

Small Batch Brewery Extract recipe instructions

This beer kit makes 11litres (2 Gallons) of beer. All the ingredients are contained in this kit apart from water and a little sugar for bottling.

Extract brewing lets you make fresh beer using hops and steeping grains with a base of pre mashed grain (malt extract) to brew beer that tastes great and is quick and easy to brew. Small Batch Brewery lets you brew craft beer on a micro scale in your own kitchen without the need for specialist equipment.

To do this you will require a simple stock pot. Ideally the pot will have a hop strainer and tap, and must allow at least 5 litres extra volume on top of the intended final volume of the recipe pack. You want the pot to fit inside your sink to cool the wort to fermentation temp before pouring the cooled wort into your fermenting vessel and adding the yeast and an airlock and then fermenting. If you only have a smaller pot use less steeping water and add more water to the fermenter. You also require some 'muslin' cloth for use with the steeping grains.

If you are brewing for the first time read through this introduction to brewing. This can be used for guidance in conjunction with the recipe's **brew day sheet**. The brew day sheet gives specific requirements and a schedule for your recipe, while this brewing guide gives more general information about how to brew. Points in this brewing guide which relate directly to your brew day sheet are numbered and marked in **bold**, to walk you through the brew day.

You need basic 2 gallon home brewing equipment to ferment and bottle your beer – which should comprise of;

- 15 litre carboy or fermenting bin with an airlock and bung.
- Homebrew equipment steriliser.
- Siphon tubing / auto siphon.
- Beer bottles - buy new or recycle your own glass or plastic bottles but they **MUST** be designed for carbonated drinks, you can use fizzy pop PET bottles but do not use wine bottles! If you are using glass beer bottles you'll need a crown capper and caps to seal them.
- We recommend using a hydrometer and thermometer.

Get prepared

Check your kit - Start by checking you have a brewing pot and all the fermenting equipment you need to hand – you're brew will need to ferment for around a week and then you'll need your bottles. For an 11 litre brew you'll need 20 x pint bottles or a mini Cornelius Keg or two Minikegs or a 10 L pressure barrel (bottle the remaining litre). Another tip is to pre mark your fermenting vessel by measuring water into it and marking the outside with a marker pen at the level your recipe states you want to ferment – in this case 11 litres (not necessary if using a graduated bin, but very handy if you have a clear demijohn or carboy!)

If you are new to brewing or new to extract brewing, read the detailed techniques instructions - and if you want any further clarification or advice do not hesitate to get in touch with Brewstore! We are open 7 days a week and you can contact us by phone, by email or check the Brewstore website where we have video links, frequently asked questions, blog articles to help you with your brew. If you're not sure about something we'd rather hear from you before you make a mistake that after you've done it!

Check you have all your ingredients ready. This pack should contain the malt extract, steeping grains, hops, yeast and any flavour additions as stated in the recipe. You need to sterilise anything that will come into contact with your beer after it has been boiled and cooled (i.e. all your fermenting, testing and transferring kit) but you don't need to sterilise the pot used for the boil.

Give yourself (and the beer) time

From the start of brewing to getting your beer into your fermenter you'll need around 1.5 hours, once it's in the fermenter your beer will take care of itself and be ready to bottle in around a week. Bottling takes 30 minutes and once your beer is in the bottles, leave it to carbonate and condition for ideally 3 weeks before enjoying – if you really can't wait it should be ready to drink around 10 days or so after bottling but the flavour improves and the beer clears much better if you can leave it a bit longer!

Good habits

Clean your brewing and fermenting equipment straight after use – you don't need to sterilise them till you need to use them again but dried on yeast is a pain to clean off. Don't use abrasive pads or harsh chemical cleaners on your brewing equipment. Scratches in your kit harbour germs and bleach leaves a taint to your beer. Soak dirty kit overnight or for several days using your homebrew equipment steriliser if you have to. Rinse your beer bottles out after use to make them easier to use the next time. We use a light brushing of milk on the back of regular paper to make labels which will stick to your bottles well, but comes off really easily when you need it to.

Extract Brewing Techniques Explained

Steeping

Heat your **steeping water volume (1)** 6 litres of water in your pot to 70°C. Put your steeping grains in a muslin bag into the hot water and steep them for 20 minutes, maintain a the recommended **steeping water temperature (2)** usually around 66°C. After 20 minutes remove the bag of grains and discard it. Bring the liquid up to boiling and then add the dried malt extract stirring all the time. Return the wort (unfermented beer) to the boil. Avoid boil overs here especially when adding the malt extract by reducing the temperature or having a spray bottle of water to hand to spray over the top of the brew if it looks like it's going to boil over.

The Boil – hop additions

Bring your wort to the boil. Keep an eye on it to make sure it doesn't boil over! Adjust the heat as necessary to keep a rolling boil for the next hour. You've collected the fermentable sugars and malty flavours in steep, now it's time to add the bitterness, aroma and flavour of the hops.

The boil concentrates the sugars of the wort. Adding hops at different stages of the boil give bitterness, aroma, and flavour to the wort.

Bring your wort to the boil. Keep an eye on it to make sure it doesn't boil over. Adjust the heat if necessary to keep a rolling boil which is usually maintained **(3) for one hour**. Do not boil with the lid on the pot, evaporation removes off-flavours from the wort.

Weigh out your **(4) hop additions** from the labelled hop bags according to the brew day sheet instructions. Your first hop addition is bittering hops, which provide most of the bitterness, while late additions provide most of the flavour and aroma. The timings for hop additions as indicated on your brew day sheet indicate the length of time from the end of the boil when a hop should be added. From the point when you add your first hop addition to the boil, you are counting down from minute 60. Hence your first hop addition boils for the full 60 minutes. A 5 minute hop addition is added to the boil only 5 minutes from the end, which will be 55 minutes after the start of the boil! If you have an immersion chiller it is worth placing this in your boiling wort to sterilise it for 10 minutes before the end of the boil, likewise for using Irish moss (i.e. finings).

Cooling your Wort

When the boil is complete, turn off the heat and turn on your wort chiller, or carefully place the pot into a sink half full of icy water. Gently swirl the cold water round the outside of the pot being careful not to get the cold water inside your wort. Check the temperature, your wort needs to be no more than 23°C before you transfer it to your fermenting vessel.

Cleaning & Sanitation

A good time to begin sterilising your equipment is while your wort is chilling. Everything that comes into contact with the cooled wort needs to be clean and sterilised. Fill your fermenting vessel with sterilising solution, following the instructions on the equipment sterilising powder. Note that some sterilisation products need rinsing after use. Also sterilise any siphon tubing, airlock, bung, hydrometer, glass thermometer, funnel etc. in a large jug or other container. You don't need to sterilise your bottles now – wait till you're ready to bottle.

Transferring wort to a fermenter

Once your fermenting equipment is clean, sanitised and your wort is cooled, pour your wort (using a funnel for a narrow necked demijohn or carboy) into your fermenting vessel, and check what **(5) volume of wort you finally collected**. You want to introduce oxygen at this stage, but not at any other point after this when transferring your beer (say at bottling time). Try to avoid pouring in big chunks of hop and protein sediment from the pot but don't worry if some make it in.

Fermentation

Check the temperature again – you want it to be room temp 18-23°C, any lower and the yeast will stall or ferment very slowly, any higher and you will produce off-flavours. Check your brew with a hydrometer and take a note of the reading – this is your **(6) starting gravity** and is useful to determine the alcohol content when the brew is finished. If your starting gravity is higher than that suggested on the brew day sheet you can either leave it and have a stronger beer, or top the brew up with some boiled and cooled water until you reach the suggested original gravity. Pitch your yeast - this simply means adding the full contents of the yeast sachet/vial.

Place a lid or bung on your fermenting vessel and insert an airlock with a small amount of water in it. This stops airborne yeast/bacteria getting into your brew while allowing the escape of CO₂ from the fermentation. Leave your beer to ferment at room temperature for 12-24 hours before checking it again, at which point you should see CO₂ bubbles coming through the airlock and yeast frothing on the top of the brew. The brew will also go cloudy as the yeast multiplies and starts to eat the sugars in the beer, creating alcohol. The bubbling and froth will calm down as the fermentation progresses. Fermentation is a natural process and can be anything from 7 to 10 days or longer.

When is it finished?

Check you brew every day after day 7 to see if bubbles are still coming through. The yeast will start to settle at the bottom of the fermenter. If you haven't seen any bubbles for more than 8 hours, check with your hydrometer to see if this primary fermentation is complete. To do this take a hydrometer reading using a sterilised hydrometer straight into the fermenting bin, or remove a sample from a narrow necked demijohn or carboy using a pipette to draw up a sample which should be placed into a trial jar and take your hydrometer reading from this. Write the reading down, discard the sample, and sterilise your trial jar and hydrometer in readiness for its next use. Check the gravity reading against the **(7) final gravity** that is recommended by your recipe. Leave the fermentation another 24 hours and repeat this process. Two identical readings 24 hours apart is the only sure way to determine if your fermentation is complete. Using your starting gravity and final gravity you can now **(8) calculate the ABV** of the beer.

Packaging

When your primary fermentation is complete you are ready to package your beer. Sanitise your bottles and crown caps/screw tops, or keg along with your siphon tube or auto-siphon and large jug. Remove the lid or bung without disturbing the yeast sediment at the bottom and siphon the beer into a sterilised jug (or you can do this straight into your bottles or a barrel). Gentle siphoning is essential at this stage. Once you have all your beer in the jug or bottles you need to prime the beer. Priming the beer means adding a small quantity of additional sugar which will reactivate the yeast in the beer, but as the bottles or barrel is sealed the CO₂ cannot escape it is forced into the solution producing a carbonated beer. Your recipe will give you exact quantities of **(9) or (10) sugar needed for each brew**, but as a general guide, one half level teaspoon of sugar per 500ml bottle is required. If you are siphoning into a jug or secondary fermenter, add the sugar in bulk and stir, before filling your bottles. If siphoning straight to the bottles you'll need to add sugar to each of the bottles. Leave 2cm headspace unfilled at the top of each bottle. Seal your bottles with a cap or screw top. If adding sugar directly to your bottles shake each gently to mix. If you are using a Cornelius Keg you can choose to force carbonate your beer without the need for priming sugar.

Conditioning

Store your bottles at room temperature for 10 days. This allows carbonation to take place. Condition the beer at room temperature or cooler (4-23 °C) for another 3 weeks before drinking. It's best to store it upright at this point as any yeast sediment from the bottle conditioning will settle to the bottom of the bottle. When you come to pour your beer try to pour without disturbing the yeast sediment at the bottom for a cleaner beer, but you can drink it even if it's a little cloudy. If you are using a plastic beer barrel, try to position it after priming where you want it to stay for drinking so that you don't disturb any sediment moving it about after it's conditioned. If you do need to move a barrel let it sit for a couple of days before pouring. Cornelius Kegs are transportable having no need for priming sugar.

Give yourself (and the beer) time

From the start of brewing to getting your beer into your fermenter you'll need around 4-8 hours, once it's in the fermenter your beer will take care of itself and be ready to bottle in around a week. Bottling usually takes up to 2 hours for a 20 litre batch. Once your beer is in the bottles/keg leave it to carbonate and condition for ideally 3 weeks before enjoying – if you really can't wait it should be ready to drink around 10 days or so after bottling but the flavour improves and the beer clears much better if you can leave it a bit longer!

Good habits

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