

THE STUDENT 2.0

Pale Ale – 5.5 Gal - OG 1.051 – FG 1.012 – ABV 5.0% - IBU 31 – SRM 6

This is the sequel to our most popular recipe: The Student. The philosophy behind the sequel is the same as the original. The thesis is to make a recipe that is a) delicious b) easy to make c) inexpensive d) did we say delicious!?

The paper was submitted, and it got an A+. This is a delightfully easy drinking beer with soft notes of sweet caramel and toasted biscuit balanced with citrus and pine hop notes. It is super easy to produce, and it's very competitively priced!

Ingredients

Grains

	Amount (lbs)
Canadian 2 Row	9.0
Biscuit Malt	0.5
Crystal Light (40L)	0.5
Acidulated	0.1

Hops

	Amount (oz)	Hop Schedule
Magnum	0.5	60
Amarillo	1.0	5
Magnum	0.5	5

Yeast

S-04 English Ale Yeast 1 Package

Extras – Sold Separately

Irish Moss 1 tsp w/ 15 minutes left in boil
DME/Dextrose 150g at bottling for priming

Important Tips on Brewing

- Be extra cautious when it comes to cleaning! Once you have stopped boiling your wort everything that gets in contact with the beer MUST be sanitary.
- The temperature of your mash is ABSOLUTELY CRITICAL. Not being in the 150-155f range can drastically affect your beer. Make sure you correct the temperature ASAP once all the grain has been added to the mash.
- Always let your beer ferment for 10 days! Do not disturb it, do not open the lid. It is absolutely natural for the airlock to stop bubbling after a few days, it is still fermenting though.
- Oxidization: Airspace is always something to consider. When undergoing primary fermentation airspace is needed so that the beer can bubble up and ferment vigoursley without leaking out of the container. The fermentation creates a layer of CO2 that remains in the pail due to the airlock. Once primary fermentation is over, and the lid has been opened, the layer of CO2 dissipates, and oxygen replaces it. At this point airspace can ruin your beer. When racking into carboys make sure they are filled to the top, or you blast CO2 inside to prevent oxidization. Ask us for details on this!
- Before bottling, make sure you use a priming calculator (many can be found online) to verify the amount of sugar that needs to be added.

Instructions

Mashing -> converting the grain into a fermentable liquid.

- 1) Bring 6 gallons of water in your brew pot to 155°F. This is our strike temperature. Turn off the heat to the pot.
- 2) Wrap the muslin/nylon bag around the brew pot and slowly pour all the milled grains into the bag. Stir them in while adding to prevent clumps. The addition of grain should drop the temperature down to 150-155°F.
- 3) We want to mash the grain at 154°F for 60 minutes. It is very important to hold the temperature at 154°F. If the temperature rises above 155°F it hurts the fermentation, or if it dips below 149°F it can lead to a thinner tasting beer.
 - a. The first 15-30 minutes are essential for the success of your brew. The temperature HAS TO BE IN THE RANGE OF 150-155°F. Sometimes adding the grain to the strike water does not lower the temperature enough, in this case add a little bit of cold water to bring the temperature down. Cover the pot with your lid and let it sit.
 - b. Most brew pots will be able to maintain 154°F without adding heat for 20 minutes, we recommend checking the temperature every 15 minutes, and if it drops add more heat to bring it up. We recommend opening the lid and using a thermometer in the liquid.
- 4) After 60 minutes, bring the temperature of the mashing grain up to 170°F and hold for 10 minutes. This is our mash out.
- 5) Time to remove the grain. Lift the bag full of grain out of the brew pot. Let the liquid in the bag dribble into your wort. Once that is done, put the bag inside of a brewing pail, or another empty pot. There will be about 4 gallons of wort in the brew pot, we need to get it to 6 gallons before we can begin the next stage.
- 6) Run warm water through the grains in the bag, aim for 170°F – let it run through the grains and add to the brew pot. Add until you reach 6 gallons.
 - a. PSA: It is natural to think that the grains need to be squeezed to get all of the liquid out of them, DO NOT DO THIS. Aggressively squeezing the grains will lead to tannin extraction and a doughy taste in your beer. Lightly pressing the bag is fine, but do not try to squeeze every last drop out.

Boiling -> Sterilizing the wort time.

- 1) Bring 6 gallons of your wort to a rolling boil, and let it boil for 5 minutes, this is called the hot break.
- 2) Start a 60-minute timer. Add ½ ounce of Magnum and keep the wort boiling (212°F) and uncovered.
- 3) With 15 minutes left in the timer add 1 teaspoon of Irish Moss, and if you have a wort chiller, we recommend adding it now.
- 4) With 5 minutes left in the timer add 1 ounce of Amarillo and the other ½ ounce of Magnum to the boil.
- 5) When your timer goes off, turn off the heat, and proceed to the cooling stage.
- 6) Now it's time to cool the beer down to 75°F (20-25°C) as quickly as possible.
 - a. We love using a wort chiller for this, it can get the beer down to temperature in 20-30 minutes. Otherwise, you can immerse the brew pot in an ice bath or wait it out. The longer it takes, the greater the risk of infection

Fermentation -> Turning the wort into beer

- 1) After the boil is done it is time to be extra careful in regard to sanitation. We recommend using a no-rinse sanitizer called Starsan. Mix ¼ tsp of it with water in a 500ml spray bottle. **Before we touch any part of the beer, we spray it with Starsan.**
- 2) Transfer the cooled wort into your fermenting pail or carboy. Run it through a strainer to catch any hop or grain residue.
 - a. It is also good time to take a hydrometer reading. It should be around 1.051 give or take a few points.
- 3) Make sure the wort has been cooled to at least 25°C!!! Adding yeast at a higher temperature will likely kill it.
- 4) Once the beer is in the fermenter, open the package of S-04 yeast and add it to the fermenter.
- 5) Put the bung and airlock in the hole (make sure there is water filled up to the line in the airlock). If using a pail, make sure the lid is sealed tight. Put the pail in a room that is in the range of 18-22°C.
- 6) Let the beer ferment for 10-14 days. Most of the fermentation will happen in the first few days, letting it sit the full 10-14 days will help with clarity and settling flavours. We give that range of dates to be flexible to you the brewer. Bottling beer can take up to 2 hours and it is important to have that time available to dedicate completely to bottling.
- 7) When you are ready to bottle, the first thing to do is take a hydrometer reading. It should be between 1.009-1.013
- 8) Unless you are kegging, we recommend skipping secondary and going straight to the bottling process. Clarification can occur in the bottle rather than in a carboy, and the risk of oxidization is greatly reduced.

Bottling -> We're getting close to Beer Time now.

- 1) Rack the now fermented beer into a bucket.
- 2) At the same time, mix the priming sugar with 300ml of boiling water and add to the beer. Stir it in VERY gently.
 - a. Make sure to check out a priming calculator to verify the correct amount of sugar. Too much sugar and your beer will end up foamy, or even start blowing the caps off! Too little and the beer won't be fully carbonated.
- 3) Rack the beer into your bottles or growlers. Then, let them sit for 2-3 weeks at room temperature. Chill and enjoy!