



Big Green Idea Sheet **Basic Soap Making**

Introduction to Basic Soap Making

Soap making can be a fun and rewarding hobby. Making your own soap can, although not always (as some essential oils can be costly), save you money. However, making a basic soap is a cheap alternative to shop bought soap full of unknown ingredients and you can control what does and does not go into it.

Soap is made simply though the actual chemical reaction is complex. Basically an acid, the fats and oils, react with a caustic alkali, a solution of water and sodium hydroxide (commonly known as caustic soda or lye) to produce soap and glycerine. This process is called saponification. Once this has happened the alkali begins to become neutralised and after curing the soap for at least 4 weeks is no longer evident. Therefore, soap is made with sodium hydroxide but does not contain it.

Although soap making at home is fairly straightforward there are some golden rules concerning safety that are paramount as the sodium hydroxide (lye) can cause severe burns if it comes into contact with the skin. NEVER leave your ingredients unattended especially if you have children or pets around. Your oils may also become quite hot whilst melting and could also cause burns if not handled carefully. The golden rules of soap making at home are:

- 1) Store sodium hydroxide (caustic soda/lye) in an airtight container clearly labelled and out of the reach of children.
- 2) Always wear rubber gloves when handling sodium hydroxide, mixing soap and un-moulding and handling fresh soap.
- 3) Wear eye goggles or large glasses when handling or mixing sodium hydroxide solution and when mixing with fats.
- 4) Do **not** touch the sodium hydroxide with rubber gloves and then rub the eyes or touch the mouth or skin!
- 5) When mixing the sodium hydroxide with water, fumes may be given off. Do not inhale the fumes and work in a well

ventilated area. These fumes only last for a few minutes.

- 6) Do not leave the sodium hydroxide solution or soap mixtures unattended at any time.
- 7) When making soap, keep a bottle of vinegar next to the area. If accidental splashes occur with the lye solution immediately wash the area with the vinegar and rinse with water. Splashes in the eye need prompt medical treatment. As an immediate remedy, douse continuously with cold water.
- 8) When cleaning your soap making pot, let the mixture harden and then scrape the remains into a plastic bag, which should then be sealed and put into the rubbish. Add vinegar to the washing up water and wash as normal (wearing rubber gloves) with washing up liquid.
- 9) Do not be tempted to use your soap before the 4-week curing deadline is up.
- 10) Do not use aluminium utensils as these will corrode.

Basic soap making equipment should include: Eye protection (plastic goggles from a DIY store), rubber gloves, kitchen scales, large cooking pot or bowl (not iron or aluminium), measuring jugs, plastic or rubber spatulas, measuring spoons and a jam/sugar thermometer (preferably 2). Sodium hydroxide can be bought in a hardware shop or chemist. You will also need some old towels or blankets, a chopping board, sharp knife and a variety of containers to be used as moulds. Specialist moulds can be bought but lots of things around the house can be used as a mould. These may need to be lined with cling film or well greased with a non-stick cooking spray. Ordinary kitchen utensils can be used safely provided everything is washed thoroughly before and after use for soap making.

The success of your soap making relies on the correct proportions of the ingredients. If you wish to alter ingredients then consult a good soap making book for recipes and instructions. All quantities, including water, are weighed either in



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ounces or grams (do not mix measurements), therefore 5oz of distilled water is weighed, not fluid, ounces. To weigh the water, place a container on the scales and adjust to zero then add the water to the correct weight.

Basic White Soap Recipe (suitable for vegans)

To make a basic white, unscented soap you will need:

16oz (454 g) vegetable fat
2oz (57g) sodium hydroxide (caustic soda)
5oz (142g) distilled or spring water
1 tbs essential oils (optional)

- 1) Grease a mould or line with cling film. An alternative mould is a juice carton – cut off the top and rinse well.
- 2) Weigh out the vegetable fat and place into a stainless steel or enamel pan over a low heat until melted. Turn off heat and leave until it reaches approximately 130°F (54.4°C).
- 3) Weigh out water and sodium hydroxide, wearing rubber gloves and eye protection.
- 4) Add the sodium hydroxide granules carefully to the water and stir until dissolved. This solution will get hot. Take care not to inhale the fumes or splash the solution. Leave until it reaches 130°F (54.4°C).
- 5) When the fats and sodium hydroxide solution reach the same temperature, carefully add the sodium hydroxide solution to the melted fat and stir carefully but thoroughly, taking care not to splash any mixture.
- 6) Stir intermittently until the solution reaches what is known as “trace”. This is where the mixture thickens so that if you trickle some off the back of the spatula it will leave a trace line on the surface.
- 7) If using essential oils, add and stir in now.
- 8) Carefully pour the soap mixture into the prepared mould, cover with a blanket or towel and leave in a safe place for at least 24 hours until set.

- 9) Clean equipment thoroughly wearing rubber gloves and disposing of any leftover soap as advised above.
- 10) When the soap is set, wearing rubber gloves, it can be un-moulded and cut into bars. Cover the bars with a blanket or old towel and leave in a warm place (eg airing cupboard) for at least 4 weeks before use, turning once or twice during that time.

Do not use the soap before this stage as it may still be caustic

Basic soap recipe taken from “The Handmade Soap Book” by Melinda Coss

For further recipes and more information regarding making soap at home there are a variety of good books or websites full of information.

Please note that there are many legalities surrounding making soap for sale to the public. This leaflet is just a suggestion for making soap for yourself and family.

Suggested reading:

The Handmade Soap Book – Melinda Coss
ISBN-13: 978-1859740064
The Natural Soap Book – Susan Miller Cavitch
ISBN-13: 978-0882668888
The Soapmaker’s Companion – Susan Miller Cavitch
ISBN-13: 978-0882669656

Suggested websites:
[www.http://millersoap.com/](http://millersoap.com/)

To find out more about the big green idea, and to share your ideas and experiences, why not visit www.itsnoteasybeinggreen.org