



TAKING CUTS

A step-by-step guide to taking cuts during distillation, as well as blending and ageing to hand craft the perfect spirit.

WHAT EXACTLY ARE CUTS?

Taking cuts refers to the process where spirit is collected in small portions of similar sizes during distillation as opposed to allowing the distillate to collect in just one large vessel.

We all know that alcohol is created during fermentation, however, there are also many other compounds produced such as acetaldehyde, esters, and ethyl acetate, just to name a few. By taking cuts, we are able to control (to an extent) how many of these by-products make it into our final spirit, allowing us to create the best quality spirit possible.

Some of these by-products appear earlier on in the distillation, while others come out later or towards the end of the distillation – this depends entirely on the compound itself. Not all of these by-products are bad. Some do not taste wonderful on their own, however, it can be beneficial to introduce them in small amounts to contribute different flavours and aromas to your final spirit.

NOTE: The following recommendations are based on using a 25 L Pot Still. Note that depending on the type of Still you are using, the ABV and volume of the wash, measurements may vary.

Cuts are taken in blocks described as foreshots, heads, hearts, and tails. The **foreshots** are the first part of the distillate (usually 50-200 mL [1.7-6.8 US fl oz] depending on what is being distilled) which are discarded as these can contain harmful compounds and off-flavours.

The **heads** are the distillate collected immediately after the first 50-200 mL (1.7-6.8 US fl oz) of discarded foreshots. They can contain some undesirable, but not harmful, compounds and off-flavours. Some of these are blended into your final spirit, however, most will be discarded or retained in a separate container for re-distilling in future batches.

The middle of the run, also known as the **hearts**, is the cleanest and most flavoursome part of the distillate where a minimal amount of undesirable compounds come through into the spirit. The hearts make up the bulk of your final spirit.

The **tails** are the final part of the distillation and contain some vegetal off-flavours. These are also typically discarded, however, like the heads they can also be kept in a separate container for re-distilling.



MULTIPLE DISTILLATIONS

Those with experience using a reflux still know that it is common to do a single distillation to obtain a neutral spirit to add flavourings to.

When using a pot still and creating a flavourful distillate, it is common practice to run two distillations – although some individuals or distilleries prefer to run even more.

These two distillations are known as the **stripping run** and **spirit run**.

THE STRIPPING RUN

The stripping run is completed first and essentially ‘strips’ the wash down to a cleaner, more concentrated ‘low wine’. This distillation is usually run ‘hot and fast’, which means temperature control isn’t as important since the aim is to strip the wash quickly. However, it is still important to take care not to run it too hot to avoid the loss of vapour from the condenser.

The purpose of a stripping run is to capture as much distillate from the wash as possible, therefore, there is no need to remove the foreshots (50-200 mL [1.7-6.8 US fl oz]) as this can be done during the spirit run. You can certainly discard the foreshots, but this is a matter of personal preference.

You may wish to carry out multiple stripping runs and then combine these to perform a larger spirit run if you prefer.

THE SPIRIT RUN

Once you have your low wine, it is diluted back with water to 40% ABV or lower and then distilled again - this is called the spirit run and is where cuts are taken.

During this distillation run, the flow of the still should be kept slower than on the stripping run, and ideally the voltage going to the boiler should be controlled to ensure a nice gentle boil. The Grainfather G30 is a great example of a boiler that can double as a brewing system to make whiskey and bourbon washes, and then control the voltage during distillation.

This run is not fast, and if you have multiple stripping runs combined, it can take much more time than you may be used to with a reflux run.

People use a few different methods to work out how to split and collect the different cuts from a spirit run. Some will go off temperature or ABV, while others just evenly split the whole run and then taste and smell later. Either way can work but will be dependent on your own desire as well as what type of still you have and where the temperature sensor may be placed. To make things easier, we're going to talk through splitting the whole run in this pocket guide.

To do this, you will need an adequate number of glass jars, preferably 300-500 mL (10.1-16.9 US fl oz) in size, that will be able to collect the entire run – this amount will depend on how many stripping runs have been done. If it is only one, then approx. 24 x 400 mL (13.5 US fl oz) jars should suffice. For best results, number these so you know exactly where the cut was made.

The next step is to fire up your pot still and get ready to start the process. You will need to discard the foreshots as usual. Depending on how many stripping runs you have done, this could be anything from 50-200 mL (1.7-6.8 US fl oz).

Once the foreshots are discarded, you can start collecting the remaining distillate into the jars.

Ensure you collect the same volume into each jar (250-300 mL [8.5-10.1 US fl oz] is usually a good figure – you can test and adjust this to suit your still later on) and then set the jar aside.

As mentioned on page 2, after the foreshots, the first part of the run you collect is the heads. This is followed by the hearts which is the most desirable part of the run, then finally, the tails.

Depending on what you wish to do, and what you're making – many will stop collecting once the distillate drops to 10% ABV or below – some stop it even higher. You may start to notice some more visible by-products forming in the last number of jars, this could be by way of an oily looking substance or off colours coming through.

It is often recommended to then let the jars air out for 24 hours for the more volatile aroma compounds to dissipate. This can be done by covering them with a thin type of material, such as muslin cloth, being careful it does not dip into the jars.



BLENDING THE CUTS

Once the 24-hours is over, line all your jars up from beginning to end and get ready for the fun to begin, because this is where you get to choose exactly what goes into your final spirit.

Take the time to waft a few of the jars towards your nose, trying not to stick your nose into the jar as it could be quite strong. Try smelling a middle jar, then the first and then the last – take note of the difference in aroma between them all!

Once you have a bit of an idea of what smells good to you and what doesn't, it's time to start selecting what you want to keep.

Typically, it's easier to start from the middle, which is the hearts, and work your way out, putting aside the jars which don't make your selection.

If you wish to taste it, place a drop or two onto a teaspoon and dilute it with a few drops of water so you can get a better idea of what it tastes like.

Once you have selected your jars, combine the contents into a larger vessel and check the ABV in preparation for ageing and/or oaking the spirit.

What about those other jars that didn't make the cut? Fear not, they don't have to go to waste! Keep these aside in another container (clearly marked) and then add these back to another spirit run to further refine and extract better tasting portions from them. Remember to keep like spirits together - rum leftovers won't go well with bourbon leftovers... or maybe that's a new type of spirit, but we'll leave that up to you!



AGEING / OAKING & REFINING YOUR SPIRIT

The next steps will depend on the type of spirit you are making. If it's a gin you distilled during a botanical run for example, it's time to dilute the combined distillate down to drinking level (typically 37-42% ABV) and then perhaps let it rest for a week or so to settle out prior to enjoying.

If, on the other hand, you've made a dark spirit such as rum or whiskey (although, it won't be dark yet), it's time to prepare for your ageing and oaking steps. These steps will contribute to the colour, flavour, and aroma of your final product.

Dark spirits are typically oaked at approximately 63% ABV, however, you may oak at a lower ABV if preferred. Many home distillers age their spirit at a rate of 10 g (0.35 oz) per litre of spirit. Again, you may increase or decrease the amount of oak used depending on your preference, but it is important to remember that you will usually achieve better results using smaller amounts for a longer period. The time left on oak will vary depending on the amount used, especially if using a barrel.

If ageing in a glass container you will almost instantly see the colour start to come through, though it takes time for all the chemical changes to occur between the alcohol and the oak.

Try leaving the ageing alcohol for at least three months (tough, we know!) and then take some out, dilute to drinking ABV, and taste it. You may find it's acceptable to drink, however, try to keep it ageing longer as you will often see amazing changes happen at 6 months, 12 months and even longer.



WHAT'S NEXT?

While you wait patiently for your spirit to age, make use of the time and distil a few more batches! Once your spirit is oaked and aged you'll be tempted to sit back and enjoy the product of your hard work. You certainly can, however, it can pay off to wait until other batches are ready so you can blend them.

You can simply blend the batches to taste, after all, it's you who will be enjoying it. Sample the batches individually, then try blending a small amount of a few together and see what you think. If you find a blend you like, then simply increase the proportions to the desired amount.

DID YOU KNOW?

Many commercial spirits are blended. There are different regional laws around the globe that define labelling requirements, so spirits that state their age on the bottle may contain spirit aged for different periods.



GLOSSARY



Stripping Run

The first distillation run after the wash has finished fermenting. The whole run is typically collected from the spirit run.

Spirit Run

The second run where the low wines are diluted back to 40% ABV or lower and run through the still again while taking cuts. This is completed more slowly than a stripping run.

Botanical Run

Often the third run when crafting a botanical based drink such as Gin. The cleanest of the hearts from a spirit run is typically diluted back to 40% ABV or lower and re-run with botanicals in a basket or macerated – or even a combination of both. Cuts can be taken again just like a spirit run, although some will just collect until the distillate drops to about 25% ABV.

Cuts

Splitting the distillate run from a distillation into multiple, similar sized, portions.

Foreshots

The first distillate from the still which is discarded, typically 50-200 mL (1.7-6.8 US fl oz), depending on what is being distilled.

Heads

The first part of the run after the foreshots, the heads typically contain some undesirable compounds and off flavours, though some can be added back to create some unique flavours.

Hearts

The most flavoursome and cleanest part of the run. This is the main part which you will use in your final spirit.

Tails

Similar to the heads, though this is the final portion of the run.

Low wines

The distillate collected from the stripping run, a more concentrated version of the raw wash that was initially distilled.



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