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Mars the Duck Oat Pale Ale

Kit Type: All Grain
Kit Style: 10A

Brewing all-grain recipes can be accomplished using many different methods. The steps described below are our recommendations. As you gain experience with all-grain brewing, you may choose to follow your own steps.

STEP 1: CLEAN AND SANITIZE

All equipment must be clean before brewing. Then, sanitize your equipment using products such as One Step, Iodophor, or Star San. If required by the manufacturer, rinse off the sanitizer thoroughly.

If you have liquid yeast with your recipe, remove the yeast from the refrigerator at this time to allow the yeast to warm up to room temperature before the end of your brew.

STEP 2: THE MASH

Your kit will contain the following grain:

9 LB 2 Row Malt
8 oz Crystal 40L
2 oz Pale Chocolate
1.5 LB Flaked Oats

Heat 1.5 quarts of water per pound of grain to 160° to 165° F. Mix the grain with the water. The temperature of the mash should fall to the ideal temperature of 150° to 155° F. You will mash your grains for 1 hour. Take temperature readings every 15 minutes to ensure that the mash temperature does not fall below 140°.

Next, heat 5 gallons of water in a separate pot to 170°. This will be your sparge water.

STEP 3: SPARGING

Before you begin sparging, drain out about 2 quarts of the sugary liquid (also known as "wort") from the bottom of the mash tun and pour back over the top of the grain. Next, begin draining the wort into a boil pot. While the wort is draining, start sparging on top of the grain with the hot sparge water. Continue to sparge and drain the wort until you have collected 6.25 gallons of wort in the boil pot.

STEP 4: THE BOIL

Bring the wort to a boil. Occasionally stir to prevent the wort from boiling over. Once the wort is boiling, remove the pot from the burner and add any additional sugars listed below:

STEP 5: ADDING THE HOPS

Now that the wort is boiling, you are ready to add the hops. The total boil time will be **60 Minutes**

With **60 Minutes** remaining, add these **bittering** hops:

0.75 oz Chinook Hops

With **15 Minutes** remaining, add these **flavor** hops:

0.25 oz Chinook Hops
0.5 oz Crystal Hops

With **5 Minutes** remaining, add these **aroma** hops:

0.5 oz Crystal Hops

STEP 6: CHILL THE WORT

After the boil, you will need to quickly cool your wort to 80°F. Fill a sink with ice water and place the pot in the ice water bath. You may need to change the ice water a couple of times, because it will warm up quickly. Once the wort has cooled to 80°F, pour the wort into a sanitized primary fermenter (commonly a 6.5 gallon or 7.9 gallon plastic bucket). You may need to top up the fermenter to 5.25 gallons if you ended up with less than 5.25 gallons of wort after the boil. If you have a hydrometer, you may now check the specific gravity of the wort to accurately determine how much alcohol you will have at the end of fermentation. To read a hydrometer, refer to the instructions that come with the hydrometer.

The original specific gravity should be approximately: **1.057**

STEP 7: PITCHING YOUR YEAST

Stir well to aerate the wort before pitching your yeast. This kit came with one of the following yeasts:

Recommended Yeast:
White Labs
California Ale 001
Wyeast
American Ale 1056
Dry Yeast
American West Coast BRY-97

If you have wet yeast, open the packages and pour on top of the wort. If you have dry yeast, sprinkle the yeast around the top of the wort. Now you will be ready to start the primary fermentation.

STEP 8: PRIMARY FERMENTATION

Put the lid on the fermenter with an airlock installed. Fill the airlock to the fill line with water. After 12-36 hours, CO2 will begin to bubble up through the airlock. After 5-7 days, the bubbling in the airlock will begin to slow and a thick "yeast cake" will form at the bottom of the fermenter.

STEP 9: SECONDARY FERMENTATION

After 7 days, transfer the wort to the secondary fermenter (commonly a 5 gallon glass carboy). Use a sanitized auto-siphon to siphon the beer to the sanitized secondary fermenter. Be careful to only transfer the beer while leaving as much of yeast cake and sediment at the bottom of the primary fermenter behind. Put a sanitized drilled stopper into the top of your jug. Seal the hole of the stopper with an airlock and fill the airlock with water up to the fill line.

STEP 10: DRY HOPPING

If the recipe calls for dry hopping, add these hops to the secondary fermenter at this point:

After you add your hops, replace the airlock on the fermenter and let the beer continue to ferment for another week.

STEP 11: BOTTLING

After 1 week in the secondary fermenter, there should be no more activity bubbling in the airlock. You are now ready to bottle the beer. If there is still bubbling in the airlock, wait an additional 2 days before you begin to bottle. If you have a hydrometer, take a gravity reading.

The final specific gravity should be approximately: **1.011**
To calculate the alcohol content of the beer, subtract the final gravity from the original gravity and then multiply by 131.

The equipment and ingredients you will need to bottle include an auto-siphon tubing, a capper and caps (unless you are using flip top beer bottles), your primary fermentation bucket, a small sauce pan, 2 cups of water, about 50 bottles, and 5 ounces of priming sugar. Make sure all of your equipment and bottles are clean and sanitized.

Put 2 cups of water in a sauce pan and bring to a boil. Add 5 ounce of priming sugar to the sauce pan and boil for a minute. Let the sugar mixture cool to 80°F.

Next, pour the cooled sugar water into the plastic bucket (primary fermenter), and then siphon the beer from the secondary fermenter into the bucket. Be careful to not disturb the sediment on the bottom of the fermenter. The sugar mixture you added to the beer is necessary for the beer to carbonate in the bottle. If your beer contains flavoring (listed below), add the flavoring to the bucket before bottling.

Flavoring to add before bottling

No Flavoring

Once the beer is in the bucket, place the bucket on a counter top. Attach the bottle filler to the end of the tubing. Siphon the beer and use the filler to put beer in the bottles. Fill the bottles to the top. When you remove the filler, the level of beer will be appropriate for capping. Cap each bottle and store in a dark place at room temperature. Chill the beer when you are ready to drink it.

This beer will taste best after **3 weeks** or more of storage.