

HOW TO MEASURE VARROA MITES IN HONEY BEE COLONIES



The Varroa mite (*Varroa destructor*) is a parasite that feeds on immature and adult honey bees (*Apis mellifera*). When left untreated, colonies with high levels of Varroa mites will die within months. The best way to ensure the survival and productivity of your bee colonies is to regularly measure your Varroa mite load(s) and treat as necessary. This guide will walk you through measuring your mite load step by step.

What you will need:

- ⇒ White dish bin
- ⇒ Tablespoon measuring spoon
- ⇒ 1/2 cup measuring spoon
- ⇒ Rubbing alcohol OR powdered sugar
- ⇒ Mason Jar with the lid replaced with the mesh screen that is provided

You will also need to be able to spot your queen.



Workers

Queen

Note: Alcohol washes are the most accurate way to measure mites, however it kills sampled bees; the powdered sugar roll is not as accurate, but it doesn't kill bees. Both methods are presented in this fact sheet.

STEP 1: SELECT A FRAME TO SAMPLE

For best results, select a brood frame covered in worker bees. **However it is important that your queen is not taken into this sample!** If you are not confident spotting queens you can select a pollen frame instead. The queen is about twice as long as a worker and usually has a dark thorax with little hair (see previous photo).

STEP 3: TAKE A SAMPLE OF BEES

Using a brush or gloved hand, quickly brush the bees off your selected frame and into a dry dish bin.

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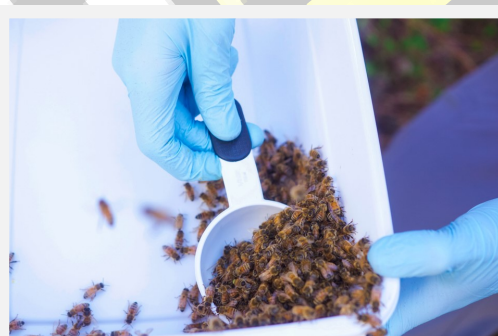


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STEP 4: PUT 1/2 CUP OF BEES IN YOUR JAR

Scoop 1/2 cup of bees and dump them into your mason jar. Then twist the screened lid onto the jar.



STEP 2: PREP YOUR JAR

Alcohol wash: Fill jar about 1/4 full with alcohol.
Powdered sugar roll: Put two tablespoons of powdered sugar at the bottom of the jar.



STEP 5: SHAKE AND REST

Alcohol wash: Secure the lid and vigorously swivel the jar to dislodge mites from the bees.

Powdered sugar roll: Secure the lid and roll the jar so that the bees are evenly coated in powdered sugar (like little ghost bees). Let sit for 3-5 minutes.



STEP 6: LET THE EXTRAS GO HOME

Take any bees left over in your white bin and dump them back into the hive. They will go right back to work!



STEP 7: SHAKE OUT THE MITES

Now take your mason jar and vigorously shake it into the white bin like a salt shaker. Pretend that you are trying to evenly coat the bottom of the bin in powdered sugar. Shake the jar into the bin for 60 seconds.



STEP 8: DISPOSE OF BEES OR SEND GHOST BEES HOME

Alcohol wash: Dispose of bees in a sealed garbage.

Powdered sugar roll: Open the top of your mason jar and dump the powdered sugar covered bees (ghost bees) back into their hive. Their nestmates will clean them and they will return to work!



STEP 9: COUNT YOUR MITES

The mites are small, oval and reddish brown. When performing the powdered sugar method, adding water to the bin dissolves the sugar and makes mites easier to see. Count how many you see in the bin, if there are 4-6 mites it is time to apply treatment.



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