

BREWING TRENDS

Beer at Zero: Breweries Explore the Non-Alcoholic Space

Gone are the days of Buckler, O'Doul's, or a glass of water as the only options for folks looking for a beer experience without the alcohol. Familiar breweries are entering the non-alcoholic space, and upstarts that focus solely on low-to-no-alcohol offerings are opening up. The breweries see growth in the category. Will U.S. consumers agree? **By John Holl**

THESE ARE INTERESTING TIMES

for beer. Styles have never been more diverse, ingredients are getting worked into recipes in new ways, and the once-scuffed-at flavored malt beverages now have a place among craft brewers. There's also been a push in recent years toward lower-calorie beers, recipes formulated for and marketed to more health-conscious drinkers. And you might have noticed in recent months a number of non-alcoholic beers popping up on shelves.

That's right, non-alcoholic (0.5 percent ABV or lower, if you want to be technical) beer is gaining traction, and what's being produced now goes well beyond the long-established norms of Buckler and O'Doul's. IPAs, hoppy lagers, blonde ales, stouts, and porters are all in the mix, and all are being made in various ways with the aim of giving drinkers a chance to feel as if they are having the real beer experience without the effects of alcohol.

"People are asking why we are seeing an uptick in interest with all the breweries entering the space, and a lot of it has been driven lately because there was very little innovation in a very long time," says Ted Fleming of Partake Brewing in Alberta, Canada. "Non-alcoholic beer seems ripe for innovation, especially because there is a trend by consumers for healthier lifestyles, being aware of the health impacts of alcohol, and because in some jurisdic-

tions the drinking and driving laws have become stricter. But that doesn't mean people don't want to drink. There is a desire to socialize with a beer in hand, and with all of these things coming together at the same time, people want options, and non-alcoholic beers and breweries are here to provide those options."

IRI, the data firm that tracks beverage sales, says that the non-alcoholic beer category was up 14 percent last year, a big number but still accounting for a fraction of overall beer sales in the country. Still, brewers see hope and are putting their resources behind recipe development, equipment, and marketing to get people to at least try the beer.

Not many non-alcoholic beer options are popping up on taps. For now, most are just being packaged and sent to retail. That, in itself, is a challenge because more often than not the non-alcoholic options show up in the same general area as margarita mixes, seltzers, tonics, and other mixers that lack booze.

Rob Burns, the cofounder of Night Shift Brewing (Everett, Massachusetts) and its distribution arm, recently took on the offerings from Athletic Brewing Co. (Stratford, Connecticut), which produces only non-alcoholic beers.

"Since these aren't usually in the beer section, we need to first get them into that space and then get craft-beer fans

thinking about them in the same way or making them part of their next occasion," says Burns. "Right now, the beer shopper is trained to avoid the non-beer aisle, so we need to get it in front of folks where they are looking for beer."

To illustrate how non-alcoholic versions can be interchanged with regular beers, last summer they held a blind tasting at Fenway Park in Boston, asking customers to pick the non-alcoholic version. Few were successful, says Burns—a heartening result, although he noted that the alcoholic beer used was not from Night Shift but rather one produced by a very large macro brewery.

European Influence

Non-alcoholic beer accounts for roughly 10 percent of beer sales in Europe, so naturally the American brewers getting into the category are hoping for similar growth. But the companies that have worked to carve out the market on their own turn are also planting flags here.

Heineken has unveiled its Heineken 0.0 lager that is packaged in the familiar green bottle, smells and tastes a lot like the light version of the classic Dutch beer (including that lightstruck aroma), but that has just 0.05 percent ABV.

"Removing alcohol from regular 5 percent Heineken would have been easy, but it wouldn't deliver the same premium-beer



A Non-Alcoholic Surprise

taste that Heineken is known for,” said Willem van Waesberghe, global craft and brew master at Heineken in a news release. “Heineken 0.0 is brewed from scratch and has a perfectly balanced taste with refreshing fruity notes and a soft malty finish.”

Clausthaler, the German brewer and pioneer in non-alcoholic beers—having made their first 40 years ago—has upped its offerings lately. In addition to their standard non-alcoholic lager, which is also packaged in a green bottle, the brewery released a version dry-hopped with Cascade last year and made the beer available in cans earlier this year.

As with most of the breweries interviewed, the European brewers are hesitant to talk about specifics when it comes to the brewing process. Clausthaler calls it “a patented process that prevents the creation of alcohol and allows the full beer flavor to be maintained, compared to the process for other non-alcoholic beers which removes the alcohol and reduces flavor.”

Why Now?

At Brooklyn Brewery, which already has a large European presence, the company saw the desire for non-alcoholic beers and decided to run a market-research study in the United States to see how a product would do here, says Eric Ottoway, the brewery CEO.

“There are several reasons why this is becoming more popular,” he says. “If you look at the core demographic of craft-beer drinkers, they are starting to age. They are 40 years old on average, and at that age, they start thinking about health and wellness and consumption a bit more. There’s also the Millennial generation that wants to have it all but is also eliminating alcohol.”

He noted that many of the brewery’s customers were already practicing this kind of drinking, but that the brewery wasn’t in the space. Lager was an obvious choice for the brewery, but he says they are experimenting with IPAs because that’s where the craft mindset is.

“Brewers like challenges, and when you look at where craft brewing has been, it was how hoppy can you make it, then how strong, then how low can you go with session beers, so this is just another challenge. There is art and science in all we do.”

The non-alcoholic beer that Frank Trosset, the head brewer and founder at Aslan Brewing Co. (Bellingham, Washington), makes regularly for his father started off as a mistake.

On a brew day a few years back, he had an overflow from his hot liquor tank, and in an attempt to save the water, he transferred it to his mash tun for overnight storage, figuring he’d just heat it the next day. His flow meter wasn’t accurate, so when he mashed in for his brown ale, he realized way too late that there was too much water in the mash tun. Because it was now a thinner mash, “like soup thin,” the temperature in the mash tun rose to 163°F (73°C) or thereabouts.

“I was freaking out because there was so much money wasted, so I could either dump it or go with it. I didn’t think I’d get any significant enzymatic activity, but I was ready to chalk it up as a learning experience.”

After fermentation he says the beer was dry, tasting good and clocking in at about 1.5 percent ABV. He has since refined the process, but still makes the non-alcoholic brown ale—Doris Non-Alcoholic, named after his father. It’s brewed with American 2-row, black, chocolate, and Crystal 210 malts.

What started out as accidental, Trosset now does intentionally. After a few days of fermenting, and a week of conditioning he filters the beer into the kettle and holds it there overnight at 180°F (82°C), just slightly above the evaporation temperature for alcohol (173°F/78°C). In the morning, he runs the beer back through the heat exchanger and, rather than sending it back into fermentation, he sends it to the bright tank where it’s carbonated and served. Trosset makes the beer every 14-16 months. The brewery moves about three or four pints per day, “not a barn burner” saleswise, he admits, “but it’s popular in the sense that a non-alcoholic beer

can be popular. When people who are interested in such a beer find out that we have one, they usually stop by to try it.”

On the homebrewing front, Trosset says that the same result could likely be achieved with a thinner mash and mashing at temperatures that are well beyond the normal conventions.

“It’s a tricky process because it’s basically mashing in at near-boiling temperatures, and you have to do it fast,” he says. “Mash in too slow, and if it’s not hot enough, your get some beta amylase activity, and it’ll all just take longer.”

When you’re done with fermentation, it’s important to filter as much of the yeast out as possible before returning the beer to the kettle “because you don’t want the terrible flavors that come with boiling yeast.”

“When you’re done, you can drink something that tastes like beer but doesn’t have the effects that come with the alcohol.” —John Holl

Bill Shufelt, the founder of Athletic Brewing Co., compares what is happening with non-alcoholic beer right now with what happened in craft beer in the 1980s. There are customers looking for something different from what’s currently available, and there are companies rising to the occasion.

Synergy with Another Category

The brewers who are getting into the non-alcoholic space are also keeping a close eye on a separate controlled substance. With changes happening on the state levels regarding *cannabis*, both traditional and non-alcoholic brewers are looking for how it can impact business.

Some beer makers see trouble with future growth when it comes to how their full-strength beers will do alongside recreational marijuana. But non-alcoholic

brewers see it as a potential complement—all of the taste and experience of a beer without the added buzz.

Removing Alcohol

There are a number of ways that brewers achieve the low-alcohol levels in their beer. Some have been well documented over time, such as boiling fermented beer until the alcohol evaporates. Other breweries, usually the larger ones, have reverse-osmosis (RO) machines that can remove alcohol from beer. Still others dabble in the arrested fermentation space, where they get just a bit of booze into their beer and then stop the process and force carbonate.

At Surreal Brewing Company (Campbell, California), Brewer Tammer Zein-El-Abedein says he tried all of the traditional methods but wasn’t happy with any of them.

“If you boil it, it changes the composition of the beer itself, or scaling up to dilute has challenges,” he says. “Reverse osmosis strips something out, but you retain other parts, and that’s just not as true to the craft in our opinion. Plus, it’s a pain in the ass doing it that way.”

He says that he brews a beer to strength—one that is purposefully designed to be less than 0.5 percent ABV each time. “There’s no voodoo necessarily. It’s not rocket science. It’s just a matter of figuring it out and calculating it. There’s math involved. There’s chemistry, too,” he says.

The brewery is currently making a red IPA and a porter. He hopes to add more to the portfolio down the line. Ingredients are also a factor. He has experimented with a number of grains to achieve his goal but still impart, in, say, the porter, the toastiness desired while not being overly sweet.

Regulations

There’s more to take into account when it comes to low-to-no-alcohol beers because they are governed by another set of food standards.

“The level of protocols and regulator rigidity is higher than on the normal beer side,” says Shufelt of Athletic Brewing. “The labels are TTB approved, but on the food side, there is the FDA inspection, and then there’s organic certifications.”

He says the brewery’s beers go through a full fermentation in a process the brewery worked out over several months and a lot of trials.

“We can mimic a wide range of styles, but because of the food-safety element, we don’t do barrel aging or souring.”

Because, in the end, all brewers want their customers to believe they are having an authentic beer experience, anything that detracts from that can lead to lost future business. “From a flavor profile perspective, we have to be seamless and have a product that you can interchange with an alcoholic beer without the yuck factor. That interchangeability is what a lot of us are going for,” says Fleming of Partake Brewing. “There’s a long-standing stigma that non-alcoholic beer is terrible, so this is an uphill battle. The lucky part is that we don’t have to educate people on what beer tastes like; we just need to make sure that we get those flavors right.”

EDITOR'S PICKS

Non-Alcoholic Beers

There used to be just one or two options when it came to non-alcoholic beers, and by most accounts, you were just better off having a soda instead. But more options are coming soon, some from familiar craft-brewing names. Senior Editor **John Holl** tried some of the new low-to-no-alcohol offerings (less than 0.5 percent ABV) entering the beer space.



Brooklyn Brewery Special Effects

The brewery calls Special Effects a hoppy lager, and there’s no mistaking the hops content—it’s packed with Mosaic, Citra, and Amarillo. But rather than the crispness of a lager, it comes off more as cider (that was the first thing many blind tasters said). Slightly rubbery mixed with sweet wort.

ABV: 0.4% **IBUs:** N/A **Loc:** Brooklyn, New York
Style: American Amber Lager



Heineken 0.0

Heineken 0.0 has all of the charm of Heineken Light, but none of the alcohol. Still, there’s something familiar in the glass, from the vaguely stunky hops to the European lager character. Well-carbonated and in the familiar green-bottle packaging, it’s a better alternative to any of the other larger-brewery options we tried.

ABV: 0.05% **IBUs:** N/A **Loc:** Amsterdam, Netherlands
Style: American Light Lager



Clausthaler Dry Hopped

Clausthaler Dry Hopped pours an inviting light chestnut color, and a dusting of Cascade hops arrives with the first sniff. The hops are herbal on the palate, but it’s mixed with a sarsaparilla-like character that imparts significant sweetness. A slight pop of candied ginger on the finish keeps it interesting between sips, and the lingering hops bitterness reminds you that this has the soul of beer.

ABV: 0.5% **IBUs:** N/A **Loc:** Frankfurt, Germany
Style: Low Alcohol Beer



Surreal Brewing Company 17 Mile Porter

17 Mile Porter is roasty and toasty with an unsweetened powdered-cocoa aroma that follows through with a chalky taste on the finish. Flavors of instant coffee and a candy malted thread weave in and out of the other flavors. It’s reminiscent of a lightly carbonated Ovaltine minus the sugar.

ABV: 0.5% **IBUs:** N/A **Loc:** Campbell, California
Style: Porter



Athletic Brewing Co. Run Wild

The brewery calls this a sessionable IPA, but those looking for the American-level of hops will leave disappointed. However, if you took it as a light session golden ale, you’d be happier. Orange and lime peel on the aroma and flavor give this a sprightly effervescent quality that lends itself to an afternoon at the beach or pool.

ABV: 0.5% **IBUs:** N/A **Loc:** Stratford, Connecticut **Style:** IPA