANT! You should only use the kit on dried mushroom material (e.g., mycelium, fruiting bodies, sclerotia "truffles") or dried extracts.

DID YOU KNOW? All psilocybin will be converted into psilocin after uptake in the human body, and the psilocin causes the perceived effects. This is why psilocybin is considered a "pro-drug." It is not biologically active until it converts into psilocin.

2. PREPARING FOR THE TEST

Take out all the items from your kit. Along with these instructions, you should have:

- Protective gloves
- Plastic vial with a screw cap (clear extraction solution)
- Glass vial with a tightly sealed lid and septum (slightly yellow detection solution)
- 1 ml syringe
- Semi blunt needle
- Syringe filter tip (Sterifilt)
- Evaluation color chart with quick reference guide

You will also need a milligram scale, a pot to boil water, a pair of kitchen tongs, a scissors/grinder and either a small funnel or a creased piece of paper to pour the mushroom material into the extraction vial carefully. (You can make your own paper funnel. Google it!)

When testing dried material:
Before you begin the test, you must homogenize your dried mushroom material. A coffee grinder or typical grinder works best. If you do not have a grinder, you can chop your mushrooms finely on a cutting board using a sharp knife. (Starting with a pair of scissors can make chopping more straightforward.) Then, mix the chopped material thoroughly.

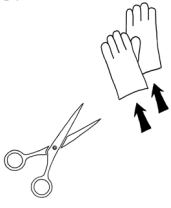
You will use **150 milligrams** (mg) of material for the test. The result will tell you the **percentage of psilocybin in 1 gram** of the remaining homogenized material (in terms of mg/gram). But you must homogenize the material first, as described above. This is because psilocybin is not naturally distributed evenly inside of mushrooms. One mushroom can have ten times more or less psilocybin than another mushroom from the same batch. Even within a single mushroom, the concentration of psilocybin can vary greatly.

You can homogenize as much material as you want, but remember that ground-up mushrooms will degrade faster than whole mushrooms. Keeping them dry and frozen („freeze-dried") will restore the alkaloids best.

When testing extracts:
Extracts are usually more concentrated. To ensure that the color result of the test still fits the scale on the evaluation card, you have to reduce the amount of starting material accordingly. Before testing homogenize your substance. Typically, methanol **extracts are triple-concentrated**, so if you have a crude extract, we recommend dividing the amount you use for the test by the factor three **(50 mg)**. If the extract is considerably more concentrated, reduce the initial quantity accordingly. The extract must be as solvent-free as possible, as this can interfere with the extraction solution. Remember that you have to multiply the result of the color scale in the end with the used factor to get the actual result for the remaining sample.

3. PERFORMING THE TEST

3.1



First, wear the enclosed nitrile gloves and wear appropriate protective clothing and safety glasses. If you wear contact lenses, remove them. The vials' liquids contain acids that may cause skin irritation or severe eye damage. If you come in contact with the liquid, remove the affected clothing immediately and rinse the affected skin area with water for several minutes. In case of eye contact, rinse the affected eye with running water for several minutes. (Keep pets, especially cats, away from the testing area.)

3.2

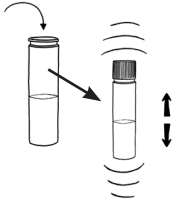
Carefully weigh **150 mg (0.150 g)** of your homogenized material using a milligram scale. For concentrated extracts, use a proportionally lower amount.
For example, weigh **50 mg (0.05 g)** of material for a 3X extract. Weigh **15 mg (0.015 g)** of material for a 10X extract.

Note: *Look in our store: We have an affordable but powerful scale on offer that you can trust. Some scales may have difficulty measuring smaller amounts and work better in higher measurement ranges. In this case, use an additional weight (e.g., a quarter or coin) to increase the measurement range. This helps improve the accuracy of the result. Add the weight of the crushed sample to that of the additional weight.*

3.3

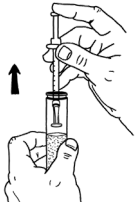
Preheat around ~ 1 liter of water (about four cups) in a pot on the stove or a kettle. When the water boils, turn off the stove. (This will save you time when you need to boil the 176 - 203 ° F water later in step 3.7.)

3.4



Open the plastic extraction vial and carefully pour in your mushroom material using a small funnel or creased piece of paper. Screw the lid back on tightly and shake the vial for approximately 10 seconds. Then, put the vial down and wait for **10 minutes**. Repeat the shaking process twice during this waiting period, once at about three minutes and again at around seven minutes. Make sure the vial rests motionless for a few minutes before filtering. This allows the particulates to settle and makes drawing liquid into the syringe through the filter tip easier.

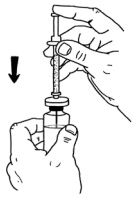
3.5



Unpack the syringe and the syringe filter tip. Attach the filter tip to the syringe. Remove the lid from the plastic vial. Hold the vial with one hand and insert the syringe into the vial with your other hand. Hold the filter under the floating particles in the middle of the vial. Pull the syringe plunger completely open and hold it there. This will create negative pressure, and the syringe will slowly fill with **1 ml of liquid**. If the filter clogs, you can clean it carefully.
If you don't draw up the whole milliliter but 0.9 ml, for example, don't worry. Add the missing 10 % to your final result, or repeat 3.5 and 3.6 two times (total amount must be 1 ml)

Remove the syringe from the plastic vial and twist the cap back onto the vial. Disconnect the filter tip from the syringe. Now, unpack the blunt needle, remove its plastic casing, and attach it carefully to the syringe.

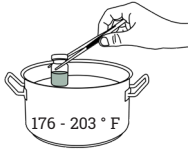
3.6



Pierce the septum of the glass vial using the semi-blunt needle and inject the entire liquid into the vial evenly with moderate pressure. (Penetrating the septum with the blunt needle requires some force but protects you from injury.) **Ensure that the syringe tip does not touch the liquid in the glass vial. Then, before removing the empty syringe, refill it entirely with air. The refill with air depressurizes the vial and prevents liquid from splashing out when removing the syringe.** Remove the needle from the glass vial.

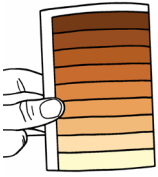
Note: *The liquid in the glass vial may now be greenish. This color change indicates the presence of psilocin in the sample but does not provide a quantitative result. You still need to incubate the vial in hot water.*

3.7



Heat the water again until it boils. Now remove the pot from the heat source and turn off the stove. The water in the pot should **no longer be boiling**. It is now at the right temperature. Place the glass vial into the water using a pair of kitchen tongs and **incubate it for 15 minutes**. (It is okay to submerge the vial completely. Water will not enter through the septum.)

3.8



The solution in the vial will start to change color. After 15 minutes, carefully remove the vial from the water using the kitchen tongs. **Be careful not to touch the glass vial with your fingers until it cools down. After a few minutes, it will be cool enough to handle.** Use the enclosed evaluation color chart to determine the potency of your homogenized material. See the next section, "EVALUATING THE RESULT," for details.

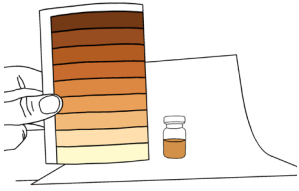
4. EVALUATING THE RESULT

The coloration typically begins within a few seconds and takes 15 minutes in the water bath to develop and deepen comprehensively. You should read the result **after the 15-minute incubation time**. Do not evaluate the liquid after four hours. At this time, the color may no longer be reliable.

You can visually determine the result by comparing the intensity or saturation of the liquid in the vial with the enclosed color chart. Good light conditions are essential for optimal evaluation; the **best place would be a bright room without direct sunlight on the vial**. If using artificial light, the influence of different color temperatures may slightly change the hue. You can still perform the evaluation, but consider this (e.g., high blue content in energy-saving lamps, green discoloration when using LED light from cell phones, etc).

SPECIFIC EVALUATION INSTRUCTIONS

- Use a white, letter-sized sheet of paper as a background.
- Under good light conditions, hold the glass vial next to the color chart about **six to eight inches in front** of the white sheet of paper and look through the glass vial **head-on**. For best results, your eyes should be fairly close to the vial, but no closer than about six to eight inches.
- Now compare the color of the liquid in the vial to the color chart. The corresponding concentration of psilocybin/psilocin is listed as a **percentage** and **ratio of milligrams per gram** of material (mg/gram).



- This concentration applies to your remaining homogenized material.
- **For extracts**, you need to **multiply the number you read** on the color chart by the same **factor that you reduced your starting material** at the beginning of the process. For example, if you tested a 3X extract and reduced your starting material by a factor of three (50 mg instead of 150 mg), you must multiply by three to obtain the correct result. Similarly, if you tested a 10X extract (using 15 mg), you must multiply by ten.

5. EXAMPLE PICTURES AND FREQUENTLY ASKED QUESTIONS

For assistance in evaluation, our website provides comparison images that show the colored vials for all concentrations and answer commonly asked questions. Follow the QR code or visit https://www.miraculix-lab.de/en/faq-psilo

Take a photo of your evaluation similar to ours, and you can digitally analyze the colors using programs like ImageJ. Do you want even more precise and reproducible results without evaluating the color yourself? Then check out our new open-source spectrophotometer, which we provide with laboratory-calibrated reference curves tailored explicitly for our QTests.

FURTHER INFORMATION:
You can find factual information about individual substances on websites like psychonautwiki.org or erowid.org. These sites provide much information about pharmacology, subjective effects, possible side effects, and other harm reduction measures. If you have further questions, feel free to reach out to us. We can often direct you to local Safer Nightlife or Harm Reduction projects for counseling and support.

6. LIMITATIONS

- The Psilocybin QTest was developed to enable the most linear and accurate concentration determination of psilocybin/psilocin. Even norbaeocystin and baeocystin do not show false positives. As the test is also incredibly sensitive, weak false positive reactions can occur with fungal material that does not contain psilocybin. The cross-reaction is most likely a false positive reaction to reactive indole. So when testing wild mushrooms, correlate your possibly weak concentration result with the morphology of your mushrooms and make sure they are psilocybin-containing mushrooms.
- Mushrooms collected in the wild can always be so-called doubles. This is especially dangerous for the poisonous Galerina marginata. A positive concentration result does not exclude the possibility that the homogenized quantity also contains other, **potentially deadly poisonous mushrooms**.
- **It is best to evaluate the colors during the day in a bright room**, look from the

front at the height of the vials, and keep the distance between the vials and the white background. Individual visual interpretation can lead to users misjudging the concentration, typically just by one color field. Correct usage and using our comparison images significantly reduce these variations among participants. Validations have shown that even inexperienced users, without knowledge of the instruction guidelines, could confidently assess whether it was a weak, medium, or strong concentration.

- Sources of potential inaccuracies in concentration results: **samples were boiled under additional heat** and not just incubated in hot water will result in a higher concentration result (nearly black), inaccurate weighing (scale not accurate), variations in amount of extraction liquid add, expired/discolored detection reagents, not all Psilocybin/Psilocin was extracted due to short extraction time, too short or too long incubation time, non-representative sample tested (homogenized quantity too small or insufficiently homogenized).

7. STORAGE AND SHELF LIFE

Store the reagents in the refrigerator (35 - 46 F) and out of direct sunlight for a shelf life of at least 18 months after production. The extraction liquid may turn slightly yellow over time. That's okay. It is still usable.

8. WARNINGS

- Pay attention to the warnings on the zip bag. Always keep the ingredients in this bag even after use.
- The test kit must always be kept away from children and animals.
- When using the test kit, suitable gloves, protective clothing, and face/eye protection must be worn.
- If you wear contact lenses, remove them before use.
- All delivered materials and liquids should not be ingested or inhaled.
- The included liquids in the test kit contain various acids that can cause skin irritation or severe eye damage/irritation. Skin, eyes, mouth, or clothing contact should be avoided.
- If contact occurs with the above-mentioned areas, remove the relevant clothing immediately. Rinse or flush affected skin areas immediately with plenty of water for several minutes.
- In case of contact with the eyes, rinse them immediately with plenty of water for several minutes.
- Cautious handling of the semi blunt needle and hot water **(risk of injury/burn)**.

9. DISCLAIMERS

- Miraculix QTests are to be used only for research purposes and to quantify unknown substances.

- Your sample could be adulterated with one or more unknown substances that cross-react with the reagents, affecting the quantitative result.
- The result does not mean your sample is safe to consume. It could still contain unwanted substances and impurities that can be harmful or even deadly.
- The result does not serve as an identification for the mushroom species. Psilocybin mushrooms can have a similar appearance to poisonous mushrooms. Mushrooms that do not contain psilocybin could cross-react with the reagents and produce minor stainings. This is a false positive reaction presumably to reactive indole.
- Miraculix assumes no responsibility for using or misusing the test kit or the results.
- Samples processed with the test kit are not to be consumed.
- Patent pending technology.

10. DISPOSAL OF MATERIALS

Check your local regulations for proper disposal of acids.

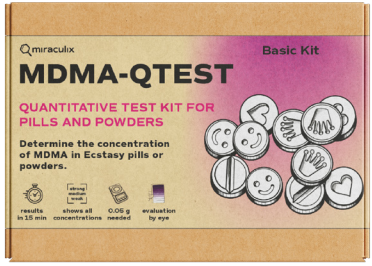
MIRACULIX COMMUNITY RESEARCH

Submit your result and the species/strain of the sample anonymously and help us with the first big community research project about magic mushrooms. Together with the Charité - Universitätsmedizin Berlin, we are assessing subjective experiences to collect data on the entourage/ensemble effects of various mushrooms for the first time.

The university ethics committee has aprroved the study, so we can ensure that the data can be published as open source afterward, and all participants are guaranteed anonymity. You can find more information by following the QR code below: https://survey.charite.de/miraculix/

Join our community and be an essential part of open-source science!

WHAT MIGHT ALSO INTEREST YOU



Our MDMA QTest determine the concentration of MDMA in Ecstasy pills or crystals.

Our LSD QTest determine the concentration of LSD in blotters, sugar cubes and liquids.

For more information, visit:

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