



Northern Brewer, Ltd. • 1150 Grand Avenue • St. Paul, MN 55105 • (800) 681-2739 • www.northernbrewer.com

General Extract Beer Kit Instructions

*These instructions are basic brewing procedures for all Northern Brewer extract beer kits; please refer to the **Kit Inventory** (located on the top of the label on the kit box) for specific instructions pertaining to your beer kit, including hop additions, yeast specifications, or special ingredients. Please refer to your starter kit instructions for specific instructions on use of equipment and common procedures such as siphoning, sanitizing, bottling, etc.*

Before you begin ...

Minimum requirements

- homebrewing starter kit for brewing 5 gallon batches
- boiling kettle of at least 2.5 gallons capacity
- approximately two cases of either 12 ounce **or** 22 ounce pry-off style beer bottles

Boil volumes

The procedure that follows is for a **partial-boil** – boiling a portion of the total batch volume (e.g., boiling 2 gallons out of a 5 gallon batch) and diluting the wort with water after the boil. Please refer to the note at the end of the document if you will be doing a **full-volume boil** of 5 to 6 gallons.

Procedure

Before you brew

1. **Refrigerate yeast and double-check kit.** Unless you are brewing immediately, refrigerate the yeast. Double check kit contents against the Kit Inventory. Please note that some kits contain more than one type of specialty grain – for these kits, specialty grains are blended and contained in one bag.
2. **Incubate yeast 3 hours in advance.** When brewing with a Wyeast Activator “smack pack” (the yeast that comes in our kits), you will get the best results if you incubate the yeast in advance. This takes 1 to 3 hours, but can be done up to 24 hours in advance. To incubate the yeast: remove the yeast from the refrigerator, and smack the package. This breaks open the inner pouch, and releases yeast food and nutrients into the yeast. Shake the package well, and leave it in a moderately warm place (70-80° F). As the yeast incubates, the package will begin to inflate. It is not

necessary for the pack to fully inflate before use. **Note:** When stored in a refrigerator and used within 3 months of purchase, our Wyeast packs will show inflation within 5 days of activation, or we will replace them free of charge. **Do not brew with inactive yeast** — we can replace the yeast, but not a batch that fails to ferment properly.

On Brewing Day

3. **Collect and heat water.** Begin the brewing process by collecting 1 ½ gallons of good-quality drinking water in your boiling kettle. Put the kettle on the burner and start heating it.
4. **Crush specialty grains (if necessary).** If your kit contains a specialty grain mix, crush the grains. The easiest way to crush grains at home is to place the grains in a large Ziplock freezer bag and crack the kernels open with a rolling pin. If your kit does not contain specialty grains, proceed to step #6.
5. **Steep specialty grains.** Transfer the crushed grains to the supplied muslin grain bag. Tie the open end into a knot. Steep the grains in the heating water like a tea bag. Remove the bag after 15 minutes or once the water reaches 170°F. **Do not boil the specialty grains!**
6. **Add malt extract and any other fermentables.** Once the water comes to a boil, remove the kettle from the burner. While stirring, add the malt extract syrup and/or dry malt extract (DME). Add other fermentables (honey, candi sugar, treacle, rice syrup, lactose) in the same way. **Important:** The 5 oz bag of priming sugar is needed for bottling – do not add it to the boil! Once the extract is dissolved, return the kettle to the burner and begin heating. The mixture is now called “wort”, the brewer's term for unfermented beer.
Boil over: Watch the kettle carefully at this stage. When it returns to a boil, there will be a lot of froth that can very quickly rise up over the kettle and “boil over”. Be prepared to reduce the heat as soon as the boiling begins again. Rapid frothing can also occur whenever

you add ingredients to the boil; this is particularly true of the first hop addition.

7. **Boil the wort for 60 minutes.** Once the wort returns to a boil, set a timer to 60 minutes. Add boil additions (hops and spices) to the kettle at the times specified on the Kit Inventory. All times on the Kit Inventory are listed in minutes before the end of the boil. For example, if you have a recipe that calls for 1 ounce of Chinook hops at 60 minutes, and 1 ounce of Cascade hops at 10 minutes, then add the Chinook hops right away and set the timer. When there are 10 minutes left on the boil, add the ounce of Cascade hops.
8. **Chill the wort.** Shortly before the end of the boil, fill your sink with about 3-4 inches of cold water. When the boil is finished, cover the kettle and cool the wort by placing the covered container in the water bath. You can cool faster by adding ice to this bath, or by periodically draining and replacing the water. If you can get the temperature down to about 100° F within 20 minutes, you are doing a pretty good job.
9. **Sanitize fermenting equipment.** While the kettle is chilling, sanitize the fermenting equipment – fermenter, lid or stopper, fermentation lock, funnel, etc.
10. **Fill primary fermenter.** Fill the sanitized primary fermenter with 3 gallons of cold water. Pour the chilled wort into the primary fermenter. Leave any thick sludge in the bottom of the kettle. Top up fermenter to 5 gallons with more cold water.
11. **Pitch yeast.** “Pitch” yeast into the fermenter when the temperature of the wort is 78°F or lower (not warm to the touch). Immerse the yeast packet and a pair of scissors in a One Step solution for 1-2 minutes. Hold the yeast packet upright and make a small cut in the top to release pressure. Continue to cut off a corner of the packet. Carefully pour the yeast into the primary fermenter.
12. **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.

Fermentation

Fermentation temperature: Brewer's yeast is very temperature-sensitive. Most ales ferment best from 60°-70°F. Most lagers ferment best from 46°-58°F. To determine optimal fermentation temperature, refer to the Wyeast specifications listed on the Kit Inventory.

Lag phase: The more fresh, healthy yeast you add to the fermenter, the shorter the *lag phase* - the amount of time before fermentation begins. Fermentation should begin within 48 hours, although it can take longer for strong beers and lagers.

Active fermentation: During active fermentation, the yeast cells absorb sugars from the wort and produce CO₂ and alcohol. You may see the fermentation lock bubble. During active fermentation, the specific gravity of the wort will steadily drop until the fermentation ends, at which point it will remain the same.

Fermentation time: Primary fermentation normally lasts about 4 to 7 days for ales, 7 to 14 days for strong beers and lagers. These are guidelines – actual times may vary.

End of fermentation: After the beer has been in the primary fermenter for one week, you should start taking hydrometer readings to see if it has completed fermentation - when you take two identical readings on consecutive days, then the fermentation is complete. Active fermentation is finished when the thick, yeasty head (called “krausen”) that forms on the beer falls back. You will also notice the beer starting to clearify, and particles settling out. There will be little or no activity in the fermentation lock. Once primary fermentation is complete, proceed with bottling or secondary fermentation as specified by your starter kit instructions.

Dry hopping: If your beer kit calls for dry hopping, add the specified amount of hop pellets to the secondary fermenter (or, if you have a single-stage system, add the hops to the primary fermenter after fermentation subsides).

Secondary fermentation times: Use the following rules of thumb for secondary fermentation:

Ale or Specialty Beer (incl. Belgian Witbier): 2 – 4 weeks
High Gravity Ale or Belgian Ale: 6 – 12 weeks
Lager: 4 – 12 weeks (up to 16 weeks for Doppelbock)

Bottling and conditioning

13. **Sanitize equipment.** Sanitize siphon equipment, bottling bucket, bottle filler, bottle caps and beer bottles.
14. **Mix a priming solution.** Measure out 3/4 to 7/8 of a cup of priming sugar from the bag of priming sugar. Combine sugar with one pint of water in a small saucepan. Boil 5-10 minutes to sanitize. Pour the priming solution into the bottling bucket.
15. **Add fruit extract (if necessary).** If your beer kit contains a Natural Fruit Extract, pour it directly into the bottling bucket.
16. **Mix beer and priming solution.** Siphon the beer into the bottling bucket, leaving behind as much sediment as possible. Stir gently to mix.
17. **Fill and cap bottles.**
18. **Conditioning.** Allow bottles to condition at room temperature for 10-14 days. Chill and serve as desired.

Adjustments for full-volume boils

If your system is designed for a full-volume boil of 5-6 gallons, make the following adjustments to the above procedure:

- **Step #3** - collect 5.5 to 6 gallons of water in the kettle.
- **Step #7** – use 25% to 50% less bittering hops (any hop additions during the first 30 minutes of the boil) than called for in the kit inventory - e.g., use ½ to ¾ oz instead of 1 oz; all other boil additions remain the same
- **Step #8** – use a wort chiller to cool the wort
- **Step #10** – add only enough water to reach 5 gallons