BEVERAGE FORMULA SEMINAR

Formulation Team
Advertising, Labeling and Formulation Division
TTB

May 3, 2006
AGENDA

• Advertising, Labeling & Formulation Division (ALFD)
• Basics of TTB Formulation
• Wine
• Distilled Spirits
• Malt Beverage
WHERE DOES ALFD FIT IN TTB?

John Manfreda
Administrator

Vicky I. McDowell
Deputy Administrator

Cheri Mitchell
Assistant Administrator
(Management)

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Assistant Administrator
(Headquarters Operations)

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Assistant Administrator
(Field Operations)

Advertising Labeling and Formulation Division

 Regulations and Rulings Division

 International Trade Division

 Scientific Services Division

 National Revenue Center

 Tax Audit Division

 Trade Investigations Division
ALFD Contact Information

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ALFD’S MISSION

- **Collect the Revenue**
  - **Ensure** the proper tax classification of alcohol beverages

- **Protect the Public**
  - **Ensure** that formulas, labels and advertisements for alcohol beverages are in compliance with Federal laws and regulations
  - **Provide** the consumer with adequate information on the identity and quality of the product
  - **Prevent** consumer deception
Laws and Regulations

- 27 CFR Part 4
  - Labeling and advertising of wine
- 27 CFR Part 5
  - Labeling and advertising of distilled spirits
- 27 CFR Part 7
  - Labeling and advertising of malt beverages
- 27 CFR Part 24 – Wine
- 27 CFR Part 25 – Beer
- 27 CFR Part 27
  - Importation of distilled spirits, wines, and beer
ALFD FORMULATION TEAM

- Roberta Sanders, Program Manager
- Shonda Geddie, Formula Specialist
- Michael Warren, Formula Specialist
- Stephen Robey, Formula Specialist
- Susan Weil, Assistant Director
Major Program Initiatives

1. Examine alcohol beverage formulations to ensure product integrity, accurate product identification and correct tax classification.

2. Issue formulas for domestic wines and distilled spirits and statements of process for domestic malt beverages.

3. Issue laboratory analyses and pre-import letters for imported wines, distilled spirits and malt beverages.
Basics of TTB Formulation

- Domestic Wine – TTB F 5120.29
- Domestic Distilled Spirits – TTB F 5110.38
- Domestic Malt Beverage – Formula
- Imported Product – Pre-Import Approval letter or Laboratory Analysis
- In the future, all products will be submitted on a single form, TTB F 5100.51
Basics of TTB Formulation

- “Uni-form” – one form for all commodities, domestic and imported, currently at OPM
- First step in adding “formulas online” to COLAs Online application
DOMESTIC PRODUCTS REQUIRING A FORMULA

- Flavored Wine
- Special Natural Wine
- Rhubarb Wine
- Honey Wine
- Vodka
- Gin
- Liqueur
- Flavored Brandy, Flavored Rum, Flavored Vodka, Flavored Gin, Flavored Whisky
- Distilled Spirits Specialty
- Flavored Malt Beverages
WHAT WE LOOK FOR

- Colors
  - Certified, non-certified, prohibited
- Flavors and FID sheets
- GRAS ingredients
- Restricted and Prohibited Ingredients
Certified Colors

1. FD&C Blue #1 (Brilliant Blue FGF) (E 133)
2. FD&C Blue #2 (Indigotine) (E 132)
3. FD&C Green #3 (Fast Green FCF)
4. FD&C Red #40 (Allura Red AC) (E 129)
5. FD&C Red #3 (Erythosine) (E 127)
6. FD&C Yellow #5* (Tartrazine) (E 102)
7. FD&C Yellow #6 (Sunset Yellow FCF) (E 110)

* Requires specific declaration on labels for finished alcoholic beverages
Non-Certified Colors Include:

- Annatto Extract
- Astaxanthin
- Dehydrated beets (beet powder)
- Dried algae meal
- Canthaxanthin
- Caramel
- Carmine (Cochineal Extract)
- Carrot oil
- Corn endosperm oil
- β-Apo-8’-carotenal
- β-Carotene
- Elderberry Extract*
- Ferrous gluconate
- Ferrous lactate
- Fruit Juice
- Grape color extract
- Grapeskin Extract (Enocianina)
- Haematococcus algae meal
- Paprika

- Paprika oleoresin
- Phaffia yeast
- Riboflavin
- Saffron*
- Sodium copper chlorophyllin
- Synthetic iron oxide
- Tagetes (Aztec marigold) meal and extract
- Titanium Dioxide
- Toasted partially defatted cooked cottonseed flour
- Tomato lycopene extract; tomato lycopene concentrate
- Turmeric*
- Turmeric oleoresin
- Ultramarine blue
- Vegetable Juice
FLAVORS

Basics of TTB Formulation

• For labeling purposes TTB categorizes flavors as:
  – All Natural
  – Natural and Artificial Containing Not More Than 0.1% Artificial Topnote
  – Natural and Artificial Containing Greater Than 0.1% Artificial Topnote
  – All Artificial
  – Non-Flavor – The product is not a flavor (ex: Cloud Emulsion)

• Must be submitted to our lab for approval before use in a product
• Flavors may contain colors that are required on the label
FLAVORS

Basics of TTB Formulation
GRAS & RESTRICTED INGREDIENTS

- GRAS
  - Generally Recognized as Safe
- FDA
- How to get an ingredient on the GRAS list
- Restricted Ingredients
Basics of TTB Formulation

CHECKLIST

• Is the product on an approved formula submission document?
• Is the formula signed?
• Does the formula have a proper registry number?
• Does the formula have a sequential formula number?
• Does the formula contain coloring? If so, is it allowed?
• Does the formula contain flavoring material? If so is all the necessary information present (flavor name, TTB number, company name)? If so how is it classified?
• Does the formula contain any limited ingredients? If so are they within limitation?
• Does the formula contain any restricted or unknown ingredients? If so, are they GRAS?
• Does the formula have the alcohol content of the final product?
“The magic formula that successful businesses have discovered is to treat customers like guests and employees like people.”

~ Thomas J. Peters
Wine Formulation

“Wine improves with age – I like it the older I get.”
~ Unknown
Domestic Wine Production

Wine Form TTB F 5120.29
- Agricultural Wine
- Aperitif Wine
- Fruit Wine
- Retsina Wine
- Carbonated and Sparkling Wines
- Other than Standard Wine
TTB F 5120.29...and beyond!

- Domestic wines are currently submitted on TTB Form 5120.29
  - Item 1 – Name, address, winery no.
  - Item 2 – Class and type of product
  - Item 4 – Formula superseded
  - Item 5 – Formula
  - Item 6 – Process of Production
  - Item 9 – Formula and Label info
  - Item 12 – Formula Number
- Future – TTB F 5100.51
  - Uniform – Single form for all domestic and imported products
Agricultural Wine

- Approved subject to the provisions found under Title 27 CFR 24.200
- Grain, cereal, malt, or molasses are not suitable materials for the production of agricultural wine and may not be brought onto bonded wine premise
- May not be flavored or colored
- The class and type on the labels for these products will state the name of the wine
- If an agricultural wine is mixed or blended with fruit, the wine is Other Than Standard wine (OTS), and will require a statement of composition on the label
Agricultural Wine – Major Types

• Major Types
  – Honey Wine/Mead
  – Sake/Rice Wine
  – Rhubarb Wine
  – Flower Wine
  – Agave Wine
  – Raisin Wine
  – Other Agricultural Wine
Honey Wine / Mead

- Title 27 CFR 24.203
- Produced from fermented honey
- Honey cannot be reduced below 13 degrees brix
- Up to 1,000 pounds of hops may be added
- Final ABV not to exceed 14% and final brix content 35
- Sugar may be added to sweeten
- Seen more often than other agricultural wines
Sake/Rice Wine

- Title 27 CFR 4.21 (f)(5)
- Produced from rice
- Sake is not a spirit, it is not distilled nor is it a wine because it is not fermented but is brewed from a cereal base.
- Alcohol content varies between 14-17% by volume
Rhubarb Wine

- Title 27 CFR 4.21(f)
- Agricultural Wine
Flower Wine

- Title 27 CFR 4.21(f)
- Dandelion Wine
- Rose Hip Wine
- Elderflower Wine
Agave Wine

- Title 27 CFR 4.21(f)
- Produced from the agave plant or agave juice concentrate
- Different from Tequila or Mezcal because this product is not distilled
Raisin Wine

- Title 27 CFR 4.21 (f)(4)
- Raisin wine produced from dried grapes
- Raisin wine is sufficient as a class and type designation
Aperitif Wine

- Title 27 CFR 4.21 (g)
- Wine having an alcoholic content of not less than 15%
- Produced from grape wine, containing added brandy or alcohol
- Flavored with herbs and other natural aromatic flavor materials
- With or without caramel color
- Vermouth is a type of aperitif wine
- Aperitif Wine is sufficient as a class and type designation
Fruit Wine

• Title 27 CFR 4.21 (e)
• Wine produced by
  – the normal alcoholic fermentation of the juice of sound, ripe fruit
  – with or without added fruit brandy or alcohol
• Fruit wine from one fruit must be designated with the name of the fruit with the designation wine
  – Apple Wine, Strawberry Wine, Peach Wine
• Fruit wine not derived wholly from one kind of fruit or berry may be designated as fruit wine or berry wine qualified by a truthful and adequate statement of composition
Retsina Wine

- Title 27 CFR 4.21 (i)
  - Grape table wine flavored or fermented with resin
Sparkling and Carbonated Wine

- Title 27 CFR 4.21(b) and Title 27 CFR 4.21(c)
- Sparkling wine occurs from secondary fermentation in a closed container
- Carbonated wine is a result of other than secondary fermentation in a closed container
Other than Standard Wine (OTS)

- Wines that are not defined under any other class
- Approved subject to the provisions of Title 27 CFR 24.218
- Formula is required
- Made in various ways:
  - By blending different types of finished fruit wine, example Grape wine and Peach wine.
  - When flavors, fruits, extracts, juices, concentrates, spices, essences, or coloring materials are added to wine.
Other than Standard Wine (OTS)

- Percentages are required if blended wines are
  - 2 wines that do not each contribute 40% of the volume of the wine
  - 3 wines that do not each contribute 30% of the volume of the wine
  - 4 wines that do not each contribute 20% of the volume of the wine
  - Example: 60% Grape wine 40% Peach wine = no percentages
  - Example: 80% Grape wine 20% Peach wine = percentages required
- Generally these require a truthful and adequate statement of composition on the brand label as the class and type designation.
Additional OTS Information

- Mulled Wine is a wine containing spices and requires a Statement of Composition
- May Wine is flavored with woodruff and requires a Statement of Composition
- Sangria is grape wine, usually red wine, with citrus flavors or juices
- TTB approves formulas for OTS Wines that are under 7% alcohol but labeling falls under the FDA
Unusual OTS Wines

- Horseradish-mustard-lovage, lemon wine
- Other than standard onion wine
- ___% Peach, ___% Honey, ___% Spiced wine
- Chocolate Wine fermented with vanilla extract
- Alfalfa-Elderberry Wine
- Oak Leak Wine = ___% Oak Leaf, ___% Raisin, ___% Orange, ___% Lemon, and ___% Elderflower
- Honey-Lemon-Orange Wine fermented with spices
- Green Tea Wine
- Mint Wine
- Jalapeno Wine
Special Natural Wines

• Approved per Title 27 CFR 24.195
  – Flavors must be all natural: Herbs, Spices, Fruit Juices, Natural Aromatics, and Natural Essences may be added
  – May contain caramel color, but can not contain certified color
  – Requires a formula approval with a statement of composition
Fortification of Domestic Wine

- Domestic Wines may only be fortified with fruit spirits
  - Example: Grape brandy, citrus brandy, apple brandy
- If the wine and fruit spirit are not kind to kind, then the spirit is required in the statement of composition
  - Example: Peach wine with grape brandy added
Imported Wine

- Wine Specialty – Requires a Statement of Composition
- Agricultural Wines – Requires laboratory analysis or Pre-Import Approval
Pre-Import Approval Process

- Requires a step-by-step description of the process
- Requires a detailed and specific quantitative list of all ingredients in the product such as:
  - Flavor information, which must include flavor producers name and address and ATF/TTB drawback number
  - All ingredients must have GRAS (generally recognized as safe) status
  - Final alcohol by volume of wine is required
Questions?

“We could in the United States make as great a variety of wines as are made in Europe, not exactly of the same kinds, but doubtless as good.”

~ Thomas Jefferson
"Too much of anything is bad, but too much of good whiskey is barely enough."

~ Mark Twain
## Distilled Spirits Formulation

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TTB F 5110.38...and beyond!

- Domestic DS are currently submitted on TTB Form 5110.38
  - Item 1 – Class and Type of Product
  - Item 2 – Name and Address of Producer
  - Item 3 - Proof
  - Item 4 – Formula Superseded
  - Item 5 – Formula
  - Item 12 – Formula Number
- Future – TTB F 5100.51
  - Uniform – Single form for all domestic and imported products
Pre-Import Approval Process

• Requires a step by step description of the process
• Requires a detailed and specific quantitative list of all ingredients in the product such as:
  – Flavor information, which must include flavor producers name and address and ATF/TTB drawback number
  – All ingredients must have GRAS (generally recognized as safe) status
  – Final alcohol by volume of DS is required
Vodka

- Neutral Spirits distilled or treated after distillation with charcoal or other materials so as to be without distinctive character, aroma, taste, or color
- Must be distilled at or above 95% ABV or 190 proof and bottled at not less than 40% ABV or 80 proof
- Domestic
  - Formula required when citric acid or sugar is added
    - Citric Acid – Max 0.1% by volume
    - Sugar – Max 0.2% by volume
- Imported
  - Lab analysis is needed
Whiskey

- Spirits distilled from a fermented mash of grain
- Distilled at less than 95% ABV, or 190 proof and bottled at not less than 40% ABV, or 80 proof
- Many different varieties
- Storage in certain types of containers requires storage proof
  - Ex. Charred or uncharred oak
  - New or used containers
- Storage proof is required
Distilled Spirits

- **Distilled Gin**
  - Gin produced from original distillation from mash with or over juniper berries and other aromatics or their extracts, essences, or flavors
  - *Domestic*
    - No Formula
  - *Imported*
    - Pre Import

- **Redistilled Gin**
  - Gin produced by redistillation of distilled spirits with or over juniper berries and other aromatics or their extracts, essences, or flavors
  - *Domestic*
    - Formula
  - *Imported*
    - Pre Import

- **Compounded Gin**
  - Gin produced by mixing neutral spirits with juniper berries and other aromatics or their extracts, essences, or flavors
  - *Domestic*
    - Formula
  - *Imported*
    - Pre Import
**Brandy**

- Spirits distilled from the fermented juice, mash, or wine of fruit or from its residue
- Distilled at less than 95% ABV, or 190 proof, bottled at not less than 40% ABV, or 80 proof
- Having the general taste, aroma, and characteristics generally attributed to brandy
- Different Types
  - Immature Brandy
  - Grappa
  - Fruit Brandy
  - Pomace Brandy
  - Neutral Brandy
Applejack

- Mixture of at least 20% on a proof gallon basis of apple brandy that has been stored in oak containers for not less than 2 years, and not more than 80% on a proof gallon basis neutral spirits
- Bottle at not less than 40% ABV, or 80 proof
- Domestic – Formula required
- Imported – Lab Analysis required
Rum

- Spirits distilled from fermented juice of sugar cane, sugar cane syrup, sugar cane molasses, or other sugar can by-products.
- Distilled at less than 95% ABV, or 190 proof and bottled at not less than 40% ABV, or 80 proof
- Having the taste, aroma, and characteristics generally attributed to rum
- Domestic – Formula required only if harmless coloring, flavoring, or blending materials (HCFBM) are added
  - Can’t exceed 2.5% of the final product
  - Doesn’t need to be stated on the label
- Imported – No Pre Imported needed
Tequila

- Spirits distilled in Mexico in compliance with the laws and regulations of the Mexican Government
- From a fermented mash derived principally from the Agave Tequilana Weber (“blue” variety)
- With or without additional fermentable substances
- Having the general tastes, aroma, and characteristics generally attributed to Tequila
- No blending or coloring material allowed
- Bottled at not less than 40% ABV, or 80 proof
- Domestic – NOT A DOMESTIC PRODUCT
- Imported – No Pre-Import needed
Mescal/Mezcal

- Spirits distilled in Mexico in compliance with the laws and regulations of the Mexican Government
- From a fermented mash derived principally from the mescal plant
- With or without additional fermentable substances
- Having the general tastes, aroma, and characteristics generally attributed to mescal
- No blending or coloring material allowed
- Bottled at not less than 40% ABV, or 80 proof
- Domestic – NOT A DOMESTIC PRODUCT
- Imported – No Pre-Import needed
Liqueur/Cordial

- Flavored spirits product containing not less than 2½% by weight sugar, dextrose, levulose or a combination thereof
- Made by mixing or redistilling any class or type of spirits with or over fruits, flowers, plants or pure juices therefrom or other natural flavoring materials or with extracts derived from infusions, percolation or maceration of such materials
Liqueur/Cordial

- Domestic – Formula required
- Imported – Pre-Import Approval needed
- Types of Liqueurs
  - Sloe Gin
  - Triple Sec
  - Peppermint Schnapps
  - Sambuca
  - Amaretto
  - Rock and Rye
Flavored Brandy, Rum, Gin, Vodka, Whiskey

- Spirits flavored with natural flavoring materials, with or without the addition of sugar, bottled at not less than 30% alcohol by volume (60 proof)
- The name of the predominant flavor shall appear as part of the class and type designation, e.g., “Apricot Flavored Brandy”
Flavored Brandy, Rum, Gin, Vodka, Whiskey

- Wine may be added up to 15% by volume of the finished product provided at least 12½% of the wine is derived from the base commodity that corresponds to the labeled flavor of the product. If not, or if the wine addition exceeds 15% by volume of the finished product the classes and/or types and percentages (by volume) of the wine must be stated as part of the class and type designation.
- Domestic – Formula required
- Imported – Lab Analysis needed
Recognized Cocktails

- Mixed drinks that have gained “trade” and “consumer” recognition.
- Contain one or more classes and/or type of distilled spirits with flavoring and/or coloring materials.
- Domestic – Formula Required
- Imported – Pre Imported Approval needed
Recognized Cocktails

• Requires a SOC on the label
  – May only need to state spirit and any coloring materials

• Examples
  – Margarita
  – Bloody Mary
  – Egg Nog
Distilled Spirits

Advocaat

- Advocaat is sufficient as a class and type
- Egg Flavored distilled spirits product
- Domestic – Formula Required
- Imported – Pre Imported Approval needed
Aquavit

- Aquavit is sufficient as a class and type
- Caraway flavored distilled spirits product
- Domestic – Formula Required
- Imported – Pre Imported Approval needed
Bitters

• Bitters is sufficient as a class and type
• Distilled spirits product distinguished by its bitterness
• Produced by blending extracts of plants, seeds, herbs, barks and/or roots with any class and/or type of distilled spirit
• Domestic – Formula Required
• Imported – Pre Imported Approval needed
Distilled Spirits Specialty

- Distilled spirits not defined under any other class
- Generally, any class and/or type of distilled spirits that contains or are treated with flavoring and/or coloring materials and/or nonstandard blending or treating materials or processes
- Aquardiente – means spirit. Is not a defined class and type, and most are DSS requiring a SOC
Distilled Spirits Specialty

- Domestic – Formula Required
- Imported – Pre Import Approval Required
- Requires a truthful and adequate statement of composition, however a distinctive or fanciful product name with a statement reflecting the composition and character of the product is sufficient as a class and type, e.g., “Fanciful name SOC = Spiced Rum, Rum with Spice Flavor”
• Interesting DSS Products
  – Vodka or Gin with colors
  – DSS products that are infused
  – DS products containing caffeine
Questions?

"I pity them greatly, but I must be mum, for how could we do without sugar and rum"

~ William Cowper
Beer and Malt Beverages

“Not all chemicals are bad. Without chemicals such as hydrogen and oxygen, for example, there would be no way to make water, a vital ingredient in beer.”

~Dave Barry
Beer and Malt Beverage Formulation

- Formula Submission and TTB F 5100.51
- Flavored Malt Beverages
- Treasury Decision 21
- Other Products
Beer and Malt Beverage Formulation

- Domestic Malt Beverages are currently submitted on producer’s letterhead.
- Imported Malt Beverages are currently submitted by importers on producer’s letterhead.
- Future – TTB F 5100.51
  - “Uni-form” or single form for all domestic and imported products
• New requirement for beer and malt beverages.
• Brings malt beverages more in line with wine and distilled spirits requirements.
• Form requires:
  – Complete list of ingredients
  – Method of manufacture
  – Alcohol content of the flavors, the malt base, and the final total.
What Products Need to be Submitted for Formula Approval?

• In general, any product that has:
  – Flavors added
  – Colors added
  – Spices added
  – Fruit or honey added
  – Anything outside of the standard brewing ingredients of barley (or an adjunct such as rice, corn, or wheat), hops, water, and yeast.

• Any fermented product that will be treated by any processing, filtration, or other method not generally recognized as the traditional process.
Flavored Malt Beverages

- Any malt beverage product that has flavored added
- Flavors can be alcoholic or non-alcoholic
- Will require a statement of composition
  - Description of what is in the product.
  - Example – Malt beverage with natural flavors added
Treasury Decision 21

- Effective January, 2006
- If the final ABV is less than 6%, at least 51% of the alcohol in the final product must come from the malt base, up to 49% of the alcohol in the final product can come from the flavor.
- If the final ABV is greater than 6%, no more than 1.5% of the volume of the malt beverage can consist of alcohol from flavors.
- If there is ANY alcohol in the added flavors, a ABV must be listed on the label.
Other Products that Require Formula Submission

- Alcohol Free Malt Beverages
  - lab analysis needed
- Ice beer
  - formula only
- Malt beverages labeled all natural
  - formula only
- Non-alcoholic malt beverage
  - formula only
- Wit beers
  - formula only
Conclusion and Questions?

“He was a wise man who invented beer.”
~Plato
Resources

  - A list of all of TTB’s industry circulars, rulings, and the beverage alcohol manual.

- [http://www.ttb.gov/forms/index.htm](http://www.ttb.gov/forms/index.htm)
  - Access to all of TTB’s forms.

  - Access to the entire Code of Federal Regulations online.