

## Beer – The Basics

Brewing the perfect beer requires the brewer to use art, craft and science, in a balance of natural ingredients and processes which can be traced back to Egyptian times. It all begins with malted barley being lightly crushed into a coarse powder called grist. At this stage, other cereals - including flaked maize, unmated barley and wheat can be introduced, if required by the brewer's recipe to produce particular characteristics of flavour or colour or appearance. Darker malts are used for stouts. In general, around 90 per cent of the total grain used in the UK is malted barley.

The grist is transferred to a large vessel called a mash tun, where it is mashed with hot water. The natural sugars in the malt dissolve in the water (brewers always call this water liquor), and eventually a sweet brown liquid is run off. The wort, as it is called, is then boiled with hops in large vessels, known as coppers.

The next stage is fermentation, the most critical process of all. The hopped wort is cooled and run into fermentation vessels. Yeast is added, and it begins to convert the natural sugars into alcohol, carbon dioxide and a range of subtle flavours. Before a beer leaves the brewery it must be conditioned. The conditioning process differs according to how the beer is to leave the brewery.

For cask-conditioned beers (real ales), the beer goes directly into the cask, barrel or bottle. More hops may be added to the cask (dry hopping) for extra aroma. Finings are then added to help clarify the beer. The yeast in the beer is still active, and so the beer undergoes a second fermentation in the cask, normally in the cellar of a pub, meaning that its flavour is developing right up until the minute you drink it.