

BREWING CLASS RECIPES

The "Pail Ale"

American Pale Ale – 5.5 Gal - OG 1.055 – FG 1.010 – ABV 5.5% - IBU 37 – SRM 6

Welcome to class! This is our first recipe which will be taught in our Brewing Classes. It is designed to be easy to make, but also to have great depth and flavour. It features fresh Ontario hops, along with locally produced Cali Ali yeast from our friends at Escarpment Labs. During the class we'll go over all the ins and outs on how to brew this style of beer. And for those of you not joining us in class, it is available to all to try out for themselves!

<u>Ingredients</u>		
Grains	Amount (lbs)	
Canadian 2 Row	9	
Honey Malt	0.4	
Crystal Light	0.25	
Biscuit	0.4	
Carafoam	1.0	
Acidulated	0.1	
Hops	Amount (oz)	Boil Schedule (minutes)
Cascade Ontario	1	60
Cascade Ontario	3	5
Yeast		
Cali Ale – Escarpment Labs	1 Package	
Extras		
Irish Moss	1 tsp for last 15 minutes of boil	
DME/Dextrose	150g (1/2 cup) 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.

[Step by step Instructions on the other side](#) →→→

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 153°F for 60 minutes. It is very important to hold the temperature at 153°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 153°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 40 minutes, bring the temperature of the mashing grain up to 170°F. This tends to take between 20-30 minutes with our induction burner system. If using a propane burner, we recommend starting this process after 50 minutes. Once you have hit 170°F – hold that temperature 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 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 -> Hop addition 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) Set a timer for 60 minutes, add 1 ounce of Cascade Ontario hops. Keep the wort boiling (212°F) and uncovered.
- 3) With 15 minutes left, add 1 tsp of Irish Moss, and if you're using a wort chiller add that too.
- 4) With 5 minutes left, add 3 ounces of Cascade Ontario hops.
- 5) When your timer goes off, turn off the heat and now it is time to begin the cooling process.
- 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 regarding 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 an important time to take a hydrometer reading. It should be around 1.055 give or take a few points.
- 3) Your choice of fermentation vessel is important. During primary fermentation, it will bubble up quite a bit, you want to be sure there is airspace for it to work away. Otherwise, the pressure of it will push out the airlock.
- 4) Make sure the wort has been cooled to at least 25°C!!! Adding yeast at a higher temperature will likely kill it.
- 5) Once the beer is in the fermenter, pour in the entire package of Cali Ale yeast from Escarpment Labs.
- 6) 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 18-24°C
- 7) Let the beer ferment for 12-14 days. It will do the majority of the fermentation in the first few days, but letting it sit will help with clarity and settling flavours.
- 8) Once the 12-14 days are up, it is time to proceed to the bottling stage. First, take a hydrometer reading. It should be somewhere between 1.008-1.012

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!