simple fermentation instructions

stage 1 - sterilisation

1. Everything used in the fermentation process must be cleaned and sterilised before and after use. This includes the fermenter (pail), airlock, hydrometer and stirrer.
2. For optimum cleaning, we recommend Brewcraft Stericlean. Note: Do not use this on your still. Stills should be cleaned with warm water immediately after use.
3. After sterilizing, the fermenter and equipment should be rinsed several times with cold tap water, taking care to run some water through the tap, to ensure no trace of the sterilizer remains. After rinsing, seal the fermenter to prevent any contamination.

stage 2 - fermenting the alcoholic wash using the standard still spirits turbo classic yeast with 6kg of turbo sugar

each pack of still spirits turbo yeast contains a mix of yeast and nutrients, to make 25 litres of wash and produce alcohol that is extremely low in by-products.

the yeast chart in the turbo product guide gives details of the volume of water you will start with and the correct temperature of that water. when using turbo classic yeast and 6kg of turbo sugar, you need 21 litres of water & it should be 40ºc. you will need a clear mark on the side of your fermenter to show the 21 litre level.

1. prepare the wash - it is very important to follow these directions closely
   - fill your fermenter to about 19 litres with cold water. add about 3 litres of very hot water.
   - check the temperature with a good quality thermometer & use hot or cold water to adjust the temperature to the required 40ºc. remove water to adjust the volume to 21 litres. add 6kg of turbo sugar to the warm water in the fermenter & stir well to dissolve. when it is dissolved, the temperature & the volume will be just right to add your yeast.
     - note that turbo sugar is a blend of dextrose, sugar & carbon that produces particularly good quality alcohol because it absorbs impurities during fermentation.
     - if using one of the other turbo yeasts, different quantities of sugar or dextrose may be required and water temperature & volumes may also vary. the turbo yeast chart in the turbo product guide has all the details.
2. add yeast
   - the wash temperature should be in the correct range between 20º - 30º celsius. check again with your thermometer and add one sachet of still spirits turbo classic yeast to produce an alcoholic wash.
     - if the wash is too hot the yeast may be killed or weakened, and therefore may not be able to ferment out all the sugar. in warmer climates, the still spirits temperature tolerant yeast can be used.
     - if the wash is too hot then cool as quickly as possible and add the yeast as any delays can result in contamination resulting in poor quality results.
     - each pack of still spirits turbo yeast contains a mix of yeast and nutrients, to make 25 litres of wash and produce alcohol which is extremely low in by-products.
3. start fermentation
   - part fill the u of the airlock with water and fit to the fermenter to prevent any oxygen, bacteria or insects getting in during fermentation. within 24 hours carbon dioxide should start bubbling through the airlock, if the brew is working correctly and if the fermenter is sealed properly.
     - if the gas does not start to bubble through the airlock, then loosen the top and have a look inside. the wash should be bubbling and will probably have a foam or froth on top. if the wash is not bubbling and there is no froth around the top of the wash then check the temperature is in the recommended range.
     - a vigorous stir at this stage with a sterilised paddle (not wooden) will speed up fermentation. stir gently to start with, to avoid a froth buildup.
4. fermentation temperature
   - the wash should ferment in an area where the room temperature is between 20º & 25ºc.
     - at a higher temperature, extra by-products may be made. using still spirits temperature tolerant turbo will produce a wash with low by-product levels at higher room temperatures
     - at a lower temperature, the wash will take longer to ferment, or in extreme cases may stop working altogether.
If you are fermenting in a hot climate, try filling some PET soft drink bottles with ice and freeze these. These can be added throughout fermentation to control the temperature. Another method is to use the evaporation technique. Sit the fermenter in a tray with about 25mm of water. Drape some fabric over the fermenter so it dangles in the water (towelling or an old sweatshirt is ideal). If it is still too hot, turn a fan onto the fermenter.

5. **Fermentation Time** Fermentation can take less than 2 days.
   - In cooler weather it could take up to 7 days. For the first 24 - 48 hours, heat is generated by the fermentation process. After this period a Brewcraft or Analog Heating Pad may be used in cooler weather to maintain the temperature. Do not use a Heating Pad in the first 24 - 48 hours.

6. **End of Fermentation** Fermentation is complete when the yeast has used up all the dextrose/sugar. All sign of fermentation should be finished and the hydrometer reading has remained static for two days. If in doubt, leave the wash for an extra day or two.
   - Wash and sterilise the Wash, Wine & Beer Hydrometer in cold water.
   - Float the hydrometer into the wash, and take the reading where the line of the liquid cuts across the scale on the hydrometer; the reading should be about 990.
   - Remember to take care when handling hydrometers. They are very delicate.

7. **Clear the Wash - An Essential Step Because It Improves the Quality of Your Spirit**
   Still Spirits Turbo Clear is the only product that will do this completely. Add Turbo Clear according to directions on the packet & wait 24 hours.

Points to watch out for:

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