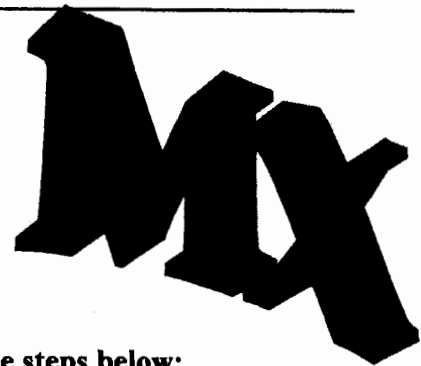


# BREWFERM®

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## MALT EXTRACT KITS



Brewing beer with malt extract consists of carefully following the steps below:

- 1 Boiling + adding the hops
- 2 Cooling the wort
- 3 Preparing the yeast starter and siphoning
- 4 Adding yeast and fermentation
- 5 Checking fermentation
- 6 Bottling
- 7 Tasting

### Before starting:

\*All materials used must be cleaned every time. This is because infection is always possible if we were to use unclean material. An infection will cause a poor taste or even make the beer undrinkable.

\*If you know on which day you are going to start brewing and you are planning to use a WYEAST yeast, you may have to start the yeast working a few days beforehand. For this carefully read the instructions for use for the WYEAST yeast.

### 1 Boiling

Dissolve the malt extract in a certain amount of water following the brewing schedule. Heat this wort to boiling point. Make sure that when boiling point is reached the wort does not boil over. Turn the heat down a little if necessary. Depending on the recipe used you must then add hops and possibly herbs (see brewing sheet) at specific times. These are already packed inside a hop bag and then vacuum packed. The hop bag is then laid in the boiling wort. Regularly stirring the wort is required to have the hops add as much of their taste as possible. After the hops have been added, the wort will foam less because of the hop oils.

By boiling this liquid becomes fully sterile and an important chemical process (the isomerisation of the alpha-acids of the hops) will take place and the proteins will settle. This takes place optimally at a pH of 5.2.

Acidify if necessary with lactic acid.

Switch the heat off after the boiling time. You will soon see that clouds form in the wort. These are the proteins that settle. These were proteins present in the malt that we

do not all require. After a short time these proteins settle in the liquid. Immediately after boiling take the hop bag out of the hot wort.

### 2 Cooling the wort

A very important aspect now is having the wort cool down as quickly as possible. This is important because any form of infection must be avoided. And when you remember that infections can most easily originate at temperatures of 15° to 40°C. and that we must now go to this temperature, you will soon understand that we need to use very clean materials. So, once more: before using any material it must always be cleaned using the cleaner CHEMIPRO OXI. Read the instructions for using this product.

Cooling takes place using the Brewferm wort cooler. It is a stainless steel plate heat exchanger with 4 connecting points : in/out water and in/out wort.

Connect the tube of the exit (lower left side) on the cold water tap. This is the "coolwater in". The tube of the exit on the upper left side will become the "coolwater out". Put this tube in a big water tub or a sink. Now attach the tube of the exit on the upper right side on tap of the kettle, this is the "wort in" and the tube on the exit on the lower right side "wort out". You can put this last one in the fermentation tank. The cooling starts when you open the cold water tap and the tap of the kettle. The rapidity of the incoming cold water and wort influences the exit temperature of the wort. Let the wort flow slowly and settle the output of the water in such way you become an optimal cooling. The out coming wort will have a temperature of +/- 25°C.

While the cooling process is happening you can proceed with the following point.



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### **3 Preparing the yeast starter and siphoning**

You require a yeast type depending on the type of beer you want to obtain. To ferment 20 litres of wort you'll have to use one XL-package of WYEAST. Follow the instructions for use for this yeast type (it may be the case that you have to start this earlier).

If you want to use the dried yeast you'll have to use the quantity which is included into the kit. Dried yeast needs to be rehydrated about 15 minutes before using it (see label instructions).

After the wort is cooled by the plate heat exchanger till about 25°C, you can measure the density for the first time.

We are now going to carry out our first density measurement: fill the measuring glass (almost full) with the cooled wort. A correct density measurement is carried out at a temperature of 20°C. Carefully place the densimeter (or hydrometer) in the measuring glass and read off the density (for beer this normally lies between approximately 1050 and 1100, but can sometimes differ slightly). Write this figure down together with the date of measuring. This is your initial (or original) density.

Best is now to aerate your wort or stir it up so that some oxygen comes into the wort. Don't aerate anymore from day 2 on!

### **4 Adding yeast and fermentation**

Once the wort has been siphoned you can add the starter. Stir this thoroughly into the wort and shut the receptacle with the cover. Fill the outer ring of the airlock with approximately 2 cm of water. Put the complete airlock on the cover.

When ready, the fermentation starts within several hours and the excess carbon dioxide will escape through the airlock.

### **5 Checking fermentation**

Keep a close eye on the fermentation. Make sure that the ambient temperature does not fall too much at night. After approximately ten days of fermentation measure the density, and depending on the type of beer (for strong beers approximately 1010-1015, for light beers 1000-1005) you can start bottling the beer. Do this as quickly as possible to prevent oxidation. Now you have measured the final density of your beer. If you determine the difference between the original and final density and convert this figure in a conversion table you can approximately see how much alcohol there is in your beer.

### **6 Bottling**

Siphon the beer over into the cleaned kettle, but make sure that the dregs at the bottom in the fermentation tank are not also siphoned over. Dissolve the indicated

quantity of sugar per litre of beer (see brewing schedule) needed for secondary fermentation in a small quantity of boiled and cooled water and add it to your beer. You must therefore approximately know how much beer you still have. **Be certain not to add too much sugar!**

#### **a) bottles**

To do this you must first obviously clean the bottles. When this has been done you can fill them. Immediately close the bottles, and if everything has taken place properly after 6 to 8 weeks you will have a tasty beer. In the first week put the bottles in a warm place (above 20°C) for secondary fermentation. Then move the bottles to a cellar or other cool place where the beer can continue to mature in the bottle.

The bottles can now be given a nice label.

#### **b) kegs**

You can use a mini-keg 5 litres or a soda-keg. Important notice: you'll have to use less sugar for refermenting. You don't need to follow the brewing schedule. Use 3 g of sugar per litre of beer. Also put the kegs first in a warm place.

### **7 Tasting**

The most important comes now: tasting your beer. When pouring do not allow the bottom to be disturbed to prevent the unnecessary clouding of the beer (with the exception of white beers).

It also has to look nice: is the beer clear and does it have an attractive and firm head?

Then the aroma: can you distinguish different aromas (wort, hops, herbs, etc.) and does it not smell?

Does it have a good taste and do you like it?

If this is all satisfactory you have followed the procedure perfectly.

### **Congratulations and cheers!**

By brewing more beer you will see that you can make further improvements and even put together your own recipes. So always note down your brewing process and the evaluation of the beer afterwards too.

The possibilities are boundless, and the pleasure always remains as great.

Enjoy!