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# LEICHTBIER



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BY GORDON STRONG

# LEICHTBIER

The primary characteristic of this style is that it is low alcohol, typically under 3.5% but often around 3% ABV.

## LEICHTBIER BY THE NUMBERS

|            |             |
|------------|-------------|
| OG: .....  | 1.026–1.034 |
| FG: .....  | 1.006–1.010 |
| SRM: ..... | .2–5        |
| IBU: ..... | 15–28       |
| ABV: ..... | 2.4–3.6%    |



Photo courtesy of Shutterstock.com

Tastes great, less filling – but in Germany it’s actually true. Compared to the marketing taglines of U.S. companies in the past trying to sell lower-alcohol beer, German breweries are producing beer with flavor that has less alcohol than their normal products. That’s pretty much what you’d expect, right? If your baseline beer starts with more flavor, then it’s logical to assume that a lower-alcohol version would still need flavor to compete in a market where consumers expect beer to not taste like water (I’m looking at you, hard seltzer makers).

Leichtbier (literally “light beer” in German) was introduced into the Beer Judge Certification Program (BJCP) Style Guidelines in 2015 in the Pale Bitter European Beer category (Category 5). It is style 5A, and is grouped with Kölsch, helles exportbier, and Pilsner. Don’t read too much into this grouping or the word “bitter” in the category name. Like kellerbier, leichtbier can have a fairly broad range in terms of its balance.

### HISTORY

There is not a long history to this style; it is a modern invention to appeal to health-conscious consumers. In the German market, there are actually several types of products that fit that definition but aren’t part of this particular style. Alcohol-free beers, dietetic beers, light beers, and mixed-product beers are all available.

Alcohol-free beers are normally defined as having less than 0.5% alcohol by volume (ABV). Not necessarily a health-conscious product, these beers can be sweet or not (which affects calories and carbohydrates present). They are primarily intended for those concerned about drinking and driving.

Dietetic beers, or diet beers, are more oriented towards diabetics or those who are very careful about consuming sugars or carbohydrates. These often take special enzymes and more

intensive mash programs.

Mixed product beers, such as radler, are marketed more towards those participating in sports, like cycling. A mix of beer and some other beverage (like lemonade) produces a different type of drink that is vaguely related to beer. Shandy is a similar product in the United Kingdom. As with fruity beers in the U.S., this product class has seen a lot of growth and experimentation, including various fruit flavors.

Light beers are lower alcohol renditions, usually in the 2.5 to 4.0% ABV range. Pale or dark, bottom- or top-fermented, lower starting gravity or higher (with higher finishing gravity) – there are many variations of this beer. Beers made this way tend to look like the normal (full) strength products, but typically have “leicht” on the label. Weissbier is one popular style in Germany with a leicht version, but others are known as well.

Leichtbier as defined by the BJCP is the version of light beer that is based on a pale lager, such as a helles or Pilsner, or something in between. It does not cover the other types of beers I mentioned here. It may have been influenced by the market for light beers that developed in the U.S., but the health-conscious or fitness-focused European influence certainly predated that in the U.S. I think the product is a natural outcome of a desire to produce a product to meet a consumer-driven demand. Lower alcohol, lower carbohydrates, and fewer calories make it a lifestyle product, but one that satisfies that German demand for beers with flavor.

In the U.S. a post-Prohibition relic was 3.2 beer, a lower alcohol beer that was mandated in several states. Note that this was 3.2% alcohol by weight (ABW, which equates to 4.0% ABV), so that is actually a bigger beer than German leichtbier. Modern “lite” beers in the U.S. can also have alcohol up in the 4% ABV range, often by using special enzymes to make the beers highly at-

## LEICHTBIER

(5 gallons/19 L, all-grain)  
OG = 1.032 FG = 1.008  
IBU = 23 SRM = 3  
ABV = 3.1%

### INGREDIENTS

6 lbs. (2.7 kg) Pilsner malt  
8 oz. (0.23 kg) Carahell® malt  
4.4 AAU German Hallertauer hops  
(first wort hop) (1.25 oz./35 g at  
3.5% alpha acids)  
0.75 oz. (21 g) German Hallertauer  
hops (5 min.)  
White Labs WLP833 (German Bock),  
Wyeast 2633 (Octoberfest Lager  
Blend), or SafLager S-23 yeast  
¾ cup corn sugar (if priming)

### STEP BY STEP

This recipe uses reverse osmosis (RO) water. Adjust all brewing water to a pH of 5.5 using phosphoric acid. Add 1 tsp. of calcium chloride to the mash.

This recipe uses a step mash process. Start with enough water to have a moderately thick mash (1.5 qts./lb./3.1 L/kg). Mash in both of the malts at 145 °F (63 °C) and hold at this temperature for 60 minutes. Raise the mash temperature to 160 °F (71 °C) and hold for 15 minutes. Begin recirculating the wort and raise the mash temperature to 169 °F (76 °C) for mash out. Recirculate for an additional 15 minutes.

Put the first wort hops in the boil kettle, then sparge slowly and collect 6.5 gallons (24.5 L) of wort.

Boil the wort for 90 minutes, adding the second hop addition with 5 minutes left in the boil. A kettle fining agent, such as Whirlfloc or Super Moss, can be added if you so desire.

Chill the wort to 50 °F (10 °C), pitch the yeast, and ferment until complete. Rack to secondary and lager for two weeks at 32 °F (0 °C). At that point taste the beer. If the sulfur level is too high, lager for another two weeks.

Rack the beer, prime and bottle

condition, or keg and force carbonate.

## LEICHTBIER

(5 gallons/19 L, extract  
with grains)  
OG = 1.032 FG = 1.008  
IBU = 23 SRM = 3  
ABV = 3.1%

### INGREDIENTS

3.3 lbs. (1.5 kg) extra light or Pilsen  
dried malt extract  
8 oz. (0.23 kg) Carahell® malt  
4.4 AAU German Hallertauer hops  
(first wort hop) (1.25 oz./35 g at  
3.5% alpha acids)  
0.75 oz. (21 g) German Hallertauer  
hops (5 min.)  
White Labs WLP833 (German Bock),  
Wyeast 2633 (Octoberfest Lager  
Blend), or SafLager S-23 yeast  
¾ cup corn sugar (if priming)

### STEP BY STEP

Starting with 6.5 gallons (24.5 L) of water in the brew kettle; heat up to 158 °F (70 °C).

Turn off the heat. Add the Carahell® malt in a mesh bag and steep for 30 minutes. Lift the grains, allowing the grains to drain their liquid back into the brew kettle.

Add all the malt extract and stir thoroughly to dissolve completely. Once the extract is in solution add the first wort hops then turn the heat back on and bring to a boil. Boil the wort for 60 minutes, adding the second hop addition with 5 minutes left in the boil. A kettle fining agent, such as Whirlfloc or Super Moss, can be added if you so desire.

Chill the wort to 50 °F (10 °C), pitch the yeast, and ferment until complete. Rack to secondary and lager for two weeks at 32 °F (0 °C). At that point taste the beer. If the sulfur level is too high, lager for another two weeks.

Rack the beer, prime and bottle condition, or keg and force carbonate.

### TIPS FOR SUCCESS:

Delicate handling of the wort and beer is essential for success. Closed transfers are recommended.

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**I tend to think of these beers as session helles or Pilsner beers, not German versions of American light lagers.**

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tenuated. Neither is really equivalent to this German style, so it's best to avoid those comparisons.

### SENSORY PROFILE

The primary characteristic of this style is that it is low alcohol, typically under 3.5%, but often around 3% ABV. The beer is also a pale lager, so it has a straw to pale gold color and has a smooth, crisp mouthfeel. Using mostly German Pilsner malt, the beer should have its characteristic flavors – a grainy-sweet, slightly crackery malt flavor through the finish.

The balance of the beer can vary, so the level of bitterness can range from that you would expect in a helles to that of a Pilsner. Either way, the beer is well attenuated so it should have a dry finish. The only difference in this style is how much hop bitterness and flavor are perceived on the palate and aftertaste. But don't expect a bone-dry bitter beer like a Jever Pils; think more of the softer Pilsners of Europe in general rather than the best German examples.

Hopping is of the noble Saazer-types generally, like most pale German lagers. Sensory characteristics are usually described as floral and spicy, perhaps a bit herbal. Nothing too aggressive, and the hop intensity can range from low to medium. Malt is likewise low to medium in intensity, allowing for the range of balances. Lower levels of bitterness can make the beer a touch malty, but it should not seem sweet.

As a lower-gravity beer, the body struggles to fill out – it's normally on the light side. But it's not an adjunct beer, so the beer shouldn't seem watery. The carbonation is medium to high, but shouldn't be so high that the flavors are masked. Clearly, alcohol should not be tasted or felt as warmth in this style.

As with all German lagers, the fermentation character should be clean without fruity esters, buttery diacetyl, or apple-like acetaldehyde. Lagering near freezing should give the beer a smooth character, and also clean up those fermentation byproducts.

I tend to think of these beers as session helles or Pilsner beers, not German versions of American light lagers. More of the flavors and balance characteristics are the same, and mentally you have to do less translating of flavors. The beer should not be strongly flavored, but it also should not be without flavor.

### BREWING INGREDIENTS AND METHODS

There isn't much written about this style, so I turned to *Technology Brewing and Malting* by Wolfgang Kunze, my go-to German brewing textbook. He does talk about brewing “light beers” of 2–3.6% ABV versus the more typical 4.5–5.5% ABV for “full beers.” While generally just giving some specifics for the style, he does give some hints about malting and mashing.

As a pale German lager, Pilsner malt should make up most of the grist. But Carahell® is also mentioned as improving body and head retention in both nutrient beers and festival beers. Carahell® is a Weyermann malt, but any light crystal-type malt of about 10° Lovibond would work. While he says it can be used up to 5% of the grist in a helles, it can be up to 15% of the grist in an alcohol-free beer. So, you might extrapolate and consider light beers to use somewhere in between those endpoints.

Kunze also describes typical mashing practices in Germany and says that step mashes are most common in modern practice. Rest temperatures of 62–64 °C (142–147 °F), 70–72 °C

(158–162 °F), with a mashout at 75–78 °C (167–175 °F) are recommended.

Lower mash temperatures aren't needed with modern fully-modified malts, and mashing in above 60 °C (140 °F) reduces enzymatic oxidation.

No surprises on hops. Just use noble-type German hops, or the American equivalents – Hallertauer, Tettnanger, Spalt, Saaz, Crystal, Liberty, Mt. Hood, Ultra, Santiam, Sterling, Vanguard ... the usual suspects. A bittering or first wort hop addition with a light finishing addition for aroma should work. No dry hopping in a style like this of course. You can use a single hop in this recipe or feel free to mix it up a bit with a combination. I tend to choose whichever hops look freshest at the time, regardless of country of origin.

A clean German lager yeast is obvious, such as the Weihenstephaner W-34/70 strain (Wyeast 2124, White Labs WLP830, or SafLager W-34/70). Follow normal fermentation practices, pitching the yeast and fermenting around 50 °F (10 °C). Lager for two weeks near freezing to allow the yeast to condition the beer. Longer lagering times aren't needed for a beer of this gravity so long as sulfur isn't apparent.

Your water treatment will depend a bit on the balance you are targeting. If you are making a helles-like beer, I'd recommend a little calcium chloride. If you are making something more Pilsner-like, I'd recommend a little calcium sulfate. A blend of the two works as well, which is like what I'd use in a Kölsch. Just keep the minerals low since the finished beer doesn't have a mineral flavor.

### HOME BREW EXAMPLE

When I first thought about giving a recipe for this style, I was going to say, “just take your favorite Pilsner or helles recipe, but use more water” – and I

wouldn't be too far from the mark. But there is a little more to it than that. So let me run through the key points.

The style is more than just a session-strength Pilsner or helles recipe. For flavor, good-quality German Pilsner malt is making up most of the grist. I'm using some Carahell® malt (7% or so) to bump up the flavor and body a touch. With lower-gravity beers, some additional body doesn't hurt. A modern German step mashing program is used, as is typical for most breweries, to help with the attenuation and drinkability.

I love Hallertauer hops in a subtle German lager, so I'm going to feature them by using first wort hopping and late hopping. The first wort hopping will give a smooth bitterness while preserving some of the hop flavor, and a late hop addition will give a fresh hop aroma. Knowing that the first wort hop technique gives a smooth bitterness, I'm using a slightly higher level of hops to get about 23 IBUs. That's a lot in a 3% beer, but if you take care with the technique, they should come through without harshness.

Though I mention the Weihenstephaner strain earlier, I'm calling for WLP833 German Bock yeast from White Labs to increase the perception of maltiness. If this yeast or the substitutes listed in the recipe are unavailable, a good second choice is one of the W-34/70-based strains which is a touch cleaner but still malty. This isn't a big beer, so it doesn't need extended lagering. Two weeks should be sufficient. I don't like my lagers sulfury, so I do like to take my time with lagering to smooth out the yeast profile. For that reason, I also avoid calcium sulfate as a mineral addition, preferring calcium chloride.

The balance of the beer should be like a slightly bitter and hoppy helles, with less strength. So you should be able to use this as a good session beer for watching sports. And if you drink it in January, you can also say you are trying to cut back on the calories without punishing yourself. Just don't let this one sit around too long; lower-alcohol pale beers don't tend to age well. (BYO)