



Cosmetic Safety Solutions Ltd

FOR EXPERIENCED CP AND HP SOAPMAKERS ONLY

Milk soap formulation and information (Suitable for both infants * and everyone else too!)

Basic formulation

Olive oil	500g
Coconut Oil	200g
Cocoa butter	100g
Shea butter	100g
Castor oil	50g
Speciality oil - client choice see list A	50g
NaOH	136 g
Water	200g
“Milk” - client choice see List B	100g
Oats	50g
Syrup / sugar / honey- client choice see list C	25g
Essential oils	6.5g

Choose either Sweet Orange (Aurantium Dulcis/Sinensis), Lavender, Chamomile (Anthemis Nobilis or Chamomilla Recutita Flower Oil). May also be sold Unfragranced. Note – all single essential oil variants are included as part of the report.

* any soaps which include essential oils are suitable for infants 3-36 months. Unfragranced soaps are suitable from birth.

Method

Melt Coconut Oil, Cocoa butter, Shea butter - Add Olive and Castor - Allow to cool to room temp

Add Caustic to 200g water – careful!! This is 40% caustic solution so will generate a little more heat than full water content dilution - allow to cool

In a separate container – add milk, sugar/syrup/honey, oats and speciality oil – stick blend to a fine emulsion.

Add caustic solution to cooled, melted bulk oil mixture – blend to light trace

At this stage, add the emulsion – Stir or gently stick blend to incorporate thoroughly

Pour into moulds

Rationale

Adding the caustic solution to the bulk oils and bringing to trace is the start of the saponification reaction. During this phase, the oils/fats are partially broken down to composite fatty acids and glycerine. The fatty acids react with the caustic to produce fatty acid sodium salts AKA soap – but at this stage there is also still free caustic and free fatty acids. This mixture has the potential to react with the sugars in the syrup to produce sugar fatty acid esters, which are very gentle cleansing agents.

The added “milk” and proteins derived from the finely ground oats will also be hydrolysed by the un-reacted caustic – again, producing active skin care ingredients including traces of intact fine / colloidal oatmeal because they were added AFTER the initial reaction with caustic.

Additionally, by adding the nutrient oil in emulsified form, with the “milk” / syrup / oat mix, the potential for these oils to remain un-saponified is increased.

List A - Nutrient oils (Choose any one of these for all variants) ^o

Apricot Kernel Oil

Argan Oil

Avocado Butter

Avocado Oil

Babassu Oil

Baobab Seed Oil

Beeswax

Black Seed Oil

Blackcurrant Seed Oil

Borage Oil

Broccoli Seed Oil
Camelina Seed Oil
Camellia Seed Oil
Candelilla Wax
Canola Oil
Carnauba Wax
Castor Oil
Cherry Kernel Oil
Chia Seed Oil
Cocoa Butter
Coconut Oil (fractionated)
Coconut Oil / Butter
Coffee Oil / Butter
Corn Oil
Cottonseed Oil
Crambe Seed Oil
Cranberry Seed Oil
Cucumber Seed Oil
Grapeseed Oil
Hazelnut Oil
Hemp Seed Oil
Illipe Butter
Jojoba Oil
Jojoba Wax
Kiwi Seed Oil
Kokum Butter
Kukui Nut Oil
Linseed Oil
Macadamia Nut Butter
Mango Butter
Meadowfoam Seed Oil

Moringa Seed Oil
Oat Oil
Olive Oil
Palm Oil
Papaya Seed Oil
Passionfruit Seed Oil
Peach Kernel Oil
Plum Kernel Oil
Pomegranate Seed Oil
Prickly Pear Seed Oil
Pumpkin Seed Oil
Rapeseed Oil
Raspberry Seed Oil
Rice Bran Oil
Rosehip Seed Oil
Safflower Oil (Inc. High Linoleic Type)
Sea Buckthorn Oil
Sesame Seed Oil
Shea Butter
Soybean Oil
Strawberry Seed Oil
Sunflower Oil (Inc. High Oleic Content)
Sweet Almond Oil
Walnut Oil
Watermelon Seed Oil
Wheat Germ Oil

° For all infant products refined oils should be used. For adults either refined or unrefined are suitable and are included as one oil option

List B – ‘Milks’ (Choose any one of these for all variants)

Cow Milk

Goat Milk

Sheep Milk

Donkey Milk

Almond Milk

Cashew Nut Milk

Coconut Milk

Hazelnut Milk

Oat Milk

Rice Milk

Soy Milk

Cream

Yoghurt – plain, unsweetened only

List C – Sugars (Choose any one of these for all variants)

Honey

Sugar (white or brown)

Maple Syrup

Agave Syrup