



Powdered Alcohol: An Encapsulation

December 2014

On April 8, 2014 the United States Alcohol and Tobacco Tax and Trade Bureau (TTB) approved seven labels for a product called Palcohol, a combination of the words powdered and alcohol. Less than two weeks later, TTB stated that the label approvals were [issued in error](#). The Palcohol manufacturer [surrendered the labels](#) in response. From Washington to the states, the ramifications of this product have come to the forefront and made news headlines regarding public health and safety concerns. There is no return to anonymity for powdered alcohol.

What is Powdered Alcohol?

The name ‘powdered alcohol’ is somewhat misleading and some reports that have come out regarding the product have been inaccurate. The powdered substance is not freeze-dried and is not always in a powdered form per se. Alcohol is absorbed by a sugar derivative and through the encapsulation process, capsules of powdered alcohol are created. The sugar derivate used, dextrin, can hold 60 percent of its own weight in alcohol.

The capsule of powdered alcohol created can be put into water to make a liquid alcoholic beverage but may also be taken orally as a pill. According to food research and flavor design company Bompas & Parr the scientific process is similar to creating longer flavor release in chewing gum.

Background and History

The origins of powdered alcohol can be traced to the 19th century. In 1877, William Clotwoethy was issued a patent for an [“improvement in flavoring-powders”](#) to be used in “foods and luxuries of the table.” That patent was referenced in a filing made in 1964 by Harold Bode of the Sugar Research Foundation for an [“alcoholic dry beverage powder”](#) to be used in “novel food products.” Bode’s patent states a methodology similar to modern powdered alcohol, by the use of



dextrin or carbohydrates. This patent was finally approved in 1969. In the early 1970's, Japanese company Sato Foods began to sell alcoholic capsules as a food additive. Up to this point, the concept of powdered alcohol was geared toward the food industry and had not yet emerged as a method to creating alcoholic beverages.

In 1976, General Foods was granted a patent for an [“alcohol-containing dextrin powder”](#) with the hope of using it both in food and as “a high ethanol-containing powder which can be used as a base for alcoholic beverages." The patent application included examples of tests done with powder combined with different temperatures and amounts of water to see the reactions. Despite receiving approval, this product was never used.

It was during this period that the first states began to address powdered alcohol. California [Regulation 2557](#) went into effect in 1978 and pertains to “powdered distilled spirits.” It created rules on trade practices, and the conversion of powdered alcohol weight to volume as measured in wine gallons. Alaska followed in 1980 with a statute that prohibited the sale of an alcoholic product “unless in liquid form.” This law was updated in 1995 to specifically denote the prohibition of alcohol [“in powdered form.”](#)

Recent Trends: Foreign and Domestic

Buzz about powdered alcohol laid low for decades until 2005 when a German company began selling a product online and later at stores called Subyou. This product had 4.8% alcohol by volume and was geared specifically to teen drinkers [according to media reports](#). Despite early success, Subyou has [virtually disappeared](#) with its website down. In 2007, Dutch students developed a product known as Booz2Go. It was reported they were [looking for a manufacturer](#) but to date, this creation has not been in the marketplace. Pulver Spirits asked TTB for approval on an alcoholic powder but decided not to proceed due to [“regulatory hurdles”](#) in 2010.

The Palcohol approval started a wave of concern among lawmakers at every level of government. United States Senator Charles Schumer [called on the Food and Drug Administration](#) to investigate Palcohol. When they would not investigate, Senator Schumer announced he would introduce legislation to [ban the product](#). The [Sober Truth on Preventing Underage Drinking Reauthorization Act](#) was introduced in November 2014 and, if enacted, would prohibit the “manufacture, sale, distribution, or possession of powdered alcohol.”

States have already stepped in to prevent the product from appearing on shelves. During 2014, [Vermont](#), [South Carolina](#) and [Louisiana](#) enacted laws to ban the sale and possession of powdered alcohol products. Legislators and regulators in Michigan¹, New York, Minnesota, Ohio, New Jersey, and Idaho are considering steps or have already begun the legislative and regulatory process to ban or limit the sale and use of powdered alcohol.

Risks

Public health and safety experts and government officials have expressed concern over what they see as the potential risks of the use of powdered alcohol.

The encapsulating process does not prevent a consumer from removing the powder from the capsule and using that in manners for which the product was not designed to be used. This would include snorting it as well as using it in foods and combining it with other alcohol-infused products such as alcoholic whipped cream. The Palcohol website addresses the potential for snorting by stating that it is “painful to snort” and “impractical” due to the length it would take to snort vs. putting it into a liquid for use.

The easy concealment of powdered alcohol and its potential use by someone on an unsuspecting victim may also occur. This is an issue that Senator Schumer raised as part of his objections to the project receiving government approval. Law enforcement has also expressed

¹ While Michigan has passed a law clarifying the use of powdered alcohol as an alcoholic beverage, a prohibition on powdered alcohol sales and use is still pending in the state legislature.



serious concerns regarding this issue. Not only are there public health and safety consequences to this, but also economic ones for restaurants and bars.

In addition to misuse, the potential for overuse of the product exists. Palcohol had seven different flavors initially approved by TTB. A consumer could combine one or more of these flavors with something other than water, such as a liquid spirit or energy drink. There is no scientific evidence on how potent the alcoholic beverage created would be so it is not possible to compare the consequences of this product to alcoholic beverages already in the marketplace.

Further, a major concern is easier youth access to powdered alcohol versus liquor or marijuana. [South Carolina State Senator Larry Martin noted](#) when introducing legislation to ban the product, “If we don’t act, literally alcohol could be sold to children and that’s not acceptable.”

Conclusion

The history of powdered alcohol may date back to the American Reconstruction period, but at no point has this product been at the center of more scrutiny. Proponents will say the convenience outweighs the consequences and it is no more dangerous than regular alcohol. Opponents continue to assert that the health and safety issues related to powdered alcohol have not been addressed in a satisfactory manner and it is far more dangerous than liquid spirits. While the future of this controversial product is unclear, it is certain that the actions of TTB have put powdered alcohol into the spotlight from its shadowy past and there is no turning back.

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