

A close-up photograph of a glass of beer with a thick, white head of foam, set against a warm, wooden background. The glass is partially filled with golden beer, and the foam is overflowing slightly. The lighting is soft and warm, highlighting the texture of the foam and the wood.

Germany's  
Beers  
of  
Autumn





mm

## Brew your own Märzen and festbier in time for Oktoberfest

by Franz Hofer

**M**unich's Oktoberfest is about one beer, and one beer only: golden festbier, served by the *maß* (liter). No one seems to mind this exercise in efficiency. It eliminates the need for choosing from an array of beers so you can concentrate on the festivities at hand. Even better, servers bring armfuls of mugs filled with this magically delicious nectar right to your table. Take one, pay up, *eins, zwei, g'suffa!*

But wait a second. Isn't Oktoberfest beer an amber-hued and richly malty Märzen? You wouldn't be alone if you thought so. Few beers occasion more confusion in North America than Oktoberfest beer. It's an annual refrain on social media when homebrewers want to brew these beers: Just what is Oktoberfest beer? How is it different from Märzen? And what about festbier?

Here we'll consider what these Oktoberfest styles meant historically and explore how they taste today. When all is said and done, you'll have tips aplenty from German and American brewers who excel at brewing these autumn elixirs. And if you get started in mid-August, your beer will be ready by the start of October. All that's missing now is the lederhosen and dirndls.

Photo courtesy of Shutterstock.com





Thousands of people from across the world flock to Munich, Germany to take part in the Oktoberfest celebration each year. While Märzen used to be served by breweries at Oktoberfest, nowadays festbier is the style of choice served by the liter.

## THE CHANGING FORTUNES OF OKTOBERFEST BEER

Once upon a time, Oktoberfest beer was just that: The name of any festival beer (festbier) served on the Oktoberfest *wiesen* (meadow). In 1872, Joseph Sedlmayr (brother of Gabriel Jr. of Spaten) released a beer based on the Vienna lager first brewed by his brother's friend and colleague Anton Dreher. He branded it a Märzen, breathing new life into an old concept. This amber-orange beer soon dominated the festival.

If Märzen was king, changing tastes provided fertile ground for golden festbier to blossom on the *wiesen*. In 1953, Augustiner's *Wiesn-Edelstoff* appeared on the scene, a sufficiently "fest-like" golden beer more potent than the *Edelstoff Hell* that Augustiner had served on the *wiesen* prior to World War II.

All the major breweries followed suit over the next few decades. *Wieserbier* (as it's known colloquially in Munich and not to be mistaken with *weizen* or *weissbier*) displaced Märzen entirely by 1990, becoming simply Oktoberfestbier along the way. Nowadays, the term "Oktober-

fest-Bier" is a protected designation reserved for the "Munich Big 6" (Augustiner, Hacker-Pschorr, Hofbräu, Löwenbräu, Paulaner, Spaten).

## THE GERMAN BEERS OF AUTUMN

To clear up any confusion for 21st century fans of Germanic beer, here's a snapshot of what these beer styles represent today.

### Märzen

Brewed to a minimum of 1.053 specific gravity (13 °P) but rarely topping 5.8% ABV, Märzen is a delectably malty beer that ranges in color from orange-gold to amber. Malt aromas and flavors run the gamut from *vollkornbrot* (whole-grain, dark country bread), Ovaltine, Leibniz biscuits, and toast to caramel and dried fruit reminiscent of dark cherry. Some versions are rich with a touch of residual sweetness. Others are toasty but leaner, the holdovers from the time when Märzen ruled the *wiesen* by the liter. Still others have a kind of "malt candy" flavor. Hops are present but subtle in some Märzens, showcasing baking spice.

### Festbier (aka Oktoberfest-Bier or Wieserbier)

The golden festbier served at Munich's Oktoberfest is more straightforward than Märzen, though no less delicious. Generally brewed to between 1.055–1.057 SG (13.5 and 14 °P), festbier lands between a helles and a golden bock with an ABV generally ranging from 5.8–6.3%. Subtle honey notes intertwine with hop and malt fragrances that recall freshly mown hay and Alpine meadows. Festbier features a velvety body with a hint of residual sweetness suggestive of white nougat, flavors of very lightly toasted country bread, and just a hint of hop bitterness — the epitome of what Germans call *süffig* (quaffable).

## BREWING OKTOBERFEST BEER: TIPS FROM THE PROS

Now that you know what these beers are all about, it's just a matter of deciding which Oktoberfest style you want to brew. If you brew regularly, the choice is easy: Brew both! Since Märzens offer a broader range of interpretive choices, I'll focus more closely on them, with the occasional nod to festbier.

First, though, here's how the pros approach their Märzens, along with some advice to help you avoid common pitfalls.

Florian Kuplent, Co-Owner and Brewmaster of Urban Chestnut in St. Louis, Missouri, aims for a beer that is balanced and malty, but not as sweet as typical American Oktoberfest Märzen. He gets the maltiness for his Oachkatzlschwoaf (O-Katz for short) through a combination of decoction mashing and a properly controlled fermentation with plenty of active, highly attenuative yeast.

When Bierstadt Lagerhaus Co-Owner Ashleigh Carter brews Märzen for their annual Oktoberfest celebration in Denver, Colorado, drinkability is front and center. She also loves the subtle toffee character of Weyermann's Barke® Vienna malt. "When I think of a Märzen, I think of a beer that you'd want to drink more than one of. It's about balance, but also about crispness. It's about letting the malt and hops speak." How does she thread the needle between drinkability and teasing out the toffee? "Fermentability."

You may have noticed a theme just two tips in: Yeast and fermentability are the keys to drinkability.

Kuplent voices the opinion of many fans of German Märzen all too familiar with the flaws of Märzens brewed on this side of the pond: Too big, too hoppy, too sweet. Aside from recipe formulation, the main issue driving these characteristics is yeast: Yeast that's too old, yeast that isn't at its peak activity, and yeast pitched into under-aerated wort.

In fact, pro brewers adept at brewing German-style lagers emphasize three things: Yeast, yeast, and more yeast. "If your primary fermentation isn't done in 7 to 9 days, you haven't pitched enough yeast," states Kuplent. Carter concurs: "On a homebrew scale, it's nearly impossible to overpitch a lager. Pitch tons of it, especially if you're going to ferment below 10 °C (50 °F). You want a minimum of 1.5 million cells per mL per degree Plato."

To put that advice into perspective, you need roughly 400 billion

yeast cells for a 5-gallon (19-L) batch of Märzen with a specific gravity of 1.056. Wyeast packs come off the assembly line with 100 billion cells, so you'd need four packs of yeast. Unless you're fine quadrupling your yeast budget, you'll want to make a starter and step it up at least twice.

Beyond that, North American brewers emphasize what's only implicit when German brewers talk about these styles: Attenuation. You get that attenuation by focusing on your mash regimen, by paying attention to your pH during the entire brewing process (keep it between 5.2 and 5.4 during the mash, and make sure it's around 5.0 or lower at the end of the boil), and by pitching tons of yeast into well-aerated wort.

## INGREDIENTS

### Water

Though water for both Märzen and festbier is typically soft, you have a range of choices. Urban Winkler of Kloster Weissenhohe mentions his water source contains calcium carbonate. And Karlton Graham of Kansas City Bier Company aims to mimic the hard water of Munich, which clocks in at roughly 8 degrees on the German hardness scale (one degree of hardness on this scale is defined as 10 mg/L calcium oxide, or 17.8 ppm). That said, most brewers polled here recommend reverse osmosis water treated with calcium chloride. Use acidulated malt or food-grade acid to get your pH down to where it needs to be in the mash and at the end of the boil.

### Grain Bill

Festbier is a straightforward combination of Pilsner with either Vienna malt or light Munich malt. Graham of KC Bier Co. uses a roughly 50/50 mix of Pilsner and Vienna in their festbier, while Chaz Lakip of lager powerhouse Chuckanut in Skagit County, Washington, goes with a 70/30 Pils/Vienna split. You can also sprinkle in some Carahell® or melanoidin malt to the tune of about 2–3% of the grain bill, especially if you don't decoct.

Märzen gives you more leeway. Some approaches are the epitome of elegance. When I asked Ayinger's

Brewmaster Bernhard Neunhoffer about grain bills, he offered a tantalizing hint about Ayinger's delicious Oktober Fest-Märzen, suggesting that you could use up to 100% Vienna malt. It's worth noting that a Märzen brewed with 100% Vienna malt is entirely in keeping with the spirit of Sedlmayr's Oktoberfest Märzen that debuted on the *wiesen* in 1872, even if contemporary Vienna malt won't get you much beyond a burnished golden color.

Specialty malts, caramel in particular, engender their fair share of debate among Märzen devotees. Urban Winkler, the fifth-generation Owner and Brewmaster at Kloster Weissenhohe, doesn't mince his words: "If you want to brew something that tastes like a malt bonbon, use lots of caramel malt." His preference is for Vienna malts. Winkler achieves his signature amber-red color via Maillard reactions during his triple decoction mash, sprinkling in the smallest amount of specialty malts along the way.

A quick survey of other brewers reveals the range of interpretive possibilities for homebrewers. Kuplent uses a 2-to-1 mix of light Munich and Pilsner malt with 1–2% dark CaraMunich® for color and character. Lakip combines 50% Pilsner malt with equal parts Munich and Vienna and a few percent CaraMunich® I. And Carter mixes roughly 50% Barke® Vienna and 50% Bohemian dark floor-malted malt, adding about 1% CaraMunich® II "to get that beautiful orange color."

Achieving that rich, hallmark maltiness of both Märzen and festbier is a difficult proposition with extract, but not impossible. A couple of options is to use a Munich malt extract (Weyermann makes one) or a high-quality Pilsner extract and steep some CaraMunich® and melanoidin malt for aroma and flavor.

As for that Märzen with 100% Vienna malt? Add a small handful of Carafa® (0.25% of the grain bill, or 2 ounces in a 5-gallon/19-L batch) during the vorlauf or sparge for color without the roastiness. This will yield a lusciously malty amber-orange beer with an SRM of about 10.



## Hops

Hallertauer, Hersbrucker, Perle, Spalter, Tettmanger, Saazer — all are fair game in a Märzen. For Kuplent's O-Katz, it's "typical Hallertauer hops, added at the beginning, middle, and end."

For those who labor under the assumption that Märzen isn't made for hopping, consider this: Winkler, who brews a traditional Märzen, begins hopping during the run-off from the mash tun, and does his last addition in the whirlpool. This lends his beer a beguiling aroma of *lebkuchen*, a German Christmas delicacy similar to gingerbread. (If you go this route, keep in mind that the hop character is subtle.) Winkler's also not averse to combining hop varieties to get that spice.

Carter keeps it simple. "Oktoberfest beer doesn't need a ton of hops," she says. "Hops are there to kiss away the sweetness. I do a single hop addition. It doesn't need more than that."

Hop varieties for festbier are the same as they are for Märzen, though festbier's hoppiness is slightly more prominent — similar in character to an export. (A festbier should not merely be a Pilsner on steroids.) Lakip of Chuckanut adds hops at 75 minutes, at the midway point, and at 10 minutes. Graham of KC Bier Co. uses Perle and Hallertauer Tradition with a 60-minute addition and a small aroma charge with 10 minutes to go.

## Yeast

Be it Märzen or Festbier, the majority of pro brewers with whom I spoke use what Carter calls "old trusty": Weihenstephan 34/70 (White Labs WLP830 German Lager Yeast or Wyeast 2124 Bohemian Lager Yeast). This yeast works particularly well if you like eminently quaffable Märzens like Paulaner's Oktoberfest Märzen or Spaten's Ur-Märzen.

The maltiness in Urban Winkler's old-style Märzen is even more pronounced than it is in the Munich-style Märzens we see in North America, as is its subtle residual sweetness. White Labs WLP835 German X Lager Yeast (said to be the Andechs yeast) attenuates slightly less than 34/70, making

it a solid choice. You could also use Wyeast 2308 or WPL820, especially if you're aiming to brew a richer, maltier Märzen with a hint of sweetness.

## PROCESS

### Mash

A decoction mash is the traditional way to go, whether it's a Märzen or a festbier. Winkler states that "it's essential for a traditional Franconian brewery to do at least a double decoction." He goes all-in on a triple decoction, describing the thinking behind his mash process in the following terms: "What's important is the right balance of proteins with a suitable ratio of maltose-to-glucose. Ultimately, I design my protein rest to yield high FAN (free amino nitrogen), along with a few high and medium weight proteins for the foam. During saccharification I aim to leave behind some unfermentables to give the beer its full body." (My recipe included on page 53 attempts to capture the spirit of Winkler's mash with a double decoction.)

If you prefer to skip the decoction, a step mash works just fine. Chuckanut's Lakip explains that they use a modified "hoch-kurz" mash (higher temperatures, shorter time period) with a 30-minute beta rest at 140–144 °F (60–62 °C) followed by a 30-minute alpha rest at 158–162 °F (70–72 °C). The even length of the beta/alpha rests will give you fermentability without sacrificing maltiness.

Whichever mash regimen you choose, remember that both Märzen and festbier need to be quaffable, even the richer versions. For festbier, conduct your decoction or step mash to balance body with fermentability. For richer Märzens, you generally want to favor body ever so slightly over fermentability. Performing a decoction will help take care of the maltiness. Bump up the caramel malt (CaraMunich® or CaraRed®) a touch if you're not decocting, but not so much that you end up with a beer that's too sweet.

And if all of this seems like too much trouble, do a single-infusion mash for an hour (or until conversion is complete) at 149–150 °F (65–66 °C)

for a festbier and at 152 °F (67 °C) for a Märzen.

## Fermentation

Whether you're brewing a Märzen or a festbier, fermentation practices recommended by the pros are similar: Conduct your primary fermentation around 46–48 °F (8–9 °C) for 7–9 days. (Note that some lager strains take a bit longer to ferment, while others are more comfortable a notch above 50 °F/10 °C.) You can forego the diacetyl rest if you've pitched enough healthy yeast.

Lagering is more of a patchwork, with brewers expressing divergent views of what's best. "Low and slow" is Neunhoffer's fermentation maxim at Ayinger. "The stronger, the longer," he adds. But how slow, and for how long? "A minimum of three weeks for a standard-strength beer at temperatures between -2 and 0 °C (28–32 °F). Minimum six weeks for bock." That's a relatively long time, but not as long as conventional wisdom would have it.

Back in the days between the mid-sixteenth and mid-nineteenth centuries when summer brewing was prohibited in Bavaria, Märzen was traditionally brewed in springtime to last the summer. This perhaps played a role in shaping the dictum that calls for one week of lagering per degree Plato. Carter sees the merit in this rule of thumb: "Time is part of that equation. Something magical happens right around eight weeks. Everything just comes together."

Others, like Kuplent, are more skeptical. "Beer doesn't necessarily get better with months-long lagering times, especially when it comes to lighter styles," explains Kuplent. "Autolysis will start to play a role and affect the flavor."

Most brewers these days lager for 3–5 weeks, long enough for the beer to drop bright. Even Winkler, who evinces a healthy respect for tradition, is entirely contemporary in his sense of lagering time. His Eucharius Märzen gets about three weeks in the cellar — great news for homebrewers gearing up to brew their Oktoberfest beers in August and September.

## Monks' Fortitude

(5 gallons/19 L, all-grain)

OG = 1.056 FG = 1.013

IBU = 24 SRM = 9 ABV = 5.7%



*Monks' Fortitude is an homage to the malty Märzens of Franconia. Located in scenic Franconian Switzerland, Klosterbrauerei Weissenhohe was once a monastery with a turbulent history, dissolved twice over the centuries before falling into private hands. I'd like to think it was the beer the monks brewed that gave them the fortitude to endure those troubling times.*

### INGREDIENTS

8.5 lbs. (3.9 kg) Vienna malt (3 °L)

3 lbs. (1.4 kg) German dark Munich malt (10 °L)

0.5 lb. (0.23 kg) CaraRed® malt (20 °L)

4.8 AAU Hersbrucker hops (first wort hop)

(1.6 oz./45 g at 3% alpha acids)

1.5 AAU Hersbrucker hops (30 min.)

(0.5 oz./14 g at 3% alpha acids)

0.25 oz. (7 g) Hersbrucker hops (5 min.)

Yeast nutrients (10 min.)

Whirlfloc (10 min.)

White Labs WLP835 (German Lager X), Omega Yeast

OYL-111 (German Bock), or Mangrove Jack's M84

(Bohemian Lager) yeast

¾ cup corn sugar (if priming)

### STEP BY STEP

If using liquid yeast, make a yeast starter two days prior to brew day. For your water, treat 10 gallons (38 L) of reverse osmosis water with ½ tsp. lactic acid for mash acidification, 1 g gypsum, 1 g Epsom salt, and 5 g calcium chloride.

Urban Winkler extols the virtues of a triple decoction mash as the old school way of achieving Märzen's signature maltiness, but you can get away with a double or single decoction. You can also do a "hoch-kurz" step mash with or without a protein rest. Alternatively, perform a single-infusion mash at 152 °F (67 °C).

Mash in for a 10-minute protein rest at 131 °F (55 °C). Raise temperature to 145 °F (63 °C) and rest for 30 minutes. Meanwhile, pull your first decoction and let it rest at 145 °F (63 °C) for 20 minutes before boiling for 10 minutes. Add it back to the main mash to raise the temperature to 162 °F (72 °C) for a 30-minute rest. Pull a second decoction and boil 15 minutes before adding back to the main mash to bring it up to 169 °F (76 °C) for a 10-minute mash out.

Sparge to collect 6.75 gallons (25.5 L) of wort once your mash has reached conversion, adding first wort hops to the kettle while sparging. Boil for 75 minutes adding hops, nutrients, and kettle fining per schedule. After the boil, cool wort, pitch plenty of yeast, and aerate well if using a liquid yeast strain. Ferment between 46–48 °F (8–10 °C) until primary fermentation is finished (7–9 days), then lager for 4 weeks around 32 °F (0 °C).

Spunding is ideal when it comes to carbonation. Aim for 2.4 volumes of CO<sub>2</sub>. Bottle-conditioning also helps produce a rounder carbonation than forced carbonation. It's common to

filter Märzen or let it drop bright, but an increasing number of brewers are serving their Märzen unfiltered.

**Extract with grains option:** Substitute 3 lbs. (3.9 kg) each of Pilsen and Munich dried malt extracts for the Vienna and dark Munich malt. If using liquid yeast, make a yeast starter two days prior to brew day. For your water, treat 6 gallons (23 L) of reverse osmosis water with ¼ tsp. lactic acid, ½ g Epsom salt, and 3 g calcium chloride.

Place crushed grains in a muslin bag and steep in the brewing water as the temperature rises to 170 °F (77 °C). Remove grains, allowing the liquid to drip back into the kettle. Remove from heat and stir in the malt extract. Once fully dissolved, add the first wort hops and bring the wort to a boil.

Boil for 60 minutes. Follow the fermentation, carbonation, and packaging suggestions from the all-grain recipe.

## Festbier

(5 gallons/19 L, all-grain)

OG = 1.057 FG = 1.012

IBU = 28 SRM = 7 ABV = 5.9%



*A traditional festbier to be enjoyed by the liter during Oktoberfest or any fall festivities.*

### INGREDIENTS

6 lbs. (2.7 kg) Pilsner malt

6 lbs. (2.7 kg) German Munich I malt (6 °L)

6.5 AAU Perle hops (60 min.) (1 oz./28 g at 6.5% alpha acids)

2.3 AAU Hallertauer Tradition hops (10 min.)

(0.5 oz./14 g at 5.5% alpha acids)

Yeast nutrients (10 min.)

Whirlfloc (10 min.)

White Labs WLP830 (German Lager), Wyeast 2124

(Bohemian Lager), or SafLager W-34/70 yeast

¾ cup corn sugar (if priming)

### STEP BY STEP

If using liquid yeast, make a yeast starter two days prior to brew day. For your water, treat 10 gallons (38 L) of reverse osmosis water with ½ tsp. lactic acid for mash acidification, 1 g gypsum, 1 g Epsom salt, and 5 g calcium chloride.

Step mash with a 30-minute beta rest at 140–144 °F (60–62 °C) followed by a 30-minute alpha rest at 158–162 °F (70–72 °C). Lauter as normal.

Sparge to collect 6.5 gallons (25 L) of wort once your mash has reached conversion. Boil for 75 minutes adding hops, nutrients, and kettle fining per schedule. After the boil, cool wort, pitch plenty of yeast, and aerate well if using a liquid yeast strain. Ferment between 46–48 °F (8–10 °C) until primary fermentation is finished (7–9 days), then lager for 4 weeks around 32 °F (0 °C). Spunding is ideal when it comes to carbonation. Aim for 2.6 volumes of CO<sub>2</sub>.

**Extract only option:** Replace the grains with 4.33 lbs. (2 kg) Pilsen dried malt extract and 2 lbs. (0.91 kg) Munich dried malt extract. Follow instructions in the Monks' Fortitude extract with grains option. 