

Brewing with a Series 2 Pack

4.1. Introduction

The Series 2 brew improver Packs contain dried extract, some may contain a small amount of sugar, all have hop packs kept separately in our fridge and some Packs have a pack of crushed specialty grains. The preponderance of malt, the fresh hops and the specialty grains combine with your brewing to produce the tastiest beers you can brew using beer concentrates (kits).

Wort is made by steeping the specialty grains. This steeping is *not* mashing, it takes only minutes and exact temperature is not important. A few Packs do involve a minimash but this is clearly stated on the Pack label.

The dry extract is added to the wort obtained by steeping the grains. This combined wort is then boiled and adding hops at various specific times during the boil to add bitterness, flavor and aroma. .

The boil times, amounts of water to be used and so on are mentioned on the label of your Series 2 Pack. The guidelines in this chapter are a general how-to, so to brew a Series 2 Pack you need both the label of the Pack and these instructions. We stock and recommend Coopers and Morgans kits for use with Series 2 Packs.

We recommend new brewers brew a Series 1 pack before tackling a series 2 Pack.

*Fresh hops and grains help you brew the tastiest beers
Beers sure to impress!*

4.2. The specialty grains

We weigh, crush then pack these separately. This means you can steep these grains in warm water, rather than boiling them with the wort. Place the grains into a small pan and mix with three times its weight of water: e.g. 200g of specialty grains needs to be mixed with 600ml of water. Mix the grains well so that there are no dry pockets.

Grains that are light in color like crystal, caramunich and carapils can be warmed to 65°C then covered and left to steep for 20 minutes (just mix with warm water out your hot water tap and put on the lowest possible heat.) Stir all the time you are heating the water-grain mix.

Grains that are dark, like chocolate and black malt and roast barley should be mixed with the appropriate amount of *cold* water and left standing overnight. In really warm weather you can put your container of cold steeping grain in the fridge This *cold steep* extracts the flavors but not the astringency dark grains will add to your beer. To maximise extraction of flavors from these dark grains sparge as described below.

At the right stage in your brewday, described later, strain the liquid from the grains through a fine kitchen sieve. If desired, you can then *sparge* the grains with a cup of water about 10 minutes off the boil, but this will not really be necessary. You risk adding

astringencies and tannins if you sparge too much or with water too hot or too cold. The grains are then discarded. They make great compost and chooks love them.

Note that some brewbooks recommend a steeping technique where grains are held in water until the water starts boiling. Any procedure like that will without fail extract astringency from the grains. The procedure described above is safe.

It is better to not boil the grains, really dark grains should be cold-steeped overnight.

*Do mix well to ensure there are no dry pockets,
ands stir constantly while heating the water-grain mixture to avoid scorching the grains*

Sparge grains with a cup of water at 80°C to extract more sugars, flavor and color.

4.3. Dry extract

The bulk of the Pack is dried extract with perhaps some sucrose or dextrose. Get your biggest pan, preferably 8L or larger. If you have a 10L pan then add 2L to the water quantities set out below. This will increase your hop utilisation thus increasing bitterness and hop flavors and aromas, all desirable. A total of 5L vigorously boiling wort is the bare minimum. If you have a smaller pan, double or treble the hop boiling times given, or try a split boil using 2 pans, etc..

So, if there are no grains in the Pack, place 5L cold water in your 8L pan, then add the extract/sugar mix, adding a third or quarter of the Pack at a time, stir well to dissolve, then add the next third or quarter. If your Pack does have grains, allow for half the water you added to the grains to be added to the 8L pan later: normally with grains you would add 4.5L water to this big pan—refer to the Pack label for the exact amount.

*Add the extract to cold water: if you add it to hot water it will ball up
and be extremely difficult to handle.*

The pan is on medium heat. Your extract will be dissolved except for a few bits floating about. Stir occasionally, wait for it to reach nearly to simmering stage. You will see scum begin to form, then darken in color. Skim it right after the darkening, so that the surface of the wort is 90% clear. If you find that the wort boils over before you can do this, try bringing it up to simmering more slowly, or add 3 or 4 hop pellets from hop Pack A. This helps reduce foaming. Bat the rising foam down, blow on it or spray a tiny amount of cold water on it to prevent it boiling over.

Once the surface of the simmering wort is clear, strain the wort from the grains into the big pan of simmering wort. Discard the grains. Simmer a minute or two longer, skim a bit more if needed, then turn the heat up so your combined wort *is boiling vigorously!* The hops need to boil vigorously as you can manage, one reason for preferring the largest pan (treat yourself to a *quality* 20L pan, great for making stocks and boiling wort!)

4.4 The boil

Why do a boil? Firstly to sterilise the wort, since wort is a sweet sugar/protein solution ideal for any wild yeast or bacteria to breed in we do a boil to kill these pesky critters. If you have done a mash, even a small one, boiling the wort destroys the enzymes activated by the mash, else your beer would be thin, out of balance and less nutritious. Finally, a strong boil

will extract bitterness, flavor and aroma from your hops.

The very word “brewing” refers to boiling. If you wish to add some spices to your beer add them to the boil when it has fifteen minutes left to go. Please refer to the label of your Pack for the total length of the boil and timing for the hop additions.

When we talk of a boil we are referring to the vigorous, roiling boil, not the simmering we do while scimming the scum.

4.5. The hops

Packs may contain hop packs with one, two or three pouches of hops. The “A” hops add bitterness to counter the sweetness of the malt and may also add hop flavor, the “B” addition is there for flavor and aroma while any “C” addition, added *after* you turn the heat off under your wort, adds aroma only. Stouts usually only have one bittering addition and most lagers have two. By spreading the addition of hops over time your Pack will give a great hop presence, flavor and aroma, without making the beer too bitter to drink.

Mostly the hops are present in the form of pellets but some Packs have hops in plug form—crush these up a bit before adding. You will find plugs give superior flavor and aroma.

As you add the hops, especially the “A” hops they may cause some foaming up. Be alert to bat that down with a tablespoon or similar. Once the scum has been skimmed and the hop foaming batted down the boil should proceed without further trouble, especially in a nice big pan with plenty of head space.

The front label of the Pack will indicate the length each hop addition should be boiled. For example, boil “A” hops for 15 minutes, “B” hops for 5 and “C” hops for no minutes. This means, when the wort is boiling vigorously, add the “A” hops and set the oven timer to 15 minutes. When it points to 5 minutes add the “B” hops and when the bell rings turn the heat off and add the “C” hops. Thus, the length the “A” hops are boiled is the total length of the boil (the simmering that you do previous to turning the heat up so the wort boils vigorously is not counted)

4.6. Liquid extract

A few of the Packs also call for a 1.5K can of light liquid malt extract. These augmented Packs result in 7–8% abv beers. For issues of hop utilisation previously discussed we recommend the following procedure for using these cans.

At about 10 minutes before the end of the boil, bail out 2L of your boiling wort into a smaller pan. This pan is not to be heated at all. Mix in the liquid malt, that you previously stood in hot water to soften the contents. Mix in well to dissolve all the extract, stir for a minute or two, then slowly add the wort + liquid extract to your pan of boiling wort, trying not to stop the boil.

This way none of the liquid extract will scorch, and the gravity of your wort is only increased right at the end of your boil.

It will be advisable to follow the same procedure with any separate pack of sugar contained in your Pack, save that Lactose must boil for half an hour.

Add liquid malt extract and packs of sugar off-heat.

4.7. End of boil

Once you have turned off the heat and added any “C” hops you need to both cool the wort and separate out the trub (hop detritus and hot break.) The first step is to stir your wort really really well, creating a whirlpool. Put the lid on the pan of wort, then cover with some teatowels and towels *and let it stand undisturbed for 30–45 minutes.*

The wort won't cool much in this time, but the trub will form and stabilise into a shallow cone on the bottom of the pan. You can now bail out, carefully, about half of the wort before the hops etc get stirred up again. Place this clear bailed wort into a smaller cleaned and sanitised pan, put the lid on this then stand it in a sink part filled with cold water, icecubes, etc to cool the cleared wort.

While this is cooling, add the contents of your can of beer concentrate to your cleaned and sanitised fermenter. Place a fine, cleaned & sanitised kitchen sieve over your fermenter and start pouring the rest of the wort from your big pan into it. Move the pan smoothly and pour in one sustained pour and the hops and trub should not show themselves until just about all the wort is in the fermenter.

*Trying to sieve the hops and trub from the wort is a tedious business
except with this whirlpool method.*

When that is all done, mix the wort with the kit, stirring to dissolve all the malt extract. Strain the cooled clear wort into the fermenter, top up with cold water to 20L, fit the lid and leave all to settle down for 5 minutes. Note the thermometer reading, and top up to 22 or 23L with cold or hot water to arrive at a final wort temperature of about 23–25°C. It will be useful to have some prechilled spring water and near boiling water handy to adjust the final temperature of your wort.

Finally pitch the yeast and fit lid and airlock, etc

4.8. Some reflections

Brewing a Series 2 Pack can take a couple of hours, so you should try to make the beer as good as possible to repay this effort.

- A. Ferment at the right temperature, and keep this temperature as constant as you can. Lagers need to ferment at 8–10°C so a brew fridge is really needed for these, any old banger of a fridge will do. Ales should be fermented in the 17–21°C range.
- B. Use a liquid yeast. Yeast is responsible for 40% of beer flavor and 60% of beer aroma, so the better the yeast the better the beer. There are dozens of liquid yeasts, so you can choose one that will be just right for your beer.
- C. Give your beer time. We recommend you leave beers in the primary fermenter for at least one week after the ferment has finished. In this week the yeast starts dropping out, making the beer clearer. The yeast cake and the dropping yeast clean your beer of faults such as diacetyl (a butter scotch flavor.) Lagers are usually taken out of the fridge at the end of the ferment and allowed to stand at ale temperatures for a few days.
- D. Cold condition. At the end of the week, rack your beer into a “cube” and place the cube in a fridge set to 3°C. A cube is a food grade plastic cubical water container that can hold nearly 23L with very little airspace, ideal for storing beer in. Cold

condition for two weeks minimum, more for bigger beers. For lagers, store the beer at 0°C for a month, then at 3°C for another month or more, again depending on the size of the beer—and your willpower!

- E. Beer concentrates are an expensive way to brew. You can replace a \$14 kit with \$6.05 worth of bulk liquid extract and \$2–3.00 worth of extra hops. Better still, replace the beer concentrate with a minimash of 2.5Kg of pale malt (\$5.00) and the extra hops. Better beer, for much less!

4.9. Further topics

To complete the coverage of brewing with beer concentrates please examine the topics of “Yeast and Fermentation Management”, “Seasonal Brewing” and “Part Mashing” appended. (to be sent later)