

March 29, 2024
Regulations and Ruling Division
Alcohol and Tobacco Tax and Trade Bureau
1310 G Street NW, Box 12
Washington, DC 20005

Comment on Non-Rulemaking Docket re: Labeling and Advertising of Wine, Distilled Spirits, and Malt Beverages with Alcohol Content, Nutritional Information, Major Food Allergens, and Ingredients (Docket No. TTB-2024-0002)

I. Introduction

Improving alcohol labeling is essential for promoting transparency, health, and safety. Excess alcohol consumption is associated with various harms including injuries,¹ motor vehicle accidents, liver disease, cardiovascular disease, and certain cancers.² Alcohol content labeling increases consumer awareness of the contents of alcoholic beverages³ and could potentially impact drinking behavior.⁴ Alcohol is calorie-dense and contributes substantially to the average daily energy intake of those who drink.⁵ Many alcoholic beverages also contain carbohydrates, sugars, and other nutrients, and they can contain a wide range of ingredients and food additives. Additionally, alcoholic beverages can contain major food allergens like wheat, milk, egg, nuts, and shellfish, awareness of which can be a matter of life or death for people with food allergies.

Nearly all other products we consume (packaged foods, non-alcoholic beverages, dietary supplements, and over-the-counter drugs) are required to bear on-package serving facts and ingredients information. Even some alcoholic beverages, including wines and hard ciders with <7% alcohol by volume (%ABV)⁶ and beers made from malted barley substitutes, like fermented sugar, fall under the Food and Drug Administration (FDA)'s jurisdiction and are required to have calorie, nutrition, ingredients, and allergen information on their labels.⁷ There is no reason TTB-regulated alcoholic beverages should be an exception.

Currently, most TTB-regulated alcoholic beverages lack any voluntary Serving Facts or ingredient disclosures. A CSPI study of labels from top brands in 2021 found very low compliance with TTB's voluntary labeling guidelines.⁸ This underscores the need for mandatory alcohol labeling policies.

The World Health Organization’s Global Alcohol Action Plan,⁹ 2022-2030, calls on member states to:

Ensure appropriate consumer protection measures through the development and implementation of labelling requirements for alcoholic beverages that display essential information for health protection on alcohol content in a way that is understood by consumers and also provides information on other ingredients with potential impact on the health of consumers, caloric value and health warnings.

We agree with this recommendation. Labels on alcoholic beverages should be required to show serving size, servings per container, number of standard drinks per serving and per container, %ABV, a statement describing the Dietary Guidelines for Americans’ (DGA) advice on moderate drinking, calories, nutritional content, ingredients, and any major food allergens present in the product. All of this information should be required on each beverage container, not only through a QR code or website.

In this comment, we describe the legal background on improved alcohol labeling and provide input on the questions posed by TTB, with an emphasis on the importance of mandatory, comprehensive, on-package labeling.

II. Background

Center for Science in the Public Interest (CSPI) has a long history of engaging with TTB on this topic, starting in 1972 when CSPI first petitioned the Bureau of Alcohol, Tobacco, and Firearms (ATF, the predecessor to TTB) to require ingredient labeling.¹⁰

In 1993, the FDA¹¹ and the U.S. Department of Agriculture (USDA)¹² issued final regulations mandating Nutrition Facts labels on most foods and beverages, but ATF did not issue similar regulations for beer, wine, and distilled spirits. When Congress passed the Food Allergen Labeling and Consumer Protection Act of 2004, the House report documented the expectation that TTB would adopt regulations applying allergen labeling requirements to alcoholic beverages,¹³ but TTB never issued such final regulations.

In 2003, CSPI, the National Consumers League (NCL), and 67 other health and consumer organizations filed a citizen petition calling on TTB to require a standardized “alcohol facts” label (including %ABV, serving size, amount of alcohol per serving, servings per container, calories, ingredients, and DGA advice on moderate drinking) on all beer, wine, and distilled spirits.¹⁴

In 2005, TTB requested public comments on alcohol labeling,¹⁰ and in 2006-2007, TTB issued proposed rules for mandatory “Serving Facts”¹⁵ and allergen labeling,¹⁶ but these rules were never finalized. Instead, an interim rule from 2006 allows voluntary allergen labeling¹⁷ and in 2013 TTB published a ruling allowing voluntary nutrition and alcohol content labeling.¹⁸

In 2019, CSPI, NCL, and the Consumer Federation of America (CFA) wrote a letter urging then-Treasury Secretary Steven Mnuchin to support alcohol labeling reform.¹⁹ At the beginning of the present administration, CSPI, NCL, CFA, and three additional partners wrote a letter urging current Treasury Secretary Janet Yellen to prioritize this issue.²⁰ Our letters received no responses.

We were encouraged in February 2022 when the Treasury Department issued a report titled “Competition in the Markets for Beer, Wine, and Spirits” which included among its Conclusions and Recommendations:

*Public health and the social costs associated with alcohol consumption are fundamental concerns in both regulation and taxation of beverage alcohol. Regulation of labeling and advertising are the federal alcohol regulatory authorities that most directly affect public health. TTB should revive or initiate rulemaking proposing ingredient labeling and mandatory information on alcohol content, nutritional content, and appropriate serving sizes.*²¹

In October 2022, CSPI, NCL, and CFA filed a lawsuit demanding a long-overdue response to our 19-year-old citizen petition.²² We were further encouraged in November 2022 when, in a letter responding to our lawsuit, TTB stated that it expected to issue mandatory labeling rules “within the next year.”²³ But 16 months have passed with no rulemakings from TTB.

We are deeply disappointed at the delay in these rulemakings. TTB could have gathered public input in November 2022, when the agency first committed to initiating new rulemakings, or earlier. Instead, the listening sessions held in February 2024 and the present request for comments are serving to further delay the promised rulemakings. The cumulative result of the delays is that a total of 21 years have now passed since we filed our initial petition and still most TTB-regulated alcoholic beverages lack adequate labeling. We hope that TTB will move swiftly to issue the regulations it committed to long ago.

III. Responses to Questions from TTB

- a. *“Do consumers believe that they are adequately informed by the information currently provided on alcohol beverage labels?”*

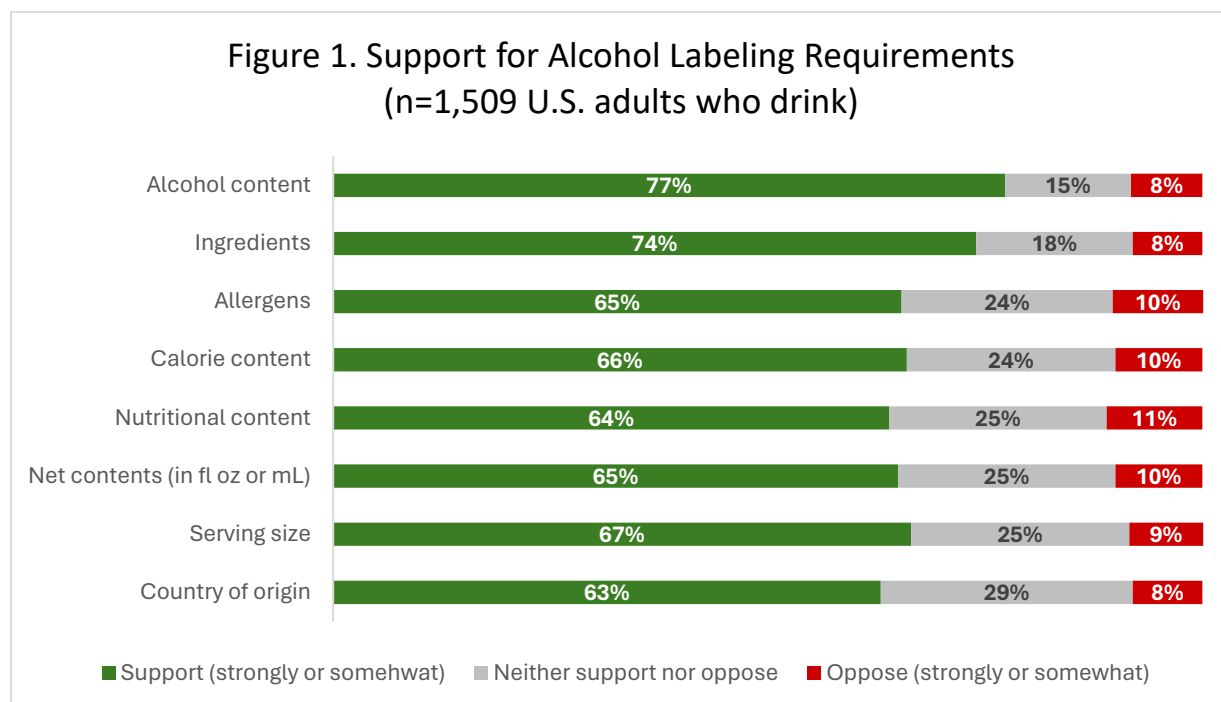
A March 2024 poll commissioned by CSPI found that consumers do not have all the information they desire from alcohol labels.²⁴ Big Village’s CARAVAN U.S. Online Omnibus Survey was administered from March 15-20 to a nationally representative sample of U.S. adults, demographically balanced to represent the U.S. Census on age, sex, region, race, and ethnicity. Of the 1,924 respondents, 1,509 (78%) reported consuming a drink containing alcohol in the past year. Respondents answered questions about their level of support and perceived importance of alcohol labeling. They first read the following background information:

Alcoholic beverages can contain significant amounts of calories, carbohydrates, fat, and protein. They also can contain a wide range of ingredients and food additives. Currently, labels on most alcoholic beverages are not required to provide product information, such as alcohol content, serving size, ingredients, allergens, calorie content, and nutritional content.

Then they responded to the following questions:

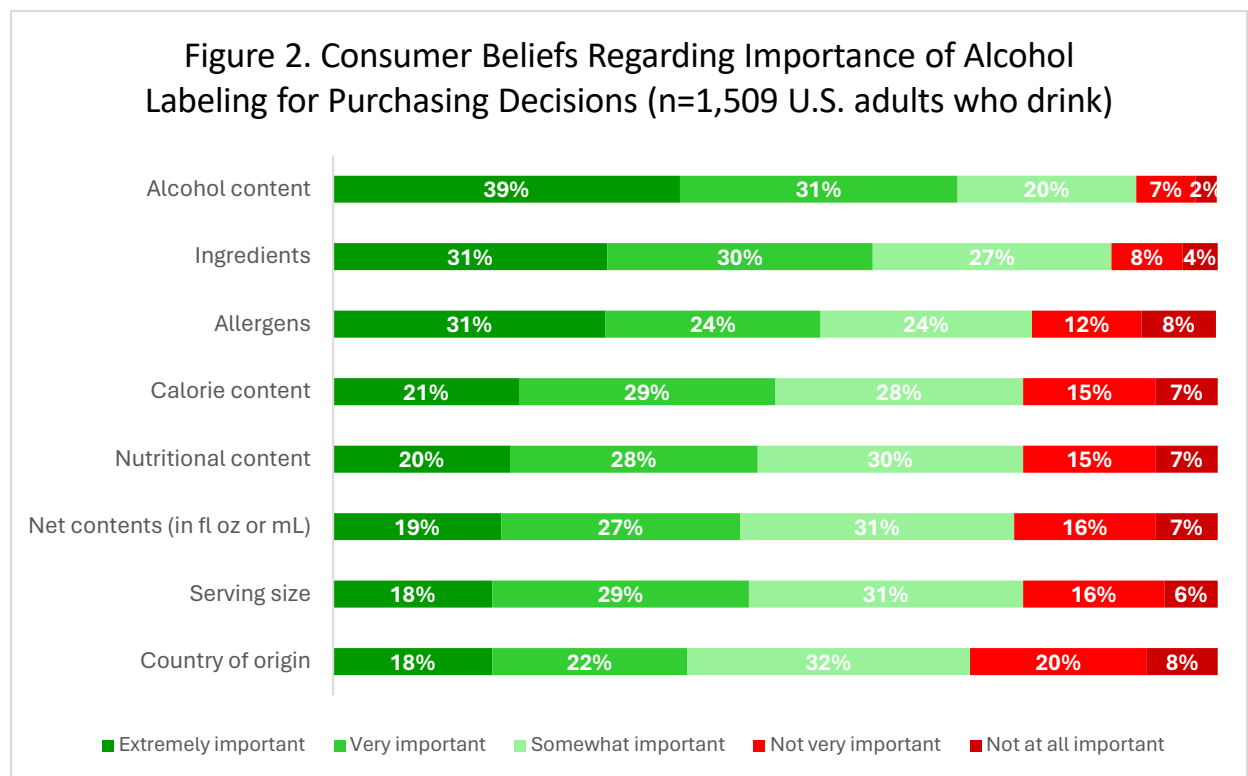
1. Please indicate the extent of your support for a policy requiring producers to include the information below on the labels of alcoholic beverages. (see Figure 1 for response options)
2. Please indicate how important each of the pieces of information below would be in helping you decide whether to purchase a particular alcoholic beverage. (see Figure 2 for response options)

A majority of respondents said they either strongly support or somewhat support policies to require each piece of information on alcohol labels. Alcohol content and ingredient labeling had the highest support (77% and 74%, respectively), and allergen, calorie content, nutritional content, and serving size labeling were close behind (64-67% each). Support for requiring new information on alcohol labels was about as high or higher than support for requiring information that is already required on alcohol labels (*i.e.*, net contents and country of origin). Opposition to new labeling policies was very low (8-10%), while 15-25% of respondents neither supported nor opposed policies that would require new label information.



Source: Big Village’s CARAVAN U.S. Online Omnibus Survey, administered March 15-20, 2024. Survey question asked: “Please indicate the extent of your support for a policy requiring producers to include the information below on the labels of alcoholic beverages.”

In addition to expressing support for new labeling policies, respondents conveyed their beliefs that additional label information is important for purchasing decisions. Overwhelming majorities of consumers believe alcohol content and ingredients labels would be at least somewhat important for helping them decide whether to purchase a particular alcoholic beverage (91% and 88%, respectively). Strong majorities also perceive allergen labeling (79%), calorie labeling (78%), nutritional content (78%), and serving size (78%) as important for deciding what to purchase. Again, consumers were more likely to perceive the information not yet required on labels as important for making purchasing decisions compared to country-of-origin labeling, which is already required on alcohol labels.



Source: Big Village’s CARAVAN U.S. Online Omnibus Survey, administered March 15-20, 2024. Survey question asked: “Please indicate how important each of the pieces of information below would be in helping you decide whether to purchase a particular alcoholic beverage.”

A limitation of polling data for assessing whether consumers believe they are adequately informed is that many consumers may not even be aware of what information they are lacking. For example, only a small number of ingredients (sulfites, FD&C Yellow No. 5, and carmine or cochineal extract) are required to be labeled on wines,²⁵ malt beverages,²⁶ and distilled spirits.²⁷ But many more ingredients are used in the production of these beverages.

Federal regulations specify more than 70 ingredients and additives that may be added to wine without being labeled (Appendix A).^{25,28} According to the president of the Wine Market Council, “It could be distressing to some consumers to see a longer list of additives than they expected.”²⁹ The possibility that there might be more additives than consumers expect is the very reason

ingredient labeling should be required. Some of these ingredients, such as albumen (egg white), isinglass (a gelatin from fish), and casein (a milk protein), are derived from major food allergens³⁰ and could cause life-threatening reactions if present in sufficient amounts. Others are ingredients that some people avoid, such as gelatin, which is an animal product, and maltitol, which can cause digestive issues.³¹ Additional ingredients like sugars, concentrated juices, and syrups can be added for sweetening without disclosure.³² Consumers may be surprised to learn that sugar added after fermentation is allowed to account for up to 21% of a wine's total weight.³²

For other alcoholic beverages, the range of possible ingredients is even wider. Any food material can be added as an adjunct to beer.³³ TTB lists on its website 30 color additives allowed in limited amounts to non-wine alcoholic beverages and notes that this is not an exhaustive list.³⁴ Without nutrition and ingredients and labeling, people are left in the dark about what ingredients alcoholic beverages could contain.

b. *“Is alcohol content per serving, and nutritional information (such as calories, carbohydrates, protein, and fat) per serving important for consumers in deciding whether to purchase or consume a particular alcohol beverage?”*

As portrayed in Figure 2, the majority of consumers believe alcohol content, calories, and nutritional information are important for deciding whether to purchase a particular alcoholic beverage. Consumers rely on the iconic Nutrition Facts label to make personalized decisions about their purchasing and consumption of FDA- and USDA-regulated food and beverages based on nutritional content. For example, a consumer following a heart-healthy diet might choose to avoid products high in saturated fat, and a consumer watching their weight might compare two products and purchase the one with fewer calories. It is important for consumers to have this same level of information for making decisions about the purchase and consumption of alcoholic beverages.

One factor that promotes the use and understanding of the Nutrition Facts label is that it is required on nearly all regulated food and beverage products, regardless of their nutritional content. FDA regulations exempt foods that “contain insignificant amounts of all of the nutrients and food components required to be included in the declaration of nutrition information.”³⁵ However, since alcohol inherently contains calories, no alcoholic beverage would meet this requirement. TTB should adopt a policy aligned with FDA's and require comprehensive Serving Facts labels with alcohol content, calories, and nutritional content on all alcoholic beverages. Below we share additional information on the importance of alcohol content, calories, and nutritional information on labels for informing consumers' choices.^a

^a Note that the information CSPI advocates for including on alcoholic beverage labels has changed in some ways since we first called for Serving Facts labels in 2003. We are no longer calling for the pure alcohol content in fluid ounces per serving because this would serve the same purpose as standard drink labeling and thus would be duplicative. We are now calling for complete nutrition information, instead of only calories, in light of strong consumer interest in this information.

i. Alcohol content labeling

Consumers currently have no straightforward way of knowing how much alcohol they are consuming, which may increase the risk of impaired-driving and other alcohol-related accidents. TTB should require alcohol content information on all alcoholic beverage labels, including the percent alcohol by volume (%ABV), serving size, number of servings per container, and number of standard drinks per serving and per container.

Alcohol content (%ABV) labeling is currently required for all distilled spirits products,²⁷ wines with >14% ABV,³⁶ and malt beverages (including beers) that contain alcohol from added flavors or other added non-beverage ingredients other than hops extract.^{26,37} For other TTB-regulated alcoholic beverages (*i.e.*, many wines and beers), %ABV labeling is voluntary. The average consumer cannot be expected to know that the absence of a %ABV label means a product has under a certain level of alcohol content or only contains alcohol from specific types of ingredients. As previously described, the majority of adults who drink support mandatory alcohol content labeling and believe this information is important for making purchasing decisions. TTB should update its policies to require %ABV on all alcoholic beverages.

The DGA recommend that adults who choose to drink alcoholic beverages should limit intake to two drinks or less in a day for men and one drink or less in a day for women (on the days in which alcohol is consumed).³⁸ Other health authorities have adopted stricter recommendations (e.g., Canada's Guidance on Alcohol and Health recommends 2 standard drinks or less per week).³⁹ Unfortunately, many Americans drink in excess of recommended guidelines. Data from the 2017-2018 National Health and Nutrition Examination Survey (NHANES) show that 9% of adults drank in excess of DGA recommendations.⁴⁰

Americans are only able to follow guidelines on drinking to the extent that they are aware of how many drinks they are consuming. The DGA define an alcoholic drink equivalent (or "standard drink") as containing 14 grams (0.6 fluid ounces) of pure alcohol. Examples of a standard drink include 12 fluid ounces of regular beer (5% alcohol), 5 fluid ounces of wine (12% alcohol), and 1.5 fluid ounces of 80 proof distilled spirits (40% alcohol).³⁸

However, for labeling purposes, a standard drink may not be the same as a "serving." TTB currently defines serving sizes for use on the voluntary Serving Facts label based on various ranges of %ABV¹⁸ (*Table 1*). TTB provides four serving sizes and ranges of acceptable %ABVs for each type of beverage. Based on these serving sizes, a 7% ABV malt beverage would contain 1.4 standard drinks per serving; a 16% ABV wine would contain 1.3 standard drinks per serving, and a high %ABV liquor could contain more than 2 standard drinks per serving.

Table 1. TTB serving sizes for use on Serving Facts labels, and ranges of possible fluid ounces of pure alcohol and standard drinks per serving

%ABV	TTB Serving Size	Minimum fl oz pure alcohol per serving	Maximum fl oz pure alcohol per serving	Minimum number of standard drinks per serving	Maximum number of standard drinks per serving
Above 24%	1.5 fl oz (44 ml)	0.36	1.5	0.6	2.5
Above 16% to 24%	2.5 fl oz (74 ml)	0.4	0.6	0.7	1
Above 7% to 16%	5 fl oz (148 ml)	0.35	0.8	0.6	1.3
Up to 7%	12 fl oz (355 ml)	0	0.84	0	1.4

Source: Adapted from: TTB Ruling 2013-2: Voluntary Nutrient Content Statements in the Labeling and Advertising of Wines, Distilled Spirits, and Malt Beverages. U.S. Department of the Treasury: Alcohol and Tobacco Tax and Trade Bureau. <https://www.ttb.gov/images/pdfs/rulings/2013-2.pdf>

Adding to the confusion, single-serving containers (*i.e.*, containers that are not resealable or could reasonably be consumed on a single occasion) can be labeled as containing multiple servings. For example, Keystone Light is sold in 24-ounce cans with Serving Facts labels based on 12-ounce servings (*Figure 3*). And serving sizes presently used on alcohol labels do not always align with serving sizes as defined by the TTB. For example, across three brands of wine—Bartenura, Cupcake, and 14 Hands—one serving of wine according to the label is variably described as 5 oz of 7% ABV wine (0.6 standard drinks), 5.6 oz of 12.5% ABV wine (1.2 standard drinks), and 6 oz of 13% ABV wine (1.3 standard drinks), respectively (*Table 2*).^{41,42}

Figure 3: Serving Facts label from a 24-ounce can of Keystone Light containing two 12-ounce servings



**Serving Facts: Serving size: 12 fl oz (355mL);
2 servings/container. Per Serving: 4.1% ALC./VOL.;
Cal: 101; Carbs: 4.7g; Fat: 0g; Protein: <1g**

Photo: Walmart.com [<https://www.walmart.com/ip/Keystone-Light-Lager-Beer-24-fl-oz-Can-4-1-ABV/15681015>], adapted by CSPI

Table 2: Serving size, percent alcohol by volume (%ABV), pure alcohol content, and standard drink equivalents of 3 wines based on labeled serving information

	Serving Size (fl oz)	ABV	Alcohol Content* (fl oz)	Number of Standard Drinks
Bartenura	5	7%	0.35	0.6
Cupcake	5.6	12.50%	0.7	1.2
14 Hands	6	13%	0.78	1.3
*one standard drink is equivalent to 0.6 fluid ounces of pure alcohol				

Source: Labels from Bartenura 250-mL Rosato, Cupcake Vineyards 8.4-oz Sauvignon Blanc, and 14 Hands 250-mL Pinot Grigio wines approved by TTB in 2021, accessed via the TTB’s COLA database, March 18, 2024.

To assist consumers with monitoring their alcohol intake and adhering to the DGA, all alcoholic beverage labels should list serving size, %ABV, and standard drinks per serving. Containers with more than one serving that could reasonably be consumed on a single occasion should be labeled as a single serving and list the number of standard drinks per serving. If the product contains multiple servings, the label should also state the number of servings per container and standard drinks per serving and per container. TTB could model its regulations for such containers after FDA’s policy of requiring larger serving sizes for products with up to 2 times the standard serving size per container and dual column nutrition labeling for products containing more than 2 and up to 3 servings per container⁴³ (*Figure 4*).

To further improve consumer comprehension of the label, a footnote should be included stating “A standard drink contains 0.6 fl oz of pure alcohol” and “The Dietary Guidelines for Americans recommend that adults who choose to drink should limit intake to two standard drinks or less in a day for men and one standard drink or less in a day for women (on days when alcohol is consumed).” This would provide a frame of reference for the standard drink information and has the potential to decrease the risk of overconsumption leading to alcohol-related injury and death.

Figure 4. Example of a dual column Serving Facts label (left) modeled after FDA’s dual column Nutrition Facts label for a 24-ounce hard cider (right)

Serving Facts		
2 servings per container		
Serving size	12 fl oz (360 mL)	
	5% alc/vol	
	Per serving (1.0 standard drink)	Per container (2.0 standard drinks)
Calories	190	380
Total Fat	0g	0g
Saturated Fat	0g	0g
Sodium	20g	35g
Total Carb.	22g	44g
Total Sugars	18g	36g
Incl. Added Sugars	16g	32g
Protein	0g	0g

*A standard drink contains 0.6 fl oz of pure alcohol
 **The Dietary Guidelines for Americans recommend that adults who choose to drink should limit intake to ≤ 2 standard drinks/day for men and ≤ 1 standard drink/day for women (on days when alcohol is consumed).



Table (on left): generated by CSPI based on nutrition contents of a 24-ounce Angry Orchard Crisp Apple hard cider;

Photo (on right): HEB.com [<https://www.heb.com/product-detail/angry-orchard-crisp-apple-hard-cider-can/2161315>], adapted by CSPI

TTB could also look to Australia, where the number of standard drinks per container is already required on alcohol labels in an easy-to-understand manner⁴⁴ (Figure 5).

Figure 5. Standard drink labeling on a wine label from Australia



Source: Drinkstrade.com [<https://www.drinkstrade.com.au/alcohol-to-have-mandatory-health-warnings-in-australia>], adapted by CSPI.

ii. Calorie Labeling

The DGA note that alcoholic beverages supply calories but few nutrients (*i.e.*, empty calories) and recommend that Americans stay within recommended daily calorie limits, noting that the number of calories in alcoholic beverages varies and should be accounted for so that calorie limits are not exceeded.³⁸ However, since calorie content is currently not required on the labels of alcoholic beverages regulated by TTB, Americans have no way of adhering to these recommendations.

A key pillar of the Biden-Harris Administration’s National Strategy on Hunger, Nutrition, and Health is enabling people to easily make informed, healthy choices by empowering consumers with updated and more accessible labels.⁴⁵ Government public health efforts are trending toward emphasis on calories in labeling. This includes updating the Nutrition Facts Panel to make calorie information larger⁴⁶ and menu labeling requirements which require on-menu calorie labeling (including for alcoholic beverages) at chain restaurants.⁴⁷ Moreover, many stakeholders are urging FDA to include calorie information as part of a new front of package labeling system.⁴⁸

TTB should mirror these efforts and ensure calorie labeling is present and prominent on alcoholic beverages because alcoholic beverages can contain substantial amounts of calories.⁴⁹ For example, a 12-ounce beer may contain anywhere from 55 calories (Budweiser Select 55, a light beer) to 300 calories (*e.g.*, Bell’s Double Two Hearted Ale) (*see Table 3*). Anheuser Busch’s specialty malt beverage “Lime-a-Rita” has 330 calories per 12-ounce can and The Wine Group’s MD 20/20 Spiked Punch (Tangy Orange flavor) has 517 calories per 16-ounce can. A 5-ounce glass of wine is about 120 calories, but certain wines have more calories. A 1.5-ounce shot of liquor typically has 100-150 calories, and canned cocktails (which are increasingly popular, with revenue for these products increasing by 36% in 2022)⁵⁰ have anywhere from 80 calories (*e.g.*, Lone River Ranch Water) to 545 calories (Cutwater Piña Colada) per 12-ounce can.

Table 3. Examples of Calorie, Carbohydrate, and Sugar Content in Select Alcoholic Beverage Products

	ABV (%)	Serving (fl. oz.)	Calories	Total Carb (g)*	Total Sugars (g)
Light Beer					
Budweiser Select 55	2.4	12	55	2	
Bud Light Next	4.0	12	80	0	0
Blue Moon Light Citrus Wheat	4.0	12	95	4	0
Miller Lite	4.2	12	96	3	0
Coors Light	4.2	12	102	5	1
Bud Light	4.2	12	110	7	

Bud Light Platinum	6	12	139	5	
Beer					
Guinness	4.2	12	125	9	
Yuengling Traditional Lager	4.5	12	141	12	
Budweiser	5	12	145	11	
Bell's Two Hearted IPA	7	12	212	17	
Sierra Nevada Torpedo Extra IPA	7.2	12	237	19	
Bell's Double Two Hearted Ale	11	12	304	21	
Malt Beverages					
White Claw Hard Seltzer Black Cherry	5	12	100	2	2
Ritas Mang-O-Rita	8	12	292	34	
Ritas Lime-A-Rita	8	12	330	44	
MD 20/20 Spiked Punch Tangy Orange	12	16	517	52	
Canned Cocktails					
Lone River Ranch Water Original	4	12	80	2	
Tip Top Bee's Knees	26	3.4	195		13
Tip Top Negroni	28	3.4	208		16
June Shine Rum Mai Tai	10	12	231	8	8
June Shine Vodka Mule	10	12	239	10	10
Cutwater Spicy Bloody Mary	10	12	255	14	9
Cutwater Lime Margarita	12.5	12	360	27	27
Cutwater Espresso Martini	13	12	540	38	32
Cutwater Piña Colada	13	12	545	70	32
Wine					
Red or white wine, most varietals	Varies	5	120	4	1
Late harvest (dessert) wine	Varies	5	172	21	
Liquor					
Gin, rum, vodka, or whiskey, 80 proof	40	1.5	97	0	0
Maker's Mark Whisky	45	1.5	109	0	
Booker's Bourbon	60.5	1.5	147	0	
Liqueur					
Kahlúa Original	20	2.5	200	30	30
Baileys Irish Cream Original	17	2.5	233	16	13
*Total carb rounded to the nearest gram. Cells are blank when information was not disclosed by the company. Source: Company websites or labels (branded products), USDA Food Data Central database (non-branded products). These are examples selected to represent what CSPI has observed as typical for the marketplace and each drink type, based on informal marketplace scans of brands disclosing nutrition information over several years, with a particular focus on products from major/leading brands.					

Among those who do drink, the 2020 DGA advisory report found that alcohol accounted for approximately 9% of energy intake (180 calories based on the 2000-calorie reference diet).⁵ This is unsurprising given that, as mentioned above, a single alcoholic beverage can top 25% of the calorie needs for an average person. Calorie labeling on alcoholic beverages could potentially result in reduced calorie intake, thus representing an opportunity for improved weight management among adults who consume alcohol. Consumers may also decide to swap out empty calories from alcohol for more nutrient-dense sources of calories, thus improving their overall diet quality.

Data from the 2019 FDA Food Safety and Nutrition Survey show that consumers are interested in calorie information. When asked what information they look for when looking at the Nutrition Facts label, about 60% of respondents said they look at the calorie information.⁵¹ And, as previously described, in a March 2024 survey of 1,509 U.S. adults who drink, 78% said calorie labeling would be important for helping them decide whether to purchase a particular alcoholic beverage.²⁴

The lack of calorie labeling on alcoholic beverages leads to confusion about their calorie content. In one study of 306 U.S. adults who reported drinking wine at least once a month, only 34% correctly identified which beverage (glass of red wine, mug of beer, shot of grappa, or alcopop- a mixed alcoholic beverage) had the highest calorie content (the correct answer was the alcopop).⁵² Another study commissioned by CSPI in 2003 asked 600 U.S. adults how many calories were in an average alcopop; 47% said they did not know and another 32% underestimated the calorie content.⁵³ A 2022 systematic review with a meta-analysis of 6 studies in varying countries (including the study by Annunziata et al. described above) found that the pooled proportion of participants who could accurately estimate calorie content of alcoholic beverages (within a pre-determined acceptable range) was only 26%.⁵⁴

TTB's effort to reconsider calorie and nutrition labeling requirements aligns with recent efforts to improve alcohol labeling around the world. For example, in December 2023, new European Union labeling regulations for wine took effect, requiring calories and additional nutritional information on wine labels.⁵⁵ And in 2018, Ireland passed the Public Health (Alcohol) Act requiring mandatory calorie labeling for all alcoholic beverages.⁵⁶

In addition to calories, consumers need nutritional information including total carbohydrates, total sugars, added sugars, total fat, saturated fat, protein, and sodium content per serving to inform decisions about purchasing and consumption of alcoholic beverages. We describe the need for labeling of these nutrients in more detail below.

- iii. Total carbohydrate, total sugar, and added sugars.

Many consumers pay attention to carbohydrate content when deciding whether to purchase or consume foods and beverages. According to the 2019 FDA Food Safety and Nutrition Survey (FSANS), a third of consumers look for information about total carbohydrates on nutrition

labels.⁵¹ This information is especially important for those with diabetes (13% of U.S. adults),⁵⁷ who are often instructed to count or restrict their carb intake.

Alcohol intake complicates diabetes management. According to 2023 guidelines from the American Diabetes Association, people with diabetes are at increased risk of hypoglycemia during and after consumption of alcohol.⁵⁸ This is in part due to alcohol inhibiting normal glucose metabolism⁵⁹ and in part due to people overestimating the amount of carbs in their alcohol.⁶⁰ Carb labeling on alcoholic beverages would likely help with the latter and prevent cases of hypoglycemia, which can be dangerous if untreated.

Labeling total and added sugars is just as important. The DGA recommend limiting added sugars to less than 10% of calories (about 50 grams for the 2000-calorie reference diet).³⁸ In order to do so, people need to know how much they're consuming. The average American adult consumes about 72 grams of added sugar, about 40% more than the recommendation.⁶¹ Overconsumption of foods and beverages high in added sugars is linked to increased risk of type 2 diabetes⁶²⁻⁶⁴ and cardiovascular disease⁶⁵⁻⁶⁷ in part by increasing the risk of weight gain,⁶⁸ and can contribute to dental decay.⁶⁹ The White House National Strategy on Hunger, Nutrition, and Health calls on government agencies to explore policies that will "Facilitate lowering added sugar consumption."⁴⁵ TTB should heed this call.

Consumers are looking for sugar information on Nutrition Facts labels. In the 2019 FSANS survey, 52% of consumers said they look for total sugars on nutrition labels, 34% look for added sugars, and 71% said they are trying to reduce their sugar intake.⁵¹ A 2023 survey conducted by the International Food Information Council similarly found that 72% of consumers surveyed are trying to limit or avoid sugars.⁷⁰ As previously discussed, TTB currently allows producers to add large amounts of sugars to alcoholic beverages after fermentation. Without better labeling, consumers are not equipped with the information they need to select products that fit with their dietary and health goals.

Beers have a broad range of carbs per serving). While light beers are lower in carbs, containing about 0 to 7 grams per 12-ounce serving, other beers commonly have 10-20 grams, and specialty malt beverages can have over 40 grams of carbs per 12-ounces (*Table 3*). Carb content of wines varies, but certain wines can contain as many as 21 grams of carbs per 5-ounce serving. Plain distilled spirits have no carbs, but canned cocktails and liqueurs vary widely based on ingredients and can have a substantial amounts of carbs. For example, a 12-ounce Cutwater Piña Colada has 70 grams of carbs and the popular coffee liqueur Kahlua has approximately 30 grams of carbs per 2.5 ounces, all of which are sugars (*Table 3*).

It can be even harder to find information about sugar content of alcoholic beverages compared to other nutrition information. Few beers or other malt beverages disclose their total or added sugar content. While some wines contain only about 1 gram of sugar per 5 ounces (*Table 3*), winemakers are allowed to add substantial amounts of sugar after fermentation (as noted above, added sugar can account for up to 21% of a wine's total weight). Canned cocktails are

particularly loaded with sugar, with a 12-ounce can of Cutwater Lime Margarita containing 27 grams of sugar (*Table 3*). If these are all added sugars, that is more than 50% of the recommended daily limit in a single can.

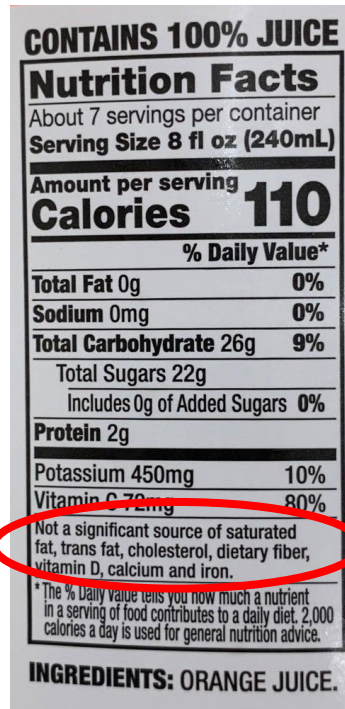
iv. Total fat and saturated fat

Fat content labeling, including saturated fats, is important for consumers who are trying to follow a heart healthy diet which requires limiting saturated fat intake. In the 2019 FDA FSANS, 43% of respondents reported that they look at total fat on the Nutrition Facts label, and 30% look at saturated fat.⁵¹

While many alcoholic beverages contain no fat, consumers might be unaware that some contain high amounts. For example, Baileys Irish Cream has 7 grams of total fat per 1.7 ounces of which 4 grams are saturated fat (20% of the recommended daily value),⁷¹ making this product “high” in saturated fat by FDA standards.⁷² Cutwater Espresso Martini, a canned cocktail, contains 14 grams of total fat per 12-ounce can but does not disclose how much of that is saturated fat.⁷³

Some producers might argue that since products in their beverage category rarely or never contain fat, they should not have to label fat content. But informing consumers when a product contains 0 grams of fat can be just as informative as telling them a product contains 7 grams of fat, and labels need to be consistently formatted to promote use and comprehension. In the case of FDA-regulated products, all products must list calories, total fat, sodium, total carbohydrate, and protein—even categories like 100% juice that rarely or never contain any fat. That said, rather than bearing large labels with many zeroes, FDA allows certain products to bear a footnote stating: “Not a significant source of saturated fat, trans fat, cholesterol, dietary fiber, total sugars, added sugars, vitamin D, calcium, iron, and potassium” (*Figure 6*).⁷⁴ TTB could adopt a similar policy for particular products but should not entirely exempt any product or category from nutrition labeling.

Figure 6: Orange juice label containing abbreviated Nutrition Facts panel and “Not a significant source of” label



Source: Fareway 100% Orange Juice label via NIQ Product Explorer.

v. Sodium

The DGA recommend that adults adhere to a 2,300-milligram daily sodium limit and note that Americans consume an average of 3,393 milligrams per day—far above the recommended limit.³⁸ Data from the 2019 FDA FSANS show that 46% of consumers are watching their sodium intake and 49% look at sodium on the Nutrition Facts label.⁵¹ Sodium is a common micronutrient to monitor because it is tied to various health conditions. Excess sodium intake raises blood pressure and is linked to the development of cardiovascular disease.⁷⁵

Adding sodium to TTB-regulated alcohol labels would align with overall government sodium reduction efforts. The White House National Strategy on Hunger, Nutrition, and Health calls on various government agencies to work towards “lowering the sodium content of food.”⁴⁵

While many alcoholic beverages have little to no sodium, some canned cocktails contain considerable amounts, such as Cutwater Spicy Bloody Mary which has 390 milligrams of sodium per 12-ounce can.⁷⁶ Also, the Gose style of beer is traditionally salted. SeaQuench, a popular Gose beer by Dogfish Head Craft Brewery, contains 105 milligrams of sodium in a 12-ounce serving.⁷⁷ ⁷⁸ Most consumers who seek to limit their sodium intake rely on labels to monitor the sodium content of products and would benefit from sodium labeling on alcoholic beverages.

In summary, TTB should require that all alcoholic beverage products have basic nutrition labeling. Consumers are looking for this information and it is essential for enabling informed purchasing and consumption.

- c. *“Would a full list of ingredients, and/or major food allergens, be important information for consumers in making their purchasing or consumption decisions?”*

Many people avoid specific ingredients for reasons including food allergies and sensitivities, health conditions, religion, personal preference, and commitment to various dietary patterns such as vegan and vegetarian diets. In order to follow a specific diet, consumers must read labels and purchase foods that fit within the diet’s parameters. For alcoholic beverages, consumers have no straightforward way of knowing if the product they are purchasing aligns with their diet. Product labels sometimes have marketing claims like “vegan” or “gluten-free”, but consumers need labels that tell them what *is* in products, not just what a company implies is *not* in them. It is no surprise that, in our March 2024 survey of 1,509 U.S. adults who drink, 88% said ingredients labeling would be important for helping them decide whether to purchase a particular alcoholic beverage.²⁴

Ingredient labeling is particularly important for people with food allergies, who rely on ingredient lists and allergen statements to prevent reactions that are sometimes life-threatening. Roughly 11% of U.S. adults have food allergies⁷⁹ and over 170 foods have reportedly caused allergic reactions.⁸⁰ For millions of Americans, insufficient allergen and ingredient labeling on alcohol could cause reactions ranging from mild to deadly. A recent study found that 71% of those with allergies check labels for allergens every time they purchase a product.⁸¹ These consumers would regularly utilize ingredients and allergens if provided on alcohol labels.

FDA-regulated products are required to clearly disclose the nine most common food allergens using their common name either in the text of the ingredient list (in parentheses if not already listed by the common name) or after using a “contains” statement.⁸² Because TTB-regulated products are not subject to this requirement, consumers may be unaware that many alcoholic beverages contain major allergens. This includes wheat in most beers, shellfish in some micheladas (Mexican beverages with beer, lime juice, and sometimes clam juice),^{83,84} milk in liqueurs such as Baileys Irish Cream, and tree nuts in liqueurs such as Amaretto, Frangelico, and Nocello.⁸⁵ And as previously discussed, wines can also contain ingredients derived from fish, milk, or eggs.

Other countries already require ingredient and allergen labeling for alcoholic beverages. For example, in Canada, “Added allergens, gluten sources and sulphites at a level of 10 ppm or more must be declared when present in alcoholic beverages” and “Unstandardized alcoholic beverages ... require a complete list of ingredients and their components.”⁸⁶ Australia, New Zealand,^{87,88} and the European Union⁸⁹ also require allergen disclosures for alcoholic beverages and

ingredient lists for at least some alcohol products. TTB should follow the lead of FDA and other countries and require ingredient and allergen labeling.

- d. *“In what ways would this information [alcohol content, nutrition, ingredients, allergens] be useful, and in what ways could it be misleading? Is some of this information more important than others?”*

All of this information is important. As previously discussed, comprehensive alcohol content, nutrition, ingredient, and allergen labeling is essential for consumer transparency, health, and safety by ensuring consumers are informed about the contents of products they drink and able to make informed purchasing and consumption decisions. To enhance utilization of the label, consistency across all products and product categories is very valuable.

Some have raised concerns about labeling ingredients that are used in the production of alcoholic beverages, but completely transformed during fermentation or distillation and not present in the final product. TTB could address this through regulations mirroring FDA’s regulations at 21 C.F.R. §101.100(a)(3) which exempt, among other things, “processing aids” from ingredient labeling requirements.⁹⁰ FDA defines “processing aids” as:

- (a) *Substances that are added to a food during the processing of such food but are removed in some manner from the food before it is packaged in its finished form.*
- (b) *Substances that are added to a food during processing, are converted into constituents normally present in the food, and do not significantly increase the amount of the constituents naturally found in the food.*
- (c) *Substances that are added to a food for their technical or functional effect in the processing but are present in the finished food at insignificant levels and do not have any technical or functional effect in that food.*

However, any ingredient present in the finished beverage product (which typically includes ingredients that undergo fermentation) should be required in the ingredients label.

The question of how to address ingredients that are transformed during production for the purpose of ingredient labeling is complex, but this complexity should not preclude action. It certainly has not stopped the FDA or other countries from adopting mandatory ingredient labeling on alcoholic beverages.⁹¹ While ingredient labeling for distilled and fermented products is slightly more complex than for others, TTB should look to examples set forth by FDA and other governments (e.g., Canada, Australia/New Zealand, and the European Union) when developing regulations for ingredient labeling of alcoholic beverages.

- e. *“What types of per-serving nutritional information, such as calories, carbohydrates, protein, and fat, should be included?”*

As stated in the previous sections of this comment, TTB should require a mandatory Serving Facts label on all alcoholic beverages including information on serving size, servings per

container, number of standard drinks per serving and per container, percent alcohol by volume, calories, nutritional content, ingredients, and any major food allergens present in the product. Nutritional information should include carbs, total fat, saturated fat, total sugars, added sugars, sodium, and protein per serving. To help consumers better understand alcohol, calorie, and nutritional content, containers with up to 2 servings should be labeled as a single serving and dual column labeling should be present when a container contains 2 to 3 servings.

TTB should require a footnote stating, “A standard drink contains 0.6 fl oz of pure alcohol” and providing the DGA moderate drinking guidelines as a frame of reference. TTB should also consider whether its Serving Facts label should include a column with the % Daily Value for each nutrient and a footnote stating “The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.”

TTB’s mandatory Serving Facts label should emulate FDA’s in a few other ways including requirements for minimum type size (including larger type size for calories), minimum spacing and kerning, standardized font and capitalization, color contrast (text in all black or one color, printed on a white or neutral background), and a box or border around the label, with each element on a separate line to promote readability.⁹²

When it comes to specific ingredients already required on labels, TTB already requires that these ingredients “Must appear separate and apart from, or be substantially more conspicuous than, descriptive or explanatory information.”⁹³ TTB should require the same for full ingredients lists and allergen disclosures.

- f. *“Would requiring this information [alcohol content, nutrition, ingredients, allergens] on labels be expected to increase the cost of the products and, if so, by how much?”*

Producers will incur some costs when implementing updated labeling requirements and may opt to pass these costs along to consumers. However, the benefits of transparent labeling for consumers will far outweigh the costs.

To estimate the costs of updated labeling requirements for FDA-regulated foods and beverages adopted in 2016, FDA calculated the expected costs associated with relabeling, accounting for labor, materials, discarded inventory, and recordkeeping.⁹⁴ Assuming that two new labeling rules would be implemented with the same compliance dates, FDA estimated that the new labeling requirements would cost an average of \$3,332 to \$3,460 per UPC over 20 years (assuming different compliance dates, the estimated costs were slightly higher, at \$4,101 to \$4,358 per UPC over 20 years). FDA also quantified the benefits of updated labels helping consumers maintain healthy dietary practices and concluded that, across all UPCs, the mean estimated annualized benefits would be worth five to seven times the costs. While these FDA labeling updates were

substantially different than the updates under consideration at TTB, we expect that TTB’s own regulatory impact analyses will find similar comparative benefits.

To minimize costs, we recommend that TTB align the compliance dates for each of its proposed rules. We also recommend that TTB provide an adequate phase-in period, during which many producers would anyways make updates to their labels. According to FDA, food and beverage products tend to be voluntarily relabeled on a two- to five-year cycle, with most products undergoing voluntary label changes at least every two to three years.⁹⁴

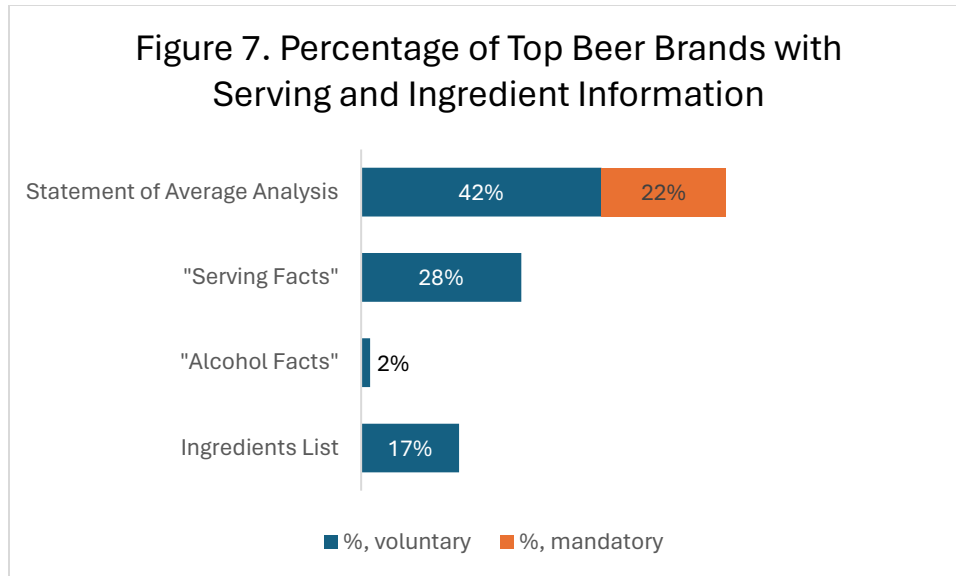
It is also worth noting that higher prices for alcoholic beverages would not be a bad thing from a public health perspective. Policies that increase the price of alcohol decrease alcohol consumption.⁹⁵ Alcohol prices and taxes are inversely associated with alcohol-related morbidity and mortality including violence, traffic crash fatalities, and drunk driving.⁹⁶ An increase in the price of alcoholic beverages could help those who drink better adhere to the DGA moderate drinking guidelines and lead to a reduction in alcohol-related morbidity and related costs.

- g. “To what extent are businesses already following voluntary guidelines for this information [nutrition, ingredients, allergens]?”

Compliance with voluntary labeling guidelines is very low, underscoring the need for a mandatory policy. CSPI conducted a study using TTB’s Certificate of Label Approval/Exemption (COLA) database to examine uptake of voluntary labeling among top beer and wine brands. We obtained lists of the top 150 beer and top 100 wine brands by 2020 sales volume and searched the COLA database for labels approved in 2021. The database had labels from 65 top beer brands and 67 top wine brands, and we inspected the labels from each brand for presence of serving information. Preliminary results are published in the journal *Current Developments in Nutrition*.^{41,97}

Our study found that only 11 of the 65 beer brands examined (17%) and none of the 67 wine brands included what appeared to be complete ingredients lists on their labels (*i.e.*, ingredient disclosures starting with “Ingredients: ...”) (*Figure 7*). Twenty-seven beers (42%) had a voluntary Statement of Average Analysis (*i.e.*, a disclosure stating the calorie, carbohydrate, protein, and fat content per serving) and an additional 14 beers (22%) were required to provide a Statement of Average Analysis because they made a calorie or carb claim (*e.g.*, “light” beers). Only one wine in our sample had a voluntary Statement of Average analysis, and none had calorie or carb claims triggering a mandatory disclosure.

Eighteen beers (28%) and no wines used the TTB’s full voluntary “Serving Facts” label (which includes a Statement of Average Analysis plus servings per container and alcohol content), and one additional beer brand carried the voluntary “Alcohol Facts” label (which includes serving size, servings per container, and alcohol content, but no Statement of Average Analysis).



Source: Greenthal E & Sorscher S. Implementation of Voluntary Nutrition Labeling Policies on Wine and Beer Sold in the United States. *Curr Dev Nutr.* 2023;7:101654. doi:10.1016/j.cdnut.2023.101654

Regarding voluntary allergen labeling, 64 of the 65 beers in our sample appear to have been made with malted barley and/or wheat, but only three of these (5%) stated “Contains wheat” or “May contain gluten” on their labels. One additional beer had a voluntary allergen disclosure (Budweiser Chelada, which contains shellfish) and one wine had a voluntary allergen disclosure (Louis Jadot White Burgundy Wine, which contains milk casein). Since most products did not have ingredients lists, we cannot assess the overall rate of voluntary allergen disclosure among beers and wines containing major allergens.

Even when serving information was included on beer and wine labels, it usually had poor formatting making the information difficult to read or hard to find. Among the 42 beer brands and 1 wine brand with either a Serving Facts label, Alcohol Facts label, or Statement of Average Analysis, 42 (95%) provided a continuous line of text rather than text with line breaks for each separate piece of information (like the Nutrition Facts label), and most of the time the serving information had no border/box around it and was crowded next to other text, written in all caps, or written vertically when much of the text on the label was horizontal.

These findings speak to the need for a mandatory policy with formatting specifications modeled after FDA’s formatting requirements for the Nutrition Facts label.

- h. “Are there alternative ways of providing the information [nutrition, ingredients, allergens], for example by allowing information to be provided through a website using a quick response code (QR code) or website address on the label?”*

CSPI implores TTB to require critical information like alcohol content, calories, complete ingredients lists, and major allergen disclosures on the physical beverage container, just as FDA requires this same information on the immediate containers of FDA-regulated beverages.⁹⁸ We

strongly oppose the idea of allowing companies to place technological barriers between consumers and health and safety-related product information.

In our March 2024 poll,²⁴ we asked 1,509 adults who drink alcohol, “How would you prefer to learn about the ingredients, alcohol content, allergens, calories, and nutritional content of an alcoholic beverage?” Respondents could select one of four response options:

1. Read this information on the label of the container
2. Scan a QR code on the label
3. Visit a website address provided on the label
4. I do not want to learn this information

More than three quarters (76%) of respondents said they would prefer to read information on the label of the container, while only 11% preferred to scan a QR code, 7% preferred to visit a website address, and 6% did not want to learn this information. These findings were unsurprising, as consumers have previously communicated their strong preference for on-package labeling. In 2018, when USDA issued a proposed rule on Bioengineered Food Disclosures that allowed companies the option of electronic disclosure, the agency received approximately 14,000 comments, the majority of which did not support the use of electronic disclosure in lieu of on-package labeling.⁹⁹ USDA responded to these comments by implying that the agency’s regulations only provided a QR code option because this was required by statute.⁹⁹ TTB has authority to require on-package labeling and should do so.¹⁰⁰

If all food and beverage products provided crucial product information only through a QR code or web address, this would impose an unreasonable burden on consumers. Accessing QR codes requires a smartphone, which not all consumers have, and Internet access, which not all stores and drinking venues provide.

Barriers created by QR code disclosures would disproportionately affect consumers who are older or have lower incomes, and those living in rural areas and on tribal lands. In 2023, 79% of adults with annual incomes less than \$30,000 owned smartphones compared to 90 to 98% of adults in higher income groups.¹⁰¹ The data show similar sized gaps in smartphone ownership by age, with 76% of adults aged 65 and older owning smartphones compared to 89 to 97% of adults in younger age groups. Furthermore, the most recent year of data (2019)¹⁰² shows a persistent rural-urban gap for access to high speed (median 10 mbps) mobile 4G LTE (91% access in rural areas vs 99% in urban areas) and lower access to “fixed terrestrial services” (i.e., satellite or wireless internet/broadband) for rural versus urban deployments at all internet speeds, with especially large gaps for the highest speed tier, 250 mbps (56% access in rural areas versus 95% in urban areas). Even larger gaps in access to high speed fixed terrestrial services between tribal lands and urban areas (50% versus 95% for the highest speed tier, 64% versus 98% for the second highest).

Electronic disclosures would also place an undue burden on people with food allergies, who would have to spend hours scanning every item in the grocery store to assess its safety.

Fortunately, this isn't how nutrition, ingredient, and allergen labeling works for non-alcoholic beverages and foods. And alcoholic beverages should not be an exception.

If TTB adopts a QR code option for label information, this should be *in addition to* on-package labeling, not *instead of* on-package labeling. Providing label information in multiple formats can increase accessibility, such as for people who are visually impaired or have limited English proficiency.

We understand that there is limited space on a label, but we believe this prized real estate should be used to highlight health and safety-related product information first, and marketing information second.

- i. "How would any new mandatory labeling requirements particularly affect small businesses and new businesses entering the marketplace?"*

We understand that small producers face a higher financial burden relative to their total revenue when implementing new regulatory requirements.

However, small food and beverage producers are not exempt from FDA's nutrition, ingredient, and allergen regulations and successfully comply with these regulations while remaining financially viable. Most hard cider producers must comply with FDA labeling rules, and local and regional hard cider sales increased by 6% from 2022 to 2023,¹⁰³ demonstrating that small alcoholic beverage businesses can thrive while adhering to comprehensive labeling requirements.

To reduce the cost burden for small businesses, TTB should adopt an extended compliance period for small producers. FDA implemented such an approach when setting deadlines for compliance with updates to the Nutrition Facts label, allowing an additional year for manufacturers with less than \$10 million in annual food sales.⁴⁶

TTB may also consider exempting very small manufacturers from labeling requirements, especially those with primarily direct-to-consumer sales. TTB regulations should align with FDA regulations at 21 CFR 101.9(j) which stipulate an exemption from nutrition labeling for: "Food offered for sale by a person who makes direct sales to consumers (*e.g.*, a retailer) who has annual gross sales made or business done in sales to consumers that is not more than \$500,000 or has annual gross sales made or business done in sales of food to consumers of not more than \$50,000, *Provided*, That the food bears no nutrition claims or other nutrition information in any context on the label or in labeling or advertising."¹⁰⁴

IV. Conclusion

Consumers rely on labeling to make personalized decisions about the purchasing and consumption of foods and beverages based on a variety of factors ranging from avoiding potentially deadly allergens to personal preferences. The same level of transparency should be available to them on all products containing alcohol. Polling data show that consumers want

transparent, comprehensive alcohol labeling. Labels on alcoholic beverages should be required to show serving size, servings per container, number of standard drinks per serving and per container, percent alcohol by volume, number of calories per serving, nutritional content, the Dietary Guidelines for Americans' advice on moderate drinking, an ingredients declaration listing each ingredient by its common or usual name, and a list of major allergens. This will help consumers know exactly how much they are drinking, prevent alcohol-related accidents and allergic reactions, and help Americans better adhere to recommendations set forth by the DGA. Further, it will harmonize TTB's labeling regulations with FDA's labeling regulations and other public health initiatives to prevent chronic disease. Thank you for considering our comments and we hope TTB will move swiftly to issue proposed rules on alcohol content, nutrition, allergen, and ingredient labeling.

Sincerely,

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Appendix A. Additives allowed in wine per 27 C.F.R. § 24.246

	Name	Purpose (if specified)
1	Acacia (gum arabic)	To clarify and stabilize wine
2	Acetaldehyde	For color stabilization of juice prior to concentration
3	Activated carbon	To assist precipitation during fermentation; To clarify and purify wine; To remove color from wine and/or juice from which wine is produced
4	Albumen (egg white)	Fining agent for wine
5	Alumino-silicates (hydrated) e.g., Bentonite (Wyoming clay) and Kaolin	To clarify and stabilize wine or juice
6	Ascorbic acid iso-ascorbic acid (erythorbic acid)	To prevent oxidation of color and flavor components of juice or wine
7	Bakers yeast mannoprotein	To stabilize wine from the precipitation of potassium bitartrate crystals
8	Calcium carbonate (CaCO ₃) (with or without calcium salts of tartaric and malic acids)	To reduce the excess natural acids in high acid wine, or in juice prior to or during fermentation; As a fining agent for cold stabilization
9	Calcium sulfate (gypsum)	To lower pH in sherry wine
10	Carbon dioxide (including food grade dry ice)	To stabilize and preserve wine
11	Casein, potassium salt of casein	To clarify wine
12	Chitosan from <i>Aspergillus niger</i>	To remove spoilage organisms such as <i>Brettanomyces</i> from wine
13	Citric acid	To correct natural acid deficiencies in certain juice or wine; To stabilize wine other than citrus wine
14	Copper sulfate	To remove hydrogen sulfide and/or mercaptans from wine
15	Defoaming agents (polyoxyethylene 40 monostearate, silicon dioxide, dimethylpoly-siloxane, sorbitan monostearate, glyceryl mono-oleate and glyceryl dioleate)	To control foaming, fermentation adjunct
16	Dimethyl dicarbonate (DMDC)	To sterilize and stabilize wine
17	Carbohydrase (alpha-Amylase)	To convert starches to fermentable carbohydrates
18	Carbohydrase (beta-Amylase)	To convert starches to fermentable carbohydrates
19	Carbohydrase (Glucoamylase, Amylogluco-sidase)	To convert starches to fermentable carbohydrates
20	Carbohydrase (pectinase, cellulase, hemicellulase)	To facilitate separation of juice from the fruit
21	Catalase	To clarify and stabilize wine
22	Cellulase	To clarify and stabilize wine and facilitate separation of the juice from the fruit
23	Cellulase (beta-glucanase)	To clarify and filter wine and juice
24	Glucose oxidase	To clarify and stabilize wine
25	Lysozyme	To stabilize wines from malolactic acid bacterial degradation
26	Pectinase	To clarify and stabilize wine and to facilitate separation of juice from the fruit
27	Protease (general)	To reduce or to remove heat labile proteins
28	Protease (Bromelin)	To reduce or remove heat labile proteins.
29	Protease (Ficin)	To reduce or remove heat labile proteins
30	Protease (Papain)	To reduce or remove heat labile proteins
31	Protease (Pepsin)	To reduce or remove heat labile proteins
32	Protease (Trypsin)	To reduce or remove heat labile proteins
33	Urease	To reduce levels of naturally occurring urea in wine to help prevent the formation of ethyl carbamate
34	Ethyl maltol	To stabilize wine
35	Fermentation aids	To facilitate fermentation of juice and wine.

36	Ammonium phosphate/diammonium phosphate (mono- and di basic)	
37	Biotin (vitamin B7)	
38	Calcium pantothenate (vitamin B5)	
39	Folic acid (folate)	
40	Inositol (myo-inositol)	
41	Magnesium sulfate	
42	Niacin (vitamin B3)	
43	Pyridoxine hydrochloride (vitamin B6)	
44	Soy flour (defatted)	
45	Thiamine hydrochloride	
46	Yeast, autolyzed	
47	Yeast, cell wall/membranes of autolyzed yeast	
48	Ferrous sulfate	To clarify and stabilize wine
49	Fractionated potato protein isolates	Fining agent for wine
50	Fumaric acid	To correct natural acid deficiencies in grape wine; To stabilize wine
51	Gelatin (food grade)	To clarify juice or wine
52	Granular cork	To smooth wine
53	Isinglass	To clarify wine
54	Lactic acid	To correct natural acid deficiencies in grape wine
55	Malic acid	To correct natural acid deficiencies in juice or wine
56	Malolactic bacteria	To stabilize grape wine
57	Maltol	To stabilize wine
58	Milk products (pasteurized whole, skim, or half-and-half)	Fining agent for grape wine; To remove off flavors in wine
59	Nitrogen gas	To maintain pressure during filtering and bottling or canning of wine and to prevent oxidation of wine
60	Oxygen and compressed air	Various uses in juice and wine
61	Polyvinylpolypyrrolidone (PVPP)	To clarify and stabilize wine and to remove color from red wine or juice
62	Polyvinylpyrrolidone (PVP)/polyvinylimidazole (PVI) polymer (terpolymer of 1-vinylimidazole, 1-vinylpyrrolidone, and 1,2-divinylimidazolidinone; CAS 87865-40-5 (Chemical Abstracts Service Registration Number))	To remove heavy metal ions and sulfides from wine
63	Potassium bitartrate	To stabilize grape wine
64	Potassium carbonate and/or potassium bicarbonate	To reduce excess natural acidity in wine and in juice prior to or during fermentation
65	Potassium citrate	pH control agent and sequestrant in the treatment of citrus wines
66	Potassium meta-bisulfite	To sterilize and preserve wine
67	Silica gel (colloidal silicon dioxide)	To clarify wine or juice
68	Sodium carboxymethyl cellulose	To stabilize wine by preventing tartrate precipitation
69	Sorbic acid and potassium salt of sorbic acid (potassium sorbate)	To sterilize and preserve wine; to inhibit mold growth and secondary fermentation
70	Sulfur dioxide	To sterilize and to preserve wine or juice
71	Tannin	To adjust tannin content in apple juice or in apple wine, To clarify, or adjust tannin content of, juice or wine (other than apple)
72	Tartaric acid (L-(+)-tartaric acid)	To correct natural acid deficiencies in grape juice or wine and to reduce the pH of grape juice or wine where ameliorating material is used in the production of grape wine