



# Alcohol Wash for Varroa Mite Monitoring

An alcohol wash is the best method for monitoring Varroa mite populations in honey bee colonies.

## Supplies

- 2 pint (16 oz) mason jars
- 1 solid lid
- 1 8-mesh hardware cloth lid
- 1 canning funnel
- 1 permanent coffee filter
- 1 half-cup measuring cup
- 1 white plastic wash basin
- Alcohol >70% (or soapy water: 2Tbsp dawn dish soap per gallon of water); 250 ml plus extra in case of spillage

An important step to keeping your honey bees healthy is to monitor parasitic mite levels in your colonies. Monitoring is the first step in implementing [an IPM approach in mite management](#). It is extremely important to monitor mite levels on a monthly basis to determine the severity of varroa mite infestations and when numbers approach damaging thresholds. It is also a good idea to maintain written records and to monitor varroa mite levels before and after treatment(s) to evaluate treatment efficacy. It is best to use a standard protocol procedure such as what is described here. This makes it easy to monitor mite levels over time and to compare data to state-wide and/or national surveys and statistics.

## Procedure



**Step 1** Inspect the colony, looking for a frame of honey bee larvae (open brood, older is better).



**Step 2** Inspect the preferred frame for the queen. If found, place her in a queen clip.



**Step 3** Shake the bees from the preferred frame into the wash basin.



**Step 4** Bang the basin on the ground to move the bees into one corner of the basin.



**Step 5** Scoop ½ cup of bees.



**Step 6** Pour the bees into a pint jar containing 250 ml alcohol (the funnel can help).



**Step 7** Set up the second jar with the lid off, placing the canning funnel and coffee filter on the jar.



**Step 8** With the solid lid on the jar, shake/roll/swirl the bees in the alcohol vigorously for 60 seconds.



**Step 9** Replace the solid lid with the mesh lid.



**Step 10** Turn the jar over, directing the alcohol through the coffee filter into the second jar.



**Step 11** When most of the alcohol has drained, vigorously shake the bees up and down with the mesh above the coffee filter, catching the mites that are falling from the jar.



**Step 12** Turn the jar with the bees upright. Gently set the filter and funnel aside, being careful that it does not fall. Return the liquid to the jar with the bees, then return the filter and funnel to the empty jar.



**Step 13** Swirl slightly, then repeat the action of pouring the liquid out of the jar, through the filter and funnel into the second jar. Carefully inspect the filter for varroa mites, counting them as you go. If there are a lot of mites or a lot of debris, a fine paintbrush can be helpful for visualizing the mites. Record the number of mites on the datasheet.



**Step 14** Bang the filter upside down to remove the mites. Dump the bees into a trash receptacle or toss them into the trees. Retain the alcohol for a future alcohol wash. It can be returned to the original container or stored in the jar with the solid lid firmly in place.

## Credits

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## Authors

**Robyn Underwood, Ph.D.**

Extension Educator, Apiculture

[rmul@psu.edu](mailto:rmul@psu.edu)

484-268-5208

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**[extension.psu.edu](http://extension.psu.edu)**

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