

SAN DIEGO  CALIFORNIA

# CUTWATER®

## SPIRITS

**SPIRITS** 101

# WHAT ARE SPIRITS?

Spirits (aka liquor) are alcoholic beverages that can be made from raw ingredients such as grains, fruits, or other plants (like agave and sugar cane) that are fermented, distilled and sometimes aged.

**EXAMPLES:** *Vodka, Gin, Rum, Whiskey, Tequila, and Brandy*



# BASICS OF HOW SPIRITS ARE MADE

- **RAW MATERIALS** – Grains (barley, corn, rye, wheat, etc.), fruit (grapes, apples, cherry, pear, etc.), plants (agave, sugar cane, sugar beets, etc.)
- **FERMENTATION** – The biological process in which yeast converts sugars into alcohol, carbon dioxide, and heat.
- **DISTILLATION** – The process of heating a liquid to separate the water from the alcohol and collecting the alcoholic vapor and condensing it back to liquid form.
- **PROOFING** – Adding water to a distilled spirit to bring the alcohol level down to a specific alcohol percentage.
- **AGING** – Storing distilled spirits in barrels (usually oak) for a specific amount of time to encourage new characteristics and flavors.



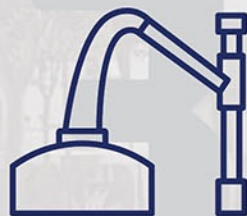
## PREPARATION

Various raw materials are ground, cooked or squeezed to extract fermentable sugars.



## FERMENTATION

The raw material and yeast are introduced to create “distiller’s beer.”



## DISTILLING

The “distiller’s beer” is then heated at low temperature to separate the alcohol from the water.



## PROOFING

Adding water to spirits taken directly off the still to get the alcohol levels down to bottling strength.



## AGING

Specific spirits are stored in oak barrels and aged for various lengths of time. Allowing the oak interaction to impart flavor characteristics.



## BOTTLING

The resulting spirit is stored in glass bottles which do not react with the spirit’s flavor. Unlike wine or beer, the aging process stops in the bottle.

# WHAT IS FERMENTATION?

Fermentation is the process by which alcohol is created. There are just two things needed to make fermentation happen — sugar and yeast. The basic steps of fermentation are:

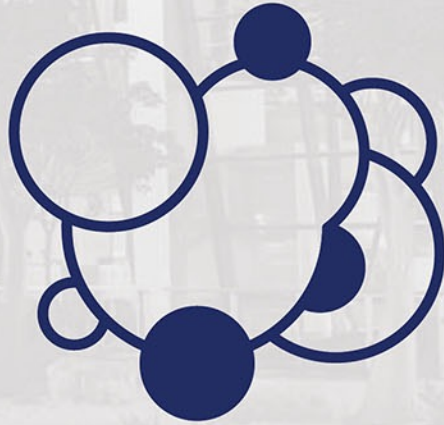
- The yeast “eats” the sugar and creates byproducts which are Carbon Dioxide (CO<sub>2</sub>), alcohol, and heat.
- Beer and wine are made from fermented barley and grapes.
- For spirits production, there are a variety of different types of grains, fruits, and plants used as sugars to create alcohol.
- Once a product is fermented it is then ready for distillation.



**SUGARS**

(cane, corn, barley, agave, etc.)

+



**YEAST**

=



**FERMENTATION**

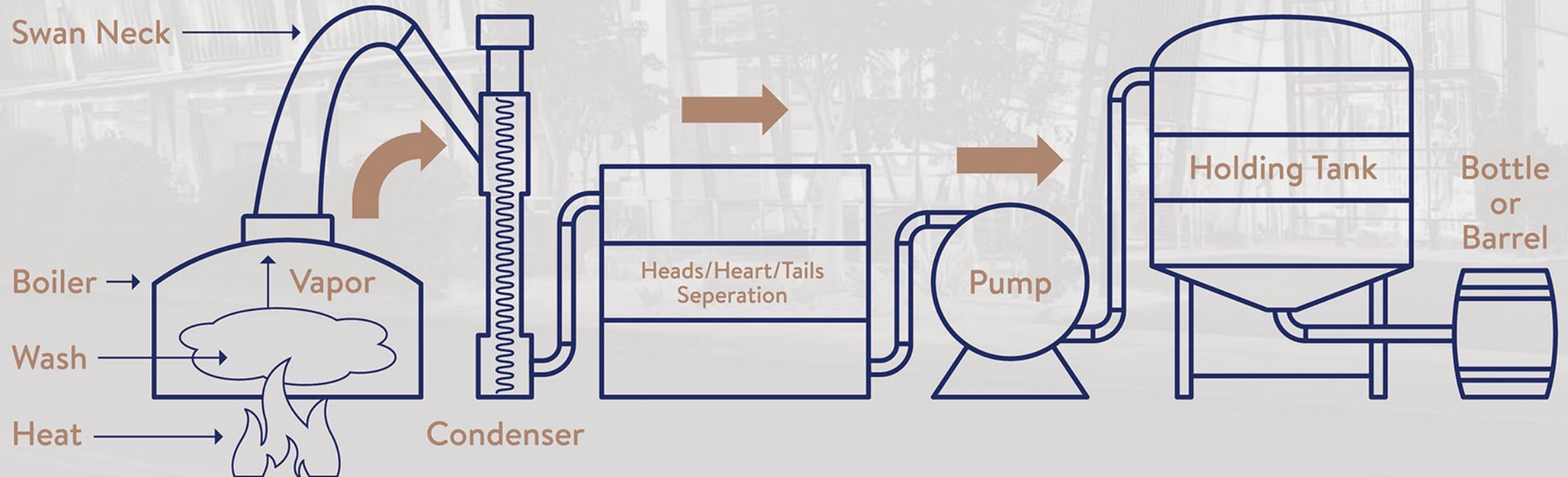
# WHAT IS DISTILLATION?

***Distillation is the application of intense heat to separate alcohol from water, creating an alcohol vapor.***

- Distillation does not produce alcohol, it merely concentrates it.
- Alcohol has a lower boiling point than water.
  - Alcohol boils at 173° F and water boils at 212° F

***A still (Column or Pot) allows the alcohol vapor to be captured in a condenser and turned back into liquid form.***

- Alcohol vapor is captured, cooled, and then condensed back into a liquid again.
- Heat – Vapor – Cooling – Condensation – Liquid



*The distillation process creates different types of alcohol and other chemical compounds that will come off the still at different times during the process. The distiller's job is to capture the drinkable ethanol through a series of "cuts" the different "cuts" are often referred to as heads, hearts, and tails. A skilled distiller will know when to make these necessary "cuts".*

## HEADS

1. During the first run of distillation, the initial vapors to come off the still are called the "**Heads**". Heads are very volatile and contain methanol, acetaldehyde, and other lighter esters. This part of the distillation run has smells reminiscent of a solvent or nail polish remover.

## HEARTS

2. Next comes ethanol or the "**Hearts**" which are separated and kept to make alcoholic beverages. Ethanol is the good tasting "safe" part to consume (in moderation).

## TAILS

3. The last part of the distillation run is called the "**Tails**" which are often lower in alcohol and can have some undesirable flavors. These can be saved and put back in the still for a second distillation to extract as much ethanol as possible.

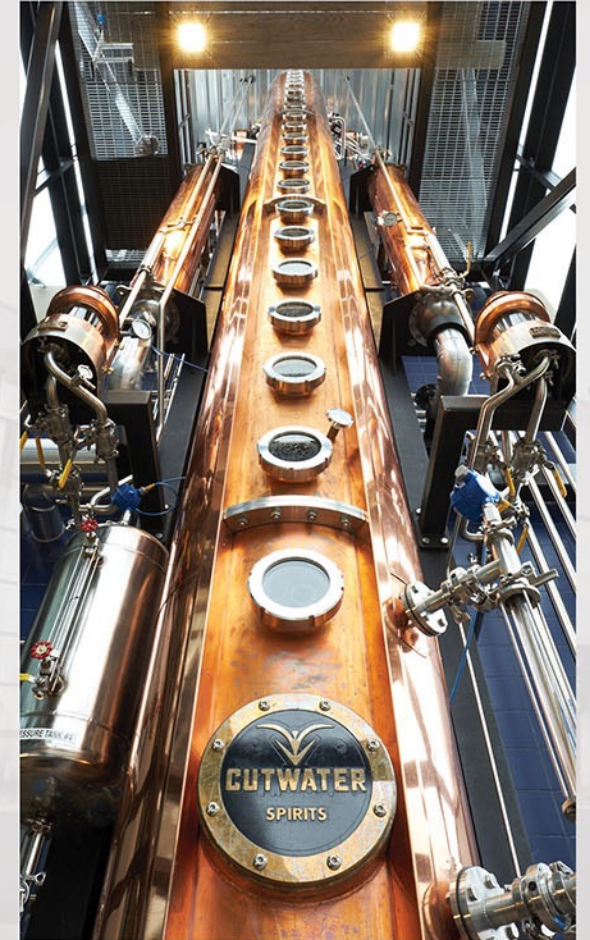
# TYPES OF STILLS

**Pot Still** – Traditionally made of copper, pot stills are available in a range of shapes and sizes depending on the quantity and style of spirit being produced. The pot designs vary and are designed to do one wash at a time.

**Column Still** – Typically much taller and designed to run continuously. Column stills can be made from both copper or stainless steel and are often a mixture of the two. Column stills process a continuous stream of “wash” and output a continual flow of high proof spirits. Columns can also create neutral spirits because of the height of the column.



**POT STILL**



**COLUMN STILL**

## DILUTION / PROOFING

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Spirits pulled directly off the still are much higher in alcohol than people want to drink and the abv varies by batch. Dilution (or proofing) is necessary to bring the alcohol percentage down to a consistent and palatable level. The quality of the water added to a given spirit is a big factor in a spirit's taste profile and at Cutwater we only use neutral Reverse Osmosis water, so we don't add additional flavors to our spirits.



# AGING

Historically aging spirits in barrels was more of a necessity for transportation and storage of spirits, but people soon found out that those spirits tasted better too.

Oak trees have been the main source of barrels for quite some time in Europe and America and there are significant flavor profiles that can come from the different varieties of oak.

American Oak can impart flavors of vanilla, coconut, spice, smoke, caramel and butterscotch, and more based on the characteristics of each spirit and how long it spends in the barrel.

Oak barrels also add color to the spirit depending on the time in the barrel, the type of barrel, the char or toast level, and other environmental factors. As of now, at Cutwater we are only using brand new American Oak barrels at char level three.





# SPIRIT CATEGORIES

# VODKA

- Based on the Slavic word “**voda**” meaning water, vodka can be made with anything that can be distilled — i.e., corn, wheat, rye, potatoes, fruit, molasses, etc.
- In order to be officially considered a vodka, the spirit has to be distilled to a minimum of 90% ABV and it is usually diluted with water before bottling.
- Most vodkas are bottled at 80 proof or 40% ABV.
- Cutwater Vodka is made with 100% corn, which makes it naturally gluten free. It is six times distilled and then carbon filtered for the utmost purity.
- Cutwater offers four vodkas with three unique flavored offerings: horchata, habanero, and hibiscus. These flavored vodkas reflect our SoCal roots, drawing inspiration from south-of-the-border and local taco shops.



**Cutwater Vodka won Double Gold at the San Francisco World Spirits Competition in 2020 and Gold in 2021.**

*It's like the Academy Awards of booze!*



# GIN

Like vodka, gin is a neutral grain spirit flavored with an infusion of botanicals — with an emphasis on juniper.

## There are four common gin styles:

- London Dry (ex - Beefeater, Tanqueray, Bombay Dry),
- Genever or Holland (ex - Bols Genever, Rutte Old Simon),
- Plymouth (Plymouth is its own style)
- New World (ex - Cutwater, Hendricks, Aviation)

Most gins range in ABV from 35% to 55%

Our portfolio features our **Cutwater Gin** and our **Cutwater Barrel Rested Gin**.

We use the same neutral grain spirit for the base of our gins as we do for our Vodkas.

We add a blend of botanicals — juniper, coriander, grains of paradise, lemon grass, rose petals, lemon peel, orange peel, licorice, bitter orange peel, whole clove, and cinnamon through a vapor infusion.



# WHISK(E)Y

Whiskey is a spirit made from fermented grain mash — corn, wheat, rye, or barley. Whiskey is then aged in wooden casks, typically made from charred white oak.

## TYPES OF WHISK(E)Y INCLUDE:

*Bourbon, Rye, Scotch, Irish, Japanese, Canadian, etc.*

- Bourbon can be made anywhere in the US, not just Kentucky, and it has to have a minimum of 51% or more corn in the mash bill.
- Bourbon has to be aged for a minimum of 2-years in brand new American Oak barrels.
- Bourbon can't be distilled higher than 160 proof or entered into the barrel for aging at no more than 125 proof and it can't be bottled at less than 80 proof.
- Cutwater's Devil's Share Bourbon is a wheated bourbon, meaning it doesn't have rye in it.
- Other notable wheated bourbons include Maker's Mark, Old Fitzgerald, Pappy Van Winkle, WL Weller.
- We also produce Devil's Share Single Malt Whiskey in homage to the Scottish style; however, it is an American Single Malt Whiskey.
- Rye follows the same rules as Bourbon; however, the mash bill must be a minimum of 51% or more rye (as opposed to corn).



# RUM

Rum is produced in over 62 countries, many with very distinctive styles (like in Jamaica, Guyana, St. Lucia, etc.)

There are very few rules when it comes to rum production, which is why it's so much fun; however, the only constant rule being that it has to come from sugar cane (like molasses).

Our portfolio of rums includes: **Cutwater White Rum**, **Cutwater Barrel Aged Rum**, **Cutwater Cask Strength Rum**, **Bali Hai Tiki Gold Rum**, and **Bali Hai Tiki Dark Rum**.

We use evaporated Fair Trade Organic cane sugar instead of molasses.

Cutwater Rum is distilled in a hybrid pot-and-column still to create a crisp spirit with hints of fruit and grassy sugarcane.



# TEQUILA

Tequila is distilled from the blue agave plant and can only be authentically produced in the state of Jalisco in Mexico and limited areas in the states of Guanajuato, Michoacan, Nayarit, and Tamaulipas. There are 5 different categories of Tequilas.

- Blanco (aged from 0 to 2 months)
- Reposado (aged from 2 to 12 months)
- Anejo (aged from 12 months to 3 years)
- Extra Anejo (aged longer than 3 years),
- Mixto or Gold (51% blue agave, the other 49% can't be agave. Most often, it's sugar cane.)

There are four types of additives allowed by law for use in 100% agave non-blanco tequilas:

- Sugar based syrup (agave nectar, corn syrup, cane sugar, aspartame, sucralose “Splenda” and stevia)
- Glycerin
- Oak extract
- Carmel coloring
- **Cutwater tequila is a zero additive tequila**



**Cutwater Reposado Tequila not only won Double Gold at the San Francisco World Spirits Competition, but it also won Best of Class!**

*This means it was chosen as the best representation of a Reposado.*



**Cutwater Tequila** — made from 100% Blue Agave in Jalisco. We formed a partnership with a family-owned distillery that has been making tequila in the region for nearly 100 years. Yuseff oversees every step of the process. They hand-select the finest agaves, exclusively use traditional oven cooking methods, and we have even built our own custom still used solely for our tequilas. The result is traditional, agave-forward tequilas made according to Cutwater's exacting standards.

Cutwater introduced Cutwater Tequila Blanco in late 2019, Cutwater Tequila Reposado in early 2020 and Cutwater Tequila Añejo in fall of 2020.

# MEZCAL

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Mezcal is the general term for agave-based spirits and Mezcal is its own sub-category with a growing following.

Mezcal can be made from more than 30 different agave varieties.

Mezcal is typically made in the state of Oaxaca and agave varietal used most often is Espadín.

Cutwater Mezcal is made from 100% Cienzo in Durango, Mexico.

Other popular agave varieties are:

- Arroqueño
- Tobala
- Tepezate
- Cuishe

Mezcal has a distinctly earthy and smoky flavor.

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Cutwater Mezcal is limited release from the region of Durango, Mexico. It's here that we distill our Mezcal by roasting the agave in traditional volcanic rock pit ovens. The open fermentation allows the area's wild yeasts to naturally inoculate the sweet agave mosto. Hints of smoke from the cooking process blend perfectly with the deep agave flavors, striking a balance in our signature Cutwater Mezcal.



## LIQUEURS, APÉRITIFS, BITTERS, ETC...

- Liqueurs and apéritifs are typically lower alcohol spirits that are usually flavored with botanicals, herbs, roots, barks, fruits, spices such as cinnamon, nutmeg, allspice, etc.
- Bitters are known as “the salt & pepper of cocktails” and can make a boring cocktail great, but a little goes a long way.
  - *Common ingredients in bitters are cassia, gentian, wormwood, orange peel, cinchona bark.*
- Cutwater’s portfolio includes a German-style liqueur called Opah which features star anise, cinnamon, allspice, and other ingredients. It is a delicious digestif after a meal as well as a great cocktail modifier.



# FUNDAMENTALS OF TASTING SPIRITS

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## APPEARANCE

**Clarity** – most spirits should be clear and bright.

– *Haziness and cloudiness can likely indicate a fault*

**Color and Intensity** – clear, golden, amber, copper, natural or artificial?

– *For brown spirits an intense color usually means its been aged in oak. However, it could also be due to caramel coloring*

## NOSE

**Aromas** – vanilla, citrus, floral, herbal, nutty, oak, molasses, pepper, pine

## PALATE

**Textures and Mouth-feel descriptions:**

hot, spicy, soft, bland, light, delicate, rich, full-bodied

## TOUCH

If a spirit is sticky to the touch, it could mean the addition of sugar or other chemicals such as glycerin or glycol.

## SOUND – **ОPAH!**



# GLOSSARY

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**% abv** – Alcohol By Volume. Measure of alcoholic strength.

**Agave** – A large succulent, that is actually part of the Lily family, native to Mexico agave southwestern US and the Caribbean. There are over 200 known varieties of agave, cultivated and wild.

**Aging** – The process of storing spirits in barrels for a specific amount of time. A statement of age refers to the number of years the youngest component has been matured in wood.

**Agricole** – French term for rum made from sugar cane juice rather than molasses.

**Amaro** – Italian liquors made with bitter herbs and is commonly consumed as after dinner digestif.

**Añejo** – An age category for tequila that has been aged in wood for 1–3 years.

**Angel's Share** – The part of the spirit that is lost by evaporation from the barrels while a spirit is aging.

**Aperitif** – A drink before a meal to stimulate the palate and appetite, including anything from champagne to cocktails.

**Blanco** – aka silver, is a category of tequila aged from 0-2 months

**Bourbon** – American Whiskey has to have a minimum of 51% or more corn in the mash bill. It has to be aged for a minimum of 2 years in Brand New Charred American Oak barrels.

**Cask Strength** – Spirit that is not altered from the barrel, meaning it has not been diluted or “proofed down”.

**Congeners** – compounds giving flavor and aroma in alcohol.

**Doubler** – a pot still used for a second distillation, especially for American Whiskeys.

# GLOSSARY (CONTINUED)

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**Esters** – compounds from distillation that contribute aromas

**Extra Añejo Tequila** – Tequila that is aged for at least three years in oak

**Fortified Wines** – wines with distilled spirit i.e. port, sherry, vermouth

**Grist** – Ground grains

**Heads** – the first part of distillation to boil at the lowest boiling point, with the most volatile and toxic compounds like methanol.

**Heart** – the middle part of distillation containing potable alcohol

**Maceration** – Used to flavor spirits by steeping of botanicals, herbs or fruits in spirits for a period of time.

**Malt** – Barley that has undergone the malting process of soaking, germination and dried to convert the starch into fermentable sugar

**Mash** – a sugar rich blend of water and grains, which are then be fermented

**Mash Bill** – the mix of grains (corn, rye, wheat, barley) in a whiskey

**Mezcal** – Primarily made in Oaxaca, Mexico from any type of agave. Generally has a strong smoky flavor from cooked pinas in pit ovens over hot rocks.

**Mixto** – a tequila variety that is at least 51% blue agave and mixed with sugars from cane or other spirits

**Molasses** – during sugar production, after all the sugar has crystallized, the thick, sticky sweet liquid that remains. It is then diluted and fermented and distilled to make rum.

**Piña** – the heart of the agave once the leaves are removed.

**Proof** – measure of alcoholic strength. Also defined as twice the percentage of ABV.

# GLOSSARY (CONTINUED)

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**Reposado** – age category for tequila that has been aged in oak barrels for 2–12 months.

**Rum** – traditionally made from molasses or sugar cane juice that is then fermented and distilled.

**Rye** – Whiskey that is aged for at least two years, with 51% or more of rye in the mashbill.

**Schnapps** – Scandinavian and German term for strong, colorless spirits. Usually made by fermenting fruit juices.

**Single Malt Whiskey** – 100% malted barley based spirit made by a single distillery.

**Straight Whiskey** – whiskey made of at least 51% of a single grain and distilled to more than 80% or 160 proof and aged for at least two years in new oak barrels.

**Tails** – the third part of distillation containing lower amounts of alcohol.

**Tequila** – produced in Mexico from the blue agave plant.

**Vermouth** – fortified and flavored wines with various botanicals made in sweet or dry styles.

**Vodka** – Vodka can be made with anything that can be distilled, i.e., corn, wheat, rye, potatoes, fruit, molasses, etc.

**Whiskey** – made from grain, i.e., corn, wheat, rye and barley.

# THANK YOU



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