

# How To Make Your Own

**SOAP**

Stuart and Gabrielle Anderson share their recipe for success  
for producing your own sweet-smelling bubbly bars



all photos © Stuart Anderson



In the first instance, try to avoid your natural permacultural tendencies to experiment, as if you do change the proportions given here, you risk ending up with a gloopy mess that never cures or a solid bar that never suds. Follow our simple recipe to the letter and you will make a bar of soap that works. Your urge to create your own recipes can then be satisfied, with plenty of guidance available free online to help you; we'll explain more further down.

#### REQUIRED EQUIPMENT

- ▶ A stainless steel or enamel pan for heating the oils and blending the soap.
- ▶ A Pyrex measuring jug for mixing lye.
- ▶ A couple of measuring jugs for oil and water.
- ▶ Silicone spatulas for mixing.
- ▶ Two soap making or cooking thermometers.
- ▶ Digital scales, accurate to 1g.
- ▶ A stick blender.
- ▶ A suitable mould such as an oblong wooden box.

The problem with instructions is that they are invariably written by someone who already knows how to do it. They therefore often miss out what they think is obvious and fail to spot ambiguities: oh, the fun of trying to assemble flat-packed furniture! So, we asked two friends of ours, Gill and Mélanie, round to our house to test drive this article. It's fair to say that it was a tense time watching them make soap with only these instructions to guide them but the exercise was well worth the effort and we did have to make some changes.

#### STEP 1. GETTING READY

Read the instructions through to the end and prepare yourself as much as possible before you begin.

Prepare and protect your work area: make sure your work area is clutter free with a clear sink area, well ventilated and with no distractions (e.g. pets and children). Cover your work area with plastic to protect surfaces from lye splashes; it can mark wooden



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worktops and burn your skin. Assemble all equipment and ingredients: gather your pans, scales, thermometers and measuring jugs, and ingredients. Prepare your mould by lining it with plastic or grease-proof paper (8) and have a blanket or towels ready to insulate your soap once it is poured into your mould. Make sure you have enough cable so that the stick blender reaches your pan easily without creating a trip hazard.

**SAFETY NOTE!**  
Protect yourself: wear long sleeves and have rubber gloves and safety glasses to hand.

**STEP 2. MEASURING THE OILS**  
For this starter recipe, you will need:

- ▶ 280g Sunflower oil
- ▶ 140g Olive oil
- ▶ 280g Coconut oil (available from Asian grocer's and specialist soap maker's suppliers.)

Weigh your oils and place them in your pan. (1)

**STEP 3. PREPARE YOUR LYE**  
Soap, would you believe, is a salt, made from combining acid (fats and oils) with an alkali (lye) in a process called 'saponification'. Clearly, vegetable oils aren't going to burn you but beware, caustic soda (sodium hydroxide) is a powerful alkali and must be handled with care. So rubber gloves and protective specs on, open a window for ventilation, and work over the sink.

- This recipe requires:
- ▶ 99g caustic soda crystals
  - ▶ 266g water

You must use pure caustic soda crystals (from DIY or hardware store or specialist soap makers' supplier), not some toilet cleaning product that contains it.

Measure your water into the Pyrex jug. Weigh the caustic soda crystals into another dry container (2) and then pour the crystals into the water (3).

**SAFETY NOTE!**  
Always pour the crystals into the water, NEVER the other way round.

*Above:*  
(1) Measuring the oils.  
(2) Measuring caustic soda.  
(3) Adding caustic soda crystals to water.  
(4) Lye at around 80°C.  
(5) Mixing the combined ingredients with a hand blender.

*Far left:*  
Washing hands with a half used bar.

*Title page:*  
This recipe produces a soap which is soft and gentle on the skin.

Do this slowly and keep stirring until they are dissolved. Don't breathe in the vapours. Even though this method is called 'cold-process', the temperature will immediately get very high, around 95°C. Leave a thermometer in the lye and wait until the temperature has fallen to approximately 80°C (4). If you do get any lye on you, wash immediately with plenty of cold water, which will neutralise the causticity.

**STEP 4. HEATING THE MIXED OILS**  
Using your second thermometer, gently heat the oils in the pan until the coconut oil has melted and the temperature is approximately 80°C. The aim is to have both the lye and the oils at the same temperature when you combine them together.

**STEP 5. BLEND YOUR SOAP**  
Take the pan off the stove and put it onto a stable heat-resistant surface, with a protective covering over the rest of your work surface. Have your blender ready.



Pour the lye into the oil in the pan and blend with your stick blender. Be careful not to splash the mixture as it's still caustic at this stage and would burn (5)

The mixture will start to thicken. You're looking to see when the blender starts to leave a trace behind it in the mixture as you move it around the pan, typically after about 5-10 minutes. What do we mean by 'trace'? Imagine a pan of milk: when you draw a spoon through it, after the ripples have settled, there's no 'trace' of where the spoon has been. Now imagine thick custard: a spoon drawn through it leaves a line (trace). When you see a trace in your soap mix (6) you're done!

When we hand some of our homemade soap to someone, they invariably hold it straight to their nose: they expect good soap to smell gorgeous. Now's the time to add an essential oil. You choose what you like but lavender or citrus oils smell wonderful and are the cheapest. European regulations set a maximum of 2% by weight for essential oils in soap to be

*Above:*  
**(6) Blender leaving a trace in the mix.**  
**(7) Weighing out essential oil.**  
**(8) Lined wooden box to use as a soap mold.**  
**(9) Pouring mix into the mold.**  
**(10) Mold insulated for curing.**  
**(11) Cutting soap into bars.**

*Far right:*  
**This is what you are aiming for. A lovely finished bar of home-made soap.**

sold, so we use this as our guide, which makes 14g; less, if you prefer (7).

Stick-blend again, for a couple of minutes, to incorporate the essential oil.

#### STEP 6. MOULDING

Carefully pour your soap mixture into your mould, helping the thick goo out of the pan with the silicon spatula (9). It looks like thick custard but don't be tempted to lick the spoon! It doesn't self-level like water, so you'll need to tap the mould on the work surface to even it out; smooth the surface with your spatula.

Wrap the mould in a woollen blanket, insulating to ensure that it cools as slowly as possible; leave your soap to harden (10). Bravo! You've just made your first batch of soap.

#### STEP 7. CUTTING & CURING

After 24 hours, remove your soap from the mould; gently does it, as it is still quite soft. Using a stiff kitchen knife cut this into bars (11).

Now place your bars in a cool and well-ventilated area

to cure. The saponification process needs a couple of days to complete but you should leave your soap for longer for the water to evaporate. The drier the bar is, the longer it will last, it'll be a touch milder and will lather better. We leave our soap a minimum of three weeks but leave it longer, if you wish.

#### FLYING SOLO

Now you can be creative. You can change the ingredients but only if you take account of how different oils and fats behave. Oils and fats have different saponification values, which determine the amount of lye required to change the oil into solids. There is abundant information on the internet.

The idea is to check out your recipe using a 'lye calculator' to see how that mix would perform under criteria such as hardness, cleansing, conditioning, bubbly-ness and creaminess. You can easily adjust the recipe to optimise it before you start mixing ingredients.

We promised to tell you how to make one simple recipe.



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There isn't the space to do more here, nor give you a detailed instructions on using lye calculators, but we hope we've inspired you to research soap making further; there are some great books available and lots of free info on the Web (see below).

Our French neighbours have a lovely expression that combines 'take courage' with 'good luck', so have a go and we wish you, "Bon Courage!" 🌍

**USEFUL RESOURCES**

- ▶ The lye calculator we use: [www.soapcalc.net/calc/SoapCalcWP.asp](http://www.soapcalc.net/calc/SoapCalcWP.asp)
- ▶ Suppliers of ingredients with plenty of information on their sites: [www.thesoapkitchen.co.uk](http://www.thesoapkitchen.co.uk) [www.justasoap.co.uk](http://www.justasoap.co.uk)

*Stuart and Gabrielle live on their three acre permaculture smallholding in Brittany. They grow fruit, vegetables and firewood, raise sheep, pigs, chickens, ducks, rabbits and bees and rent out their holiday cottage. [www.permacultureinbrittany.com](http://www.permacultureinbrittany.com)*

