

# ProVap 18-20 LI (Lithium-Ion)

Instruction Guide This vaporizer is strictly for use with Lithium-Ion batteries.

#### **Operation:**

Congratulations on your purchase of the ProVap 18-20! You're going to love the versatility of using a vaporizer without wires and lugging around generators or heavy batteries!

This vaporizer is most easily used from the back of the hive, where a small (7/16") hole is drilled in the back center of the ¾" rim of the bottom board that supports the bottom brood box. This hole is needed to accommodate the vaporizer stem. You want the vapors to rise up through the frames & throughout the hive. Using a hole in the back of the hive and at this place (we believe) is easiest as it eliminates the nuisance of flying bees. The friction between the stem and drilled hole holds the vaporizer in place during vaporization. The "teeth" on the front of the vaporizer will also keep it from possibly spinning. The bees will readily propolize this small hole afterwards. And yes, you must block off the front entrance for 10 minutes so as not allow the vapors to escape. It is the vapors that kill the mites. Allowing them to escape defeats the purpose of vaporizing. Should you wish to close the hole after vaporizing (we don't) a plastic golf tee works great and is easily removed for next time. Make sure the hole is not clogged prior to inserting the stem! We take a PHILLIPS head screwdriver and insert it into existing holes to make sure they are open prior to vaporization.

You can use the ProVap in the front entrances as well if you wish. Use with rags or whatever you choose and insert the vaporizer into an open area. Leave the rags in place 10 minutes after vaporizing to contain the vapors within. Slide your battery onto the vaporizer. It will take approximately 2 minutes to reach operating temperature. The temperature may reach above 230 when first powered, it will then "drift" down to 230. The vaporizer is then ready to use. *The temperature is preset for 230 C. This is the correct setting for the bowl of this vaporizer. Do not attempt to change it or any settings. If you change any of the settings, you'll need to return it back to us to reset. There is a \$50 fee to do so. Buyer beware!!* Set the dispenser for the number of grams you wish to vaporize by turning the dial on the dispenser. Then dip the dispenser into the Oxalic Acid where it will "grab" (since OA is slightly damp) the number of grams that you've set.

Note: if your OA is not slightly damp so that dispenser does not hold it, <u>SLIGHTLY</u> mist the OA with water. Insert the PV18 into the hive then simply place the dispenser into the vaporizer opening pushing it down until you feel it "click" into the dispenser opening and then "tap" the top. It will dispense the OA into the ProVap heating chamber and immediately begin to vaporize it at which time the temperature will drop. When it rises again to about 220, you're done and can remover the vaporizer and prepare to do the next hive. This will take about 20 seconds for 2 grams and slightly longer for additional grams.

### NOTE: the vaporizer stays on and HOT the entire time! Safety!

You must use a respirator that is rated for organic acids! Make sure you buy one with replaceable filters. You are going to work in a heavy OA environment. The 3M full face model 6800 with #60923 filters is a good choice. Heavy, heat resistant gauntlet gloves are a must as well. **Do NOT drill a hole in your brood chamber to vaporize! You'll most likely shoot the OA directly into a sidebar causing back pressure on the vaporizer. Do NOT point the stem of the vaporizer against a solid object, this also could cause the dispenser to pop off and spew OA from the heating chamber. Make sure the stem is always clear and pointing to an open area.** 

### Power:

It takes approximately 1ah to bring the ProVap up to temperature, so an 18-20v 4ah or better battery is recommended. Although batteries have low voltage protection, be safe and vaporize no more than 10-15 hives with the starter battery and then switch batteries while the vaporizer is still "hot" and continue vaporizing the hives. You should be able to vaporize 40+ hives on this  $2^{nd}$  battery as energy from the battery is not used to heat it to temperature. Recharge your batteries immediately after you've finished vaporizing. Details: The vaporizer is a 12-24-volt electrical appliance, 220W, 13a

## Oxalic Acid:

The EPA guidelines call for one gram of OA per brood chamber. Recent studies have determined that this is not enough to control mites. Rather 3 (yes 3) per brood chamber is found to have the best affect. We are not recommending that you use anything other than what the EPA label states. We are just providing information on the latest studies.

<u>Additional Parts</u>: Should you wish to purchase additional dispensers, they are readily available at OxaVap.com

**Maintenance:** Rinse/clean out the dispenser when it starts to stick and at the end of the day! Also, clean the vaporizer, instructions are on another insert.

### OxaVap.com - where the only good mite is a vaporized one!