

THE **Rum** UNIVERSITY

Rum Appreciation In The 21st Century

Lesson IX



Lesson IX - Premium Rums Part II: Separating Men from Boys

Vocabulary Primer

Cellulose

A carbohydrate of high molecular weight that is the chief constituent of the cell walls of plants. Raw cotton is 91% cellulose. Other important natural sources are flax, hemp, jute, straw, and wood. Cellulose has been used to make paper since the 2nd Century A.D.

Flavonoid

The flavonoids are polyphenolic compounds possessing 15 carbon atoms; two benzene rings joined by a linear three carbon chain. Flavonoids constitute one of the most characteristic classes of compounds in higher plants (such as oak trees). There are more than 4,000 chemically unique flavonoids known.

Polyphenol

Also known as polyhydroxy phenol. Polyphenols are antioxidants that are plant substances, such as anthocyananins, flavonoids, and poranthocyanidins.

How Do Rums Mature?

The term “maturity”, as with people, refers to growing and changing as affected by the surrounding environment.

Rum begins to mature the moment the raw alcohol is placed inside an oak barrel. The raw, unrefined ethanol begins to soak into the inner walls of the barrel almost immediately, extracting flavors and transforming elements found inside the wood. Tannins in the wood change into different elements, each imparting unique sensations to the alcohol while the oak’s cellulose is broken down to produce even more sources of flavors and aromas.

Almost immediately, weather begins to affect the aging process: in hotter climates, where the daytime and night-time temperature fluctuations are larger, the alcohol inside the barrel expands with the heat, penetrating deeper into the pores of the wooden walls of the barrel. At nighttime, as the temperature drops, the alcohol volume decreases, retracting from the pores of the wood, but bringing with it some of the flavors and aromas found deep inside the wood. It is easy to see then, that rum aged in hotter, tropical climates will reach maturity faster than rum aged in cooler climates where there is less interaction between the oak cask and its contents.

The Burning Question

If temperature alone is responsible for accelerating the aging process, why burn (or char) the inside of the barrels to begin with? To answer this question properly, we must first take a closer look at our friend, the oak barrel.

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New barrels out of a cooperage



Used bourbon barrels, ready to be filled with rum



Oak wood is made up of different tissues:

- Sap conductive elements
- Support elements
- Storage elements (parenchymas cells)

Oak trees grow in thickness as the single layer of cells (called “cambium”) generates more cells. Inside the tree, sapwood cells are created, while outside the cell, bark cells are formed.

After about 10 years of growth, the oak tree undergoes physiological and morphological changes. Collectively, these changes are known as “duraminisation process” and are responsible for the formation of the heartwood. Duraminisation begins with the progressive hardening of the parenchymal cell wall, where reserve substances are stored. These cells also excrete a membranous protuberance (known as “tylose”) which seals the space between the cells, making mature oak a water-tight building material. American oak is the only variety that secretes tylose, making it a better wood to work with when making barrels for storing liquids.

Once the heartwood has been formed, it consists mainly of three types of macromolecules: cellulose, hemicellulose and lignin.

Once the wood is selected, cut and assembled to create barrels (the subject of assembling barrels could cover an entire chapter and may be dealt with in a future course), it is ready to be toasted (aka “charred” or “burnt”).

Toasting is the most important operation that will affect rum from an organoleptic perspective. Toasting is performed by placing the barrel structure (without the two flat ends) on a stove in a way such that the stove is completely surrounded by the barrel. The degree of toasting achieved depends on the temperature of the fire and the amount of time the barrel is exposed to it. The toast of the wood corresponds to a pyrolytic breakdown of its macromolecules and the generation of odorous molecules in the wood. In other words, toasting produces molecules in the wood which will impart (desirable) aromas to the rum it will store.

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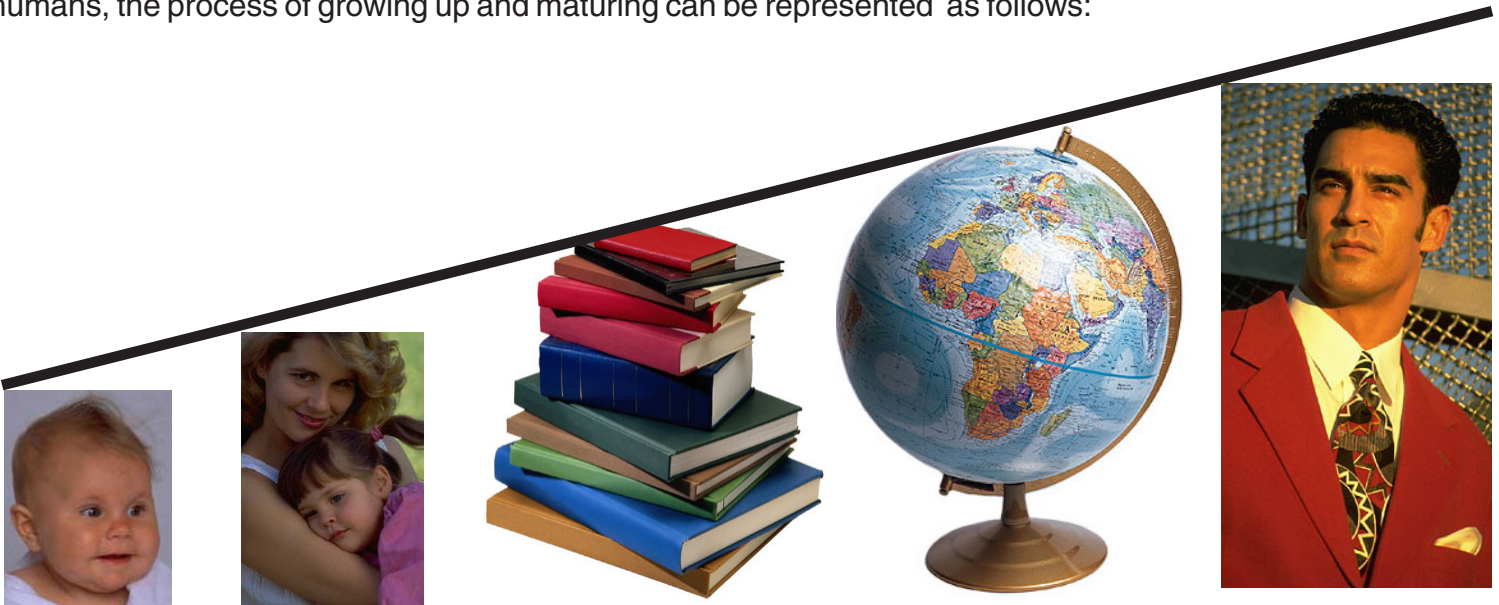
Another way of looking at the toasting of the barrels is to think of it in terms of cooking: when you cook a steak on a pan, a glaze forms on the pan. This glaze is a caramelization of the sugars in the steak. Skilled cooks know that this glaze has concentrated flavors and often deglaze the pans with wine, in an attempt to dissolve the glaze so they can then use it as a sauce to finish their dishes. Toasting an oak barrel creates a similar layer of caramelized components on the surface of the wood. As the alcohol inside the barrels spends more and more time, it helps dissolve this layer and starts incorporating its flavors.

If rum is aged using oak barrels that were previously used for Bourbon, how much of the taste of aged rums is really rum and how much is Bourbon? There is always a little bit of bourbon or Whiskey left in the barrels, soaked in the wood, even after the barrels are emptied. Even as the barrels dry while in route to the rum distilleries, the aroma of Bourbon will remain. It is unrealistic to say that no traces of the previous contents survive, as they invariably do. The bulk of the aromas, flavors and aftertaste in rum, however, come from the wood itself. When dealing with aged rums, more than 60 percent of the flavors and aromas will come directly from the oak.

Separating the Men from the Boys

Does a rum get better and better the longer it ages? No. Similarly to people, some gain maturity faster than others while others never fully mature. It all depends on the conditions regarding their "upbringing". A person's health does not get better and better as they age. Something very similar can happen to rum. If left to age for an extremely long period of time, rum will develop unpleasant oaky and bitter charactersitics that will make it less desirable.

In humans, the process of growing up and maturing can be represented as follows:



Infancy + Parenting + Education + Environment = Maturity

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In rum, the equivalent process could be represented this way:



Infancy +



Environment +



Aging +



Blending =



Maturity

As you can see, there are as many factors involving a rum's maturity as there are factors involving a person's growth. When judging rum, it is important to know as many of these factors before making an educated decision.

Hands-on Exercise: Lessons From an Empty Glass

Understanding the speed with which rums mature requires a deep knowledge of the all the variables involved.

Select at least two rums from your bar that have been made in different countries. Make sure both types are distilled using the same type of equipment (in other words, choose only pot still rums or column still rums). If at all possible, choose rums that have an age statement on them. Ideally you will have two rums that have the same age statement on the label or whose age is very close (for example a 3 and a 4 year old, or two rums which are 5 years old). Now consult an encyclopedia (there are several of them on-line) and try to determine the average temperature in those two countries. Next, see if the distilleries have their own websites. If so, try to find out as much as you can about the way the rums are made: ingredients, type of barrels, etc...

Now that you know about the environmental conditions surrounding the distilleries, evaluate the samples side by side. Look for the most characteristic signs of aging: oak aroma and taste, tannins and vanilla.

Write down your conclusions. If you can repeat this process with another set of rums from different countries, go ahead and do so.

There are rums in the market that have been aged in cold European cellars. If you happen to have one of these, compare it against a rum (of the same age) that has been aged in a Caribbean or tropical climate. Notice the differences and record your findings.

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From the Rum Bar - Featured Cocktail: Mai Tai

The original Mai Tai has been claimed to have been created by Victor J. Bergeron in 1944. The story says that he invented this drink for some friends from Tahiti. His Mai Tai is said to have been made by combining the following ingredients: 2 ounces of 17-year-old J. Wray Nephew rum with juice from one fresh lime, 1/2 ounce each of Holland DeKuyper Orange Curacao and French Garnier Orgeat, and 1/4 ounce Rock Candy Syrup. The mix was then hand shaken and poured over shaved ice. Then it was garnished with fresh mint and the rind of half a lime. After drinking this new cocktail his Tahitian friends exclaimed "Mai Tai" which means "out of this world".

Later Mr. Bergeron used the recipe in his Trader Vic's starting in 1948, and later introduced the Mai Tai to Hawaii in 1953 in the Royal Hawaiian, Moana and Surfrider Hotels.

An Authentic Hawaiian Mai Tai (derived in 1953)

1 oz. Royal Hawaiian Light Rum, or any light rum
1 oz. Demerara Rum (Lemon Hart 86)
1 oz. Orange Curacao (Bols)
Dash French Orgeat Syrup
Dash Rock Candy Syrup
Juice of half a Lime
1/4 oz. Lemon Juice
Orange Juice



Fill large (14 ounce) glass with all ingredients, then add crushed ice and fill the rest of the glass with orange juice. Garnish with mint leaves and fresh fruit on a skewer.

Mai Tai 1

2 oz. Light Rum
1 oz. Dark Rum
2 oz. Pineapple Juice
2 oz. Orange Juice
1 oz. Cranberry Juice
1/2 oz. Grenadine
1/2 oz. Triple Sec



Shake together in a cocktail shaker, then strain into a collins glass filled with ice.

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Mai Tai 2

1 oz. White Rum
1 oz. Dark Rum
1/2 oz. Amaretto
1/2 oz. Apricot Brandy
1/2 oz. Orange Curacao
1/2 oz. Lime Juice
Top with Pineapple Juice
5 Ice Cubes



Mix everything together (except the pineapple juice) and pour over ice in a highball glass. Fill the rest of the glass with the pineapple juice.

Mai Tai 3

1 1/2 oz. Dark Rum
1/2 oz. Orange Curacao
1/2 oz. Creme de Noyaux
1/2 oz. Lime Juice
Dash of Grenadine (if desired)

Shake with ice. Serve in a Hurricane glass. Garnish with a flag, orange slice and cherry (skewered).



Mai-Tai 4

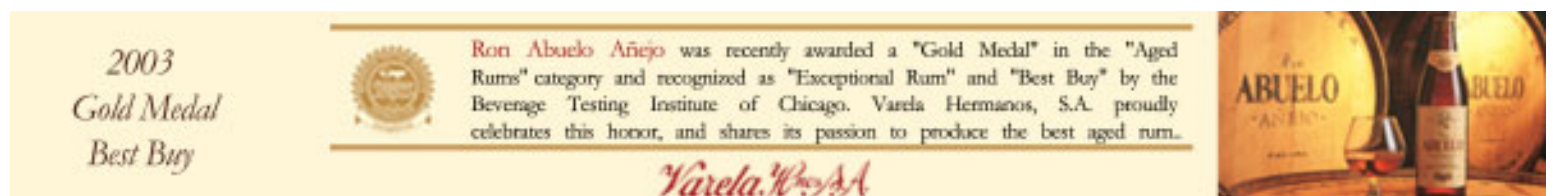
2 oz. White Rum
2 oz. Dark Rum
1 oz. Amaretto
1 oz. Triple Sec
1 oz. Orange Juice
1 oz. Pineapple Juice

Shake together in a cocktail shaker, then strain into a collins glass filled with ice.

Watermelon Mai Tai

1 oz. Light Rum
1 oz. Sour Mix
1 oz. Pineapple Juice
1/2 oz. Triple Sec
6 oz. Cubed Seeded Watermelons
3/4 oz. Dark Rum

Blend all ingredients (except the dark rum) at high speed. Pour over ice in a hurricane glass and float dark rum on top. Garnish with a straw, cherry and watermelon wedge.



Lesson 9 Questionnaire

Q: Do weather conditions affect the way rum ages?

Q: Can a barrel be made from a tree that is younger than 10 years?

Q: Why is it important to use toasted (or charred) barrels when aging rum?

Q: How much of the taste and aroma of rum comes directly from the oak barrel?

Q: Does rum get better and better the longer it is aged?

Q: Who invented the Mai Tai?

Q: What are the basic ingredients in a modern Mai Tai?

Answers to Lesson 8 Questionnaire

Q: A lot of marketing departments for distilleries are now using the words “Premium”, “Super Premium” and “Ultra Premium” for their more refined aged rums. What kind of message are they trying to get across to the consumers?

A: That their rum is of the highest quality and that their rums have been around for decades.

Q: Is it in a distilleries best interest to age rums as much as possible? Why?

A: As long as the distillery maintains a profit margin then the answer is yes. It depends on the loss of rum due to evaporation/perspiration.

Q: How long does it take for a rum to be completely lost due to evaporation?

A: The answer depends on the following: air temperature, circulation and humidity, condition of

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barrels, rum volume vs. barrel surface ratio (to name a few).

Q: How many variables are involved in determining a rum producers' profit margins?

A: Two. Quantity and quality of the product available.

Q: What is PDR and what does it mean to a rum producer?

A: PDR stands for Point of Diminishing Returns. What this means to a rum producer is that they need to keep an eye on their bottom line. They must determine at what point a product becomes non-profitable.

Q: When evaluating a rum solely on its aroma what characteristic is a good indicator of its age?

A: The two elements are either esters or ethyl alcohol. If the presence of esters is detected in the aroma then this is a sign of an aged rum.

Q: Can the age statement on the label of a bottle of rum be misleading? Why?

A: Yes! Because each country and their laws affect the age presented on the labels. Some local laws allow distilleries to use the oldest rum in the blend on the label or they may require the distilleries to use the youngest age on the label.

Q: Who was Ramón Marrero?

A: He was a bartender at the Caribe Hilton Hotel in San Juan, Puerto Rico. His goal was to capture all of the flavors of Puerto Rico in a glass. It was through his goal that he later in 1954 invented the Piña Colada.

Q: What are the main ingredients in making a piña colada?

A: Rum, coconut cream and pineapple juice.

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DESDE 1908

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The history of Varela Hermanos, S.A. goes back to the year 1908, when Don José Varela Blanco, a young Spanish immigrant, arrived in Panama and founded in the town of Pese, Province of Herrera, the Ingenio San Isidro, the first sugar mill in the recently created Republic of Panama.

In 1936, acceding to the wishes of his three older sons, José Manuel, Plinio and Julio, Don José authorized the distillation of sugar cane juice to produce liquor. This activity would be carried out in a garage on his sugar mill property. This new business was called Hermanos Varela, in honor of the Varela brothers, who from the very beginning, were distinguished by their extraordinary quality.

Before dying, Don José asked his nine children to maintain the cultivation of sugar cane for liquor production as a family heritage.

Today, almost a century later, a third generation heads Varela Hermanos, S.A.

Thus, keeping the familiar tradition and implementing state-of-the-art production sale and marketing techniques, VARELA HERMANOS, S.A. is one of the main liquor producers and distributors of Panama and Central America, and begins the 21st century as one of the most solid and successful companies in our country.



Abuelo Añejo is a blend of selected aged rums, married to perfection by our Master Blender. Slowly distilled and patiently matured in small oak barrels, it is distinguished by its mellow, rich, and smooth flavor. Enjoy it straight, on the rocks, or with your favorite mixer.

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