The process, this how do we do it?

During the fermentation stage three main unwanted by-products are formed that can cause a spirit to either not taste good, not smell good or give you a bad hangover in the morning.

The three main unwanted by-products are;

- methanol (causes a hangover)
- fusel oils & esters (mainly affect flavor and aroma)
- sulfides (cause a strong bad odor)

There are over 100 other by-products being formed during fermentation. Most of these are in concentrations that are not noticeable, have no effect on flavor and bouquet, are completely harmless when consumed or are removed during distillation and polishing.

Methanol

It all starts with choosing the right yeast, we chose one that produces almost no methanol. Yeah, that is right, you can actually select a yeast on the basis of what chemical reaction it allows.

However, even the best yeast will still form methanol if the ingredients of the wash are triggered in a certain way. For example, if the sugary substance contains pectin. Pectin is a sugar type (a heteropolysaccharide, sure why not) found in the peel of stone fruits such as plums and apricots and citrus fruits such as oranges and lemons. Pectin is believed to contribute to cholesterol and heartburn reduction. However, in contact with the right yeast it is also the main contributor of methanol production during fermentation. Needless to say, that we do not use fruits that contain pectin. Our spirits contain 0.001% of methanol, far below the legal limit and far less than anything commercially available.

Fusel oils & esters

The fermentation is an exothermic chemical process, it generates a certain amount of heat. This happens primarily during the beginning stages of the fermentation when the sugar concentration is still at its highest. When heat is generated, the temperature of the wash raises. It turns out that the slightest increase in temperature increases the formation of these fusel oils & esters. It is next to impossible to avoid these by reducing the fermentation temperature as this risks the stalling of the fermentation process. Luckily small batches offer a much better temperature control compared to large stills resulting in craft spirits often being of superior quality. Fusel oils are not necessarily bad, they give a distinct aroma to the final product. However, they may cloud (solidify) when the product is cooled (fridge) which gives an

unappealing look. Most fusel oils & esters can be removed from the wash during distillation but only with a so-called reflux column. At Red Anchor this is exactly what we are using and our distillate is as pure as it can get.

Sulfides

To a lesser degree sulfides are formed during fermentation. In the concentrations that these are formed they are completely harmless. However, some of these sulfides have a strong and bad odor (rotten eggs). The contact with copper inside the reflux column initiates a chemical reaction that bonds these sulfides to the copper surface in the form of an odorless black deposit.

Every so often the copper needs to be treated to gain its original shiny color back that can once again bond the sulfides.
This is the reason that in every distillery you will see copper components, either the column or the still itself. The copper contributes to a better and cleaner end product.

Water

Our spirits contain 40% alcohol ABV, the other 59.9% consists of water. The flavor and bouquet ingredients make up only 0.1% of the volume. With such a large quantity, the water must be of extremely pure quality or it will offset the intended flavor and bouquet of the end product. Luckily in Aruba, due to the SWRO (Sea Water Reverse Osmosis) technology, we enjoy the drinking water that is amongst the purest and finest in the world. Audits by the U.S. National Testing Laboratories keep a keen eye on it that our water quality exceeds the strictest of standards such as from the WHO (World Health Organization). Our products reflect this.

Polishing

At Red Anchor our spirits undergo one final step in the process. All spirits are passed through a gravity fed activated coconut carbon filter. This time consuming process eliminates the last of the fusel oils, esters and sulfides that might still be present. It also filters out any impurities from less than ideal water quality. Pure concentrates are added as flavoring, resulting in an extremely pure, smooth and high quality spirit with none of the “bad stuff” and all of the “good stuff”.

Difficult to do? Absolutely. Impossible? Heck no.