

MILLENNIUM KESTREL

Official NORTHERN BREWER Instructional Document

At first glance this Belgian Pale Ale may not seem like much...but she's got it where it counts! Northern Brewer Saint Paul's proprietary blend of American hops provides complex floral notes, spice and citrus that gives way to a smooth, refreshing finish more satisfying than making a beer run in less than 12 parsecs. Enjoy with friends, but be warned: a Solo sip of this deep golden, light-bodied ale is sure to attract bounty hunters.

O.G.: 1.054 READY: 6 WEEKS

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

KIT INVENTORY:

MAILLARD MALTS™ SPECIALTY GRAIN

- 0.75 lbs Belgian Aromatic Malt
- 0.25 lbs Belgian Caravienne

MAILLARD MALTS™ EXTRACTS & OTHER FERMENTABLES

- 6 lbs Pilsen malt syrup
- 1 lb Clear Candi Sugar

HOPTIMUS REX™ PREMIUM HOPS & OTHER FLAVORINGS

- 1 oz Kestrel Blend (First Wort Hop)
- 0.75 oz Kestrel Blend (60 min)
- 1 oz Kestrel Blend (5 min)

YEAST

- **WYEST 3538 LEUVEN PALE ALE.**
Apparent attenuation: 75-78%. Flocculation: high. Optimum temp: 65°-80°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. Remove the liquid Wyeast pack 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. If you are using dry yeast, no action is needed.

ON BREWING DAY

2. Collect and heat 2.5 gallons of water.

3. Add 1 oz Kestrel Blend hops directly into the boil kettle. If you don't have a scale, you can estimate 1 oz by adding two tablespoons plus two teaspoons of hops.

4. For mail-order customers grains for extract kits come crushed by default, but if you requested uncrushed grains, crush them now. 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 the 6 lbs Pilsen malt syrup and 1 lb Clear Candi Sugar. Remove the kettle from the burner and stir in the Gold malt syrup and Candi Sugar.

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

- Add 0.75 oz Kestrel Blend hops and boil for 60 minutes.

- Add 1 oz Kestrel Blend hops 5 minutes before 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. 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 1-2

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 65-80° F - move the fermenter to a warmer or cooler spot as needed.

17. Active fermentation ends. Approximately one week to two 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 2-4 weeks before proceeding with the next step. Timing now is somewhat flexible.

BOTTLING DAY-ABOUT 1 MONTH 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.

1-2 WEEKS AFTER BOTTLING DAY

24. Condition bottles at room temperature for 1-2 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!