

THIOL HIGH CLUB

All Ontario Hazy IPA – 5.5 Gal - OG 1.055 – FG 1.010 – ABV 5.6% - IBU 25 – SRM 4

A delicious hazy beer made from all Ontario ingredients* - how cool is that!? There's a lot of awesome going on in this recipe let us break it down for you.

Let's start with the grain. We sourced organically grown malted barley from an up and coming malting company based in Petrolia called "Against the Grain". We're using their pale ale malt, but they have a few other malts we will be stocking soon. Next, for hops we're using Cascade Hops from our friends at the Hop House based out of Strathroy. The freshness and quality of their hops has been incredible. Finally, from a little-known yeast company based out of Guelph – we're using Escarpment Labs new Thiol Libre yeast. This is the star of the show.

Thiol Libre unbinds thiols from hops which can lead to some intriguing flavours. This is a gross oversimplification, but it changes the standard aromas and notes you get from hops like Cascade and Saaz and converts them into juicy, citrus like flavours. Escarpment Labs has a great blog post on their website going deep on this which we recommend checking out. Most hops that give juicy/citrus notes are grown outside of Canada, predominantly in Washington State. It's pretty neat that with this yeast we can use ingredients grown and produced right here in Ontario and make a delicious hazy IPA. Science!!!

The finished beer itself is hazy with strong citrus and tropical fruit hop character. It has a touch of toasted bread notes – almost like the malt profile of a wheat beer. At an ABV of 5.5 it's not too heavy and ideal for sitting out on the patio on one of the four months in Ontario where our weather is not actively hostile.

** The Strata hops used for dry hopping are not from Ontario, please forgive us this one transgression!*

Ingredients

Grains Amount (lbs)

Ontario Pale Ale Malt
Acidulated Malt

11
0.1

Hops Amount (oz)

Cascade Ontario
Cascade Ontario
Cascade Ontario
Strata

1
1
2
2

Hop Schedule

60 (AT MASHING)
5
FLAME OUT – Add at 180°F
DRY Hop – 6 Days into Fermentation

Yeast

Thiol Libre – Escarpment Labs 1 Package

Extras – Sold Separately

Calcium Chloride 1 tsp at mash in.

Adds some of that lovely haze to the beer

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.

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) If you are using standard Guelph tap water, add 1 tsp of GYPSUM to the water. *This raised the calcium in the water which brings out the hazy look we're going for.*
- 3) 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.
- 4) HOPPING AT MASHING: Add 1 ounce of Ontario Cascade hops to the mash along with all the grain.**
- 5) We want to mash the grain at 154°F for 60 minutes. It is very important to hold the temperature at 152°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 152°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.
- 6) After 60 minutes, bring the temperature of the mashing grain up to 170°F and hold for 10 minutes. This is our mash out.
- 7) 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.
- 8) 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. Start a 60-minute timer. Keep the wort boiling (212°F) and uncovered.
- 2) With 15 minutes left in the timer, if you have a wort chiller, we recommend adding it now, otherwise keep boiling.
- 3) With 5 minutes left in the timer, add 1 ounce of Ontario Cascade to the boiling wort.
- 4) When your timer goes off, turn off the heat, and now it's time to add MORE hops!

Cooling & Whirlpooling -> Let's Get Hoppy

- 1) We need to cool the beer a bit before adding more hops. Our target temperature is 180°F. This will not take too long to cool if you're using a wort chiller. Adding hops at 180°F will maximize the flavour of the hops but add just a little bitterness.
- 2) Once the wort is down to 180°F, add 2 ounces of Ontario Cascade. Let the beer sit for 10 minutes. Do NOT actively cool the beer.
- 3) After the 10 minutes are complete. Start cooling the beer down to 25°C, this is our yeast pitching temperature.

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 $\frac{1}{4}$ 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. With all of the hop matter in this beer, it might take a while to strain through all the hops.
 - a. It is also good time to take a hydrometer reading. It should be around 1.055 give or take a few points.
- 3) Be sure to use a pail for fermentation. It will be hard to rack a carboy with all the dry hops that are added.
- 4) Make sure the wort has been cooled to at least 25c!!! Adding yeast at a higher temperature will likely kill it.
- 5) Once the beer is in the fermenter, shake up and pour in the package of Thiol Libre yeast.
- 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 19-23°c.
- 7) After 6 to 7 days have passed, it is time to add the dry hops. Quickly open the lid or remove the bung and pour in 2 ounces of Strata.
 - a. Potential oxidization is a concern here. If you have CO2 available, we recommend spraying a layer of it in the fermenter after adding the hops.
 - b. If you don't have CO2, then we recommend making a small tincture of dextrose and water. Boil 100ml in the kettle and mix with 100g of dextrose. Stir and dissolve, and then pour into the fermenter. This will create a mini fermentation which will result in the production of CO2 which keeps the oxygen at bay. Have the tincture ready before you add the hops. **The less time the lid/bung is open the better!**
- 8) Let the beer sit for 3 more days after adding the dry hops.
- 9) After 10 days have passed, take a hydrometer reading. It should be somewhere between 1.009-1.012.
- 10) Lately, we have been of the opinion that secondary is an unnecessary step. Unless you are kegging, we recommend proceeding to the bottling stage. 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!