



# Billy Goat Dunkel Bock

We don't want to say that drinking this classic German bock is like having a mystical experience, but seriously, indulge yourself with one sip of this malty brown beauty, and you'll feel like you've been head-butted by a billy goat, and first you'll see stars, and then you'll see the light! And believe you will, when this silky elixir fills your mouth and electrifies your taste buds, bestowing you with deep-silken maltiness and bountiful toasty-caramel goodness. And with your new found conviction, you'll want to butt heads with everyone you know and bring them to the light!

## Just the Facts, Ma'am:

BJCP Style: 5B. Traditional Bock  
Original Specific Gravity: 1.066 - 1.070  
Final Specific Gravity: 1.013 - 1.019  
Alcohol by Volume: 6.8%  
Color: 19 SRM (Traditional brown, with flashes of garnet!)  
International Bittering Units: 26  
Time to Awesome Drinkability: 10 Weeks!

Your recipe kit includes the freshest malt, hops and yeast. If you are not going to brew your recipe immediately, it is important to refrigerate your yeast and hops. If your recipe includes bags of malt syrup, these should be refrigerated too. Bags of dried malt do not require refrigeration. Also, all grains are best stored at dry room temperature.

## Ingredients:

### Fermentables:

8.8 lbs Munich Malt Extract Syrup

### Grains & Wort Additives:

8 oz Caravienne Malt (Crushed)  
6 oz Melanoidin Malt (Crushed)  
2 oz Chocolate Malt (Crushed)

### Hops:

1 oz Columbus Hops (Bittering, 60 Minutes)  
½ oz German Hallertaur Hops (Bittering, 45 Minutes)  
½ oz German Hallertaur Hops (Bittering & Flavor, 15 Minutes)

### Yeast:

Liquid Yeast: Wyeast 2206 Bavarian Lager or  
Wyeast 2308 Munich Lager

Or

Dry Yeast: Saflager S-23 Lager Yeast OR Lallemand Diamond Lager Yeast

### Brewing Supplies & Flavors:

1 Muslin Bag  
5 oz Priming Sugar

## Pre-Brew Day Checklist:

If you are using liquid yeast and desire to pitch the yeast into cool wort, we recommend making a yeast starter. Making a yeast starter allows you to propagate to a greater (and necessary) cell count. You can find the complete yeast starter instructions at [www.boomchugalug.com/yeaststarter.htm](http://www.boomchugalug.com/yeaststarter.htm)

## Brew Day Checklist:

On brew day, you will require the following equipment:

- Brew Pot - A 5 gallon brew pot is ideal, but never use a pot that is less than 4 gallons.
- Long-handled spoon or paddle for stirring the boiling wort.
- Primary Fermenter - A 6½ gallon (or greater) food-grade plastic bucket with lid, or a 6½ glass carboy.
- Airlock
- Stopper (if using a carboy)
- Funnel (if using a carboy)
- Hydrometer (Optional, if you want to measure your specific gravity)
- Sanitizing Solution
- Scissors

On the day you rack the beer into the secondary fermenter, you will require the following equipment:

- 5 gallon carboy
- Airlock
- Siphon Setup
- Stopper

## The Magical Procedure:

### Liquid Yeast Activation Before Brewing:

If you are fermenting with liquid yeast, you must activate the yeast packet before it is ready to pitch. Always check the manufacturing date stamped on the yeast packet. Yeast that is less than 1 month old may be activated on brew day. A yeast that is more than 2 months old may require additional preparation time. Always make sure your yeast has been properly activated before using. For more information about yeast starters, please visit the 'Frequently Asked Questions' section on [boomchugalug.com](http://boomchugalug.com).

### Time to Brew!

Total Boiling Time: 60 Minutes. While your wort is boiling, you should sanitize your fermentation equipment, such as your primary fermenter, airlock, scissors, stopper, etc. After you have sanitized your fermenter, fill it with 2 gallons of cold water, into which you will later add your hot boiled wort.

1. Place the crushed grains in the muslin bag and add to 1½ gallons of water. Measure the water volume carefully to ensure you extract the proper

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Flip the sheet to continue the magic. Also, this is a good time to pour a cold one! →





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amount of hop bitterness during the boil.

2. Heat water until the temperature is between 150° and 170°F. Steep the grains between this temperature range for 30 minutes. Steeping longer than 30 minutes does not hurt.
3. Remove and discard the grains, and bring this mixture to a boil. Remove the pot from the heat and add the malt extract. To prevent scorching, stir until all of the malt is dissolved. Then bring this mixture to a boil. Watch for boilovers!
4. When boiling begins, add 1 oz of Columbus hops. Boil these hops for the entire 60 minutes.
5. With 45 minutes remaining, add ½ oz of German Hallertaur hops.
6. With 15 minutes remaining, add ½ oz of German Hallertaur hops.

## Chill out, Man! (Chill the Wort)

1. At the end of the 60 minute boil, cool the wort to approximately 75°F as quickly as possible. With extract brewing, the easiest way to quick-chill the wort is to place your brew pot into a sink full of ice. For more information about cooling your wort quickly, please see 'Fast Wort Chilling' in the 'Frequently Asked Questions' section on our website.
2. Add your chilled wort to the 2 gallons of water already in your fermenter.
3. Add any extra water needed to bring the total volume in your fermenter to 5 gallons.
4. If you would like to measure the specific gravity, now is a good time. To get an accurate reading, it is important to make sure all of the heavy wort extract you added to the fermenter has been completely mixed in the water.

## Pitch the Yeast! (Into the Wort, But Not Out the Window!)

When pitching yeast into a lager wort, there are several approaches.

1. If you choose to "lager ferment by the book" by cold pitching, then cool the wort to approximately 58°F (56° - 60°F is okay), and aerate the wort before pitching (adding) the yeast. If you are cold pitching and using Wyeast liquid yeast, then you should have done a yeast starter. To aerate, simply close the fermenter and swirl around to mix in oxygen. If you are swirling a carboy, it is helpful to place the carboy on a thick, folded blanket to avoid damaging the vessel.
2. If you choose to "lager ferment like a lazy man," then cool the wort to approximately 70°F (68° - 73°F is okay), and aerate the wort before pitching (adding) the yeast.
2. After aerating, pitch (add) the yeast. Use the sanitized scissors to cut open the yeast packet. If you are using liquid yeast, sanitize the pack before opening. If you are using dried yeast, simply sprinkle the yeast over the wort. No mixing is necessary.
3. Close the fermenter and attach the airlock. If you are using the "lazy man" method, keep the fermenter between 68° - 73°F until you see fermentation beginning, such as the airlock bubbling once every 30 seconds. Wrapping the fermenter with a blanket is an easy way to keep the temperature within this range.

## Primary Fermentation:

There are several ways to know when fermentation has begun. First, you will begin to see bubbling through the airlock. If you are using a carboy, then you will usually see the yeast begin to form a layer over the beer's surface.

1. Once fermentation begins, move the fermenter to a room with the proper temperature. The ideal temperature to ferment this beer is between 50° - 58°F. Do not let the temperature drop below 50°F. If you do, fermentation

may stop too soon. That's a bummer, man.

2. Active fermentation may take as long as two weeks after pitching the yeast, although fermentation may finish in 7 days.

## Secondary Fermentation & Lagering:

After about two weeks, fermentation will end (your drooling didn't speed this process). At this time, siphon the beer into the 5 gallon glass carboy where the beer will lager (cold age) for 2 - 4 weeks. Do not begin the cold aging until all fermentation is complete. If you are unsure if fermentation has ended, you may use your hydrometer to measure the specific gravity. If your specific gravity does not change after two or more days, then fermentation is complete and you are ready to lager.

1. If you choose to "lager by the book," then drop the beer's temperature by approximately 2°F each day until it is between 33° - 38°F. Lager for 2 - 4 weeks.
2. If you opt for "lazy man's lagering," then place your carboy in the coolest spot above 33°F for 2 - 4 weeks.

## Time to Bottle!

1. Before bottling, sanitize your bottling bucket, auto siphon (or racking cane), hose, bottle filler, caps and bottles. Glass bottles may be sanitized one day in advance by baking them in the oven. More information about baking your bottles can be found under 'Baking Beer Bottles' in the 'Frequently Asked Questions' section on our website.
2. Dissolve 5 ounces (weight) or ¾ cup of priming sugar (dextrose / corn sugar) in 16 oz water. Boil for 5 minutes.
3. Pour the sugar solution into the bottling bucket, and siphon in the beer. Siphon carefully, trying to minimize splashing and aeration of the beer. Also when siphoning, be sure to leave behind the sediment at the bottom of the fermenter. When done siphoning, gently stir the beer in the bucket to make sure all of the sugar solution has been dissolved. Your racking cane makes a convenient stirring wand.
4. Elevate your bottling bucket, and attach your siphon hose and bottle filler to the bucket's spigot. Fill the bottles to about 1 inch from the top, and cap each bottle.

## Carbonation and Maturation!

Now that your bottles are primed and capped, the remaining yeast will undergo a second fermentation in the bottle whereby they eat the priming sugar and produce carbon dioxide, which is trapped in the bottle to produce the carbonation. While your beer is carbonating, it will also be clearing and maturing - the young, rough undeveloped flavors develop into your magical beverage! Your wondrous elixir reaches awesome drinkability about 10 weeks from the day you began the brew, but don't be surprised if it keeps getting better as time goes on.

1. Place your bottles in a dark place at room temperature (62°F - 75°F), and wait at least two weeks for the beer to carbonate. It is important to keep the beer between 62°F - 75°F for carbonation to develop. If the beer cools below 62°F, it may not properly carbonate. In brewing, this is officially known as the buzzkill. Keep it warm, let it carbonate!
2. Once your beer is carbonated, you may store it in a cool place. Unfiltered home-brew is unfiltered, and unfiltered beers will improve with time. If your young beer is rough or yeasty, these flavors will mellow over time. Cheers!



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