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## Brewing the Northern Brewer Double IPA (extract version)

### Supplement to the General Beer Kit Instructions

In order to achieve an extremely high bitterness level in a high-gravity beer, you will use the bittering hops to make a *hop tea* by boiling the hops in water, then adding the hop tea to the regular wort at the end of the boil. Because acids in the hop flowers are extracted more efficiently in a less dense solution, boiling them in water (with a specific gravity of 1.000) yields more bitterness than boiling them in a dense high-gravity wort (in this case, with an SG of 1.090 or more).

In addition to standard brewing equipment, you will also need the following to brew the Double IPA:

- A saucepan or pot of at least 3 quarts for making the hop tea
- A second burner to boil the hop tea
- A secondary fermenter
- Yeast starter kit

Optional:

- Aeration or oxygen system

#### *Prior to Brewing Day*

1. **Prepare a yeast starter.** Incubate the Wyeast pack and prepare a 1000 ml (or larger) yeast starter, 2 to 4 days before you will brew the beer. The actual work for this step takes a relatively small amount of time but makes a big difference in the fermentation and flavor of the finished beer.

Ferment the starter at the same temperature at which you will ferment the beer – for example, if you will be fermenting your Double IPA at 65°F, allow the yeast starter to ferment at 65°F as well to prevent “temperature-shocking” the yeast. For information on how to make a yeast starter, refer to [www.northernbrewer.com/docs/html/yeast-starter.html](http://www.northernbrewer.com/docs/html/yeast-starter.html)

If you choose not to make a yeast starter, prepare the wort as specified below, and pitch yeast when the wort is 78°F or lower. The lag phase may be several days long, and the terminal gravity may be high.

#### *On Brewing Day*

2. **Prepare the wort.** Follow steps #3 through 6 of the General Beer Kit Instructions to make the wort.
3. **Prepare the hop tea.** While the grain is steeping and the wort is being brought to a boil, collect 2 to 3 quarts of good-quality drinking water in the hop tea pot and bring it to a boil.

4. **Boil the wort and the hop tea separately for 60 minutes.** Boil the wort according to step #7 of the General Beer kit instructions, but add the bittering hops (1 oz Yakima Magnum and 1 oz Liberty) *to the hop tea* at the specified times. There should not be any hops in the wort at this point. Both the wort and the hop tea should boil for 60 minutes – use an egg timer or make a note of the time that each boil began so that you will know when they are done.
5. **Add the aroma hops to the wort.** Add the aroma hops (1 oz of Yakima Magnum) *to the wort* ten minutes before the end of the boil.  
*Note:* If the wort finishes its 60-minute boil before the hop tea, proceed with step #7, below, and go back to step #6 once the tea is finished boiling. You will then need to re-chill the wort before continuing with steps #9 through 12 of the General Beer Kit Instructions. If the hop tea finishes first, combine it with the wort and boil them together for the time remaining.
6. **Combine the wort and the hop tea.** When both the hop tea and the wort are finished boiling, carefully pour the hop tea into the wort in the boiling kettle. If you like, you can use a sanitized colander or strainer to remove some of the hop solids as the tea is added – don't worry if some particles get through.
7. **Add finishing hops and chill the wort.** Put the finishing hops (2 ounces of Northern Brewer leaf hops) in the supplied muslin bag and tie the open end of the bag into a knot. Steep the hops in the wort as it chills. Proceed with steps #8 through 12 of the General Beer Kit Instructions.

## Fermentation

Follow the steps outlined in the “Fermentation” section of the General Beer Kit Instructions. Your Double IPA, being a very strong beer, may show signs of fermentation for up to two weeks. After active fermentation subsides and the specific gravity is stable, transfer the beer to the secondary fermenter and allow it to age for eight to twelve weeks.

8. **Dry hop the beer.** Add the dry hops (1 oz Amarillo) to the secondary fermenter one to two weeks before bottling.
9. **Bottling.** Nine times out of ten, you can follow the instructions in step #14 of the General Beer Kit Instructions for priming and bottling a high-gravity beer. Sometimes, however, you may need to add fresh yeast at bottling to ensure good carbonation. This is most common when the beer has been aged in the secondary for more than 8 weeks, or if the beer had a very high (over 1.070) original gravity. If the beer is very clear after the secondary fermentation, most of the yeast may have settled out, and there may not be enough cells left in suspension to carbonate the bottles.

To repitch yeast at bottling, add one incubated Wyeast XL pack per 5 gallons (repitch with the same strain that was used for the fermentation; it's not necessary to make a yeast starter). Sanitize the pack and a pair of scissors as described in step #11 of the General Beer Kit Instructions, and gently mix the fresh yeast with the beer in the bottling bucket, then proceed as normal. This will not cloud the beer or cause bottles to explode (as long fermentation is complete or you don't add more than the correct amount of priming sugar!).

Proceed with step #18 of the General Beer Kit Instructions to condition the freshly-bottled beer.

10. **Cellaring.** High-gravity beers generally take well to aging. Set aside a six pack (or more, if you can stand it) for future sampling. Stored in a dark, cool place, your Double IPA will continue to improve and increase in complexity.