

URBANISTIC

ALTERNATIVE SUPPLY CO. CDXX



DESKTOP SCOPE GUIDE

Version 1 - 2024



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WHY TO USE A MICROSCOPE

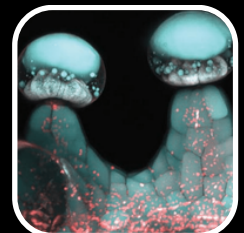
1. IT'S FUN & EDUCATIONAL



Humans are fascinated by science and digital screens.

The microscopes combine these two elements in a useful tool that is **fun and educational** for everyone. Customers and budtenders who have never scoped a product will be amazed by the microscopic view of their buds that raises many questions: What are we looking at? Why are we magnifying our weed? What does this tell me?

2. IT'S ALL ABOUT THE TRICHOMES



Reference: Samuels Lab, UBC

When set up correctly, the microscope will primarily showcase the essential resin glands on the buds - the trichomes.

The trichomes are the most important part of the entire cannabis plant as these little hair-like looking structures house all of the psychoactive phytochemicals in them. When magnifying the trichomes, we can see various types of these resin glands. The most important ones - the capitate stalked types - will look like little mushrooms with a head and a stalk under the scope.

The **trichome head** of the glandular trichomes is particularly important as all of the plants phytochemicals are produced and stored in there.

3. THERE'S SO MUCH TO FIND



Besides the head of the trichomes, we can also observe their different colours which indicate the maturity of the plant's compounds.

When scoping some products, we might even encounter various **undesirables** like insects, hairs, seeds, and moulds that reduce the overall quality of the cannabis and can even qualify for a product refund as especially mouldy products can impact the consumers health negatively.

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HOW TO USE THE DESKTOP SCOPE

FRONT VIEW

1. LED SCREEN

2. INTEGRATED CAMERA

3. FOCUS RING

4. HEIGHT ADJUSTMENT

BACK VIEW

5. USB CHARGER PORT

6. MICRO SD SLOT

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TRICHOME IMAGE INSTRUCTIONS

There are 2 ways to take trichome pictures:

1. With the scope by inserting a **micro SD card** in the back of the screen and pressing the **photo button** on the display.



USING THE MICROSCOPE

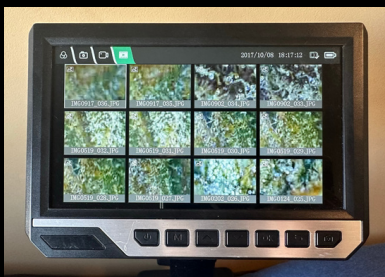
DISPLAYING PICTURES WITH THE SD CARD



1. Insert your micro SD card in the back of the microscope.



2. Use the back button to switch to your image gallery.



3. Select the right picture by using the up, down & ok buttons.



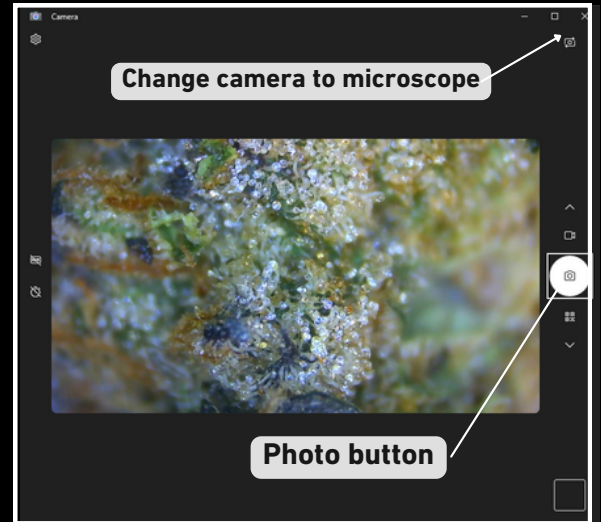
4. Display your trichome shots.

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TRICHOME IMAGE INSTRUCTIONS

2. With the **Webcam App on Windows** or **Photo Booth App on Mac** by connecting the microscope to your computer with the USB cable.



USING YOUR WEBCAM PROGRAM

IMAGE INSTRUCTIONS

✓ IMAGE

Find the best spot on your buds that shows the average quality of your observations.

✓ FOCUS

1. Adjust the focus to see as many sharp trichomes as possible.
2. Hold the lens still when clicking the photo button on your scope, or use the included remote shutter button.

✓ TAKING THE PICTURES

- Press the photo button on your microscope.
- Click the photo button on your webcam program.

(Alternatively: adjust the focus ever so slightly and take multiple pictures for photo stacking)



INADEQUATE FOCUS



PROPER FOCUS

MICROSCOPE EVALUATION GUIDELINES

Always **set** the **zoom** of your microscope to the **lowest magnification** setting to **observe** as many **trichomes** as possible and then **grade** the **average** of your observations rather than looking at a few highly magnified trichomes on a single bud.

Once you have your microscope at the **lowest magnification setting**, you can **start** with **observing** the outer surface of your buds before breaking them open to investigate their insides.

We grade the **outside** and the **inside** of the buds for two reasons:

1. To analyze the **impact of the product packaging & handling** on the integrity of the trichomes.
2. To analyze **possible undesirables** like bud rot that could be **hidden inside the buds**.

MICROSCOPY TIPS:

💡 Scope **all** your buds!



💡 Use the **wheels at the back** of your desktop microscopes to **move the platform** to the **lowest point** and the **silver wheel** on your hand-held scope to **set the magnification** to the lowest setting.

Use two hands:

When using the desktop microscope, keep **one hand on the bud** or the scope card to move the bud around, and keep the **other hand on the focus ring** above the lens to **adjust the focus** while you're moving the bud under the microscope.

When using the digital hand-held microscope, use **one hand to hold the bud** steadily, and the **other hand to move and adjust the focus** of the microscope.

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KEEPING THE MAGNIFICATION LOW

Keeping the magnification at the lowest setting (the lowest point of the platform for desktop scopes) allows us to have a clear view of the numerous trichomes on our buds, as all the trichomes will ultimately end up in our grinder.

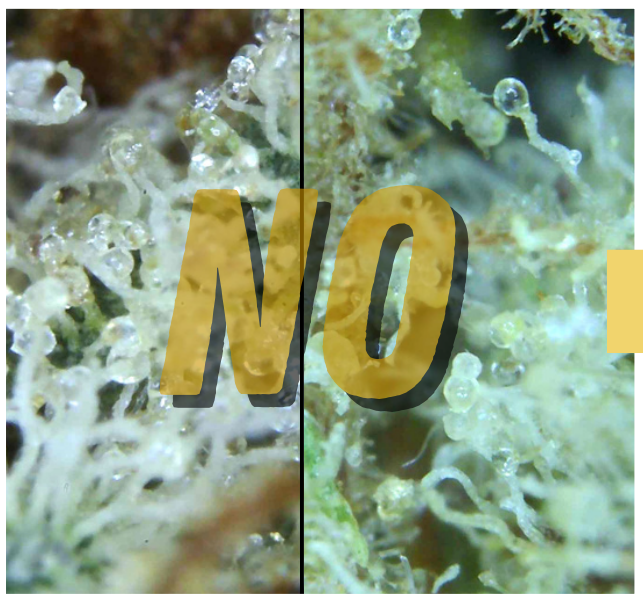


DESCRIBE THE PICTURE

"THERE'S SOME YELLOW AND BLACK."

DESCRIBE THE PICTURE

***"A CROP OF THOUSAND SUNFLOWERS,
THE PICTURE IS TAKEN AT SUNSET."***



STRONG MAGNIFICATION

SHOWS A FEW TRICHOMES ON THE BUD.

EVALUATION MAGNIFICATION

SHOW AS MANY TRICHOMES ON THE BUD AS POSSIBLE.

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GRADING TRICHOMES

Here are some excerpts from our **Guide to the TDC Grading System** that you can download for free on our website:

**DOWNLOAD
THE GUIDE** 

TRICHOME VISIBILITY

Evaluation focus: The potential amount of present phytochemicals.

Mindful focus: Sight | Observing the visibility of the buds' trichomes.

Mindful evaluation:

To evaluate the trichome visibility, start by holding the bud about a forearm's length away from your eyes and pay attention to the amount of trichomes (frostiness) of the buds.

If you can notice the trichomes already from a distance, the trichomes are either visible (C), easily visible (D), or highly visible (E).

Now, bring the buds closer to your eyes.

If you still hardly see any trichomes from up close, select option (A) from the menu. When they're slightly visible from here, select the choice (B). If they're visible, select option (C) and if you notice the trichomes easily, choose option (D). Lastly, if the buds are fully covered in trichomes and look white or golden frosty, select the option (E) - highly visible trichomes.



Tip:

Next up, we'll evaluate the trichome development.

If the trichomes on the buds sparkled at you during the visibility grading, you can already assume that the trichomes will likely be properly developed.

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GRADING TRICHOMES

TRICHOME COLOUR RANGE - OUTER SURFACE (OS) & INNER SURFACE (IS)

Evaluation focus: The ripeness of trichome heads and phytochemicals.

Mindful focus: Microscope sight | Observing the dominant colours of the trichome heads.

Mindful evaluation:

*Same grading process for outside and inside evaluation.
Ensure to save one bud for the last grading aspects.*

1. Place one bud after the other under the microscope and move each of them around while properly adjusting the focus and paying close attention to the colour of the trichome heads.

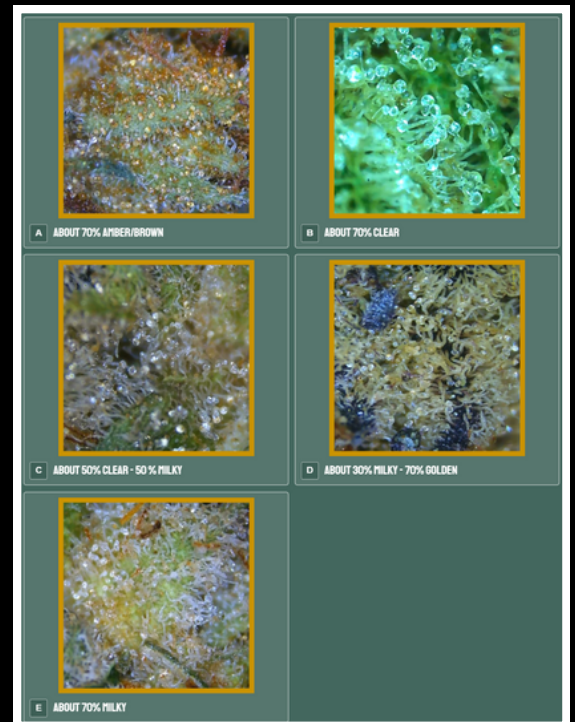
For inside observation, break a few pieces of the different buds off and then place the pieces with the inner surface facing the lens under the microscope.

2. While observing the trichomes under the microscope, try to notice a distinct hue of your microscope display screen. For example, the trichomes of some extremely old or unhealthy buds will make the microscope display immediately look brown, dark amber or even red-ish (A).

On the other hand, expertly grown, fully mature buds make the screen appear fully white (E). If the trichomes are a bit overripe, their colours will be mostly golden (D) and if they're a bit premature they're about 50% white and about 50% milky/white (C).

Lastly, if you observe the colour of the trichome heads thoroughly and notice that the majority of them appear clear, you're likely looking at a premature bud (B).

3. Once you observed all of the buds, select the most suitable option from the menu (right) based on the average of your observations.



GRADING TRICHOMES

TRICHOME HEAD DEVELOPMENT (OS & IS)

Evaluation focus: The size & condition of trichome heads' storage cavities and their correlating amount of phytochemicals.

Mindful focus: Microscope sight | Observing the size/radius of the trichome heads.

Mindful evaluation:

*Same grading process for outside and inside evaluation.
If you do a full bud grading, save one bud for the last grading aspects.*

1. Continue to observe each bud under the microscope, but change your **focus** now from observing the colour of the trichome heads to **grading the heads' size/radius and intactness**.

2. For reference, we can compare the trichome development to the **development of grapes**.

Generally speaking, when you buy grapes, you'd hope for **big juicy grapes** on the shoots rather than buying **grape-less shoots or dried-out raisins**.

3. Therefore, if you **only see trichome stems and barely any trichome heads** on the buds (A), the product will likely **lack in phytochemicals and flavour**.

However, other buds may show some trichomes with a **few tiny (raisin-like) trichome heads** (B) while even other ones may have a **couple of heads** on them but **lack in size and robustness** (C).

On the other hand, if the genetics and the growing/processing methods were properly dialed in, you can also find buds with a **few robust trichome heads** (D) or **fully juicy, robust trichomes** that **sparkle back** at you from a distance and **pop out** at your microscope screen (E).

4. Once you observed all of the buds, select the most suitable option from the menu (right) based on the **average** of your observations.



GRADING TRICHOMES

UNDESIRABLES (IF APPLICABLE)

Evaluation focus: The presence of harmful and degrading undesirables.

Mindful focus: Microscope sight | Observing the presence of undesirables.

Mindful evaluation:

1. During your microscopy observation of the trichome heads, it's possible that you encounter **undesirables** such as moulds, seeds or insects.

2. After the trichome grading, the grading system will ask you if you've spotted any undesirables in your buds and opens up the list on the right if you click 'yes' in the survey.

3. Select the undesirables you've found from the list and upload a proper photo of the undesirables on your microscope screen in the next steps.

Here are some general tips on how to identify certain undesirables:

Bud rot: Buds show brown, dark amber or reddish trichomes surrounded by a white fuzz on the inside.

Powdery mildew: Buds show spots of white powder on the plant material.

Jar rot: Buds show white web-like strings around the plant material and trichomes.

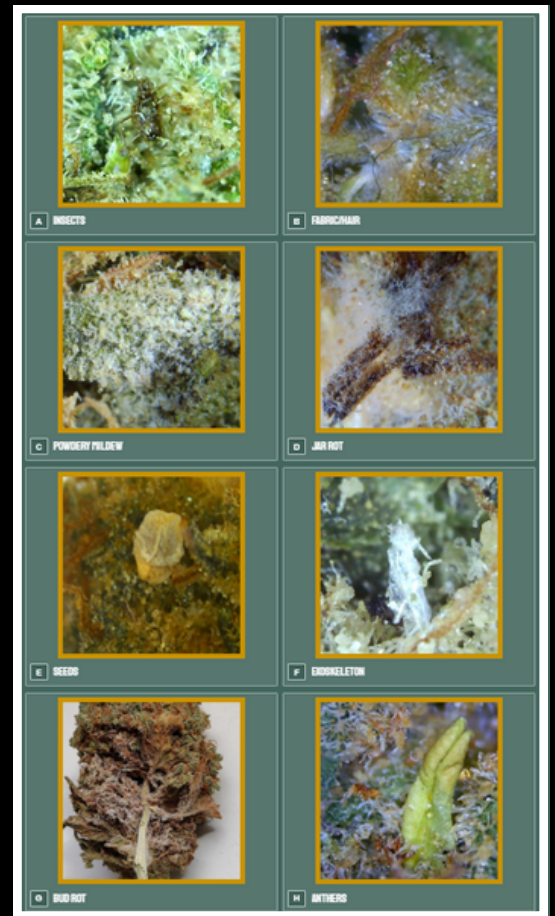
Insects: Buds show various edgy shapes and entire bodies of insects.

Exoskeleton: Buds show white, edgy shapes that often have the form of an insect.

Seeds: Buds show fully matured, brown/spotted seeds or enlarged ovules surrounded by the white calyx membrane.

Anthers: Buds show banana-like looking protruding formations.

Fabric/Hair: Buds show a string or hair of various colours.





If you have any more questions, contact us at:

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