

ST. JAMES GATE FOREIGN EXTRA STOUT

Official NORTHERN BREWER Instructional Document

This beer is a mighty, midnight-black strong stout in the tradition of Dublin's tropical export ales. Overtones of Turkish coffee and ultra-premium dark chocolate. Malt and residual sweetness spar with roast barley and a hefty charge of IBUs without a clear winner. You, the brewer, choose the ultimate character of this beer - modern or antique? Controlled sourness with mild- to moderate acid and esters; or the old-skool Victorian program with introduction of Brett to the entire batch during a lengthy secondary for a truly wild fermentation? The choice, dear homebrewer, is in your hands.

This kit includes two yeast packs - an ale yeast for alcoholic fermentation, and a culture of *Brettanomyces clausenii*, the bacteria responsible for the funky, fruity undertones in vatted old ale. Brewed strong and hoppy for export to the far corners of the empire, foreign extra stouts took on a "vatted" character from Brett fermentation during transport and storage. The modern paragon of this style blends a percentage of pasteurized, Brett-fermented wort with *S. cerevisiae*-fermented wort to add acidic sourness and estery high notes to a more stable product. See the additional instructions on the back side of this document for further details on the two different fermentation schedules.

O.G: 1.071 READY: 4 MONTHS+

1-2 weeks primary, 2-3 months secondary, 2-4 weeks bottle conditioning

KIT INVENTORY:

SPECIALTY GRAIN

- 1 lbs English Roasted Barley
- 0.5 lbs English Dark Crystal

FERMENTABLES

- 2 lbs Dark dry malt extract (60 min)
- 6 lbs Dark malt syrup late addition (15 min)
- 1 lbs Corn Sugar (add at end of boil)

HOPS & FLAVORINGS

- 1 oz Summit (60 min)

YEAST

- **WYEAST 1084 IRISH ALE YEAST.** Slight residual diacetyl and fruitiness; great for stouts. Clean, smooth, soft and full-bodied. Apparent attenuation: 71-75%. Flocculation: medium. Optimum temp: 62°-72° F.
- **WYEAST 5151 BRETTANOMYCES CLAUSENII.** Isolated from English stock ale, this wild yeast produces a mild Brett character with overtones of tropical fruit and pineapple. It ferments best in worts with a reduced pH after primary fermentation has begun. May form a pellicle in bottles or casks. Typically used in conjunction with other yeast and lactic acid bacteria. Apparent attenuation: 80-plus%. Flocculation: medium. Optimum temp: 65-75°F.

BEFORE YOU BEGIN ...

MINIMUM REQUIREMENTS

- Homebrewing starter kit for brewing 5 gallon batches
- Boiling kettle of at least 3.5 gallons capacity
- A 5 gallon glass carboy, with bung and airlock, to use as a secondary fermenter - If you do not have a secondary fermenter you may skip the secondary fermentation and add an additional week to primary fermentation before bottling
- Approximately two cases of either 12 oz or 22 oz pry-off style beer bottles

UNPACK THE KIT

- Refrigerate the yeast upon arrival
- Locate the Kit Inventory (above) - this is the recipe for your beer, so keep it handy
- Doublecheck the box contents vs. the Kit Inventory
- Contact us immediately if you have any questions or concerns!

PROCEDURE

A FEW DAYS BEFORE BREWING DAY

1. Incubate yeast. Remove the yeast from the refrigerator, and "smack" as shown on the back of the yeast package. Leave it in a warm place (70-80° F) to incubate until the pack begins to inflate. Allow at least 3 hours for inflation; some packs may take up to several days to show inflation. Do not brew with inactive yeast - we can replace the yeast, but not a batch that fails to ferment properly.

2. Prepare a yeast starter for the Wyeast Irish Ale strain. Follow the Yeast Starter Kit instructions. Allow the starter to incubate for at least one day.

Alternate method: yeast cake. Instead of a yeast starter, reuse yeast from a previous batch. Brew a batch of beer using the same yeast 1 to 2 weeks before Brew Day. On Brew Day, transfer the batch out of the primary fermenter and save the slurry from the bottom to pitch into the chilled wort. Be sure to follow good sanitizing procedures!

ON BREWING DAY

3. Collect and heat 2.5 gallons of water.

4. Crush and steep specialty grain. Pour crushed grain into supplied mesh bag and tie the open end in a knot. Steep for 20 minutes or until water reaches 170°F. Remove bag and discard.

5. Bring to a boil and add 2 lbs Dark dry malt extract. Remove the kettle from the burner and stir in the Dark DME.

6. Return wort to boil. The mixture is now called "wort", the brewer's term for unfermented beer.

- Add 1 oz Summit hops and boil for 60 minutes.

- Add 6 lbs of Dark malt syrup 15 minutes before the end of the boil.

- Add 1 lb corn (priming) sugar at the end of the boil.

7. Cool the wort. When the 60-minute boil is finished, cool the wort to approximately 100° F as rapidly as possible. Use a wort chiller, or put the kettle in an ice bath in your sink.

8. Sanitize fermenting equipment and yeast pack. While the wort cools, sanitize the fermenting equipment - fermenter, lid or stopper, fermentation lock, funnel, etc - along with the yeast pack and a pair of scissors.

9. Fill primary fermenter with 2 gallons of cold water, then pour in the cooled wort. Leave any thick sludge in the bottom of the kettle.

10. Add more cold water as needed to bring the volume to 5 gallons.

11. Aerate the wort. Seal the fermenter and rock back and forth to splash for a few minutes, or use an aeration system and diffusion stone.

12. Measure specific gravity of the wort with a hydrometer and record.

13. Depending on your fermentation schedule, you may wish to set aside a portion of the wort for souring.

Consult the reverse side of this sheet for more details. Add yeast once the temperature of the wort is 78°F or lower (not warm to the touch). Use the sanitized scissors to cut off a corner of the yeast pack, and carefully pour the yeast into the primary fermenter.

14. Seal the fermenter. Add approximately 1 tablespoon of water to the sanitized fermentation lock. Insert the lock into rubber stopper or lid, and seal the fermenter.

15. Move the fermenter to a warm, dark, quiet spot until fermentation begins.

BEYOND BREWING DAY, WEEKS 2-4

16. Active fermentation begins. Within approximately 48 hours of Brewing Day, active fermentation will begin - there will be a cap of foam on the surface of the beer, the specific gravity as measured with a hydrometer will drop steadily, and you may see bubbles come through the fermentation lock. The optimum fermentation temperature for this beer is 62-72° F - move the fermenter to a warmer or cooler spot as needed.

17. Active fermentation ends. Approximately two weeks to four weeks after brewing day, active fermentation will end. When the cap of foam falls back into the new beer, bubbling in the fermentation lock slows down or stops, and the specific gravity as measured with a hydrometer is stable, proceed to the next step.

18. Transfer beer to secondary fermenter. Sanitize siphoning equipment and an airlock and carboy bung or stopper. Siphon the beer from the primary fermenter into the secondary.

BEYOND BREWING DAY— SECONDARY FERMENTATION

19. Secondary fermentation. Allow the beer to condition in the secondary fermenter for 2-3 months or longer before proceeding with the next step. Depending on your fermentation schedule, you may wish to add the *brettanomyces* at this point. Timing now is somewhat flexible.

BOTTLING DAY—ABOUT 3.5 MONTHS AFTER BREWING DAY

20. Sanitize siphoning and bottling equipment.

21. Mix a priming solution (a measured amount of sugar dissolved in water to carbonate the bottled beer). Use the following amounts, depending on which type of sugar you will use:

- Corn sugar (dextrose) 2/3 cup in 16 oz water.

- Table sugar (sucrose) 5/8 cup in 16 oz water.

Then bring the solution to a boil and pour into the bottling bucket.

22. Siphon beer into bottling bucket and mix with priming solution. Stir gently to mix—don't splash.

23. Fill and cap bottles.

2-4 weeks after Bottling Day

24. Condition bottles at room temperature for 2-4 weeks. After this point, the bottles can be stored cool or cold.

25. Serving. Pour into a clean glass, being careful to leave the layer of sediment at the bottom of the bottle. Cheers!

SPECIAL INSTRUCTIONS – PLEASE READ BEFORE BREWING!

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BEFORE YOU BEGIN BREWING, DECIDE WHICH SCHEDULE YOU WILL FOLLOW FOR FERMENTATION:

FERMENTATION SCHEDULE A – MODERN

This method splits the batch into separate fermentations, one with each yeast; the *Brettanomyces* wort is heat-pasteurized after fermentation and blended with the main batch at packaging. This will yield mild- to moderate acid and Brett character in a more shelf-stable beer.

ADDITIONAL EQUIPMENT REQUIRED:

- a glass jug, bottle, or flask that can hold about 20 oz of wort, plus an airlock & stopper
- a saucepan or double boiler
- a glass or metal-probe thermometer

SCHEDULE A:

Primary, main wort: 1-2 weeks

Secondary, main wort: 3-11 weeks, or until sour wort is ready

Primary, sour wort: 4-12 weeks

PROCEDURE:

Split the batch: On brewing day, when the boil is finished and the wort is chilled, divert 600 ml (approximately 20 oz.) of chilled wort from the boil kettle to the sanitized glass container; pitch the *Brettanomyces clausenii* into the 600 ml of wort and attach the sanitized stopper and airlock - this is the sour wort. Put the remaining 4.75 gallons or so of wort into the primary fermenter and pitch the Irish Ale yeast - this is the main wort.

Ferment the two worts: Ferment the main wort and rack to the secondary fermenter as normal. The sour wort needs to ferment in the glass vessel for 4 to 12 weeks - do not rack! Compared to ale yeast, *Brettanomyces* is a slow fermenter and there may be little to no visible activity. A film or skin may develop on the surface of the sour wort - this is good! The sour wort is ready when the aroma is fruity, funky, and acidic enough; follow your instincts. If in doubt, give it more time.

Pasteurize, blend, & package: Sanitize racking and bottling equipment or keg. Using a saucepan or double boiler and thermometer, heat the sour wort to 180F and hold for a few minutes, stirring gently - it's important that the heat is evenly distributed. Immediately add the pasteurized sour wort to the sanitized bottling bucket or keg and rack the main wort on top of it. Stir gently to mix, and proceed with bottling or kegging as normal.

FERMENTATION SCHEDULE B – ANTIQUE

This method is simple - inoculate the entire batch with *B. clausenii* in the secondary and age 12 weeks (or more) before packaging to mimic the effects of barrel aging Victorian-era export-strength stout. This will yield a beer that will continue to evolve, developing higher levels of acidity and Brett character over time; this sour, aged stout can in turn be used for blending with younger batches.

ADDITIONAL EQUIPMENT REQUIRED:

- none

SCHEDULE B:

Primary: 1-2 weeks

Secondary: 12 weeks or longer

PROCEDURE:

Primary fermentation: Boil and chill wort, pitch Irish Ale yeast to primary. Ferment to attenuation and rack to secondary fermenter.

Secondary fermentation: Add *B. clausenii* to beer in secondary, attach airlock, and let it do its thing for 12 weeks or more. Ready for packaging when the aroma and flavor are sufficiently *Brettanomyces*-tinged for your taste.