

cream soaps

Cream soaps are part liquid and part solid and are made using a combination of both sodium and potassium hydroxides. As a result this produces the most fascinating, interesting and beautiful product as the soap undergoes its various changes. The soap is very mild, smooth, sensual and easily distributed all over the body. Cream soaps are traditionally used as shaving soaps but their use can be extended to facial, hand and body soaps. I have provided a few recipes and hope you will try them all and appreciate their differences.

other key ingredients

stearic acid

Stearic acid is essential for making cream soaps. It is produced from palm oil or tallow. You can source stearic acid from a soap making supply store, see *resources* page 159.

sodium and potassium hydroxides

Both sodium hydroxide and potassium hydroxides are used in making cream soaps. It is easier to source sodium hydroxide (caustic soda) than potassium hydroxide. You can source potassium hydroxide from a soap making supply store, see *resources* page 159.

boric acid

This is used for super fatting the soap and can be purchased at any chemist.

glycerin

This gives a lovely finish, adds emollience to the soap and acts as a humectant, pulling moisture from the air and holding it to the skin.

safety

Safety is paramount when making soap due to the use of sodium and potassium hydroxides. It is best to set aside a specific time (two-and-a-half hours) where you can work with full attention. There is no place for small children and inquisitive pets so make arrangements for them prior to making soap.

Always wear safety goggles – the kind you can get from any DIY store are suitable – gloves, and an apron. Wear clothes that you don't mind getting dirty or acquiring a few burn marks. Have a bottle of vinegar close at hand to neutralise any caustic solution on the skin and on work surfaces.

Always work in an organised manner and apply some common sense.

cream soap instructions

step 1 preparations

- protect your work area with newspaper
- dress appropriately with safety goggles and gloves

step 2 preheat the crock pot

step 3 warm the stearic acid and oils

- weigh out the stearic acid and oils, then add to the crock pot and melt. Continue heating until the stearic acid is melted.
- add the glycerin to the melted oils and stir until dissolved and evenly distributed



fig 48: melt the fats and oils in the slow cooker

step 4 add the potassium hydroxide and sodium hydroxide (caustic) solution

- weigh out the water, sodium hydroxide and potassium hydroxide. Add the potassium hydroxide and sodium hydroxide to the water and stir continuously with a spatula until they dissolve completely. Then slowly add this solution to the melted oils in the crock pot and stir continuously with the hand blender.
- the mixture will look lumpy at first but continue to mix it until the emulsion becomes smooth and creamy like 'white' honey



fig 49: add the caustic solution to the heated fats and oils



fig 50: stir the mixture



fig 51: continue to mix until the emulsion is smooth and creamy

step 5 cook the mixture

- when the mixture becomes homogenous, cover the crock pot and allow it to cook at a steady gentle boil for 15 minutes, then check that there is no separation or curdling in the emulsion.
- if the mixture separates or curdles stir it with the hand blender until it is smooth. Cook the mixture for a further two-and-a-half hours.
- the mixture will go through a number of changes during the cook. Do not be alarmed if the mixture puffs up during the first hour of cooking; this is caused by air trapped in the mixture. Stir the mixture with a spatula to release the air.
- after two-and-a-half hours of cooking the mixture should be neutral and translucent, resembling petroleum jelly.



fig 52: cream soap cooking



fig 53: the cooked soap

step 6 test for neutrality

- after two-and-a-half hours continuous cooking the soap mixture should be neutral. Test for the presence of excess alkali in the soap mixture by using the tongue test or phenolphthalein, see page 110 for details.

step 7 super creaming (or super fattening)

- super creaming is achieved by using between 3 and 5 per cent excess stearic acid. There are two ways of doing this – either by adding the stearic acid to the soap directly or by the addition of boric acid. There is no one correct way of super creaming, just use whichever method you prefer. In my experience I have found that the boric acid method is the easiest to use.

boric acid can be added to either hot or cold soap:

to hot soap

Add the boric acid/water solution to the hot soap mixture and mix them thoroughly. Allow the soap to cool for 24 hours.

to cold soap

Allow the cream soap to cool for 24 hours before super creaming. When it has cooled the soap mixture will turn into a thick white liquid similar to heavy whipping cream. Add the boric acid/water solution to the liquid soap mixture and mix them thoroughly. The mixture will become firmer.

step 8 add the water

- the addition of water will determine the finished texture and body of the soap. There is no exact amount of water to be prescribed as the final result must be based on trial and error to create the consistency that suits your needs. However, a good guide is up to 12oz (340g) of water. The water used in making the boric acid solution should be counted as part of the total amount of water. Beat the mixture until it resembles whipping cream. The more the soap is beaten the more air is incorporated into the soap mixture. Cover and leave for a few days.



fig 54: beat the mixture



fig 55: the final texture

step 9 age the soap

- the texture of the finished soap will change over a few days. Check the consistency and add a little extra water if necessary. It is best to age the soap for two weeks so that it develops a sheen. Cover the soap with plastic during the ageing process to prevent water evaporation.

step 10 colour and fragrance

- after the ageing period the soap should resemble whipped cream; soft and white with peaks that hold their shape. The soap is now ready for colourants and fragrance if desired.

step 11 transfer to jars

- Spoon or pipe the soap into jars using a pastry bag and – enjoy!!

cream soap recipes

mild shaving cream

This is an extra mild, low-foaming soap, perfect for shaving.

oil blend

45g cocoa butter

45g coconut oil

91g olive oil

726g stearic acid

caustic solution

140g potassium hydroxide

28g sodium hydroxide

1021g water

additives

227g glycerin

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

creamy body wash

This a mild, high-foaming body wash suitable for all skin types.

oil blend

18g avocado oil

272g coconut oil

617g stearic acid

caustic solution

153g potassium hydroxide
31g sodium hydroxide
1102g water

additives

227g glycerin

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

cream of rosin

This is an extra creamy, mild soap with a natural earthy fragrance and caramel colour.

oil blend

227g coconut oil
27g olive oil
18g rosin (rosin is distilled from the resin of pine trees and sold as amber crystals)
635g stearic acid

caustic solution

150g potassium hydroxide
30g sodium hydroxide
1082g water

additives

227g glycerin

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

shea butter cream

This is a very mild soap suitable for all skin types.

oil blend

27g almond oil

272g coconut oil

64g shea butter

544g stearic acid

caustic solution

142g potassium hydroxide

28g sodium hydroxide

1021g water

additives

227g glycerin

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

coconut milk cream

This is a high-foaming moisturising soap suitable for all skin types.

oil blend

18g avocado oil
272g coconut oil
617g stearic acid

caustic solution

153g potassium hydroxide
31g sodium hydroxide
151g coconut milk
151g water

additives

227g glycerin

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

almond cream

This is a mild soap suitable for all skin types.

oil blend

45g almond oil
227g coconut oil
635g stearic acid

caustic solution

150g potassium hydroxide
30g sodium hydroxide
1082g water

additives

227g glycerin

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

creamy body polish

This is a mild exfoliating soap for soft beautiful skin.

oil blend

18g cocoa butter

227g coconut oil

45g olive oil

617g stearic acid

caustic solution

152g potassium hydroxide

30g sodium hydroxide

1091g water

additives

227g glycerin

1 tablespoon soft sea sand

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

Aloe vera cream

This is a mild, soothing soap suitable for all skin types.

oil blend

45g almond oil
227g coconut oil
18g shea butter
617g stearic acid

caustic solution

151g potassium hydroxide
30g sodium hydroxide
545g water

additives

227g glycerin
545g aloe vera juice

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

cinnamon cream

This is a spicy, mild soap suitable for all skin types.

oil blend

227g coconut oil
18g cocoa butter
45g olive oil
617g stearic acid

caustic solution

152g potassium hydroxide
30g sodium hydroxide
546g water

additives

227g glycerin

546g cinnamon bark decoction

1 tsp cinnamon powder

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

herbal cream

This is a mild, soothing herbal soap suitable for all skin types.

oil blend

227g coconut oil

45g olive

635g stearic acid

caustic solution

151g potassium hydroxide

30g sodium hydroxide

1084g water

additives

227g glycerin

1 tablespoon rosemary powder

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

As you like.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

chocolate cream

This is a mild, high-foaming soap suitable for all skin types.

oil blend

45g castor oil

45g cocoa butter

227g coconut oil

590g stearic acid

caustic solution

149g potassium hydroxide

30g sodium hydroxide

1072g water

additives

227g glycerin

1 tablespoon cocoa powder

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

From additives.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

coffee cream

This is a mild deodorant soap suitable for all skin types.

oil blend

45g castor oil

227g coconut oil

45g jojoba oil

590g stearic acid

caustic solution

146g potassium hydroxide

29g sodium hydroxide

1051g water

additives

227g glycerin

1 tablespoon coffee powder (instant)

super cream

Dissolve 23g of boric acid in 100g of hot water.

extra water

Add up to 302g or more depending on your desired consistency.

colour

From additives.

fragrance

As you like.

temperature

71°C (160°F)

Please follow the instructions given on pages 128 to 134.

troubleshooting

The majority of the problems associated with cream soap making stem from incorrect measurement of the ingredients and inadequate mixing. It is important to invest in an accurate electronic scale and a hand blender for mixing as these items could save you a lot of trouble. I have identified some problems and offered solutions below.

curdled soap emulsion

Some curdling should be expected in the emulsion at the beginning, during the addition of the two hydroxide solutions but could also arise as a result of excess alkali in the mixture.

Mix the emulsion with a hand blender until the mixture is smooth. Use the tongue test method or phenolphthalein to test for the presence of excess alkali, see page 110 for details. If there is too much alkali, add up to 2oz (57g) of melted stearic acid to the soap solution and cook for 15 minutes. Repeat this process if necessary until, if you are using the taste method to test, the sharp 'sting' on the tongue disappears.

no translucency after cooking

If the soap remains opaque after the full cooking time of two-and-a-half hours, it could be that there are excess fatty acids. To solve this allow the soap to cook for a further hour on a medium setting.

The excess fatty acids could be due to incorrect measurement of the oils and hydroxides. To overcome this, allow the soap to cool for 24 hours then add water until the desired consistency is achieved.

soap remains as paste after cooling

Cooled cream soap takes 24 hours to turn semi-liquid and if this fails to happen the problem could be either incorrect measurement of the oils causing excess fatty acids or insufficient liquid in the soap due to incorrect measurement of the water in the hydroxide solution or glycerin.

Having excess fatty acids in the soap is the equivalent of super creaming and hence a premature firmness could arise. It is best to use phenolphthalein to test, see page 110. Otherwise add water until the mixture becomes soft but not runny then add a boric solution made up of approximately $\frac{1}{2}$ oz (14g) of boric acid to 2oz (57g) of water. Continue adding water until the soap reaches the desired consistency.