

Thawing Honey

If you have any honey left over from the fall that was not given out for Christmas gifts or used up in the Christmas ham glaze I would expect that it is starting to cloud up on its way to crystallization. Depending on where it has been stored it may be set up as hard as a rock by now. I thought that I would use up some space in this month's newsletter to discuss options of re-liquefying it. Of course adding heat to the honey is something that is unavoidable during this process it can be kept to a low enough temperature to avoid damaging the honey in its flavor color and healthful qualities. There are a number of devices on the market that are designed for this purpose but each has a downside to it. In general I think that it is best to avoid any device that puts honey in direct contact with a high heat source. The thermal properties of honey don't allow the heat to spread rapidly through it so the result is that there are areas of the honey that are overheated in close contact with the heater. Granulated honey has even poorer heat conduction properties. In addition there is a thing called latent heat that comes into play. In order to change something from a solid to a liquid there is a lot of energy used to change the state of matter. In other words it takes more heat to go from 31 degrees to 33 degrees for water than 33 degrees to 35 degrees even though it is the same amount of increase. This is why it is so slow to warm up in the springtime until the snow and ice are gone. The same principles apply to crystallized honey.

A thermometer is a pretty handy device to have around the honey house. My favorite is one that I got at radio shack for about twelve dollars. It is an indoor outdoor device that has a temperature probe that is waterproof on the end of fairly long flexible wire. You can use it to measure the temperature of the honey directly or the temperature of the substance that the honey is placed in (water bath or the air). A temperature of above about 110 degrees will eventually thaw out honey so simply placing it in a very warm location may work quite well. I have placed a bucket of crystallized honey in front of a oil fired heater that blows warm air into the room and discovered that the side facing the heater was thawed out in a couple of days. I never measured the temperature of the surface of the bucket but it was never too hot to rest your hand on so I expect that it was less than about 120 degrees. If you are going to use low heat expect that the honey will take a long time to thaw out.

Another method of thawing honey is to make a warming box to put your bucket into. Some beekeepers convert a small refrigerator to do this and some have even done it in a large ice chest. Basically the process of construction is heat the space with light bulbs (being careful not to set the house on fire). By varying the wattage of the bulbs you can control the heat output into the container. For those that are electrically inclined placing a dimmer switch in line can get the temperature just right. Again the use of the thermometer here is quite valuable.

There are heater bands that fit around buckets. I have never tried them. Having said that, I will report that I have heard that they can get quite hot even to the point that

they will deform a bucket if it is empty. Some beekeepers worry that at these temperatures plastics are driven into the honey which may be a valid concern.

A warm water bath is my favorite method of thawing out honey. Placing the honey in a container that warmed water can freely circulate around it is a very effective way of transferring heat into the honey in a rapid but controllable fashion. I have used my bottling tank with some water in it for this purpose and it works very well. I also have under construction an old water heater that has the top removed so that a full bucket can be placed in it surrounded by water. I suspect that it should work with the same efficiency. Honey that has been bottled up already should be heated carefully as some of the plastic bottles don't do well with excess heat. Contact your supplier to find out what the upper limit is for heating your honey bottles.

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