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TTB's Laboratory Certification Program, and Wine Sampling and Testing Programs

Submitted by: United States



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TTB's Laboratory Certification Program, and Wine Sampling and Testing Programs

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TTB Mission

■ Collect Revenue

Collect all revenue that is rightfully due, eliminate or prevent tax evasion and other criminal conduct, and provide high quality service while imposing the least regulatory burden

■ Protect the Public

Prevent consumer deception, ensure that regulated alcohol and tobacco products comply with Federal commodity, safety and distribution requirements

TTB Laboratories

National Laboratory Center, Maryland

- Beverage Alcohol Laboratory
- Nonbeverage Products Laboratory
- Tobacco Laboratory

Walnut Creek, California

- Compliance Laboratory

Capabilities

- **ISO 17025 Accreditation**
 - Beverage Alcohol Laboratory
 - Compliance Laboratory, and
 - Tobacco Laboratory
- **Methods Used: Consensus Methods**
 - Use official methods of the Association of Official Analytical Chemists (AOAC)
 - Develop methods, and validate

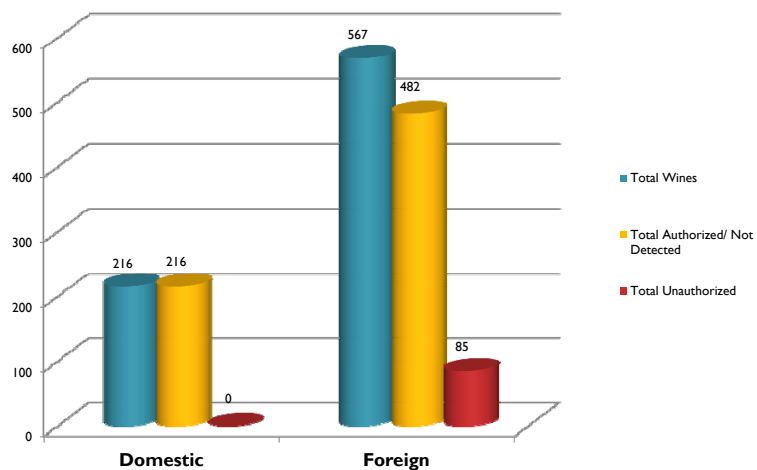
Alcohol Beverage Sampling Program

- **Marketed Products**
- **Statistically valid random sampling**
 - Collected from retail shops
 - Domestic and imported
- **Laboratory analyses to ensure**
 - Products conform to TTB regulations (class and type, label information accurately described)
 - Product safety
 - Limited / prohibited ingredients (TTB and FDA laws and regulations)
 - Sulfites, methanol, toxic metals, pesticides, mycotoxins, ingredients of herbs and botanicals, flavors, additives, etc.

Pesticide Monitoring Program

- **Yearly Program**
 - Currently about 100 wines per year analyzed
 - Sampling: subset of ABSP samples
 - Domestic and imported
- **Pesticides approved by EPA for application in grape vines have MRLs in grapes**
- **Analysis of wines**
 - Unauthorized pesticides
 - Authorized pesticides that exceed the MRL established for grapes

Wines Survey: Pesticide Monitoring (2003 to Present)



Ochratoxin-A (OTA)

- Ochratoxin A - a naturally occurring mycotoxin on grapes produced by mold
- International Agency for Research on Cancer (IARC) has classified OTA as a possible carcinogen to humans
- EU has established 2 ppb ochratoxin A maximum level in wine (from 2005 vintage)
- TTB monitors OTA levels in wines sold in US

Ochratoxin-A Monitoring in Wines Vintage (1999 – 2010)

Wine Type (No)	Range (ppb)
White (93)	0.01 – 0.08
Rosé (15)	ND – 0.05
Red (133)	0.01 – 0.81
Dessert (4)	0.01 – 0.04
Sparkling wine (8)	ND – 0.04
Fruit Wine (3)	ND
Total 256 wines	All OTA levels are below the 2 ppb EU regulatory limit

Product Integrity Investigation

- Mostly domestic products (wineries, breweries, distilleries)
 - Investigations and audits
- Imported Products (importers, distributors)
 - investigations
- Products are analyzed to ensure regulatory compliance

Chemist Certification Program

- Importing economies require analysis by a US certified laboratory
- TTB offers a program to certify chemists at qualified private laboratories
 - Wines, distilled spirits, and/or beers
 - Offered twice a year (Spring and Fall)
 - Applicants must meet TTB requirements
 - Educational
 - Have necessary equipment to perform the tests
 - Pass testing of TTB provided samples
 - ISO 17025 Labs

Test Samples



- All applicants analyze the same samples provided by TTB (from single lot/batch)
- TTB consensus values are determined
- All applicants need to meet the criteria

Wine Analytes

Analysis	Reported to the nearest:
Alcohol by Volume	0.1% by volume
Total Extract	0.01 g/100mL
Total Acidity as Tartaric Acid	0.01 g/100mL
Volatile Acidity	0.001 g/100mL
Citric Acid	0.1 g/L
Total Sulfur Dioxide	1 mg/L
Residual Sugars (expressed as glucose + fructose)	0.1 g/100mL
Sorbic Acid	1 mg/L
Methanol	0.01 % v/v (or mg/L)

Program Statistics (Wine , DS, and Beer)

	Total Applicants	New Applicants	Education Failures	Data Failures
2010	52	18	7	5
Spring 2011	41	8	0	2