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ALTBIER



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ALTBIER

There were over 100 breweries in Düsseldorf in the late 1800s, but the impact of two world wars whittled those down considerably.

ALTBIER BY THE NUMBERS

OG: 1.044–1.052
 FG: 1.008–1.014
 SRM: 11–17
 IBU: 25–50
 ABV: 4.3–5.5%



Photo by Charles A. Parker/Images Plus

In the world of beer trivia, if you mention *altbier*, most people know two facts: That it comes from Düsseldorf in Germany, and that “*alt*” means “old” in German. But it’s nothing like an English old ale . . .

As it pertains to *altbier*, “old” refers to the old style of brewing using top-fermenting ale yeast, not the more modern bottom-fermenting lager yeast. It was a style that was described in beer books, such as those written by Michael Jackson, but it was hard to find commercial examples and the style descriptions often had misconceptions and biases, and perhaps some Americanized examples. The current BJCP Style Guidelines are based on field notes from tastings I did in Düsseldorf in 2006, and are meant to describe the classic style as brewed at the source.

A funny story from that trip: I was there with another judge who really wanted to fit in with the locals. He had a Germanic surname, wore long-sleeved shirts, muted colors, and looked around disapprovingly at others. When it came time to order a beer, he held up his thumb (meaning ‘one’ in Europe) and said, “ein altbier.” The old waiter stared at him and said, “ja, ein bier.” He just made a tourist move, like ordering Buffalo Wings in Buffalo or Philly cheesesteak in Philadelphia (where they are just wings and steaks). So much for Mr. German; in Düsseldorf, bier is always *altbier*.

The beer had been described in older guidelines as a copper-brown lagered ale with chocolate flavors and astringency. I found mostly dark amber beer with rich malty flavors and variable bitterness. A later version of the style guidelines described what was essentially a Zum Uerige clone (a world-class beer, to be sure), but I found that example was a stylistic outlier in its home city, that was much more aggressively bittered than the other classic examples.

In the current (2015) BJCP Style

Guidelines, *altbier* falls within Category 7, Amber Bitter European Beer as Style 7B. There used to be separate styles for Düsseldorf *altbier* and North German *altbier*, but that latter style had no real basis in history or fact. It was really just a collection of moderately-bitter brownish lagers. So we extended the *altbier* style to cover the range of classic beers of Düsseldorf, while creating an International Amber Lager category to cover the other examples (along with similar beers from other countries).

ALTBIER’S HISTORY

Altbier as we know it today became established in the 1800s in Düsseldorf. The name *altbier* only makes sense once newer lager type beer started becoming popular in the early-1800s; the oldest pub making *altbier* is Schumacher, which opened in 1838. Several other well-known pubs followed in the mid-1800s; those making this style in the *altstadt* (old city) include Zum Uerige, Im Füchschen, and Zum Schlüssel, among other more recent ones. There were over 100 breweries in Düsseldorf in the late 1800s, but the impact of two world wars whittled those down considerably.

There is no historical evidence that there was a style of beer similar to *altbier* that was renamed *altbier* when (new) lager beer became popular. Mostly there is just history that Brauerei Schumacher started making the modern style first. The closest style is probably Adambier, although that was a stronger aged beer. I’m not suggesting these styles are linked, just that they are made in the same general region of Germany and share some (but not all) key characteristics.

Some have attempted to tie *altbier* to older German beer styles such as Broyhan and Keutebier, but historical descriptions of those styles don’t describe highly hopped beers. Often these older styles were sour, although it isn’t

ALTBIER

(5 gallons/19 L, all-grain)
OG = 1.051 FG = 1.012
IBU = 51 SRM = 15 ABV = 5.1%

INGREDIENTS

6 lbs. (2.7 kg) Pilsner malt
3.5 lbs. (1.6 kg) Munich malt
8 oz. (227 g) wheat malt
5 oz. (142 g) Caramunich® II malt
3 oz. (85 g) Carafa® Special III malt
11.4 AAU Perle hops (60 min.) (1.25 oz./35g at 9.1% alpha acids)
2.25 AAU Spalt hops (10 min.) (0.5 oz./14 g at 4.5% alpha acids)
0.5 oz. (14 g) Spalt hops (0 min.)
White Labs WLP036 (Düsseldorf Alt Ale) or Wyeast 1007 (German Ale) or Safale K-97 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 ½ tsp each of calcium sulfate and calcium chloride to the mash.

Decoction mash: Mash in Pilsner, Munich, and wheat malts at 144 °F (62 °C). Hold for 20 minutes. Pull a thick decoction (about ⅓ of the mash volume), while continuing to hold the main mash at temperature. Bring the decoction to a boil; boil the decoction for 15 minutes, stirring. Remix the decoction and the main mash, hitting 154 °F (68 °C); hold for 45 minutes. Pull the thin portion of the mash, while continuing to hold the main mash at temperature. Boil the thin portion for 10 minutes. Remix the decoction and main mash, hitting 168 °F (76 °C). Add the Caramunich® and Carafa® malts, hold for 10 minutes, then recirculate for 15 minutes.

Sparge slowly and collect 6.5 gallons (24.5 L) of wort. Boil the wort for 90 minutes, adding hops at the times indicated in the recipe.

Chill the wort to 61 °F (16 °C), pitch the yeast, and hold the

temperature for the first three days of fermentation. Allow the temperature to rise to 68 °F (20 °C), and ferment until complete. Rack the beer to a secondary fermenter and lager for two months at 32 °F (0 °C). Rack the beer, prime and bottle condition, or keg and force carbonate.

ALTBIER

(5 gallons/19 L, extract with grains)
OG = 1.051 FG = 1.012
IBU = 51 SRM = 15 ABV = 5.1%

INGREDIENTS

4.3 lbs. (1.9 kg) pale liquid malt extract
2.3 lbs. (1 kg) Munich liquid malt extract
5 oz. (142 g) Caramunich® II malt
3 oz. (85 g) Carafa® Special III malt
11.4 AAU Perle hops (60 min.) (1.25 oz./35g at 9.1% alpha acid)
2.25 AAU Spalt hops (10 min.) (0.5 oz./14 g at 4.5% alpha acids)
0.5 oz. (14 g) Spalt hops (0 min.)
White Labs WLP036 (Düsseldorf Alt Ale) or Wyeast 1007 (German Ale) or Safale K-97 yeast
¾ cup corn sugar (if priming)

STEP BY STEP

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

Steep the Caramunich® and Carafa® malts for 30 minutes. Remove then turn off the heat. Add the malt extracts and stir thoroughly to dissolve completely. You do not want to feel extract at the bottom when stirring with your spoon. Turn the heat back on and bring to a boil. Boil the wort for 60 minutes, adding hops at the times indicated.

Chill the wort to 61 °F (16 °C), pitch the yeast, and hold the temperature for the first three days of fermentation. After that time, allow the temperature to rise to 68 °F (20 °C), and ferment until complete. Rack the beer to a

secondary fermenter and lager for two months at 32 °F (0 °C). Rack the beer, prime and bottle condition, or keg and force carbonate.

clear that this trait was intentional. Altbier from Münster is somewhat sour, and the historical Adambier from nearby Dortmund is also described as sour (albeit as developed during long aging in wood, similar to historical porter). Modern Düsseldorf altbier definitely isn't sour. But it does serve to establish that there was a brewing tradition in that area of Germany prior to the development of lager beer.

For geographical context, Düsseldorf is in western Germany, on the banks of the Rhine (mostly on the right bank). It is a little north of center, and is about a 30-minute train ride north of Köln (Cologne), which is on the left bank of the Rhine. Both cities are in the state of North Rhine-Westphalia, in the industrial heartland of Germany. Düsseldorf is just a little south of the populous Ruhr Valley, where Dortmund is located.

Kölsch and altbier are often mentioned together since their home cities are nearby and that the beers share a similar production method (cool-fermented ale yeast, followed by lagering). Kölsch is a pale beer, while altbier is a darker beer with a richer malt flavor. The bitterness of altbier increased to match the increased maltiness. That is the only relationship; there really isn't a common history to the styles.

Many people like to discuss the *sticke* (secret) alt variant, which was traditionally a special treat for regular customers. Often advertised with a subtle symbol posted at the pub, it is typically a stronger and hoppier version of the normal product. I think of it like the holiday ales of Belgium, where you find beers that are about 2% ABV stronger and have bolder spicing or other flavors compared to their normal offering. It's the same idea, but the spicing is hops. This variant is outside the definitions of the style guidelines, so brewers that make these versions should enter them as Historical Beers.

SENSORY PROFILE

Altbier is a moderately colored, well-attenuated, bitter beer. The rich maltiness balances the strong bitterness, while the late hop character is relatively light and spicy. While a dry beer, the style

has a firm body and smooth palate. The color is light amber to deep copper, but isn't truly brown. As a lagered beer, the clarity is typically brilliant. The off-white head is thick, creamy, and long-lasting.

The aroma is malty and rich with grainy characteristics that can be likened to baked bread or toasted bread crusts. It should not have darker roasted notes. Hops complement but do not dominate the malt, and often have a spicy, peppery, floral character. The fermentation character is very clean. A hint of esters may be present as can a light sulfur character, although these should not be prominent.

The flavor profile is similar to the aroma, but an assertive hop bitterness balances the rich malty flavors. The beer finishes dry with a bitter-malty aftertaste. Your brain wants to call it bittersweet but the beer itself is mostly dry. The beer is smooth on the palate and the fermentation character is clean and lager-like.

The beer has a medium to medium-full body, which may seem lighter since it is so smooth. Carbonation can be medium to medium-high. Cask versions may be less carbonated and lighter in body. As an average strength (4.3–5.5%) beer, it should not have a warming character, particularly as the malt and hops are so prominent.

The bitterness level of the beer can vary considerably, most notably with the Zum Uerige being assertively bittered and most others moderate. The IBU level is 25 to 50, which is quite broad, although the maltiness tends to increase with the bitterness levels so as to remain balanced.

While it is possible to find some examples in the US, they are often not well kept. The best way to experience the style is to visit Düsseldorf and try them fresh from the cask. Pubs in Düsseldorf brew their beer on site, and serve directly from cask into short cylindrical glasses.

BREWING INGREDIENTS AND METHODS

Since the name of the style mentions the brewing method, a little clarification is needed. Sometimes described as warm-fermented, the yeast used in alt-

bier (and Kölsch) isn't really fermented as warm as most ales (although it is warmer than lagers). Normally the fermentation temperature is between 57–64 °F (14–18 °C).

In my opinion, the most important part about the fermentation regime is that the beer is subsequently lagered. Not cold-crashed, but properly lagered at near-freezing temperatures for between one and two months. Since the yeast is typically powdery and often is sulfur-producing, lagering is an important step in developing the smooth flavor profile of the finished beer. Fermentation byproducts are reduced and the beer becomes very clean and smooth.

The combination of a cool fermentation with an ale yeast followed by a cold lagering phase is why the beer is properly called a top-fermenting lager beer. It used to be called a hybrid style in the style guidelines but people misinterpreted that phrase. Some thought it meant using a combination of ale and lager yeast, but keep in mind that it really referred to both the yeast and the conditioning method that give the style its character.

Any yeast designed for altbier or Kölsch will work in this style, including White Labs WLP036 (Düsseldorf Alt Ale) yeast, Wyeast 1007 (German Ale), White Labs WLP011 (European Ale), Wyeast 2565 (Kölsch), White Labs WLP029 (German Ale/Kölsch) yeast, or Fermentis Safale K-97.

While the grist and mash programs can vary, there are a few essential aspects to the style. To get the dry finish with a fuller body, a more intensive mash program is required. Decoction mashes or step mashes are traditional. The goal is to achieve high attenuation and a dry finish while still retaining sufficient body to make the beer mouth-filling. These mash schedules may have a short protein rest (122–131 °F/50–55 °C), but will include rests in the beta amylase (136–149 °F/58–65 °C) and alpha amylase ranges (149–165 °F/65–74 °C).

Some grists are mostly Pilsner malt with a little color malt (medium crystal type malt) and a little roast malt for color, not flavor. Other grists can feature less Pilsner malt and more

Vienna and/or Munich malts. The rich maltiness comes from the base malts and how they are mashed, not from character malt additions. Those other malts are simply for color adjustment. A common mistake is to rely too heavily on character malt additions that provide flavor in addition to color; an altbier should not have a roasted character or other heavily toasted or biscuity notes.

Continental (European) malts have the proper protein content to support more intensive mash schedules. Many American malts do as well, although they don't always have the richer flavor profile as their German cousins. English malts tend to have lower protein and won't work as well in this style, and tend to have more bready and biscuity flavors that are not really typical.

Düsseldorf water is similar to London, Dublin, and Munich, but brewers typically treat their water to remove carbonates. Brewers building their own water profile should shoot for a moderately hard water with balanced chlorides and sulfates. The finished beer does not have a distinctive water character, so as long as the mash pH is in a good range (5.1 to 5.3, measured at room temperature), the beer should be fine.

Hops play an important role in the character of an altbier, especially in the bittering. The hops should have a smooth bitterness, not harsh, and the flavor and aroma should be relatively low but have an elegant noble hop character. The traditional finishing hop is Spalt, but other German noble hops such as Hallertauer and Tettnanger are appropriate. The goal is a hop that is a little peppery and spicy with floral notes. Bittering hops can be the same type, although using a higher alpha variety with a clean character such as Magnum can be more cost effective.

HOMEBREW EXAMPLE

My version of altbier is an aggressive take on the style, with specifications at the upper end of the range. It makes a malty beer with a strong bitterness and a dry finish. I've made other versions of this beer with a higher Munich malt content but it comes out more bock-like. A delicious beer to be sure, but

less similar to the commercial examples I've tasted.

The base I used is mostly Pilsner and Munich malt with a little wheat for increased head retention and some Caramunich® and Carafa® for a coppery color. The decoction mash increases the malty impression, body, and color, while producing a highly fermentable beer. My choice for malts are German, such as Weyermann or Best Malz, for authenticity, flavor profile, and protein content.

My hop choice is Perle for bittering and the classic Spalt for flavor and aroma. I don't want a huge late-hop character, so I chose a modest addition. Perle provides clean bitterness, and Spalt has a very pleasant spicy quality.

I'm using the White Labs Düsseldorf yeast, mostly because I like the name. It can be harder to find, but I'll substitute other yeast I mentioned earlier that are available. I ferment cool, and lager it for a full two months. This is a beer I normally make during cold months so I take my time with it.

This is a style that I wish more people appreciated. I think it is a great style to make since it's often hard to find a good, fresh commercial example. It makes a great everyday beer, but you can't really rush it. When you take your time, prepare it in the traditional way, ferment cool, and lager it until it's ready, you will be rewarded with a wonderful drinking experience. 