Addendum regarding:
The 2018 Certified Specialist of Spirits Study Guide, as published by the Society of Wine Educators

Note: This document outlines the substantive changes to the 2018 Study Guide as compared to the 2016 version of the CSW Study Guide. All page numbers reference the 2016 version. Please note that all of the tables concerning top-selling brands of particular classes of spirits have been updated to reflect 2017 statistics.

Page 10: The section on fractional distillation has been removed, and replaced with the following sections:

Reflux: During distillation, heat is used to turn a liquid into vapors and, depending on the shape, size, and format of the still, portions of the vapor will be drawn off the still to be condensed into the distillate. However, some of the vapor will cool, turn back into liquid form, and drop back down into the boiling liquid. This process is known as reflux. The shape, size, temperature, and format of the still will influence which elements of the liquid are passed on the condenser and which are returned to the still.

Rectification: Rectification is the process of concentrating the alcohol content in a liquid by repeated distillation. This process is a type of *fractional distillation* (referring to component parts, or fractions). While modern pot stills are sometimes fitted with a few rectification plates, rectification is typically discussed in terms of column still distillation. A column still may contain a rectification column with a number of rectification plates—sometimes even more than 40.

Rectification plates (each of which can hold a small amount of liquid) maximize the interaction between alcoholic vapors and the liquid in the still by forcing the vapors up through a series of liquid layers, allowing just the more volatile components to reach the top of the still. The level of rectification refers to the proof and concentration of congeners in a distilled spirit; those that are highly rectified are almost pure elthyl alcohol with a minimum level of congeners.

Page 10: The section on congeners has been updated to read as follows: The preceding explanation of distillation has been simplified by using the example of a solution made of only ethyl alcohol and water. However, in reality there are many other compounds present in a fermented solution. These compounds, known as congeners, are responsible for much of the aroma and flavor—besides that of pure ethyl alcohol and water—of individual spirits. These compounds include acids, esters, aldehydes, fusel oils, and alcohols (other than ethanol) that are developed during fermentation. During distillation, congeners may vaporize and blend in with the ethanol–water vapors; however, each specific congener will react differently based on three factors: boiling point, solubility (in ethanol and water), and specific gravity.

Congeners contribute to the overall flavor of a product even though they may be present in miniscule quantities and are often measurable in terms as small as parts per million. While many of these congeners contribute to favorable aromas and flavors, some of them can be undesirable. As such, one of the many jobs of the master distiller is the control of congeners during the production process. During distillation, the type and level of congeners that will remain in the finished product can be controlled via

the shape, size, and type of still used as well as by the cut points and the manner in which the distillate is allowed to exit the still.
Page 11: The following information has been added to the section on the pot still: The still itself is a metal pot, usually copper or stainless steel. It consists of a broad rounded bottom and a long tapered swan's neck (also known as the lyne arm) which runs from the head of the still to the worm condenser.

Page 19: A discussion on the definition and labeling of distilled spirits has been added to the end of chapter one:

Page 32: A discussion on the EU vodka wars has been added to chapter three:

Page 47: Discussions on Gin de Mahón and Vilnius Gin have been added to chapter four.

Page 51: A section on Herbsaint has been added to chapter four.

Page 52: The following note was added to the section on akvavit: Note: In the United States, TTB regulations require that caraway be the dominant flavor in akvavit, however, EU standards allow that akvavit may be dominated by either caraway or dill. While a few examples of EU akvavit use dill as their primary flavor, in practice almost all are caraway-dominant.

Page 68: A section on Irish Poitín was added at the end of the section on Irish whiskey.

Page 77: The section on Japanese whiskey was updated to include the following information: Today, Suntory operates three distilleries: the original Suntory Distillery located in Yamazaki (near Osaka), the Hakushu Distillery located in the Yamanashi Prefecture (near Hokuto), and the Chita Distillery (on the Chita Peninsula).

Page 90 – In figure 6.1 (Cognac Labeling Terms), the definition of the "XO" classification was updated to read as follows: Minimum of 10 years of wood aging. The note at the bottom of the table was updated to read: Note: The aging standard of XO Cognac was raised from a minimum of six years to a minimum of ten years effective April 1, 2018. Spirits bottled as XO Cognac under the previous minimum of six years will be allowed to be sold through March 31, 2019.

Page 97: A section on Singani was added to chapter six.

Page 98: The last paragraph in the section on grappa was updated to read as follows: In the European Union, the term grappa is a PGI reserved for products made in Italy. Several specific grappa-producing areas within Italy have also been awarded specific PGIs—these include Grappa di Barolo, Grappa del Piemonte, and Grappa del Veneto (among others). Outside of the EU, modern craft distillers in the United States and elsewhere, such as the Cedar Ridge Winery and Distillery and the Clear Creek Distillery, are also making artisanal pomace brandies labeled with the term grappa.

Page 99: A section on Orujo was added to chapter six.

Page 109: The following information was added to the section on the distillation of rum: A unique style of pot still distillation uses a series of copper vessels—known as retorts—that are placed between the pot still and the condenser. The use of retorts allows the distiller to create a new make spirit using a

single distillation. The retorts contain liquid—typically a mixture of alcohol (left over from the previous distillation) and water. Upon firing, the original vapors from the still will pass through the liquid in the first retort—this will cause the liquid in the retort to boil and release a batch of vapors that are concentrated to a higher proof than the original vapors. These concentrated vapors then pass onto the next retort where the process is repeated, and the resulting vapors are passed onto the condenser. Typically, the heads and tails of the run are used to fill the retorts for the next round of distillation.

Page 110: A portion of the section on Rhum Martinique was updated to read as follows:

For all versions of Rhum Martinique AOC, the words *Rhum Agricole* must be indicated on the label alongside the word *Martinique*. There are several styles of rhum agricole produced within the Rhum Martinique AOC. These include the following:

- Rhum Blanc Martinique (White): colorless rum that has aged for a minimum of eight weeks with no oak aging requirement; if aged in oak, the rhum must have been aged for no more than three months
- Rhum Martinique Élevé Sous Bois (Cask-Aged): rum that has been oak-aged for at least twelve months
- Rhum Martinique Ambré (Rhum Paille): amber or straw-colored rum that has been oak-aged for a minimum of 18 months
- Rhum Martinique Vieux (Extra-Aged): rum that has been oak-aged for at least three years with a capacity of less than 650 liters

The following aging designations are allowed to be used on the labels of Rhum Martinique:

- VO: a minimum of three years of oak aging
- VSOP: a minimum of four years of oak aging
- XO: a minimum of six years of oak aging

Any style of rum designated as *vieux* (three years) or older must have been aged in oak barrels with a capacity of less than 650 liters.

Page 111: A series of short discussions on the rum industries of the following countries were added: Guadeloupe, Trinidad and Tobago, St. Croix, Mauritius, Venezuela, Nicaragua, and Cuba.

Page 114: The following information was added to the section on flavored rum: According to European Union guidelines, EU rum may not be flavored (although caramel coloring is allowed). However, flavored spirits based on rum are produced throughout Europe. These products may be classified as “other spirit drinks” such as Inländerrum (a spice-flavored spirit produced in Austria), or—if sweetened—as “liqueurs” such as Ronmiel de Canarias (produced in Spain).

Page 114: A section on Navy Rum was included in chapter six.

Page 115: A discussion on Charanda was included in the “Other Sugar-base Spirits” section of chapter six.

Page 117: The introductory paragraph of chapter seven was updated to read as follows: Tequila—a type of spirit produced from the blue agave plant—has denominacion de origen (DO) status as a protected

product of Mexico. Most tequila is made in the state of Jalisco, but it is also approved for production within portions of four nearby states.

Page 119: The information on the agave plant was updated to note that there are over 200 varieties of agave, and to read as follows: The agave belongs to the Agavaceae (amaryllis) family and is classificed as a succulent." – please REPLACE with the following: Rather, the agave belongs to the *Asparagaceae* family and is classified as a succulent. *Asparagaceae* is a large family of flowering plants that includes asparagus, the spider plant, yucca, and lily of the valley as well as the large sub-family of agave (*Agavoideae*) plants.

Page 126: The section on pulque was updated to include the following: The sap (as opposed to the cooked hearts) of the Agave americana, commonly referred to as maguey, is the typical base material for pulque. When the plant reaches maturity—which typically takes 10 to 12 years—the floral bud and central leaves of the plant are removed, and a small cavity is carved into the center of the base. After a few days, the sap starts to flow into the cavity and it is harvested once or twice per day. The cavity is scraped at regular intervals, which allows the plant to continue to produce sap for three to six months.

After the sap is harvested, it is brought to the production facility—known as a tinacal—and placed in a large vat. Fermentation, via ethanol-producing Zymomonas mobilis bacteria, is induced by the addition of some freshly-made (and still-fermenting) pulque to the vat of fresh sap. Fermentation typically takes 7 to 14 days.

Because pulque spoils rapidly within a few days, this milky-looking product is essentially a locally produced product, and most pulque is consumed in neighborhood bars called pulquerías. In recent years, brewers have found a way to store pulque in cans, like beer, but purists claim that this significantly changes the flavor.

Page 126: The section on Mezcal was updated to read as follows:

Mezcal was, until quite recently, a traditional term referring to all agave spirits. However, in 1994, mezcal was awarded its own set of standards, and as of 2016 these standards (as described in the *Norma Oficial Mexicana* and the standards of the spirit's *denominacion de origen*) were updated such that the term *mezcal* may only be used to refer to certain specific agave-based beverages produced within certain defined geographic areas. Mezcal derives its name from a Nahuatl Indian word, *mexcalmetl*, which loosely translates as "agave plant."

While the Mexican state of Oaxaca is the traditional center and leading producer of mezcal, the NOM allows for the production of mezcal in a total of nine Mexican states. In addition to Oaxaca, approved production areas include the Mexican states of Guerrero, Durango, San Luis Potosí, Puebla, and Zacatecas as well as portions of the states of Tamaulipas and Michoacán—plus the town of San Luis de la Paz (located in the state of Guanajuato).

A range of agave plant species and varieties are approved for use in the production of mezcal, however, close to 90% is made using *Agave espadín* (*Agave angustifolia*). Other approved species include *Agave esperrima, Agave weberi, Agave patatorum,* and *Agave salmiano.* The rules also allow for the use of "other agave species" as long as they are not specified in the use of other NOM-regulated beverages

within the same state. This means that many different agave plants may be used to produce mezcal, resulting in a wide selection of unique and artisanal beverages.

Mezcal often has a “smokier” or “earthier” aroma than tequila, in part because of the varieties of agave used but also because of the tradition of cooking the piñas in earth-covered pits. Grinding methods vary, and some versions of mezcal use agave fibers (bagazo) in the fermentation and distillation stages of production in order to add character.

Mezcal made using only agave may be labeled as 100% Agave Mezcal. Products without this label designation must be produced using a minimum of 80% agave (the remaining 20% being non-agave sugars).

Mezcal is typically bottled in an unaged expression, but it may be oak-aged prior to bottling. Regulations allow for the following aging designations on the label of a bottle of mezcal:

- Joven: No aging requirements
- Reposado: Must be aged in oak barrels for a minimum of two months
- Añejo: Must be aged in oak barrels for a minimum of one year

With the update of the official standards in 2016, three categories of mezcal were created. Products with labels using just the term *Mezcal* have few production requirements regarding the specific procedures for cooking the piñas, milling the cooked product, fermentation, and/or distillation. Such products are likely to use industrial-style equipment including stainless steel ovens, stainless steel fermentation tanks, and column stills.

The following two label categories may be used for those products made using specific artisanal or traditional production methods:

- *Mezcal Artesanal:* In the production of Mezcal Artesanal, the agave must be cooked in pits or cement ovens (no stainless steel allowed), fermentation must be completed in a vessel made of stone, cement, wood, clay, earthenware or animal skins, and distillation must be fueled using direct fire.
- *Mezcal Ancestral:* Mezcal Ancestral must be produced using traditional methods, such as cooking the agave in pit ovens and milling the agave with wooden bats or a stone wheel. Fermentation must be accomplished in a vessel of stone, cement, wood, clay, earthenware or animal skins; and agave fibers (bagazo) must be included. Distillation, which must also include agave fibers, must be accomplished via cement vessels fueled using a direct fire.

As of the passage of NOM 199 in July 2016, agave-based distillates produced outside of the geographical limits (or other standards) of the Mezcal NOM may not use the term *mezcal* but instead must be named according to another designation or labeled as “Aguardiente de Agave.”

Page 127: The section on Bacanora was updated to include the following information: Bacanora is produced using the agave subspecies angustofolia (also known as Agave yaquiana).

Page 138: The section on “The Essential Liqueurs” was updated to include new information on the following products: Ginjinha, Licor 43, Pimm's No. 1 Cup, Rumchata, and Rock & Rye.

Page 138: The following information was added to the section on Limoncello: Two versions of limoncello produced in Italy— Liquore di limone di Sorrento and Liquore di limone della Costa d'Amalfi—have PGI status in the European Union.

Page 148: The information on Vermouth di Torino was updated to read as follows: Vermouth di Torino PGI

While many styles of vermouth are produced surrounding the city of Turin (Torino), a specific product referred to as Vermouth di Torino has protected geographical indication (PGI) status in the European Union. Under these standards, which were updated in early 2017, Vermouth di Torino PGI must be produced within the region of Piedmont using a base of Italian wine, and must be fortified with the addition of spirits. The main flavoring must be artemisia (with additional herbs and spices allowed) and the alcohol by volume must be between 16% and 22%. The standards also allow for a Vermouth di Torino Superiore PGI, with a minimum of 17% alcohol by volume. At least 50% of the base wine and the flavorings used for Vermouth di Torino Superiore PGI (aside from the artemisia) must be grown in Piedmont.