BEESWAX PROCESSING WITH DIY SIMPLE SOLAR WAX MELTER

BEESWAX SOURCES

Best – Wax cappings from honey extraction process. This is the cleanest, newest source of beeswax & makes the best wax for candle making & crafting lip balm & skin creams. A cold knife yields best results as a hot knife darkens the wax. After wax cappings drain in the de-capping tub for at least 24 hours store them in zip lock bags in freezer or in clean 5 gallon bucket with tight fitting lid in a cool location (basement is good) until ready to process.

2nd Best – Save wax from scraping burr comb & recycling old frames of wax. When processing, don't mix older dark comb with extraction wax cappings. This will darken the finished wax product. The end goal is to produce a pale yellow wax. Darker wax is fine for workshop purposes or coating plastic frames.

OPTIONAL PROCESSING STEP – Use honey or paint filter to rinse cappings outdoors using a watering wand or spray nozzle. Work fast as the bees will come to investigate. **DO NOT** rinse wax indoors in your sink. Wax will clog the drain pipes. This step is entirely optional but worthwhile as rinsing results in less honey trapped in wax after the first round of rendering.

PHASE 1 – Beeswax Processing – Construct a Simple Solar Wax Melter from Items on Hand
Solar wax melters are available in bee supply catalogs for $135. Most beekeepers already have on hand everything they need to assemble a simple solar wax melter that will process their beeswax. If they don't, the items needed can be easily acquired at thrift stores or yard sales.

SIMPLE SOLAR WAX MELTER COMPONENTS – ASSEMBLE FOLLOWING ITEMS:

- Old cooler minus its top;
- Black spray paint to paint inside of cooler;
- Storm window or other large piece of plate glass (picture frame glass) to cover cooler;
- Small plastic tub to fit inside cooler;
- 2 – 3 inches of water in bottom of small tub for melted wax to float on top;
- Filter material for wax – lint free fabric such as old sweatshirt (best), shop towel, panty hose, old bed sheet. **Do not** use cheesecloth - too much lint;
- Clips from hardware store to hold filter onto tub;
- Optional – Basket fashioned from wire (fencing, chicken) to fit over tub & hold wax & filter;
- Warm sunny day of 80 degrees or more. This phase is done outdoors.

When all components are assembled, put wax cappings on top of filter material over tub inside cooler. Top cooler with glass. Assure there are no gaps between cooler & glass or there will be dead bees inside the cooler soon. Use painter's tape if needed to close gaps. Wax will melt quickly on a hot, sunny day so replenish wax on top of filter periodically. Check every 30 – 45 minutes for melting progress. I use the same filter all day. The wax cappings will melt through the filter & float on top of water in bottom of tub. Melt wax throughout day. Leave entire assembly in place over night so it will cool down & wax in bottom of the tub will harden. Remove filter & tub from cooler in the morning. Remove filter from top of tub. There will be beautiful pale yellow chunks of wax floating on top of the water in bottom of the tub. Remove wax & store in plastic containers (I use zip locks or Folger's coffee containers) until ready for phase 2 of wax processing. I pour the cooled water on my flowers & vegetables. The wax encrusted filter makes a great fire starter for campers. Or, if you want to squeeze the last drop of wax out of the filter, stuff an old pantyhose leg with used filters. Tie a knot in the top so none of the filters escape. Toss the filters in a pot (an old turkey fryer pot is good) of water & bring water to boil on gas cooker outdoors. Boil for at least 1 hour. Turn off & let cool overnight. Skim hardened beeswax off top of water in morning. This wax may be darker than your premium wax derived from filtering but it will still be pretty nice.

PHASE 2 BEESWAX PROCESSING – PRODUCE WAX READY FOR CRAFTING – IMPLEMENTS NEEDED:
Phase 2 will refine the beeswax further and remove any remaining honey or other sediments still trapped in the beeswax. After Phase 2, the wax will be ready for candle making and other crafting uses. Wax processing items should be dedicated to this task. Don't use your favorite cooking pots. The following items will be needed for Phase 2:

- Beeswax chunks from solar wax melter;
- Hot plate (don't try this over an open flame!). The melting point of beeswax is 143 – 151 degrees Fahrenheit (F); the flash (burning) point of beeswax is 490 – 524 degrees F;
- Fire Extinguisher (I've never needed it but better safe than sorry);
- Old sauce pan to serve as bottom part of double boiler;
- Seamless pouring pots. Find at Michael's, Hobby Lobby, or JoAnne's & use their 40% off coupon; At least 2 pouring pots are needed (one as part of the double boiler & one to receive melted wax from the double boiler for filtering);
- Filter material (sweat shirt, panty hose, old sheet, etc.);
- Clips to secure filter to second pouring pot;
- Molds – Candle making molds (I prefer the polyurethane molds for candle making) or plastic containers for wax storage until you use the wax for crafting and/or candle making. Think yogurt, cottage cheese, margarine cartons or even ½ gallon milk cartons for wax storage;
- Butcher paper turned wax side up for covering work surface; this makes clean-up easier;
- Skewers for stirring (I use cheap wooden skewers);
- Wax thermometer;

When items are assembled, put chunks of wax from Phase 1 in pouring pot. Fill sauce pan 1/3 – ½ full of water. The pouring pot will displace water in sauce pan so don't over fill with water. Put pouring pot with wax into sauce pan of water. Put sauce pan with pouring pot onto hot plate & turn on. Bring water in pan to boil. Wax will melt at 143 – 151 degrees F.

NOTE: Wax processing requires your complete attention. DO NOT leave melting wax unattended.

When wax in pouring pot has completely melted, remove it from double boiler & pour melted wax through filter on top of second pouring pot. You may see honey and/or sediment in bottom of pouring pot from double boiler. Pour the wax slowly through filter, leaving honey/sediment in bottom of double boiler pouring pot. The wax in second pouring pot is now ready for candle making & other crafting. If you are not ready for crafting, pour the wax in molds for storage. I prefer 1 – 4 ounce blocks for my crafting purposes but use whatever size suits your needs.

Candle Mold Sources: Mann-Lake and Brushy Mtn. Bee Farm have good selections of candle molds. Be sure to buy the correct size wick for the mold. The catalog will specify the size wick needed for the mold. Ceramic cookie molds are good ornament molds. Brown Bag cookie molds (discontinued but available on Ebay) make beautiful wax ornaments.

Candle Release: After candle has cooled, mold release can be aided by putting the mold in a freezer for 30 minutes. The wax will contract & release from the mold. A product called Mold Release is also very helpful in removing candles from molds. Beeswax candles burn dripless and smokeless with faint honey scent.

Wax Bloom: This is a frosty white coating that appears on beeswax over time. It is harmless & can be removed by rubbing with a soft cloth or warming the surface with a blow dryer. The bloom disappears at 102 degrees F. Bloom has no adverse effect on the way a candle burns.