



NORTHERN BREWER

O.G.	ABV	IBU	BREW TIME: 6 WEEKS
1.065	6.7%	80	Primary: 2 Weeks
			Secondary: 2 Weeks
			Bottle Conditioning: 2 Weeks

PERMAFROST WHITE IPA

This complex and hoppy brew will help you to navigate the doldrums of seemingly never ending winters. Developed with the pioneering spirit of American brewers, this White IPA recipe melds old world tradition with the hoppy boldness of an American IPA. At first glance this beer is as white as a frozen tundra, but upon closer scrutiny, tall drifts of American hop flavor and aromas abound. A traditional witbier grain bill and yeast strain coupled with West Coast American hops yields a wonderfully complex India White Ale beer kit.

KIT INVENTORY

SPECIALTY GRAIN

- 0.75 lb Unmalted Wheat
- 0.75 lb Flaked Oats

FERMENTABLES

- 6 lbs Wheat Malt Syrup
- 3.15 lbs Gold Malt Syrup
(10 min late addition)

PREMIUM HOPS

- 0.5 oz Summit **60 min**
- 0.5 oz Centennial **30 min**
- 1 oz Amarillo **20 min**
- 1 oz Centennial **15 min**
- 1 oz Amarillo **10 min**
- 0.5 oz Centennial **5 min**
- 1 oz Galaxy **Dry Hop**

SUGGESTED YEAST

YEAST

- DRY YEAST:
Fermentis Safale BW-20
 Optimum Temp: 64°-79°F
- LIQUID YEAST OPTIONS:
Omega Yeast OYL-030 Wit
 Optimum temp: 62°-75°F
- Imperial Yeast B44 Whiteout**
 Optimum temp: 62°-72°F
- Wyeast 3944 Belgian Witbier**
 Optimum temp: 62°-75°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.
- **Optional** - 5 gallon carboy, with bung and airlock, to use as secondary fermentor.

A FEW HOURS BEFORE BREW DAY

Remove liquid yeast package from the refrigerator, and leave in a cool place (~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. Heat 2.5 gal of water.
2. Pour grain into supplied mesh bag, and tie open end in a knot. Steep for 30 min at 150° - 160°F. Remove bag, drain and discard.
3. Bring to a boil. Remove the kettle from burner and stir in **6 lbs Wheat Malt Syrup**.
4. Return to boil. The mixture is now called "wort", the brewer's term for unfermented beer.
NOTE: Total boil time is 60 min.
 - Add **0.5 oz Summit hops** at the start of boil (60 minutes)
 - Add **0.5 oz Centennial hops** with 30 minutes left in the boil.
 - Add **1 oz Amarillo hops** with 20 minutes left in the boil.
 - Add **1 oz Centennial hops** with 15 minutes left in the boil.
 - Add **3.15 lbs Gold Malt Syrup and 1 oz Amarillo hops** with 10 min left in the boil.
 - Add **0.5 oz Centennial hops** with 5 minutes left in the boil.
5. Cool wort. When the 60-minute boil is finished, cool wort to approximately 100°F as rapidly as possible by using a wort chiller, or put kettle in an ice bath in your sink.
6. Sanitize fermenting equipment and yeast pack. While wort cools, sanitize fermenting equipment (fermenter, lid or stopper, airlock, funnel, etc) along with yeast packs.
7. Fill primary fermenter with 2 gal cold water, then pour in cooled wort. Leave any thick sludge in bottom of kettle.
8. Add more cold water as needed to bring volume to 5 gal.
9. Aerate wort: Seal fermenter and rock back and forth to splash for a few mins, or use an aeration system and diffusion stone.
10. Measure wort's specific gravity with a hydrometer. Record.
11. Add yeast once temp. of the wort is 70°F or lower (not warm to the touch). Sanitize and open yeast pack. Carefully pour contents into primary fermenter.
12. Seal fermenter. Add approx. 1 tbsp of water to sanitized fermentation lock. Insert airlock into rubber stopper or lid. Seal fermenter.
13. Move fermenter to a cool, dark, quiet spot until fermentation begins, such as a cool basement or closet.

PRIMARY FERMENTATION

14. **Within 48 hours Active fermentation begins.** You'll see a cap of foam on the surface of the beer. Specific gravity as measured with a hydrometer will drop steadily. You may see bubbles in the fermentation lock. The optimum temp. for this beer is 62°- 68°F.
15. **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 secondary fermentation and simply add 2 weeks to primary fermentation before bottling.

16. Sanitize siphoning equipment, airlock, carboy bung or stopper. Siphon beer from primary fermenter into secondary.
17. Allow beer to condition in secondary fermenter for 2 weeks before proceeding with the next step. Timing is now somewhat flexible.
18. After 2 weeks of conditioning, Add **1 oz Galaxy hops** directly to the new beer and allow to dry hop for 3-5 days before bottling.

BOTTLING DAY (ABOUT 4 WEEKS AFTER BREW DAY)

19. Sanitize siphoning and bottling equipment.
20. 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.
21. Siphon beer into bottling bucket and mix with priming solution. Stir gently to mix
 - *do not splash.*
22. Fill and cap bottles.

CONDITIONING (ABOUT 6 WEEKS AFTER BREW DAY)

23. Condition bottles at room temp. for 2 weeks
After this point, store bottles cool or cold.
24. 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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