



NORTHERN BREWER

O.G.	ABV	IBU	BREW TIME: 6 WEEKS
1.064	7.0%	35	Primary: 2 Weeks
			Secondary: 2 Weeks
			Bottle Conditioning: 2 Weeks

STAR GAZER HAZY DOUBLE IPA

This hazy double IPA was formulated to showcase the tropical and juicy aromas from BSG Hops' Zamba™ blend and the minty and green-apple aroma notes from German Polaris hops. The grist is typical for the style, with a little boost from sucrose to increase wort gravity without adding non-fermentables or additional malt flavor. The hopping schedule and yeast strain are intended to set the stage for aroma retention and biotransformation while keeping hop bitterness in check.

KIT INVENTORY

STEEPING/MASHING GRAINS

3.25 lbs Rahr Red Wheat
1.5 lbs Flaked Oats

EXTRACTS & FERMENTABLES

4.4 lbs Pilsen Light DME
1.25 lbs Corn Sugar

PREMIUM HOPS

0.5 oz Polaris	60 min
0.5 oz Zamba™	60 min
1 oz Polaris	Steep
1 oz Zamba™	Steep
3 oz Polaris	Dry hop
3 oz Zamba™	Dry hop

Note: The total amount of dry hops is split between two equal additions.

SUGGESTED YEAST

YEAST

DRY YEAST:

Lallemand LalBrew Köln
Optimum Temp: 54°- 68°F

LIQUID YEAST OPTION:

Omega Yeast OYL-044 Kolsch II
Optimum temp: 65°- 69°F

Imperial Yeast G03 Deiter
Optimum temp: 60°- 69°F

BEFORE BREW DAY

- Upon arrival, unpack kit.
- Read all instructions before starting.
- Be sure you have all items listed in the Kit Inventory.
- Refrigerate liquid yeast.
- If making a yeast starter, we suggest 24-48 hrs.
- Contact us if you have any questions or concerns.

YOU WILL NEED

- Homebrewing equipment for brewing 5 gallon batches.
- Boiling kettle (at least 3.5 gallons capacity).
- Approx. 2 cases of 12 oz or 22 oz pry-off beer bottles.
- Scale capable of measuring fractions of a pound*.
- **Optional** - 5 gallon carboy, with bung and airlock, to use as secondary fermentor.

**This kit will require a scale to accurately reproduce the original recipe published by the AHA.*

A FEW HOURS BEFORE BREW DAY

Remove liquid yeast packages from the refrigerator. Allow to warm to your desired fermentation temperature (~65°F). Check yeast instructions on packet.

BREWING NOTES

KEY STATS

Brew Day Date: _____

Secondary: _____

Important Additions: _____

Bottling/Kegging: _____

Fermentation Temp: _____

Yeast Strain #: _____

Measured OG: _____ FG: _____

ON BREWING DAY

1. **Important:** Heat 1.5 gal of water to 160°F.
2. Pour grain into supplied mesh bags, and tie open ends in a knot. Steep for 45 min at 154°F. While steeping/mashing, heat an additional small quantity of water to 170°F.
3. After 45 minutes has elapsed, remove the grain bags and allow to drain. Gently pour reserved hot water over them into the kettle. Discard grain bags.
4. Add water to reach your preboil volume and bring to a boil. Remove the kettle from burner and stir in **4.4 lbs Pilsen Light DME, and 1.25 lbs Corn Sugar.**
5. Return to boil. The mixture is now called "wort", the brewer's term for unfermented beer.
NOTE: Total boil time is 70 min.
 - Add **0.5 oz Polaris** with 60 min remaining
 - Add **0.5 oz Zamba™** with 60 min remaining
6. Cool wort. When the 70 minute boil is finished, cool wort to 158°F as rapidly as possible. Stop chilling. Use a wort chiller, or put kettle in an ice bath in your sink. Add **1 oz Polaris and 1 oz Zamba™** and allow to steep for 10 minutes. Resume chilling until a temperature of 60°-68°F is reached.
7. Sanitize fermenting equipment and yeast pack. While wort cools, sanitize fermenting equipment (fermenter, lid or stopper, airlock, funnel, etc) along with yeast packs.
8. Fill primary fermenter with 2 gal cold water, then pour in cooled wort. Leave any thick sludge in bottom of kettle.
9. Add more cold water as needed to bring volume to 5 gal.
10. Aerate wort: Seal fermenter and rock back and forth to splash for a few mins, or use an aeration system and diffusion stone.
11. Measure the wort's specific gravity with a hydrometer. Record.
12. Add yeast once temperature of the wort is 68°F or lower. Sanitize and open yeast pack. Carefully pour contents into primary fermenter.
13. Seal fermenter. Add approx. 1 tbsp of water to sanitized fermentation lock. Insert airlock into rubber stopper or lid. Seal fermenter.
14. Move fermenter to a cool, dark, spot until fermentation begins.

PRIMARY FERMENTATION

15. **Within 48 hours Active fermentation begins.**
The optimum temp. for this beer is 60°- 68°F.
16. On day 2 of active fermentation, add **1.5 oz Polaris and 1.5 oz Zamba™** to the fermenting beer.
17. On day 4 of active fermentation, add the remaining **Polaris and Zamba™** to the fermenting beer.
18. **Within 2 weeks Active fermentation ends.**
Proceed to next step when:
 - Cap of foam falls back into the beer.
 - Bubbling in airlock slows down or stops.
 - Specific gravity as measured with a hydrometer is stable.

SECONDARY FERMENTATION (OPTIONAL)

NOTE: You may skip transferring to a secondary fermenter and simply leave the beer in the primary fermenter.

19. Sanitize siphoning equipment, airlock, carboy bung or stopper. Siphon beer from primary fermenter into secondary. (optional - see above)
20. Allow the beer to condition for 2 weeks before proceeding with the next step. Timing is now somewhat flexible.

BOTTLING DAY (ABOUT 4 WEEKS AFTER BREWING DAY)

21. Sanitize siphoning and bottling equipment.
22. Mix a priming solution (sugar dissolved in water; carbonates bottled beer). Use the following amounts, depending on which type of sugar you use:
 - Corn sugar (dextrose) 2/3 cup in 16oz water.
 - Table sugar (sucrose) 5/8 cup in 16oz water.Bring solution to a boil. Pour into bottling bucket.
23. Siphon beer into bottling bucket and mix with priming solution. Stir gently to mix
 - *do not splash.*
24. Fill and cap bottles.

CONDITIONING (ABOUT 6 WEEKS AFTER BREWING DAY)

25. Condition bottles at room temp. for 1-2 weeks. After this point, store bottles cool or cold.
26. Serving: Pour into a clean glass. Be careful to leave any sediment at the bottom of the bottle. Cheers!

WE'VE GOT YOUR BATCH

We're so confident in the quality of our beer kits, we'll replace any kit, anytime, no questions asked.

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