

Instructions for brewing the extract version of WHALE ARROW I.P.A

1) Sanitize your fermenter (either carboy, stopper and blow-off tubing or plastic bucket, lid and airlock) by soaking for a minimum of 5 minutes in an iodophor solution: 1/2 oz.(1 Tbs.) per 5 gallons water (a one step cleaner/sanitizer may be used instead).

2) Add 11/2-2 1/2 gallons of cold water to your brewpot. Add the cracked grains to the water and heat. Steep grains until water starts to boil. Turn off heat and remove grains.

1 Crystal 40L, 1/2 lb. Biscuit Malt

3) Add malt extract (and any other sugars and/or water treatments, but do not add your priming/bottling sugar). Stir until everything has dissolved. Turn on heat.

6.6 pounds of Light malt extract Syrup

4) Boil above ingredients (wort) for a total of one hour. Add hops throughout the boil.

1/2 ounce of Nugget hop pellets bittering hops for full hour.

1 ounce of Cascade pellets flavoring hops for last 15 minutes of boil.

1/2 tsp. of Irish Moss last 15 to 20 minutes of boil.

1 1/2 ounce of Cascade pellets aroma hops for last 5 minutes of boil.

5) Turn off heat. In order to help cool down the wort, take your brewpot off the stove and cover it to avoid splashing. Immerse it in a sink partially filled with ice-water and swirl the pot occasionally. Chill until the bottom of the pot is cool to the touch when removed from the ice water bath.

6) Fill your sanitized fermenter with approximately 2 gallons of room temperature water. It is important that you add the water to the fermenter first when using a glass carboy since the glass can crack when subjected to extreme temperature changes.

7) Add the wort to the fermenter while straining out the hops. Shake the fermenter in order to help dissolve some air into the wort . Top up to 5 gallons with room temperature water.

8) Immediately add (pitch) your yeast when the wort is at or below 78F (when the fermenter no longer feels warm to the touch).

If you like dry yeast use Muntons, for liquid yeast use Wyeast

1098, or Whitelabs WLP005

9) If using a carboy, attach stopper and blow-off tubing and run the other end into water in a container to collect excess foam (blow-off). Make sure stopper is dry so that it creates a firm seal in the neck of the carboy. After blow-off has subsided (24-48 hours.) replace tubing with a sanitized airlock 1/2 full of water. If fermenting in a plastic bucket, attach lid and airlock 1/2 full of water.

10) Ferment in a dark place. Fermentation should start within 48 hours and finish within 3-10 days or up to 50 days at colder temperatures (Ale yeast is best used between 63F-75F. Lager yeast is best used at 42F-58F). When it takes more than two minutes for a bubble to escape from the airlock you can assume fermentation is complete. You're now ready to bottle and should do so within the next week.

11) Sanitize your siphon, bottles and bottling bucket as indicated in step #1 above.

12) To be sure fermentation is complete siphon off enough beer to fill your hydrometer flask and float your hydrometer in it. A specific gravity higher than 1.020 indicates incomplete fermentation. The beer is not safe to bottle.

13) Boil bottle caps in a pint of water for 15 minutes or sanitize as indicated in step #1 above.

14) Boil (priming sugar) in one pint of water for 15 minutes and pour into your bottling bucket.

3/4 cup corn sugar (priming sugar) or 1 1/4 cups of dried malt extract

15) Siphon beer from fermenter to bottling bucket. Avoid taking up yeast from fermenter and splashing beer in bottling bucket. Gently stir with the end of the siphon tube to mix in the priming sugar.

16) Fill bottles from spigot, leaving 1/2" to 1" airspace and cap.

17) Store bottles upright in dark place at fermentation temperature for at least two weeks.

18) Drink the beer. Repeat.