

JOHN PALMER'S OAKED MILD (Partial Mash)

Official NORTHERN BREWER Instructional Document

This mild brown ale is designed to be toasty, with hints of sourdough bread and roast, but the high crystal malt will balance the tannins and provide a balanced finish.

O.G: 1.046 READY: 6 WEEKS

1 week primary, 1-8 weeks secondary,

1-2 weeks bottle conditioning

KIT INVENTORY:

SPECIALTY GRAIN

- 2 lbs Maris Otter
- 0.75 lbs Briess Caramel 60
- 0.5 lbs Briess Special Roast
- 0.5 lbs flaked oats
- 0.5 lbs flaked wheat
- 0.25 lbs chocolate malt

FERMENTABLES

- 3.15 lbs Northern Brewer Maris Otter malt syrup

HOPS & FLAVORINGS

- 1 oz East Kent Goldings (60 min)

SPECIAL INGREDIENTS

- 2 oz US Medium Toast Oak Cubes (add to secondary for 1 to 8 weeks - see Step 23)

YEAST

- **DRY YEAST (DEFAULT):** Safale S-04 Ale Yeast. Optimum temp: 64-75° F
- **LIQUID YEAST OPTION:** Wyeast 1275 Thames Valley. Flocculation: Medium low. Attenuation: 72-77%. Temperature Range: 62-72 F.

PRIMING SUGAR

- 5 oz Priming Sugar (save for Bottling Day)

BEFORE YOU BEGIN ...

MINIMUM REQUIREMENTS

- Homebrewing starter kit for brewing 5 gallon batches
- Two kettles, one of at least 5 gallons capacity and one of at least 2 gallons
- A large mesh bag or strainer that can hold 5 lbs of grain
- A thermometer with a range that includes 120-170°F
- 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!

PARTIAL MASH BASICS

- This partial mash kit uses some techniques that may be unfamiliar to the extract brewer. The idea behind partial mash brewing is to use some malt extract for sugar content along with extracting some sugars yourself directly from grains. Basically, you'll be putting the grains in water and holding the mixture (called the mash) at a particular temperature while enzymes in the grain break complex starches down into simpler sugars. Then you will rinse the grains with hot water (a process called sparging) to get as much of the sugar off as possible. The liquid that you collect should be a sweet wort that you can use as a base for adding malt extract and hops. The procedure below will take you through the process step by step.

PROCEDURE

A FEW DAYS BEFORE BREWING DAY

1. If you chose liquid yeast - remove the 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. Heat 5 quarts of water to 164°F in your mash kettle.

3. Crush the grains if they are unmilled. Pour crushed grain and oats into your nylon mesh bag and place in the kettle, or if you are not using a nylon bag pour the grain directly into your mash kettle.

4. Adjust the temperature. Take a temperature reading of the mixture. The temperature should be within 1-2°F of 154°F. If not, adjust by adding cold or hot water as needed.

5. Put the lid on your mash kettle and wrap it in old towels or blankets to insulate it, or put it in an oven set to "warm" or "low" to maintain the temperature (make sure your oven is not too hot! The temperature of the oven should be at or under 154°F). Leave for one hour.

6. While the mash rests, collect and heat sparge water in your second pot. Collect 5 quarts of water and heat to 170°F. Hold at this temperature until the mash is finished.

7. When the one hour mash is finished, return the mash kettle to the stove (without towels!) and apply very low heat. Raise the temperature of the mash to 170°F, being careful not to scorch the grains.

8. Separate the grain from the liquid portion of the mash. Remove the grains from the mash - don't spill or waste the liquid, which is now the wort. If using a mesh bag, you can simply lift it out. If not using a mesh bag, scoop the grain into a colander or sieve over a bowl or pan to collect the drips. If you are using a separate kettle to boil with, pour the wort from the mash kettle to the boil kettle.

9. Sparge the grain. Using a strainer or mesh bag, hold the grain over the wort in the kettle. Slowly pour the 170° F sparge water through the grain, one quart at a time, until it's gone. Collect the sparge water along with the wort in the boil kettle. When finished, you may discard the grain.

10. Top up the kettle. Add more water if necessary to achieve your normal boil volume.

11. Bring to a boil and add in 3.15 lbs of Maris Otter malt syrup. Remove the kettle from the burner and stir in the malt syrup, then bring back up to a boil.

- Add 1 oz East Kent Goldings hops and boil for 60 minutes.

12. 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.

13. 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.

14. Pour the cooled wort into your fermenter. Leave any thick sludge in the bottom of the kettle.

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

16. 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.

17. **OPTIONAL:** if you have our Mad Brewer Upgrade or Gravity Testing kits, measure specific gravity of the wort with a hydrometer and record.

18. 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.

19. 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.

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

BEYOND BREWING DAY, WEEKS 1-2

21. 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, and you may see bubbles come through the fermentation lock.

22. Active fermentation ends. Approximately 1-2 weeks after brewing day, active fermentation will end: the cap of foam falls back into the new beer, bubbling in the fermentation lock slows down or stops.

23. Secondary fermentation with oak cubes. Pour the oak cubes into a sanitized 5 gallon carboy, then siphon the fermented beer in after them and seal with an airlock. Timing now is somewhat flexible - wait as little as 1 week or as long as 2 months before bottling, depending on desired intensity of oak flavor. Taste test samples of the beer and bottle when it's to your liking.

BOTTLING DAY - ABOUT 2 WEEKS AFTER BREWING DAY

24. Mix a priming solution (a measured amount of sugar dissolved in water to carbonate the bottled beer) of $\frac{1}{3}$ cup priming sugar in 16 oz water. Bring the solution to a boil and pour into the bottling bucket.

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

26. Fill and cap bottles.

1-2 WEEKS AFTER BOTTLING DAY

27. Condition bottles at room temperature for 1-2 weeks. After this point, the bottles can be stored cool or cold.

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