



Northeast Idaho Beekeepers Association

Oxalic Acid Vaporizer Instructions

Oxalic acid (OA) vaporization is a fast and convenient way to treat your bees for varroa mite infestations. You should treat for mites when there are more than 3 mites in a 300-bee sample (1/2 cup) or 1% mites on the bees. If the boxes contain brood, then treat at least three times over a 10-day period (one treatment every 5 days). OA will NOT kill the mites under the brood cappings.

What you will need (items 1 through 5 are supplied with the kit):

1. OA Vaporizer (Mite-E-Vape) with 3 silicone rubber cups
2. Oxalic acid
3. Organic acid respirator
4. Alcohol wipes
5. Inverter (as needed)
6. Small cup of water
7. Heat-resistant gloves
8. Block(s) of wood or rag(s) [to plug the hive entrance(s)]
9. Three-prong extension cord (as needed)

To use the vaporizer:

1. Get ready by filling the silicone rubber cup(s) you will be using with oxalic acid: about $\frac{1}{4}$ – $\frac{1}{2}$ teaspoon (1 – 2 grams) per deep box. The silicone rubber cup(s) will hold 3 – 4 grams, so if you are doing two deep boxes per hive, fill the cup(s) up completely. If you have more than 3 hives, then continue to refill the cups as they are emptied by the vaporizer.
2. Plug the hive entrance(s) with a block of wood or a rag.
3. If you are using the inverter, clip the inverter leads to your 12-volt battery; red to + and black to -. Do NOT use the inverter with your vehicle's 12-volt auxiliary power outlet; the inverter draws about 25 amps and will blow the fuse. Note: the OA vaporizer uses

about 300 watts of power; if your vehicle has a built-in 300+ watt inverter, you can use it instead of the inverter supplied with the kit.

4. Put on the respirator and pull the straps to make a tight seal on your face. Put on the gloves.
5. Plug in the vaporizer and wait until the light goes out, this means that it is hot enough to vaporize the OA (*Figure 1*). You can use a three-prong extension cord to connect the vaporizer to the inverter.
6. If you have a peg or dowel in the hole in the bottom of your hive, remove it.
7. Place one filled silicone rubber cup upside down and press the vaporizer onto it (*Figure 2*). Be careful, the vaporizer is **HOT!**
8. Insert the tube of the upside-down vaporizer into the hole in the bottom of your hive (*Figure 3*).
9. Quickly turn the vaporizer over so the silicone rubber cup is on top. Tap the rubber cup to ensure that the OA falls out of the cup and into the vaporizer (*Figure 4*). The light will go on when the vaporizer starts to vaporize the OA.
10. When the light goes out, all the OA has been vaporized. Remove the vaporizer from the hive.
11. Remove the empty silicone rubber cup from the vaporizer.
12. Repeat steps 6 – 11 until you have treated all your hives.
13. When you are done treating all your hives, fill one silicone rubber cup with water. Place the cup upside down and press the vaporizer on top of it. Quickly flip the vaporizer over and wait until all the water has evaporated. This will clean out the vaporizer and tube. Remove the cup from the vaporizer when done.
14. Unplug the vaporizer and disconnect the inverter (if used).
15. Remove the respirator and use an alcohol wipe to clean it out.
16. After 10 minutes, remove the blocks of wood or rags you used to block the hive entrances. Replace the peg or dowel in the hole (if used).

If you have questions or for more information contact Brad Eldredge at 208-520-9403 or brad@eldredgeengineering.com



Figure 1. Wait until the light goes out.



Figure 2. Press the vaporizer onto the silicone rubber cup.



Figure 3. Insert the vaporizer upside-down into the hole.



Figure 4. Quickly flip it over and tap the cup.

