

## How can I extract honey from a comb without a mechanical extractor?

- **Suggestion A:** Exhibitors of honey samples extract without an extractor all the time. They incline a warm (90 degrees F) comb with open cells -- either carefully uncapped, or just beginning to be capped -- at 60 degrees to the horizontal with the bottom end sitting on a (preferably glass) cookie sheet, and stroke the comb slowly and forcefully with the smooth side of a spoon to force the honey out and down the comb unto the perfectly clean sheet. This way no air or pollen or wax gets incorporated and the sample, if run immediately into a jar that is also perfectly clean and free of odors (check the cardboard on the underside of the lid for *\*any\** odors) , one gets about as perfect a sample as possible (after careful skimming). The comb can be replaced in the hive and is quickly repaired and the remaining honey tidied up.
- **Suggestion B:** Don't boil or heat it. This will destroy your comb and will also destroy the flavor of your honey. Wax melts at approximately 150 degrees F., My understanding is that temperatures above approximately 120 degrees F. will damage honey flavor (those in the know, does this have anything to do with the temperature at which enzymes start breaking down?) Certainly, boiling it will damage it. As for letting it trickle out, you might end up with an increase in the moisture in the honey. Remember, it is a hygroscopic solution (tending to absorb moisture) and will pull in water from the air surrounding it. The bees dehydrate the nectar-honey until it reaches around 17% water and then they cap it - sealing it off from the air. If you left honey on a saucer in your kitchen it would eventually (in a few days perhaps) reach about 25% water, at which point, if there was any yeast about, it would begin to ferment. It's easy to see how mead-making originated, isn't it?
- **Suggestion C:** We have two hives, and decided last year for first time to extract honey. I used a large Rubbermaid tub where I placed a frame in vertically and then scraped the comb down to the foundation with a stainless steel spatula-like the kind used for burger flipping in restaurants. I would *\*heat\** the spatula in a pot of boiling water. I don't think it took more than a couple of minutes per frame, after I quit trying not to damage the foundation. After two frames, I would pour the tub into a colander lined with cheese cloth over another tub. After reading a remark about the best temperature for extracting in one of the Dadant books, (with or without extractor), I turned up the heat in my house to 90F, and the honey flowed like water. (Of course, I chose to extract in the short time of cool weather Southern California has!) It wasted a lot of honey, but I had more than enough to give for Christmas, and several holidays past that. (60+lb.) Last time, I went to the honey-supplier's and bought a plastic Chinese-manufactured extractor. It holds two frames, I cut down on the extracting time, but it skittered on the floor, so it had to be held down with my feet braced on either side, on a damp towel. I also bought an electric uncapping knife-cut myself real good-but between the sanitary conditions, the *\*cauterization\** and the healing power of the raw honey-I healed in a week! I found that the temperature is still important for draining-yes, bought a

stainless steel drainer which was slow in cooler weather but not as messy as cheesecloth. It strained into a plastic tub with a gate-beat using a 4-cup cheesecloth-lined funnel! It can be done without the tools; it was amusing until the third day, when you can't quit but are quite sick of wax caps and honey everywhere. As soon as you can, get a stainless steel extractor! The American Bee Journal has ads in their classifieds where people sell used equipment.

- **Suggestion D (tail end of a long story about an old beekeeper):** He heated it just hot enough to melt the wax, and then drew the honey off from the bottom. His tanks were water jacked and heated with adjustable gas burners. His wax was very nice looking and he turned it into hand dipped candles. To this day I would not criticize this bee man for his method of extracting honey, it worked for him and my guess it worked for his dad and his dad's dad. He had no trouble selling his honey and people would come to his home to pick it up, and it sold well in the few stores he marketed it in.
  - **Suggestion E:** Here in the UK a major crop is oil seed rape, much favored by the bees. The honey produced from this crop granulates in a few weeks, or less! If it granulates in the comb it is very hard to extract. In the past I have resorted to melting the whole comb and letting the liquid cool. The wax can then be lifted off and the honey poured. The secret is not to let the mixture get too hot otherwise the honey will be damaged, but it does mean that you can at least get at the stuff. This method is not really to be recommended as it destroys comb, thereby making more work for both bees and beekeeper, and it risks damage to the honey. It also takes a very long time to do properly as the heating rate is slow, it must NOT be boiled, 65C is high enough.
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