

# COOPERS

## DIY BEER

### INSTRUCTIONS:

WELCOME to the Coopers "International Series" developed for those brewers seeking the unique international flavours and characteristics of regional beer styles. Choose from Australian Pak Ale, Canadian Blonde, English Bitter, European Lager or Mexican Cerveza. By carefully following the instructions we are confident that you will produce a quality beer. We thank you for using our products and hope you continue to enjoy the brewing experience. Requirements: Australian Pale Ale, European Lager and Mexican Cerveza - we recommend the use of 1 kg Brew Enhancer 2 (alternatively, 500g Light Dry Malt + 250g Sugar/Dextrose may be used). Canadian Blonde - 1kg of Brew Enhancer 1 and English Bitter - 500g of Coopers Light Dry Malt.

### EQUIPMENT:

Most equipment needed is supplied in the COOPERS MICRO-BREW KIT (including an Instructional DVD and booklet). Your local home brew retailer can also advise on equipment.

### CLEANING:

A major cause of failure when brewing is infection due to poor cleaning or sanitising. All equipment that will come in contact with your brew must firstly be cleaned then sanitised. Avoid any forms of detergent or soap unless specifically / made for brewing.

### TO CLEAN:

- Soak equipment in water until caked on residue is softened.
- Remove residue with a soft cloth and rinse thoroughly.
- Pay attention to 'hard to get at' areas such as the tap thread. NOTE: Do not use any cleaning aid that may scratch the plastic.

### TO SANITISE USE COOPERS SANITISER OR:

- Place 1/2 cup of unscented household bleach in fermenter. (active ingredient is sodium hypochlorite, as in baby bottle sterilant)
- Fill with cool water.
- Place all equipment in fermenter and let soak for at least 1/2 hour, • Rinse with hot water to remove all traces of chlorine smell.
- The fermenter lid need only be cleaned then rinsed with hot water.

### DETERMINING ALCOHOL CONTENT

Your hydrometer is used to measure the specific gravity (SG) or density with respect to water.

To calculate the alcohol content of your brew:

- a) Measure the specific gravity of the wort before adding the yeast - Original Gravity (OG)
- b) Measure the specific gravity upon completion of fermentation - Final Gravity (FG). Typical hydrometer readings 1.042 (OG) and 1.006 (FG).
- c) Remove the decimal points (1.042 is expressed as one thousand (OG-FG) and forty two).
- d) Formula:  
 $(OG-FG)/7.46 + 0.5 = \text{approx \% alcohol by volume (ABV)}$   
Note: 0.5 % is added to reflect the addition of priming sugar for secondary fermentation eg.  $(1042-1006)/7.45 + 0.5 = 5.3\% \text{ ABV}$

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## 1. MIX

- a) Dissolve contents of can and other fermentable sugars with 2 litres of boiling water (4 litres of hot tap water may be used).
- b) Top up fermenter with cold water to the 20 litre mark, mix thoroughly with plastic spoon and check temperature for ideally 21°C-27°C (70°F-80°F), see below for European Lager.
- c) Top up to 23 litres with hot/cold water (even ice) in order to achieve approx 21°C-27°C.
- d) Take S.G. reading and add yeast (see determining alcohol content).

Important: If the wort is not at ideal temperature but within the range of 18°C-32°C (64°F-90°F) add the yeast. At this point the wort is vulnerable and prompt addition of yeast is more important than ideal temperature.

If you are unsure of the quantities of hot and cold water required try filling the fermenter with hot and cold water minus the ingredients to get a feel for what is needed to achieve approx 21°C-27°C.

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## 2. BREW

The two types of fermentation are open (brewed in an open vessel covered cloth) and closed (a fitted lid plus airlock or cling wrap with a pin hole). Both methods will ferment effectively providing the wort remains within of 18°C-32°C. Good quality beer can be made using open fermentation. However, preference is given to L method because the brew is protected in a time for bottling off is not as critical.

### Temperature Control

One of the major causes of home brewing failure is poor temperature control. Whilst the enclosed yeast will ferment effectively at 18°C-32°C, we recommend a brew temperature of 21°C-27°C for optimum results (see below for European Lager). Some techniques for controlling temperature are: Hot Box (box with a low wattage light globe attached inside) heat pad, heat belt, place fermenter near a storage hot water system, insulate fermenter, place in a disused fridge, drape wet towels over fermenter, etc. Ask your local home brew retailer.

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## 3. BOTTLE

After about 6 days at 21°C or 4 days at 27°C (higher temperatures shorten ferment time) check with a hydrometer that the brew has reached FG by ensuring the S.G. readings over two days are steady. Ensure bottles are clean and sanitised. Prime bottles

with Coopers Carbonation Drops or white sugar at a rate of 8g per litre. One rounded teaspoon measure of sugar is approx 6g (enough for a 740-750ml bottle). **WARNING - GLASS BOTTLES MAY EXPLODE IF OVER PRIMED OR FERMENTATION IS INCOMPLETE.** Fill bottles, seal and Invert several times if using sugar. Store bottles upright at a temperature above 18°C for at least 7 days to enable secondary fermentation (carbonation) to occur. Note: Storing (conditioning) your beer beyond two weeks and up to or beyond three months should see the flavour improve, the bubbles reduce in size and the yeast deposit become more compact (see page 7 for European Lager).

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#### 4. ENJOY

Chill beer and serve. To serve, open the bottle and decant into a glass or jug taking care not to disturb the yeast deposit. Cloudy beer enthusiasts may choose to rotate the bottle gently before opening to mix the yeast deposit through the beer. **WARNING - Excise laws may be contravened if this kit is used to produce a product for sale or other commercial purposes.**

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#### COMMON FAULTS

1. Beer is too gassy - Too much priming sugar added when bottling, the brew has become infected or more commonly, fermentation was not complete. Maintain the brew above 18°C. Use a hydrometer to check that fermentation has finished (see page 6).
2. Lack of head - Too much water added, too much white sugar added (use Coopers Brewing Sugars instead) or residual fats/detergent in glassware.
3. White skin on top of fermented beer or sour taste (infection) — Equipment has not been cleaned and sanitised properly (see page above), wort has been exposed to air for too long before yeast is added or fermented beer has been allowed to stand too long before bottling.
4. Unpleasant aroma — Beer may have become infected (see above) or brewed at a temperature too high for the yeast to perform properly (see page above),

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#### BREWING NOTES FOR EUROPEAN LAGER

1. The yeast supplied with Coopers European Lager is a true lager strain. Lager yeast behaves differently to the normal Coopers Yeast.
2. Avoid using too much simple sugar (white sugar or dextrose) with this product as the lager yeast will ferment more thoroughly causing the beer to lack in body.
3. Preferred brewing temperature is at the low end of the recommended range (i.e. 21°C). Coopers European Lager yeast can ferment as low as 13°C. Lower ferment temperatures extend the fermentation period. Ensure fermentation has finished before bottling.
4. It is common for lager yeast to produce a smell like eggs when fermenting, this should dissipate as the beer conditions in the bottle.
5. Allow Coopers European Lager at least 12 weeks in the bottle before consuming.