



## How Do I? Information Sheet #6 Wax Purification – The Andy Method Author Andy Willis - Feb 2008

1. Collecting raw wax and storage until first processing
  - a. Grade the wax and keep separate e.g. cappings, scrapings, old comb, same colour/dirtiness.
  - b. Store in sealed plastic bags and put in the freezer for 24 hours to prevent wax moth.
  - c. Keep wax out of light unless you want bleached wax, nice for candles but not for show.
  - d. Use solar wax extractor or steam wax extractor to reclaim wax from old brood frames. The tablets produced this way still have traces of honey in them and still need further processing as in no 2 below. 1 average 1½ lb of purified wax per national brood box.
2. 1<sup>st</sup> processing and removal of water soluble contaminants i.e. honey
  - a. Wash cappings in rainwater, or soak for a few hours and drain well. Use only clean rainwater – (clear/washout gutters and water butt and keep the water butt covered to keep out light/wildlife).
  - b. Use large enamel or non-stick pan with lid.
  - c. Melt down washed raw wax in pan with rainwater, don't let the water boil – turn off the heat.
  - d. Put metal sieve in pan and leave to warm up a bit, fish for clumps of debris in the molten wax with a spoon and place in sieve for the wax to be able to drain out. Do not stir the wax, just let the impurities clump together, be patient. Put back on heat if it starts to set.
  - e. When all clumps of impurities have been caught in the sieve, carefully lift out the sieve and drain wax by gently tipping the sieve from side to side to agitate the contents.
  - f. Empty the sieve of debris onto kitchen paper before it sets and then dispose of, or put it in the solar wax extractor.
  - g. Put lid on the pan and allow to cool slowly, (the slower the better). Remove set tablet from the pan and rinse with tap water or more rainwater and allow to dry thoroughly in the air, and when dry store in a plastic bag.
  - h. Wash pan thoroughly with washing up liquid and plastic scouring pad and hot water – the pan must be spotless before the next melting or normal kitchen use.
3. 2<sup>nd</sup> Processing – filtering wax in oven, for foundation or exchange
  - a. Cut disks of material to fit a funnel sieve from brushed cotton or flannelette bed sheet. This needs to be clean and free of holes and preferably not washed with fabric conditioner
  - b. Line funnel sieve with cloth and fill with pieces of wax from tablet (break in bag into small pieces that will fit in the sieve).
  - c. In main oven put oven shelf in at highest position. Using wire loops, hang loaded funnel from oven shelf. Place the Bain Marie underneath to catch filtered wax. Make sure there is enough water in the bottom of the Bain Marie, so it doesn't evaporate dry.

- d. Turn the oven on very low to 90 – 95°C, all ovens vary so keep an eye on it.
  - e. The wax must slowly melt and not overheat and the water in the Bain Marie not boil.
  - f. This process can take 2-3 hours, be patient. Go and do something else but keep an eye on it. If not melting enough raise temperature slightly.
  - g. When wax has melted and run through the filter, remove from the oven and pour into moulds/blocks for storage. Remove dirty filter while still hot and place on greaseproof paper to cool. If the wax was very dirty the filter may block and molten wax pond in the funnel. If so, pour out of the funnel into container. And repeat melting down over water and sieving process, no. 2 or change the blocked filter and repeat filtering.
  - h. This first filtered wax is clean enough for foundation or exchange or moulding into shapes, but not for candles.
4. 3<sup>rd</sup> processing for candles and exhibiting wax for show
- a. For making candles and showing wax, the wax needs to filter through the oven process at least twice – clean, fresh filters used each time. Until there is no discoloration on the filter cloth.
  - b. You will be surprised at how much dirt passes through the first filtering. Keep this 2<sup>nd</sup> filtered wax separate and labelled as candle grade wax, there is no visible difference between it and once filtered wax.
  - c. Wipe all equipment clean while hot with dry kitchen paper towel.
5. Reclaiming Wax from Filter Cloths / reusing filter cloths
- a. Put 8-10 (no more) used filter cloths into the large enamel/non-stick pan with clean rain water and heat over gentle heat, do not boil. Once the water temperature is up to 80 - 90°C using an old potato masher gently 'mash' the cloths against the bottom of the pan, continue for about 5 minutes, until the molten wax is squeezed out and floating on the surface of the water. Weight the cloths down below the wax layer by either using weights in the water or a 'wigwam' of wooden skewers and leave to set.
  - b. The resulting tablet of wax will be very dirty but is easily cleaned by putting through processes 2, 3 and 4 again.
  - c. The still dirty but relatively wax free cloth discs now need to be boil washed in a pan of water with washing powder and then put through the washing machine on a hot white's wash with extra rinse (if available), washing soda can be added to the washing machine (as you would for cleaning your bee-suits). Don't add washing soda to the pan during the boil wash, as it will react with aluminium and enamel.
  - d. This way the cloths come up good as new (if a little frayed at the edges), and little or no wax lost.
6. Storage of purified wax
- a. Storage of purified wax is best done in plastic bags inside a box, to keep both light and air out – normal room temperature is ok if in the house. If kept outside the house, keep in a mouse/rat proof box, as they are partial to a bit of wax.
  - b. Finally, grade for colour and brightness/clarity of wax – the very best is put by for show. The judges are looking for wax that is not too pale or dark, with a good fragrance. The wax should be primrose – pale gold and stand out from the rest.
  - c. Then all you need to do is cast the perfect cake of beeswax without it cracking or sticking and a prize is assured, and making sure your pigs are well fed and watered and ready for flying.