



Mead Formulas

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TTB Disclaimer

Notice:

This information is being presented to help the public to understand and comply with the laws and regulations that the Alcohol and Tobacco Tax and Trade Bureau administers. It is not intended to establish any new, or change any existing, definitions, interpretations, standards, or procedures regarding those laws and regulations. In addition, this presentation may be made obsolete by changes in laws and regulations. Please consult the regulations for the most current regulatory requirements.

Sample documents (such as records, returns, and labels) are for illustrative purposes only and contain fictitious data.



How are Mead
(Honey Wine)
Products
Classified?



How are Honey Wine Products Classified?

Depending on how they are made, wines made by fermenting honey are either:

- Standard Agricultural (honey) wine
- Other than standard wine



Production of Domestic Standard Honey Wine

Formula approval is not required for standard honey wine

- Honey must be the sole fermentable ingredient
- The following may be added:
 - Water to facilitate fermentation, provided the density of the honey and water mixture is not reduced below 13 degrees Brix
 - Hops in quantities not to exceed one pound for each 1,000 pounds of honey
 - Pure, dry sugar or honey for sweetening
 - Sugar may be added only after fermentation is completed
- After complete fermentation or complete fermentation and sweetening:
 - May not exceed 14% ABV
 - May not have a total solids content that exceeds 35 degrees Brix

27 CFR 24.200, 24.203, 4.21(f), TTB Ruling 2016-2



Production Limitations for Domestic Standard Honey Wine

- No **wine spirits/honey spirits/brandy** may be added
- No **coloring or flavoring materials** (e.g., fruit juices, spices, or other flavoring materials) may be added
 - Exception: **hops** may be added to honey wine
- Cannot be the product of **blending** honey wine with wine made from fruit or any other agricultural commodities



Note: Grain, cereal, malt, or molasses are never allowed in the production of wine, and may not be received on bonded wine premises

27 CFR 24.200, 24.203, 4.21(f)



Label Designations for Domestic Standard Honey Wine

Standard honey wine may be labeled as:

- Honey wine
- Mead

- If the product contains more than 0.392 gram of CO₂ per 100 milliliters:
 - Sparkling honey wine/mead
 - Carbonated honey wine/mead

27 CFR 4.21(f)



Other than Standard/Wine Specialty

Other than standard wine made from honey includes wine made:

- With sugar, water, or sugar and water beyond the limitations prescribed for standard honey wine
- By blending honey wine with wine made from fruit/other agricultural products
- With sugar other than pure dry sugar, liquid pure sugar, and invert sugar syrup
- With materials not authorized for use in standard honey wine
 - Flavors (other than hops), e.g., spices, fruit juice
 - Colors
 - Wine spirits

Formula approval is **always** required
for other than standard wine

27 CFR 24.218



Other than Standard/Wine Specialty Product

Other than standard wine includes honey wine:

- Produced below 13° Brix
- Finished above 14% ABV
- Where sugar is added before fermentation
- Where fruit juice, spices, or other flavoring materials are added



Note: Grain, cereal, malt, or molasses are never allowed in the production of wine, and may not be received on bonded wine premises

27 CFR 24.218



Label Designations for Domestic Other than Standard Wine/Wine Specialties

- Wine specialty products may **NOT** be labeled simply as “honey wine” or “mead”
- Wine specialty products **must be** labeled with **truthful and adequate statements of composition**
- TTB provides a suggested statement of composition during formula review
 - TTB’s suggestion is general - you may choose to be more specific

27 CFR 4.34



Formula Basics



What is a Formula?

Think of a formula as a recipe – it includes:

- Quantitative list of ingredients
- Method of manufacture
 - Describes the steps you take to create your product
 - Must include each ingredient mentioned on the ingredients list
- Total yield, or batch size



Where is the Formula Requirement?

TTB regulations under the IRC require formulas for certain types of domestic wine. (27 CFR 24.201)

TTB regulations under the FAA Act authorize TTB to request formulas for certain domestic and imported wines. (27 CFR 4.38(h))



When are Formulas required?

In general, formula approval is required if a wine is made with:

- Flavors (with or without alcohol) including compounded flavors, essences, and extracts
- Coloring materials
- Excess sugar
- Excess water



Why is a Formula Required?

We use the information found in the formula to:

- Classify the product for tax and labeling purposes
- Ensure that the product does not contain any prohibited ingredients
- Determine if limited ingredients are used within prescribed limitations or if they will impact labeling
- Provide a suggested statement of composition for labeling purposes



Who Applies for Formula Approval and When?

Formulas, when required, are submitted by:

- **Domestic:** the producer (BW proprietor)
- **Imported*:** U.S. importer (holder of an Importer's Basic Permit)

Formulas must be obtained:

- **Domestic:** before product is produced and before applying for label approval (if needed)
- **Imported*:** before applying for label approval and before product is removed from customs custody

* Formula requirements do not apply to imported wine with under 7% ABV



Wine Formula Tool

Which Alcohol Beverages Require Formula Approval?

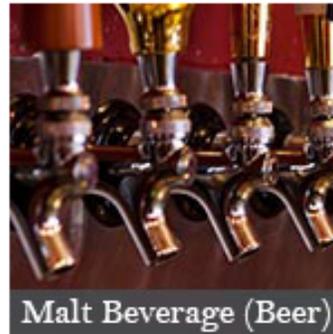
For certain distilled spirits, beers/malt beverages, and wines, TTB must evaluate the ingredients and production process before the product can be made or imported, and before you can submit your labels to TTB (if required). In some cases we also analyze a sample of the product in our laboratory while reviewing the formula.

Select your commodity, then answer a few questions about your product and we'll tell you whether it needs formula approval:



Distilled Spirits

Start



Malt Beverage (Beer)

Start



Wine/Cider

Start

<https://www.ttb.gov/formulation/which-alcohol-beverages-require-formula-approval>



A Deeper Dive into Formulas



Compounded Flavors

For this purpose, a compounded flavor includes any flavor, cloudifier, or blender that consists of multiple ingredients that are combined to produce a particular taste characteristic (e.g., artificial strawberry flavor or natural pecan flavor)

If you're using a compounded flavor that was purchased from a flavor manufacturer, you should submit a FID sheet with your formula



Flavor Ingredient Data Sheet (FID Sheet or FIDS)

A [FID Sheet](#) is a document that includes information about certain ingredients used to make a compounded flavor

Submit one FID Sheet for each compounded flavor used in your product

See [TTB G 2017- 4](#) for additional information and examples



Flavor Ingredient Data Sheet (FIDS)

- Flavor manufacturer supplies to the producer
- FID based on exchange between flavor producer and TTB Nonbeverage Laboratory
- It lists concentration of limited ingredients in PPM
- Lists any colors used in flavor
- States alcohol content of flavor
- This information, combined with the use rate, determines classification of flavor

Flavor Ingredient Data Sheet				
Flavor Producer Information				
TTB Co. Code: <u>FLRUS</u>	Date: <u>1/1/2017</u>			
Company Name: <u>Flavors-R-Us LLC</u>	Contact Person: <u>Jane Q. Flavor</u>			
Address: <u>123 Nonexistent Street</u>	Phone: <u>202-555-5555</u>			
<u>Any City, State USA 00000</u>	Fax: <u>202-555-5554</u>			
Check Appropriate Box:				
Flavor Name: <u>Natural Poppin' Pecan Supreme</u>	Approved for Drawback (DrB)	<input type="checkbox"/>		
TTB Drawback Number: <u>123456</u>	Approved as No Action (N/A)	<input checked="" type="checkbox"/>		
Alcohol Range by Volume: <u>50.0 - 54.0</u>	Fit for Beverage Purposes (Fit)	<input type="checkbox"/>		
Flavor Product Number: <u>7891011</u>	Submitted for TTB Approval	<input type="checkbox"/>		
	Not Yet Submitted for TTB Approval	<input type="checkbox"/>		
Classification				
Natural <input checked="" type="checkbox"/>	N&A ≤ 0.1% Topnote <input type="checkbox"/>	N&A > 0.1% Topnote <input type="checkbox"/>	Artificial <input type="checkbox"/>	Non-Flavor <input type="checkbox"/>
Total Artificial Flavor Content: _____ ppm (Excluding Synthetic Vanillin, Ethyl Vanillin, Synthetic Maltol, and Ethyl Maltol)				
Flavor Components				
TTB/FDA Limited Ingredients	TTB/FDA Limitation in Finished Product	Amount of Additive or Agent Present in Flavor	Maximum Use Rate	Coloring Additives and Other Additives that Affect the Beverage Label (check or list label ingredients that affect the beverage label)
1. Synthetic Vanillin	40.0 ppm	_____ ppm	- %	1. FD&C Yellow #5 <input type="checkbox"/>
2. Ethyl Vanillin	16.0 ppm	_____ ppm	- %	2. FD&C Yellow #6 <input type="checkbox"/>
3. Synthetic Maltol	250.0 ppm	_____ ppm	- %	3. FD&C Blue #1 <input type="checkbox"/>
4. Ethyl Maltol	100.0 ppm	_____ ppm	- %	4. FD&C Blue #2 <input type="checkbox"/>
5. Ester Gum	100.0 ppm	_____ ppm	- %	5. FD&C Green #3 <input type="checkbox"/>
6. BVO	15.0 ppm	_____ ppm	- %	6. FD&C Red #40 <input type="checkbox"/>
7. Sodium Benzoate	1,000.0 ppm	<u>5,000</u> ppm	<u>20.00</u> %	7. Grapeskin Extract <input type="checkbox"/>
8. Gum Arabic/Acacia	200,000.0 ppm	_____ ppm	- %	8. Caramel Color <input checked="" type="checkbox"/>
9. Propylene Glycol	50,000.0 ppm	<u>10,000</u> ppm	<u>NO LIMIT</u> %	9. Annatto <input type="checkbox"/>
10. BHA	(≤0.5% Essential Oil)	<input type="checkbox"/> check if contained	- %	10. Elderberry Extract <input type="checkbox"/>
11. Acetic Acid	1,500.0 ppm	_____ ppm	- %	11. Beet Extract <input type="checkbox"/>
12. _____	_____ ppm	_____ ppm	- %	12. Oak Extract <input type="checkbox"/>
13. _____	_____ ppm	_____ ppm	- %	13. Carmine/ Cochineal Extract <input type="checkbox"/>
14. _____	_____ ppm	_____ ppm	- %	14. _____ <input type="checkbox"/>
15. Total Vanillin	40.0 ppm	- ppm	- %	15. _____ <input type="checkbox"/>
16. Total Maltol	250.0 ppm	- ppm	- %	
Confidential Limited Ingredients Not Shown (CLI)				
Check if contained in formula <input type="checkbox"/> Check if CLI was previously submitted <input type="checkbox"/>				
Beverage Manufacturer / Importer: _____				
Formula # / Serial #: _____				
<i>Jane Q. Flavor</i> Title: <u>Supervisory Chemist</u> Date: <u>30-Sep-17</u> Flavor Company Representative Signature				



Limited Ingredients Section

Flavor Components				Coloring Additives and Other Additives that Affect the Beverage Label (check or list label ingredients that affect the beverage label)
TTB/FDA Limited Ingredients	TTB/FDA Limitation in Finished Product	Amount of Additive or Agent Present in Flavor	Maximum Use Rate	
1. Synthetic Vanillin	40.0 ppm	_____ ppm	- %	1. FD&C Yellow #5 <input type="checkbox"/>
2. Ethyl Vanillin	16.0 ppm	_____ ppm	- %	2. FD&C Yellow #6 <input type="checkbox"/>
3. Synthetic Maltol	250.0 ppm	_____ ppm	- %	3. FD&C Blue #1 <input type="checkbox"/>
4. Ethyl Maltol	100.0 ppm	_____ ppm	- %	4. FD&C Blue #2 <input type="checkbox"/>
5. Ester Gum	100.0 ppm	_____ ppm	- %	5. FD&C Green #3 <input type="checkbox"/>
6. BVO	15.0 ppm	_____ ppm	- %	6. FD&C Red #40 <input type="checkbox"/>
7. Sodium Benzoate	1,000.0 ppm	5,000 ppm	20.00 %	7. Grapeskin Extract <input type="checkbox"/>
8. Gum Arabic/Acacia	200,000.0 ppm	_____ ppm	- %	8. Caramel Color <input checked="" type="checkbox"/>
9. Propylene Glycol	50,000.0 ppm	10,000 ppm	NO LIMIT %	9. Annatto <input type="checkbox"/>
10. BHA	(<0.5% Essential Oil)	<input type="checkbox"/> check if contained		10. Elderberry Extract <input type="checkbox"/>
11. Acetic Acid	1,500.0 ppm	_____ ppm	- %	11. Beet Extract <input type="checkbox"/>
12. _____	_____ ppm	_____ ppm	- %	12. Oak Extract <input type="checkbox"/>
13. _____	_____ ppm	_____ ppm	- %	13. Carmine/ Cochineal Extract <input type="checkbox"/>
14. _____	_____ ppm	_____ ppm	- %	14. _____ <input type="checkbox"/>
15. Total Vanillin	40.0 ppm	- ppm	- %	15. _____ <input type="checkbox"/>
16. Total Maltol	250.0 ppm	- ppm	- %	



TTB Limited Ingredients

There are 4 flavor materials that TTB allows to be present at certain levels in alcoholic beverages without affecting the label declaration:

- Synthetic maltol
- Ethyl maltol
- Synthetic vanillin
- Ethyl vanillin

If these limits are exceeded, the flavor must be labeled as an “artificial flavor” in the product



Ingredient Specification Sheet (Spec Sheet or Technical Data Sheet)

A spec sheet is a document or label that lists or describes the contents of an ingredient that is made from more than one component

Submit a spec sheet for each ingredient that is made from more than one component, e.g., a fruit juice made from water, apples, and sugar



Ingredient Specification Sheet (Cont.)

(Spec Sheet or Technical Data Sheet)

Should not be used for compounded flavors (use FID sheet)

See [TTB G 2017-3](#) for additional information and examples



GRAS Ingredients

According to the FDA website, [Generally Recognized as Safe \(GRAS\) | FDA](#), "GRAS" is an acronym for the phrase **Generally Recognized As Safe**. Under sections 201(s) and 409 of the Federal Food, Drug, and Cosmetic Act (the Act), any substance that is intentionally added to food is a food additive, that is subject to premarket review and approval by FDA, unless the substance is generally recognized, among qualified experts, as having been adequately shown to be safe under the conditions of its intended use, or unless the use of the substance is otherwise excepted from the definition of a food additive.

- Using only GRAS ingredients does not mean a product is exempt from TTB formula requirements.
- TTB may ask for information regarding the GRAS status of additives in alcohol beverages



Food/Color Additives

Food/Color Additives and Limitations on their Use

Food and color additives can be used in alcohol beverages assuming the ingredient is approved for its intended use, at appropriate use rates, by the FDA. See [TTBGov - Determining If and How Ingredients may be used in Your Beverage](#)

To find out if and how a food or color additive can be used, consult:

[TTB's list of limited flavoring substances, acceptable colors, and label implications](#)

[FDA's Food Additive Status List](#)

[21 CFR Part 172](#) (Food Additives Permitted for Direct Addition to Food for Human Consumption)

[Substances Added to Food](#) (formerly "EAFUS" - FDA's Everything Added to Food in the United States)

[FDA's Color Additive Status List](#)



FDA Requirements

To learn more about GRAS requirements, see FDA's:

[Generally Recognized as Safe: Overview and Resources](#)

[Frequently Asked Questions about GRAS](#)

Contacting FDA

For any questions regarding how GRAS determinations are made or the particular GRAS status of an ingredient, please [contact the FDA's Center for Food Safety and Applied Nutrition](#).



How to Apply for Formula Approval



How Do I Apply for Formula Approval?

Formulas Online

- Step-by-step guidance
- Data validation checks along the way
- Application status updates via email



[Formulas Online Customer Page](#)

See webinar presentation: [How to Register and Submit Formulas through Formulas Online](#)

1 Measurement

Type: Percentage Volume/Weight Units: English Metric

2 Yield Summary

Total Yield: Liters

Alcohol Content of Finished Product:	Low: <input type="text" value="6.1"/>	High: <input type="text" value="6.45"/>	Unit: <input type="text" value="% by Volume"/>	
Alcohol From Flavors:	Low: <input type="text" value="0.5"/>	High: <input type="text" value="0.85"/>	Unit: <input type="text" value="% by Volume"/>	
Alcohol From Base:	Low: <input type="text" value="5.6"/>	High: <input type="text" value="5.6"/>	Unit: <input type="text" value="% by Volume"/>	

3 Ingredients List

List ALL ingredients to be used in formulating a batch of the product. Please enter the ingredients in production order. [Ingredient List Examples](#)

Ingredient Name	Quantity	Abv	PaD	TTB Formula ID	Finished Alcohol	
▶ Draft Lemon Pale Ale	990.0 - 995.0 l.	Abv: 5.5% - 5.5%	PaD: <Not Entered>	TTB Formula ID: <Not Entered>	Finished Alcohol	
▶ Flavor Group 1: Natural Mango flavor	1.2 - 5.0 l.	TTB Company Code: WL5	TTB Drawback #: 25		Flavor (Compounded)	
▶ Flavor Group 1: Natural Jablanica Mint flavor	4.0 - 5.0 l.	TTB Company Code: WL5	TTB Drawback #: 3		Flavor (Compounded)	
▶ Flavor Group 2: Natural and Artificial Pineapple flavor	3.5 - 5.0 l.	TTB Company Code: WL5	TTB Drawback #: 55		Flavor (Compounded)	
▶ Flavor Group 2: Natural and Artificial Balkan Coffee flavor	1.0 - 5.0 l.	TTB Company Code: WL5	TTB Drawback #: 1		Flavor (Compounded)	
▶ Flavor Group 3: Natural and Artificial Tropical Fruit flavor	0.25 - 5.0 l.	TTB Company Code: WL5	TTB Drawback #: 59		Flavor (Compounded)	
▶ Flavor Group 3: Natural Blablar Blueberry flavor	1.0 - 5.0 l.	TTB Company Code: WL5	TTB Drawback #: 19		Flavor (Compounded)	
▶ FD&C Blue #1	40.0 - 45.0 ml.				Color	
▶ Titanium Dioxide	25.0 - 100.0 g				Color	
▶ Sodium benzoate	500.0 - 800.0 g				Other	
▶ Caramel	100.0 - 110.0 ml.				Color	

[+Add Ingredient...](#) Which category should I choose?

4 Method of Manufacture

Describe in sequence each step used to produce this product.

This can be done in a format similar to a recipe, for instance providing the sequence of steps in either a list or paragraph format to describe how your product is made. See [Method of Manufacture Examples](#) for some indications of the level of detail that TTB looks for when evaluating formula submissions.

Description:

- 1.) Use approved flavored malt beverage as base for new product. Base is produced according to the 2015-1 Ruling.
- 2.) Add to this base beverage one of the three flavor groups. Flavor groups are marked as Group 1, 2, or 3 in the ingredient list. Products are seasonal beers and the flavor palate will change during the year.
- 3.) Add Sodium benzoate as preservative, use rate no greater than .1%
- 4.) Add FD&C Blue #1, Caramel, and Titanium Dioxide and blend.
- 5.) Bottle and package.

Method of Manufacture Documents

TYPE	NAME	DATE	ACTION
Add Attachment			

<< Previous
Save as Draft
Validate
Next >>



Supporting Documentation: Spec Sheets

- An **ingredient specification sheet** (also called a **spec sheet** or technical data sheet) is a document (or copy of a product label) that lists or describes the contents of an ingredient used to make your alcohol beverage product
- Include a **spec sheet** for each ingredient that is made from more than one component (excluding compounded flavors)

See [TTB G 2017-3](#) for additional information on **spec sheets**, including examples



Supporting Documentation: Flavor Ingredient Data Sheets

- A **Flavor Ingredient Data Sheet** (also called **FID sheet** or **FIDS**) is a spreadsheet that includes information about certain ingredients
- Include a **FID sheet** if you're using a compounded flavor
 - A compounded flavor includes any flavor, cloudifier, or blender that consists of multiple ingredients that are combined to produce a particular taste characteristic

See [TTB G 2017- 4](#) for additional information on **FID sheets**, including examples



Supporting Documentation: Limited Ingredient Calculation Worksheets

- A **Limited Ingredient Calculation Worksheet** is used to calculate the total amounts of ingredients that have limits on their use per TTB and FDA requirements
- Submit the worksheet for products containing one or more compounded flavors

See [TTB G 2017- 6](#) for additional information on **Limited Ingredient Calculation Worksheets**, including examples



What Should I Do After My Formula is Approved?

1. Determine whether your product requires a Certificate of Label Approval (COLA)
 - **YES:** If wine product contains at least 7% alcohol by volume **and** will be sold in interstate commerce
 - **NO:** If it contains less than 7% alcohol by volume
 - **NO:** If it will only be sold only intrastate; you can instead apply for a Certificate of Exemption
2. If your product requires a COLA, find the statement of composition in the RESULTS tab of your approved formula



What Should I Do After My Formula is Approved? (Cont.)

On the approved formula, TTB will provide a simple, general statement of composition for the product label, such as:

- *Honey Wine with Natural Flavors*

You can either use this generic statement of composition to meet the requirement for the class/type statement on the label, or create a more specific labeling statement that discloses the specific flavors as well as the coloring agent (if applicable), such as:

- *Mead with cherries, cinnamon, and vanilla*



What Should I Do After My Formula is Approved? (Cont.)

If a COLA is required, list your formula ID on your label application

More information can be found: [TTBGov - Wine Example Formulas](#)

Please take few minutes to
provide feedback on this session:

<https://www.ttb.gov/survey>

