

ALCOHOL WASH

Varroa Mite Monitoring Method

Varroa Mite Monitoring is a very important step in evaluating whether your colony is below or above the threshold for treatment. It is suggested that you sample your colonies at least quarterly, more if you're in a year-round climate.

Depending on what phase of the population cycle your colony is in, the threshold may vary:

Table 1: Treatment Thresholds by Phase;(%=Number of mites/100 adult bees)

Colony Phase	Acceptable Further control not needed	Danger Control promptly
Dormant with brood	<1%	>2%
Dormant without brood	<1%	>3%
Population Increase	<1%	>2-3%
Peak Population	<2%	>3%
Population Decrease	<2%	>2-3%

[*https://honeybeehealthcoalition.org/varroatool/](https://honeybeehealthcoalition.org/varroatool/)

With this suggested How-To Sampling Method, you are collecting 300 bees to sample (equivalent to ½ cup). So for example if you are sampling during Peak Population (Spring Season or heavy nectar flow in your area) and count 9+ mites, you definitely want to treat.

Mite Count Per 300 Bees	Mite Load
3	1%
6	2%
9	3%

Things you will need:

- 1 wide mouth Mason Jar (w/ solid lid) marked at ½ cup
- #8 hardware screen to make a second Lid
- Plate
- Paper towel
- Rubbing Alcohol – at least ½ cup per sample

Number of mites ÷ number of bees = mite level (.xx) = X%

If you have 10 or fewer colonies, you should sample all colonies!

Step 1: Collect 300 bees (about a half cup) from a brood frame into the jar

- You can do this by running the Mason jar along the frame or by shaking the frame into a 5 gal bucket and taking a ½ cup scoop of bees.
- MAKE SURE THE QUEEN IS NOT ON THE FRAME

Step 2: Add enough alcohol to the jar to cover the bees.

Step 3: Close jar with the solid lid and shake vigorously for 1 min.

Step 4: Put down a sheet of paper towel onto the plate to keep the alcohol from splashing. Swap to the screen lid on the jar and pour out on to the plate.

Step 5: Recommend doing a second alcohol wash with the same sample of bees to be thorough.

Step 6: Count the mites and calculate the colony mite load. Decide if the mite load is below or above the acceptable threshold for their population phase and whether you need to treat or not.



Disclaimer- this sampling method uses alcohol and kills the sample of bees in the process. However, it is seen as a more effective method of sampling than the Powdered Sugar Shake Method.

Great step by step video on how to sample: <https://www.youtube.com/watch?v=lqPft9FQxLc>