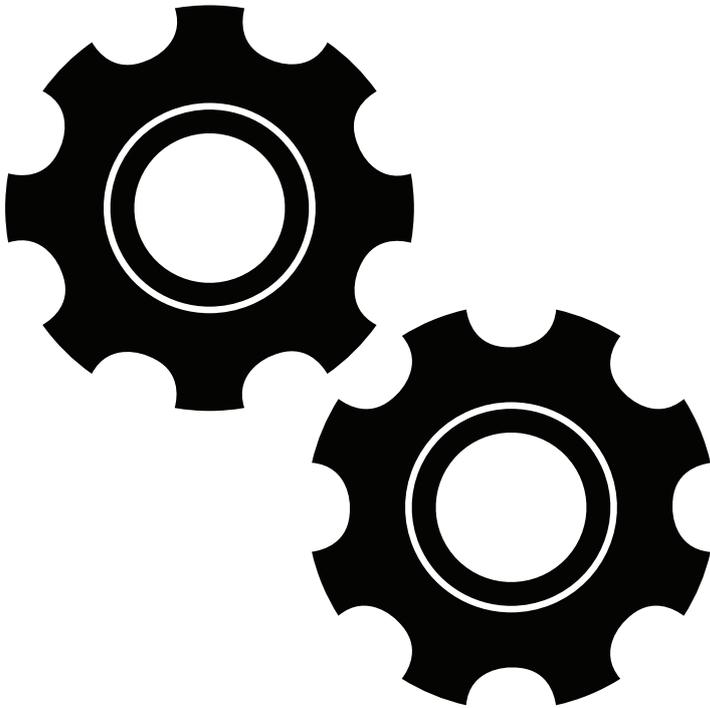


TOILET SOAP STARTER KIT

PRODUCTION MANUAL



SINGLE SPARK
Your business-in-a-box

CHAPTER ONE

EQUIPMENT

Here is an overview of the potentially required equipment, including a short description.



Soap kettle (size depends on production capacity needed)
Can also be made from plastic.
(+/-25 to 100 Liter)

or



Soap kettle with motor mixer
(only needed for large quantities)

+



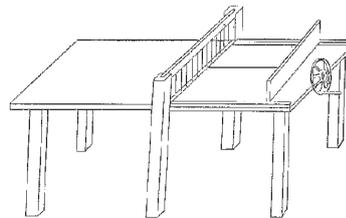
Large wooden ladle for manual mixing



A fire stove to heat the fats or
as option a drum heater to melt
the fats.



Steel or wooden trays
(enough for two days
production)



Soap cutting table



10 Kg Scale



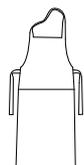
Analytical Balance



Thermometer



Safety equipment



CHAPTER TWO

TOILET SOAP PRODUCTION

Making simple plain soap is relatively easy and involves basic equipment. However, there are certain hazards for workers when making soap which any potential producer must be aware of. This Technical Brief describes the production of a simple toilet soap.

1 Ingredients

There are three main ingredients in plain soap - oil/fat (oil is simply liquid fat), lye (or alkali) and water. Other ingredients may be added to give the soap a pleasant odour or colour, or to improve its skin-softening qualities. Almost any fat or non-toxic oil is suitable for soap manufacture. Common types include animal fat, avocado oil and sunflower oil. Lye can be bought either as potassium hydroxide (caustic potash) or as sodium hydroxide (caustic soda)

Some soaps are better made using soft water, and for these it is necessary to use either rainwater or to add borax to tap water. Each of the above chemicals is usually available from pharmacies in larger towns.

Tip: You can use second hand cooking oil to make soap from. Be aware of the colour because the soap will get brown.

2 Making a recipe

In this chapter we share a few soap recipes, but there are thousands of soap recipes which you can easily find on the internet, for example at www.soapqueen.com. You can also create your own recipe based on the ingredients you have access to. To calculate the mix ratios you'll need a soap calculator. For this, see the website www.soapcalc.net or <http://naturalsoapboutique.com/soapcalculator/>. A soap calculator is a great to calculate the correct ratios of lye, water and oil. Furthermore, it indicates the quality and composition of your soap, so whether your soap is conditioning, hard, creamy, bubbling and/or cleansing.

Example recipe 1

300g olive oil
100g palm oil
100g coconut oil
190g water
69g lye
0,25g essential oil / fragrance

This is a basic recipe with 3 oils.

Example recipe 2

170g olive oil
150g palm oil
150g coconut oil
30g castor oil
190g water
72g lye
0,25g essential oil / fragrance

This is a basic recipe with 6% castor oil. This makes the soap extra creamy.

3

Mixing

1) Start by adding the Lye to the water. The water will become hot, let it cool down to about 40 - 50 degrees Celsius. Use the exact quantities according to your recipe by using a scale.



Measuring the lye on a scale and mix with the water.



WARNING!

TAKE CARE WITH LYE!



You should always take precautions when handling these materials as they are dangerous. Be especially careful when adding them to cold water, when stirring lye water, and when pouring the liquid soap into moulds. Lye produces harmful fumes, so stand back and avert your head while the lye is dissolving. Do not breathe lye fumes. Use rubber gloves and plastic safety goggles. You should also wear an apron or overalls to protect your clothes. If lye splashes onto the skin or into your eyes, wash it off immediately with plenty of cold water. When lye is added to water the chemical reaction quickly heats the water. Never add lye to hot water because it can boil over and scald your skin. Never add water to lye because it could react violently and splash over you. Always add the lye to the water in small quantities at a time.

2) Melt the oils and fats to a liquid in the large barrel/ pot by heating it to +/- 30 degrees Celsius. You can use an electrical drum heater, but a small fire will also do, although it is less convenient.

3) Add the cooled down water-lye (about 50 degrees Celsius) solution to the liquid oils/ fats

4) Start stirring with the ladle until you have a thick solution. This takes about half an hour to one hour depending on the temperature of the lye and how fast you stir.



Stirring the soap solution with stick

4 Pouring soap into the moulds

In the meanwhile prepare the soap trays by adding plastic sheet in the trays. You need to do this so the soap block will release easily. When your mixture is ready you can pour the soap in the tray(s) gently.

Cover the soap trays with some plastic sheet or a piece of cloth.

Remove the block after 24 hours.



Pouring soap in the tray



Covering soap tray with plastic

5 Cutting the soap

After 24 hours your soap block is ready to be cut. If you wait longer the soap will be cured more and more difficult to cut. For easier cutting make a cutting table. A cutting table has a steel top layer and several tensioned steel wires with a certain distance. This way all your soap blocks will have exactly the same size. Optionally, you can also install a horizontal wire, so the top side of your soap will cut as well and look neater.



L-shaped cutting table with double wires. This tables simplifies the cutting. You can work faster by cutting the soap blocks in one flow. The wires of row 1 have a different distance then row 2. This way you get a rectangle shape. If the wires are spaced evenly you will get square shaped soaps.

6 Finishing

To finish your soap for sale there are different options. See possibilities below.

UNFINISHED NO PACKAGING

- unfinished/ raw soap block
- not packaged or wrapped



PAPER WRAPPED

- packed in paper wrap with print



PLASTIC (SHRINK) WRAPPED

- packed in shrink plastic with heat gun



STAMPED

- custom logo can be stamped in soap block with a custom made soap stamp.



SHAPED

- custom shape can be pressed with a soap press and a mould. (logo can be included)



7 Curing

Before selling your soaps will need to cure. It will take about two to four weeks before the lye is completely out of the soap. Soap with lye in it is dangerous to use on the human skin.

CHAPTER THREE

PROBLEM SOLVING

Problems that can occur in soapmaking and their possible causes are described below.

PROBLEM	POSSIBLE CAUSE
Soap will not thicken quickly enough	— Not enough lye, too much water, temperature too low, not stirred enough or too slowly or too much unsaturated oil (e.g. sunflower or safflower).
Mixture curdles while stirring	— Fat and/or lye at too high temperature, not stirred enough or too slowly.
Mixture sets too quickly, while in the kettle	— Fat and lye temperatures too high.
Mixture is grainy	— Fat and lye temperature too hot or too cold, not stirred enough or too slowly.
Layer of oil forms on soap as it cools	— Too much fat in recipe or not enough lye.
Clear liquid in soap when it is cut	— Too much lye in recipe, not stirred enough or too slowly.
Soft spongy soap	— Not enough lye, too much water, or too much unsaturated oil
Hard brittle soap.	— Too much lye
Soap smells rancid	— Poor quality fat, too much fat or not enough lye.
Air bubbles in soap	— Stirred too long
Mottled soap	— Not stirred enough or too slowly or fluctuating temperature during curing.
Soap separates in mould, greasy surface layer on soap	— Not enough lye, not boiled for long enough, not stirred enough or too slowly
White powder on cured soap	— Hard water, lye not dissolved properly, reaction with air.
Warped bars	— Drying conditions variable.

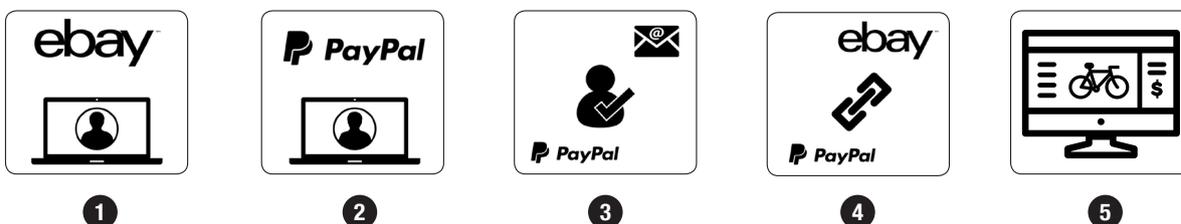
CHAPTER FOUR

BUY ONLINE

Some equipment and materials can't be bought locally or are very expensive. here are several websites online where one can buy materials and equipment from abroad. Alibaba and Ebay are the most popular ones. With the use of clear videos this chapter explains how Ebay works. To purchase products online you'll need a Creditcard or a free PayPal account. For PayPal you'll only need your bank account. The tutorial for Paypal is also included in this chapter.



These are the steps you need to take to create an Ebay account, create a Paypal account, to link them together, and to buy your first product online.



- 1 Create an Ebay account (see online video: How To Create an Ebay Account)
- 2 Create a PayPal-account (see online video: How to Make a PayPal Business Account and link your bank account)
- 3 Verify your PayPal-account with your email address (video: How to Verify Your PayPal Account)
- 4 Link your PayPal-account to your Ebay-account (video: How to Link Your PayPal Account With Ebay)
- 5 Purchase your product (video: How to Buy on Ebay)



See your personal account to watch the videos

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