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Mappleau Recipe

Ingredients and Materials

Airlock

5-gallon Carboy

2 gallons Maple Syrup (Grade A or Processing Grade (Buddy)) – for fermenting/distilling

Yeast Nutrient (e.g., Fermaid O™)

Distiller's Yeast (*Saccharomyces cerevisiae*)

Grade A Maple Syrup – for back sweetening/flavoring

- Dark or Very Dark grades are recommended for intensity of flavor
- Bourbon barrel-aged syrup may be used if those flavor characteristics are desired

Oak chips or Oak barrel (optional)

Directions

Step 1: Fermentation

1. In a 5-gallon carboy, combine maple syrup and water to make a 5-gallon solution with 25 °Brix. *For calculations, please see "Fermentation Calculations" below.*
2. Add 150 mgN/L yeast nutrient (e.g., 0.48 g/L Fermaid O™).
3. Add distiller's yeast (*S. cerevisiae),* prepared according to instructions on the package, to the carboy and close with an airlock. Ensure sufficient headspace; do not fill past the shoulder of the carboy.
4. Maintain solution temperature at 70 °F and check °Brix every 2 to 3 days.
5. Following 4 to 5 days of fermentation, or when the solution reaches 17 °Brix, add another 150 mgN/L yeast nutrient to solution and stir.
6. Allow fermentation to continue for approximately 10 days or until °Brix measurements have stabilized. Total fermentation time is approximately 14 days.
7. The fermentation is complete and ready to be distilled.

Step 2: Distillation

Distillation can take place in a pot still or a column still.

1. If using a pot still, two passes will be required to create a clean, concentrated spirit. On a column still, one or two plates can be used, and close attention should be given to the temperature of the still, column, and condenser.
2. Separate distillates into 7 to 10 cuts. A cut refers to the collection of distillates as they are released from the distillation pot or column. Each cut varies in alcohol content and flavor profile.
3. For tasting, dilute high proof cuts to 50% ABV (100-proof). Select the initial and final cuts to discard (i.e., heads and tails). Remaining cuts can be used to create the final product.

Step 3: Dilution & Back Sweetening

1. Select a maple syrup with desired flavor characteristics for Mappleau.
    a. Dark syrup adds sweet, floral, and cooked caramel characteristics.
    b. Very Dark syrup has robust flavor with dark caramel and dried fruit notes.
    c. Bourbon barrel-aged maple syrup adds vanilla and coconut notes normally associated with aged whiskey.
2. Dilute distillate to 15 or 20% alcohol by volume (ABV) with water and back sweeten with maple syrup to attain 15 °Brix. Maple syrup contains about 33% water, which is accounted for in the calculations section. *For calculations, please see "Dilution and Back Sweetening Calculations" below.*

Calculations

Fermentation Calculations

For this example, we will calculate the volume (in gallons) of maple syrup needed to make 5 gallons of 25 °Brix (25% sugar) solution using the following equation:

$$(\textbf{°Brix of maple syrup}) * (\textbf{Volume of syrup needed}) = (\textbf{Desired °Brix of solution}) * (\textbf{Final volume of solution})$$

Example:
Fill in equation with known values (°Brix of maple syrup can vary).

$$(\textbf{67 °Brix}) * (\textbf{Volume of syrup needed}) = (\textbf{25 °Brix}) * (\textbf{5 gallons})$$

Multiply 25 °Brix by 5 gallons.

$$(\mathbf{67\ °Brix}) * (\mathbf{Volume\ of\ syrup\ needed}) = \mathbf{125}$$

To calculate *Volume of syrup needed*, divide both sides of the equation by 67 °Brix.

$$\frac{(\mathbf{67\ °Brix}) * (\mathbf{Volume\ of\ syrup\ needed})}{\mathbf{67}} = \frac{\mathbf{125}}{\mathbf{67}}$$

The resulting value is the amount of maple syrup needed.

$$\mathbf{Volume\ of\ syrup\ needed\ (gallons)} = \mathbf{1.87\ gallons}$$

$$\mathbf{Volume\ of\ water\ needed\ (gallons)} = \mathbf{5 - 1.87 = 3.13\ gallons}$$

Add 1.87 gallons of maple syrup and 3.13 gallons of water to a 5-gallon carboy.

Dilution and Back Sweetening Calculations

After distillation is complete, the Mappleau can be made by mixing the distillate (maple spirit) with water and maple syrup. For this example, we will calculate the volumes of maple syrup, maple distillate, and water needed to make 375mL of Mappleau with 15 °Brix and 15% alcohol by volume (ABV).

First, calculate the volume (mL) of maple syrup needed to make 375mL of Mappleau with 15 °Brix using the following equation:

$$(\mathbf{°Brix\ of\ maple\ syrup}) * (\mathbf{Volume\ of\ syrup\ needed}) = (\mathbf{Desired\ °Brix\ of\ Mappleau}) * (\mathbf{Final\ volume\ of\ Mappleau})$$

Example:
Fill in equation with known values (°Brix of maple syrup can vary).

$$(\mathbf{67\ °Brix}) * (\mathbf{Volume\ of\ syrup\ needed}) = (\mathbf{15\ °Brix}) * (\mathbf{375\ mL})$$

Multiply 15 °Brix by 375 mL.

$$(\mathbf{67\ °Brix}) * (\mathbf{Volume\ of\ syrup\ needed}) = \mathbf{5,625}$$

To calculate *Volume of syrup needed*, divide both sides of the equation by 67 °Brix.

$$\frac{(\mathbf{67\ °Brix}) * (\mathbf{Volume\ of\ syrup\ needed})}{\mathbf{67}} = \frac{\mathbf{5,625}}{\mathbf{67}}$$

The resulting value is the amount of maple syrup needed.

$$\textbf{Volume of syrup needed} = \textbf{83.96 mL}$$

Next, calculate the volume (mL) of distillate (maple spirit) needed to make 375mL of Mappleau with 15% ABV using the following equation:

$$(\%\ \textbf{ABV of distillate}) * (\textbf{Volume of distillate needed}) = (\textbf{Desired}\ \%\ \textbf{ABV of Mappleau}) * (\textbf{Final volume of Mappleau})$$

Example:
Fill in equation with known values. For this example, we are using 75% ABV distillate.

$$(\textbf{75}\ \%\textbf{ABV}) * (\textbf{Volume of distillate needed}) = (\textbf{15}\ \%\textbf{ABV}) * (\textbf{375 mL})$$

Multiply 15 %ABV by 375 mL.

$$(\textbf{75}\ \%\textbf{ABV}) * (\textbf{Volume of distillate needed}) = \textbf{5,625}$$

To calculate *Volume of distillate needed*, divide both sides of the equation by 75 %ABV.

$$\frac{(\textbf{75}\ \%\textbf{ABV}) * (\textbf{Volume of distillate needed})}{\textbf{75}} = \frac{\textbf{5,625}}{\textbf{75}}$$

The resulting value is the amount of distillate needed.

$$\textbf{Volume of distillate needed}\ (\textbf{mL}) = \textbf{75.00 mL}$$

To calculate volume of water needed, subtract volume of distillate and volume of maple syrup from the total volume of Mappleau (375mL).

$$(\textbf{Volume of Mappleau}) - (\textbf{Volume of maple syrup}) - (\textbf{Volume of distillate}) = (\textbf{Volume of water})$$

$$\textbf{375 mL} - \textbf{75 mL} - \textbf{84 mL} = (\textbf{Volume of water})$$

$$(\textbf{Volume of water}) = \textbf{216 mL}$$

Into a 500mL (2cup) measuring cup, add 84mL of 67 °Brix maple syrup, 75mL of 75% ABV distillate (maple spirit), and fill to 375mL with filtered water (approximately 216mL water).

Mappleau Facts

Alcohol by volume	15-20%
Sugar	15-20 °Brix
Serving temperature	50-70 °F
Occasion	Digestif, dessert pairing, or stand-alone
Glassware	Tulip or snifter
Aroma characteristics	Light caramel, fruity (red apple skins, banana), earthy, woody (when barrel-aged)
Taste characteristics	Maple, medium caramel

Christian Mercado, MFS, developer of Mappleau recipe and methods, with finished Mappleau at the Arnot Forest. Photo by Ailis Clyne.

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Cornell Maple Program

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