ALL GRAIN

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SAN DIEGO BEER NEWS
HOMEBREW SUMMER
HOME BREW MART
INGRAINED SINCE 1992

CHULA VISTA BREWERY

HOPPY

Thai Tea Haze – Hazy IPA

BREW DAY

Stage/Time	Type	Qty	Name	%AA	%IBU
Mash Target pH: 5.2	Grain	8 lb	Weyerman Extra Pale	-	57%
		2.5 lb	Chit Malt	-	18%
		2.5 lb	Flaked Oats	-	18%
Boil/60min	Dextrin	1 lb	Maltodextrin	-	7%
Boil/15min	Nutrient	½ tsp	Yeast nutrient	-	-
Whirlpool Target pH: 5.0	Hop	2.5 oz	Citra	12%	9.7

FERMENTATION AND BEYOND

Stage	Type	Qty	Name	Notes
Pitch	Yeast	1 pouch	Imperial #A38 Juice Ale	64-74˚F
Dry Hop Final pH: 4.55	Hop	8 oz	Citra	3 days ⇨ bottle
	Tea	8 oz	Thai Tea	1 days ⇨ bottle

Hazy IPA (21C)

Original Gravity: 1.060 – 1.085 SG

Final Gravity: 1.010 – 1.015 SG

Bitterness: 25 – 60 IBUs

ABV: 6 – 9%

SRM: 3 - 7

Overall Impression: An American IPA with intense fruit flavors and aromas, a soft body, smooth mouthfeel, and often opaque with substantial haze. Less perceived bitterness than traditional IPAs but always massively hop-forward.

TARGET STATS

Batch Size	5 gal
OG	1.068
FG	1.017
~%ABV	6.7
%Efficiency	72
IBU	10
SRM	5

BREW NOTES

Mash Temp	154˚F
Mash Duration	60 min
Boil Volume	6 gal
Boil Duration	60 min
Whirlpool Temp	170˚F
Whirlpool Time	15 min
Dry Hop Duration	3 days

Notes

pH can play an important role in the final flavor in any beer. For this recipe we highly recommend measuring the pH at the mash and whirlpool. You can gently adjust the pH down by adding small doses (0.5 ml) of 88% Lactic Acid.

Ferment at 65˚F until gravity reaches 1.032, then increase temp to 70˚F until terminal gravity. When final gravity is reached, allow beer to condition 1 more day to clean up diacetyl.

Quick Brewing Instructions

MASH

Mashing is the process of soaking milled, malted barley in hot water to convert starch into fermentable sugars. The success of this process is measured as percent efficiency and is reliant on maintaining the appropriate temperature and water to grain ratio of 1.25 quarts per pound of grain.

1. Measure out your water for mash and heat to your strike temperature.
2. Slowly add your grain, constantly stirring to break up dough balls and consistent mixture.
3. Check that your temperature is on target and seal your mash tun.
4. If your equipment has a recirculation pump, now is the time to run it.
5. While you wait for the mash to finish, begin heating your water for the sparge.

Mash Targets

Mash Water	4.25 gal
Strike Temp	165˚F
Mash Temp	154˚F
Duration	60 min

Sparge Targets

Volume	3.75 gal
Temp	167˚F

Boil Targets

Volume	6 gal
Duration	60 min
Pre-Boil SG	1.054

LAUTER & SPARGE

Once the starch conversion is complete, the liquid ("sweet wort") needs to be separated ("lautered") from the grain which then needs to be rinsed ("sparged") to extract as much sugar as possible.

1. Measure out your sparge water and heat to 168˚F.
2. Position your kettle below your mash tun and your sparge tank above.
3. If your brewing equipment did not include a recirculation pump for the mash, you'll need to do this manually.
    a. Partially open the valve on the mash tun and use 2 pitchers or large measuring cups to catch the stream that begins to flow; you'll notice a lot of small particles floating in the wort. As each pitcher fills, replace it with an empty one and pour the full pitcher gently back into the mash tun. Continue doing this until your wort is relatively free of particles.
4. With sparge tank and kettle in place, mash complete, and grain bed set, it's time to start lautering into the kettle. As wort drains from the mash, sparge water should replace it at the same rate from above, ideally maintaining an inch or so of water above the surface of the grain. Adjust your flow rates at the sparge tank or mash tun accordingly.
5. Once the target boil volume is reached in the kettle you can turn off valves and stop the flow into the kettle. Start heating up to a boil.

For best results, adjust mash waster to reflect:

- 100ppm Sulfate
- 300ppm Chloride
- 5.2 pH

BOIL & COOLDOWN

The purpose of your boil is 1) to sanitize, 2) to extract bitterness (alpha acids) from hops, and 3) to break down particulates for a clearer finished product.

1. As your wort nears the boil, be prepared to turn down the heat or add foam control to prevent boil-overs.
2. Once you reach a steady rolling boil, add your first boil addition and start your timer counting down to the next addition (i.e. if it's a 60 min boil and your next addition is at the 15 min mark, start your timer for 45 minutes). Add all other additions at their appropriate times.
3. Sanitize all other equipment that will contact your wort after the boil.
4. If you're using an immersion chiller, attach tubes and submerge in pot at the 15 min mark to sanitize.
5. Once your full boil time has elapsed, it's time to check gravity. There is some chance that you lost enough boil volume to evaporation that your final boil volume is less than 5 gallons—which means that your gravity may be higher than your target. Add water back to the kettle to get back to 5 gallons and your target starting gravity.
6. Once done, it's time to start the cooldown. Start running water through your immersion chiller. The outgoing water will be steaming hot, so be sure the outflow is directed somewhere safe.
7. Once cooled to fermentation temperature, whirlpooled, and allowed to settle, it's time to rack into your sanitized fermentor.

60MIN	• 1 lb Maltodextrin
15 MIN	• Yeast Nutrient
WHIRLPOOL	*Add at 170˚F and steep for 15 min* • 2.5 oz Citra

PITCH

Adding your yeast is what changes the liquid in your fermentor from "wort" to "beer."

1. Sanitize the exterior of the yeast package as well as any tools used to open it.
2. Add your yeast to the fermentor and seal with an airlock and stopper—being sure to fill the airlock to the appropriate mark with sanitizing solution.
3. Store in a cool dark place for the duration of fermentation.

Imperial #A038 Juice Ale Yeast

Ferment at 64 – 74˚F

SECONDARY

The secondary stage comes after fermentation is complete. Unlike ingredients adding during the boil, dry hop and other additions contribute more aroma—not bitterness—to the finished beer. To maximize flavor retention, wait until fermentation activity (i.e. bubbling in the airlock) has ceased.

1. If possible, rack beer off yeast cake or dump yeast and reduce temperature to 60˚F.
2. Remove your airlock and pour your dry hop additions directly into the beer. Replace airlock..
3. Some recipes have multiple addition. For this recipe add the first addition after fermentation ends, then add the second 2 days later. Package 1day later so that the hops have steeped for a 3 days and the Thai Tea steeps for 1.
4. Cold crash to 31˚F for forced carbonation and serve after 1 week to reduce over-fresh, green flavors.

DRY HOP	• 8 oz Citra
THAI TEA	• 8 oz Thai Tea