



NORTHERN BREWER

| O.G. | ABV | IBU | BREW TIME: 6 WEEKS |
|-------|------|-----|--|
| 1.060 | 6.1% | 20 | Primary: 2 Weeks Secondary: 2 Weeks Bottle Conditioning: 2 Weeks |

MIGHTY AXE ARCTIC HAZE IPA

Featuring the coolest hop blend we have seen, the undisputed star of this hazy IPA recipe comes from Mighty Axe Hops in Minnesota. The Arctic hop blend is specifically formulated from the highest oil content crops produced during the last harvest, meaning intense notes of tropical fruits, citrus and slight pine abound in glacial proportions. Chill out with the soft, supple malt foundation laden with luscious oats and prepare to be wowed by the overwhelming hop character. Moderate to low bitterness plays second fiddle to this absolutely massive hop flavor, creating a complex and downright exhilarating sipping experience.

KIT INVENTORY

GRAIN BILL

10.75 lbs Rahr 2-Row Malt
2 lbs Flaked Oats

PREMIUM HOPS

3 oz Arctic Whirlpool
2 oz Arctic Dry hop #1
2 oz Arctic Dry hop #2

SUGGESTED YEAST

YEAST

DRY YEAST:

Fermentis Safale US-05
Optimum Temp: 59°- 75°F

LIQUID YEAST OPTIONS:

Imperial Yeast A38 Juice
Optimum temp: 64°- 74°F

Omega Yeast OYL-011 British Ale V
Optimum temp: 64°- 74°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.
- All-grain equipment kit with mash tun and hot liquor tank
- Boiling kettle (at least 8 gallon 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 packages from the refrigerator. Leave in warm place (~70°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: _____

MASH SCHEDULE

SINGLE INFUSION

If you are new to all-grain, we suggest starting with 1.5 quarts of water per pound of grain for strike water volume. This mash thickness can be adjusted for future brews as you become more comfortable with your equipment.

Saccharification Rest: 150° F for 60 minutes

Mashout: 170° F for 10 minutes (optional)

To raise the temp for mashout, gently apply direct heat while stirring well (if using a kettle), or add near boiling water until target temp is reached.

Prepare sparge water in hot liquor tank at 1.5 quarts per pound of grain. Perform a fly sparge until you reach pre-boil volume (7-8 gallons) in your kettle. Sparge should take about an hour for optimal extraction efficiency. You should end with extra sparge water in hot liquor tank. Use this hot water to clean later on.

BOIL ADDITIONS & TIMES

Total time: 60 mins

- Please note there is only 1 hop addition after the boil has completed.
- 3 oz Arctic Turn off heat after the 60 min boil and allow to steep in the wort for 10 minutes before proceeding

PRIMARY FERMENTATION

10. **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 68°- 72°F.
11. When the yeast is highly active, add **2 oz Arctic hops** directly to the fermentor.
12. **Within 1-2 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.

13. Sanitize siphoning equipment, airlock, carboy bung or stopper. Siphon beer from primary fermenter into secondary. Add **2 oz Arctic hops** directly to the new beer.
14. Allow beer to condition in secondary fermenter for 2 weeks before proceeding with the next step. Timing is now somewhat flexible.

AFTER THE BOIL

1. When 60 minute boil is finished, remove from heat.
2. Cool wort to 68°-72°F ASAP.
3. Sanitize fermenting equipment and yeast pack: While wort cools, sanitize fermenting equipment (fermenter, lid or stopper, airlock, funnel, etc) along with yeast pack.
4. Transfer cooled wort into primary fermentation vessel using valve on boil kettle, siphoning from boil kettle, OR pouring wort into fermenter.
5. Aerate wort. Seal fermenter and rock back and forth to splash for a few minutes, or use an aeration system and diffusion stone.
6. Measure specific gravity of wort with a hydrometer. Record. Target gravity for this kit is 1.060.
7. Add yeast once temp of wort is between 68°-72°F. Sanitize and open yeast pack. Carefully pour contents into primary fermenter.
8. Seal fermenter. Add 1 tbsp of sanitizer or clean water to sanitized airlock. Insert airlock into rubber stopper or bucket lid. Seal fermenter.
9. Move fermenter to a warm, dark, quiet spot until fermentation begins.

BOTTLING DAY (ABOUT 4 WEEKS AFTER BREWING DAY)

15. Sanitize siphoning and bottling equipment.
16. 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.
17. Siphon beer into bottling bucket and mix with priming solution. Stir gently to mix
 - do not splash.
18. Fill and cap bottles.

CONDITIONING (ABOUT 6 WEEKS AFTER BREWING DAY)

19. Condition bottles at room temp. for 1-2 weeks. After this point, store bottles cool or cold.
20. 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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