

## Bees & beekeeping: Crucial temperatures and other figures

Hive:	Temp	RH	CO <sub>2</sub>
	35°C +/-0.5	45%	0.1-4.3%

### Effects of temperature and time on diastase and HMF

Temperature	Time to halve diastase level	Time to raise HMF to 30 mg/kg
20°C	1500 days	300 days
30°C	200 days	60 days
52°C		3 days
70°C	5 hours	4.5 hours

Normal diastase level is 40 - 8 is legal limit (i.e. the higher the better)

HMF is very low in fresh honey - legal limit is 40 mg/kg (i.e. the lower the better)

Action	Temperature	period
To filter honey	36°C (35-38°C)	3-4 days? Until liquid?
To prepare ling for filtration	49°C	As necessary to reach uniform temp
To store long term	<10°C	12 months
To warm granulated (seed) honey to produce soft set	32°C	2-3 days
To liquefy honey prior to seeding	66°C	Until liquid
To bottle honey	49°C	24 hrs
To blend different honeys	49°C	As necessary to reach uniform temp
To granulate quickly	14°C	-
To delay granulation (Yates)	54°C	45 minutes
To delay granulation (Doug Brown, BBKA News Aug 2012)	63°C	1 hr
To spoil honey by "burning"	71-82°C	
To destroy yeasts	63°C	30 minutes
To caramelize ling honey (not good!)	>66°C	
To degrade honey	>35-40°C	
To melt beeswax	64°C	

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