Free Will's *Micromanager* Pale Ale

Free Will likes to brew a lot of hop-bombs and this pale ale is no exception. A sessionable example of the infamous NEIPA style, this beer features no hops during the boil. Every hop is added after flameout. Free Will describes this beer as, "[a] New England-style American Pale Ale, hopped with a ridiculous amount of Ekuanot, Mosaic, Cascade and Centennial. Fresh lemon citrus and tropical fruit hop profile."

Malt Extract
3.3 lb. Briess Pilsen Light Liquid Malt Extract
2.0 lb. Briess Pilsen Light Dried Malt Extract

Steeping Grains*
1.1 lb. Thomas Fawcett Malted Oats
0.5 lb. Flaked Oats
0.5 lb. Flaked Barley
0.15 lb. Weyermann Acidulated Malt

OPTIONAL (Not Included): 8oz of Pureed Apples
Add at start of boil in a muslin bag.

Kettle Hops
2 oz. Ekuanot pellets (at flameout).
2 oz. Apollo pellets (at flameout).

**Targets*

Original Gravity	1.045
Final Gravity	1.011
Alcohol Content	4.4%

Dry Hops
4 oz. Ekuanot pellets
2 oz. Mosaic pellets
2 oz. Cascade pellets
2 oz. Centennial pellets

Yeast & Other
White Labs WLP090 San Diego Super Yeast
4 Muslin Bags
2 Large Muslin Bags
5 oz. Priming Sugar (for bottling)

**These grains are together in the clear bag.*

Procedure

A ***few hours before you begin to brew***, prepare your liquid yeast according to the package instructions. We assume that you are familiar with basic homebrewing techniques, so these procedures are abbreviated.

1. Prepare hops and grain additions. For your hops, place 1 oz. in each muslin bag. For grains, divide the grains between the two large bags.
2. Add the grain bags to your brew kettle along with up to 2.5 gallons of cold water (keep enough head space to avoid boil-overs). Heat slowly.
3. Steep the grains in hot water (about 145° – 160°F) to extract flavor and color – do not allow to boil. After about 30 minutes, remove the grain bags and then bring the water to a boil.
4. Remove the pot from the heat and add the liquid malt extract. Keep the kettle off the burner and stir until the malt extract is *completely* dissolved. *Note: if using apple puree, add it at this point.*.
5. Bring the wort to a boil. Keep an eye on the pot to avoid a boil-over as the wort starts to boil. You may need to adjust the heat accordingly. Set your timer for 30 minutes.
6. After 15 minutes of boiling you may add ½ teaspoon of Irish moss or ½ of a Whirlfloc tablet to help keep chill haze out your beer (optional).
7. After 30 minutes of boiling, turn off the heat and add the kettle hop additions. Add the remaining dry malt extract. Stir until completely dissolved. Allow to steep in hot wort for 15 minutes before chilling.
8. Remove the hop bags. Put a lid on your pot and cool it in an ice batch (use your sink) for about 30 minutes.
9. Pour 1 gallon of cold water into your sanitized fermenter and add the cooled wort (the stuff in your pot). Top up with additional water to 5 gallons. Aerate the wort with vigorous stirring, rocking the fermenter, etc.
10. Make sure the wort is below 75°F before adding yeast. Take a hydrometer reading and record it. Add the yeast.
11. Store the fermenter where the temperature will be a fairly constant 70° – 75°F.
12. After 3 days of fermentation, add HALF your dry hops directly to the fermenter and allow the beer to warm up an additional 5°F to 10°F. After two more days add the remaining dry hops. They do not have to be bagged.
13. After 10-14 days of fermentation, the beer should be ready to bottle. A hydrometer reading is a great way to determine when the fermentation is done – if it is at a stable gravity for 2-3 days in a row, it is ready to package.
14. When ready to bottle, siphon beer into your sanitized bottling bucket, leaving sediment behind. Boil the priming sugar in 1-2 cups of water for a few minutes, gently stir into the beer and bottle as usual.

For store use only – 6x EQU, 2x APO, 2x CEN, 2x CAS, 2x MOS

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