**THE MAKING OF MALT WHISKY**   
  
The origins of malt whisky distilling in Scotland are lost in the mists of antiquity. They date back at least to the monks of the 15'" century and probably long before.   
  
Although the distillers' art has been understood since earliest times, the subtle aromas and flavours of whisky have never been fully explained, even today. The ancient term uisge beatha, which is Gaelic for the Latin aqua vitae or 'water of life', was corrupted in the 18th century to usky, and then to whisky. The following description is a generalisation of the process.   
  
It should be remembered that each distillery has its own unique specifications.   
  
 **1. Malting**  
  
Best quality barley is first steeped in water and then spread out on malting floors to germinate. It is turned regularly to prevent the build up of heat. Traditionally, this was done by tossing the barley into the air with wooden shovels in a malt barn adjacent to the kiln.   
  
During this process enzymes are activated which convert the starch into sugar when mashing takes place. After 6 to 7 days of germination the barley, now called green malt, goes to the kiln for drying. This halts the germination. The heat is kept below 70°C so that the enzymes are not destroyed. Peat may be added to the fire to impart flavour from the smoke.   
  
  
**2. Mashing**  
  
The dried malt is ground into a coarse flour or grist, which is mixed with hot water in the mash tun. The water is added in 3 stages and gets hotter at each stage, starting around 67°C and rising to almost boiling point.   
  
The quality of the pure Scottish water is important. The mash is stirred, helping to convert the starches to sugar. After mashing, the sweet sugary liquid is known as wort. The spent grains - the draff - are processed into cattle feed.   
  
  
**3. Fermentation**  
  
The wort is cooled to 20°C and pumped into washbacks, where yeast is added and fermentation begins. The living yeast feeds on the sugars, producing alcohol and small quantities of other compounds known as congeners, which contribute to the flavour of the whisky. Carbon dioxide is also produced and the wash froths violently. Revolving switchers cut the head to prevent it overflowing. After about 2 days the fermentation dies down and the wash contains 6-8% alcohol by volume.   
  
  
**4. Pot Stills**  
  
In some mysterious way the shape of the pot still affects the character of the individual malt whisky, and each distillery keeps its stills exactly the same over the years.   
  
In distillation, the still is heated to just below the boiling point of water and the alcohol and other compounds vaporise and pass over the neck of the still into either a condenser or a worm - a large copper coil immersed in cold running water where the vapour is condensed into a liquid.   
  
  
**5. Distillation**  
  
The wash is distilled twice - first in the wash still, to separate the alcohol from the water, yeast and residue called pot ale - the solids of which are also saved for use in animal feeds.  
  
The distillate from the wash still, known as low wines, and containing about 20% alcohol by volume, then goes to the spirit still for the second distillation. The more volatile compounds which distil off first - the foreshots, and the final runnings called feints where more oily compounds are vaporised, are both channelled off to be redistilled when mixed with the low wines in the next batch.  
  
Only the pure centre cut, or heart of the run, which is about 68% alcohol by volume is collected in the spirit receiver.   
  
  
**6. Spirit Safe**  
  
All the distillates pass through the spirit safe - whose locks were traditionally controlled by the Customs & Excise. The stillman uses all his years of experience to test and judge the various distillates without being able to come into physical contact with the spirit.   
  
The newly distilled, colourless, fiery spirit reduced to maturing strength, 63% alcohol by volume, is filled into oak casks which may have previously contained Scotch whisky, bourbon or sherry, and the maturation process begins

**THE MATURATION PROCESS**   
  
While maturing, the whisky becomes smoother, gains flavour, and draws its golden colour from the cask. A proportion of the higher alcohols turn into esters and other complex compounds which subtly enhance each whisky's distinctive characteristics.   
  
By law all Scotch whisky must be matured for at least 3 years, but most single malts lie in the wood for 8, 10, 12, 15 years or longer. Customs & Excise allow for a maximum of 2% of the whisky to evaporate from the cask each year - the Angels' Share. Unlike wine, whisky does not mature further once it is in the bottle.