

WHISKY PRODUCTION

Mill

In the production of whisky there are three basic ingredients – water, yeast and barley. The initial process does not nowadays take place at the distillery due to economic reasons. What is done at these centralised maltings, is to soak the barley in water for a period of five to seven days and then the barley is spread out on an even floor, which is known as the ‘Malt Floor’. During this period peat is burnt below the germinating barley and as the smoke rises up through the tiny perforations it gives the malting barley its slight flavouring. The amount of peat burnt and each distillery’s own supply of water gives each whisky its own unique flavour. The first process at the distillery is to grind the malt barley or malt. Once this has been done the crushed grains, now called ‘grist’, are moved onto the next stage which takes place in the mash house.

Mashing

The Grist is stored in a container known as the ‘grist hopper’. There is a large metal vessel (mash tun) below the grist hopper and when ready, a certain amount of grist will go into the tun and be mixed with a first hot water. Once the first hot water has passed through, a second is added at an even higher temperature than the first. Finally, a third hot water is added. This last water, after it has been drained off, is called sparge and it returns to the water tanks where it is used as the first hot water the following day. The substance left lying at the bottom of the Mash Tun, once all three waters have passed through, is known as draff. This is not wasted but used by local farmers.

Worts Cooler

The first and second waters are now a hot sugary liquid called worts. On leaving the Mash Tun they have a temperature of around 63°C. This temperature is too high to add the yeast. The Worts is therefore passed through a cooler where the temperature is lowered to 20°C and it is now safe to add the yeast. From here this liquid, now called wash, moves on to the next stage – fermentation.

Tun Room

The word tun is an old Scots word that means container. The wash, at this point in the process, has an alcohol content of about 7%, which is roughly the same as beer and indeed the process up until now is very similar to that of brewing. Fermentation takes about 50 hours to complete, and by the end the liquid will have an alcohol content of 20-24%. It is then time for distillation.

Distillation

Scotch whisky production involves two distillations – the first one in the wash still and the second in the low wines still. The purpose of the first distillation is to get rid of the yeast, which is still in suspension after fermentation. After this first distillation the liquid, now called ‘low wines’, goes through a second copper pot still and at the end of this the alcohol content is at 70-80%. The residue which is left at the bottom of the two stills after this process is called ‘spent wash’ and ‘spent lees’. The two are not wasted but in fact mixed together and then sprayed onto the fields as fertiliser.

Spirit Safe

After the second distillation the spirit, as it is now called, is monitored until the alcohol content drops to 63.4%. At this point the spirit is a crystal clear colour and not the tradition golden brown. The colouring comes from the cask in which the whisky has matured. Once this true spirit has reached 63.4% it is then transferred to the ‘spirit receiver’ where it is kept until the casks are ready to be filled. The spirit is checked by the stillman, who measures temperature and density, from which he is able to determine the alcoholic strength of the spirit. The spirit is only checked visually as the safes are sealed by the government to refrain the ‘thirsty Scotsmen’ from sampling the product without paying taxes for it! From the still house the spirit then moves onto the filling store.

Filling Store

Casks are filled and then sealed with what is known as a bung and hessian. Some casks which may be used are old Spanish sherry casks and therefore the colour comes from the stain left inside once it has been emptied of sherry. The spirit must be kept in the cask for a minimum of three years before it can be called whisky and it must be kept for those three years in Scotland before it can be called ‘Scotch Whisky’. The maturation time for single malt whiskies can be anything from a minimum of eight years upwards. Once the whisky is ready it will be diluted to 40% alcohol content and then bottled.

Single Malt and Blended

There are two types of whisky to be found in Scotland – malt and blended. A malt whisky contains only malted barley and is the product of one distillery. A blended whisky is 70% grain whisky and 30% malt whiskies. By grain whisky it means that it is not necessarily barley which is used but another type of grain and that it has also not gone through the malting process. The taste is therefore rather rough to the palate and hence the additions of Malt whiskies in order to smooth out the flavour. One whisky is not necessarily better than the other – it simply depends on a person's own taste.

*Scotland.
Welcome to our life.*

Want to know more about Scotland?
The No. 1 Booking and Information Service for Scotland
Tel: 0845 22 55 121 or +44 (0)1506 832 121 (outside UK)
Email: info@visitscotland.com

www.visitscotland.com

The information contained in this publication is correct at the time of going to print.
VisitScotland can accept no responsibility, for any errors or omissions contained in the publication.
Produced by Marketing Services, VisitScotland.