

CP SOAP – FORMULATION GUIDE

This package comes with a base formulation that can be easily amended and customised to enable you to create a huge range of solid soap bars.

Palm-free and vegan, these soap bars use the traditional cold / hot process method of soapmaking. This method can be tricky to master at first, but, after a few practice batches, you will be crafting beautiful, hand-made soaps.

You can fragrance these soaps with essential oils or fragrance oils (depending on what is shown in your assessment), and you can create un-fragranced soaps too.

This formulation guide is intended to provide you with a starter for your soapmaking and is not a comprehensive “how-to” manual on soap making. There are a lot of resources available online to help you in your crafting. Have a look at YouTube and sites like the Soap Coach for tips on refining your soapmaking.

Please read through this guide as it explains how the assessment works, and the parameters you have to work within.

All formulations will be listed to make a batch with 900g of oils / butter (plus lye and water).

Fragrance load is calculated as 3% (or less IFRA depending) of the weight of oils.

Your soap bars must not resemble food or anything edible.

Your soap bars may be packaged in any cosmetic grade packaging (e.g., paper, cardboard etc.) or may be “naked”.

THE BASE

The base is comprised of 4 basic oils / butters that cannot be amended (unless specifically stated in this guide / assessment).

You then have the option to include some specialist or “exotic” oils to impart specific qualities. These oils will be listed further down the guide.

The base will include sodium hydroxide (lye) and water. ***Sodium hydroxide is hazardous. You MUST wear PPE (cover your arms, wear suitable gloves, and wear eye protection) and take care when handling it.***

We include the water in a “range” to allow you to make a small water discount if preferred.

We also include the sodium hydroxide with a slight range, this allows you to increase the super-fat if needed.

Super-fat is set at 5% as standard. This can be increased (by reducing the lye) to 10%. However, be aware that increasing the super-fat increases the risk of oils and butters oxidising and causing discoloration of the soap bars (e.g., DOS).

THE BASE FORMULATION #1

Cocoa Butter	135g
Olive Oil	300g
Coconut Oil	315g
YOUR CHOICE OF OIL(S)	150g
Water	252g-297g
Lye / Sodium Hydroxide	130g
Fragrance / Essential Oil	30g

THE BASE FORMULATION #2

Shea Butter	135g
Olive Oil	300g
Coconut Oil	315g
YOUR CHOICE OF OIL(S)	150g
Water	252g-297g
Lye / Sodium Hydroxide	130g
Fragrance / Essential Oil	30g

THE BASE FORMULATION #3

Shea Butter / Cocoa Butter (any Ratio)	135g
Olive Oil	300g
Coconut Oil	315g
YOUR CHOICE OF OIL(S)	150g
Water	252g-297g
Lye / Sodium Hydroxide	130g
Fragrance / Essential Oil	30g

SUPER-FAT GUIDE: To adjust the super-fat, the lye / water must be adjusted. The below table details the amounts needed to achieve a super-fat of 6-10%.

5% Super-fat	252g Water / 130g Lye
6% Super-fat	252g Water / 129g Lye
7% Super-fat	252g Water / 128g Lye
8% Super-fat	252g Water / 126g Lye
9% Super-fat	252g Water / 125g Lye
10% Super-fat	252g Water / 123g Lye

YOUR ADDITIONAL OIL OPTIONS: You may use one, or any combination of one or more of the following oils to enhance your soap. You should research the qualities of these oils and add them depending on what you want to achieve (e.g., antioxidant properties, more moisturising, more “bubbly” etc.). A maximum of 150g (per batch) may be added. If you wish to add less than this, make up the difference with olive oil. E.g., you use 100g of hempseed oil, so you add an extra 50g of olive oil to make it up to 150g in total.

OIL NAME

INCI NAME

APRICOT KERNEL OIL

Prunus Armeniaca Kernel Oil

ARGAN OIL

Argania Spinosa Kernel Oil

AVOCADO OIL

Persea Gratissima Oil

BLACK CUMIN / NIGELLA OIL

Nigella Sativa Seed Oil

BROCCOLI SEED OIL

Brassica Oleracea Italica Seed Oil

HEMPSEED OIL

Cannabis Sativa Seed Oil

MACADAMIA OIL

Macadamia Ternifolia Kernel Oil

MANGO BUTTER

Mangifera Indica Seed Butter

MEADOWFOAM SEED OIL

Limnanthes Alba Seed Oil

MORINGA OIL

Moringa Oleifera Seed Oil

NEEM OIL

Melia Azadirachta Seed Oil

OAT OIL

Avena Sativa Kernel Oil

OLIVE OIL

Olea Europaea Fruit Oil

PUMPKIN SEED OIL

Cucurbita Pepo Seed Oil

RAPSEED OIL

Brassica Campestris Seed Oil

RASPBERRY SEED OIL

Rubus Idaeus Seed Oil

RICE BRAN OIL

Oryza Sativa Bran Oil

ROSEHIP OIL

Rosa Canina Fruit / Seed Oil

SAFFLOWER OIL

Carthamus Tinctorius Seed Oil

SUNFLOWER SEED OIL

Helianthus Annuus Seed Oil

SWEET ALMOND OIL

Prunus Amygdalus Dulcis Oil

GRAPESEED

Vitis Vinifera Seed Oil

ADDING COLOUR TO YOUR SOAPS

There are a huge number of colour options for your soaps. You can add mica / dye / pigments / lakes and natural colours. You may add a total of 2.5% colourant per batch.

MICA / PIGMENTS / DYES ETC.

The following table lists the colour you may add – we have included a large amount of CI numbers. You can use any of the pigments listed in the table below, or a commercially produced blend or mica blend that is made up of any combination of the pigments listed below.

e.g., You can use iron oxide red (CI 77491) in your soap.

OR,

You can use a mica colour called Orange Pop which is made up of the following CI numbers – CI 77019, CI 77891, CI 77491.

Check the SDS/Spec. sheet of the colour and check the CI numbers listed- as long as they all appear in the table you can use this colourant.

Glitter: We have included bio-glitter. Bio-glitter contains other substances (such as rayon) so we have listed these as well. You can use any bio-glitter or cosmetic (biodegradable) glitter as long as ALL components of this glitter are listed in the table.

SUBSTANCE NAME		CI NUMBER
ACID RED 18, CI 11710, CI 15985, CURRY RED, ACID RED 33, ACID YELLOW 23, SOLVENT RED 23, FOOD BLACK 2, CI 28440, CI 40215, BETA CAROTENE, ACID BLUE 1, ACID BLUE 3, FAST GREEN FCF, ACID BLUE 9, ACID BLUE 9 ALUMINIUM LAKE, CI 42170, BASIC VIOLET 2, CI 44090, ACID RED 52, BASIC RED 1, BASIC VIOLET 11:1, ACID YELLOW 73, ACID RED 92, NIGROSINE, CI 71105, ACID BLUE 74, ACID BLUE 74 ALUMINIUM LAKE, CI 73360, CI 73385, PIGMENT VIOLET 19, CI 74260, ANNATTO, PIGMENT BLUE 27, CI 75125, CI FOOD ORANGE 5, CARMINES, ALUMINIUM, CI 77002, KAOLIN / BENTONITE / ILLITE / MONTMORILLONITE, ULTRAMARINES, CI 77015, MICA, CARBON BLACK, CHARCOAL, CHROMIUM (III) OXIDE, CHROMIUM (III) HYDROXIDE, COPPER, GOLD, IRON OXIDE, IRON OXIDE RED, IRON OXIDE YELLOW, IRON OXIDE BLACK, MANGANESE VIOLET, MAGNESIUM CARBONATE, SILVER, TIN OXIDE, TITANIUM DIOXIDE, COKE BLACK		16255, 11710, 15985, 16035, 17200, 19140, 26100, 27755, 28440, 40215, 40800, 42045, 42051, 42053, 42090, 42090:1, 42170, 42520, 44090, 45100, 45160, 45174, 45350, 45410, 50420, 71105, 73015, 73015:1, 73360, 73385, 73900, 74260, 75120, 77510, 75125, 75130, 75470, 77000, 77002, 77004, 77007, 77015, 77019, 77266, 77267, 77288, 77289, 77400, 77480, 77489, 77491, 77492, 77499, 77742, 77713, 77820, 77861, 77891, 77268:1.
SUBSTANCE NAME	INCI NAME	CAS NUMBER
SYNTHETIC MICA	SYNTHETIC FLUORPHLOGOPITE	12003-38-2
STYRENE/ACRYLATE COPOLYMER	STYRENE/ACRYLATE COPOLYMER	9010-92-8
POLYURETHANE-11	POLYURETHANE-11	N/A
RAYON	RAYON	270-493-7
RAYON (CELLULOSE REGENERATED)	RAYON (CELLULOSE REGENERATED)	270-493-7
GLYCERIN	GLYCERIN	56-81-5
AQUA	AQUA	7732-18-5
UREA	UREA	57-13-6
SHELLAC	SHELLAC	9000-59-3

NATURAL COLOUR

Certain natural / botanical extracts can be used to formulate your soaps. These also have a cosmetic function (e.g., soothing) so may be used in the soaps.

We have included the following:

ALKANET	Alkanna Tinctoria Root Powder
ANNATTO	Bixa Orellana Seed Powder
BEETROOT	Beta Vulgaris Root Powder
CHARCOAL	Charcoal Powder
CINNAMON POWDER	Cinnamomum Zeylanicum Bark Powder
GREEN TEA	Camellia Sinensis Leaf Powder
MADDER ROOT	Rubia Tinctoria Root Powder
PAPRIKA POWDER	Capsicum Annuum Fruit Powder
SPINACH POWDER	Spinacia Oleracea Leaf Powder
SPIRULINA POWDER	Spirulina Platensis Powder
TURMERIC POWDER	Curcuma Longa Root Powder

CLAYS

We have included a range of cosmetic clays. The following clays may be used (in any combination):

Moroccan Lava Clay, Kaolin, Illite, Montmorillonite

These may have different names, e.g., you might want to use “French Pink Clay”, this is fine as long as the INCI name(s) are listed above.

EXTRAS (botanicals/exfoliants etc.)

You may add some “extras” to decorate the soap or to add additional qualities (like exfoliation). The following ingredients may be added to the soap batter or on the outside of the soap bars for decorative purposes. You may add a total of 5% “extra” per batch.

CALENDULA PETALS	Calendula Officinalis Flower
COFFEE BEANS	Coffea Arabica Seed
COFFEE GROUNDS	Coffea Arabica Seed Powder
CORNFLOWERS	Centaurea Cyanus Flower
HEATHER	Calluna Vulgaris Flower
LAVENDER FLOWER / BUDS	Lavandula Angustifolia Flower
LEMON PEEL / SLICE	Citrus Limon Fruit
LIME PEEL / SLICE	Citrus Aurantifolia Fruit
MINT LEAF	Mentha Piperita Leaf
OAT FLOWER	Avena Sativa Kernel Flour
OATS	Avena Sativa Kernel Meal
ORANGE PEEL / SLICE	Citrus Sinensis Fruit
ORANGE PEEL POWDER	Citrus Sinensis Peel Powder
POPPYSEEDS	<i>Papaver Somniferum Seed</i>
PUMICE (FINE)	Pumice
ROSE PETALS	Rosa Damascena Flower / Rosa Gallica Flower
SALT / PINK SALT / HIMALAYAN SALT	Sodium Chloride
SEA SALT	Maris Sal
STAR ANISE (WHOLE)	Illicium Verum Fruit

You may also add a rope (to make soap on a rope), sponge or loofah / luffah to your soap bars.

THE METHOD

This method is a simple, general guide to making CP soap. This is not intended to be a tutorial on making soap, so please look at additional resources if you need extra guidance.

- 1) Weigh your ingredients into suitable containers.
- 2) Make your lye (sodium hydroxide solution):
 - a. In a suitable container (avoid pyrex / glass) add your water.
 - b. Gently add the lye to the water, stirring gently.
 - c. Stir gently until the lye has fully dissolved in the water.
 - d. Set aside to cool. This solution gets very hot, very quickly and is very corrosive. Be very careful with this step.
- 3) Take your butters and oils (I prefer the "one pot method" and heat them up. Heat until fully melted and then take off the heat to cool down to around 45 degrees or less.
- 4) Slowly and carefully add your lye solution to your oils. Stir gently ensuring it is well mixed. Saponification will start now.
- 5) Using a stick blender, whizz the mixture in short bursts until you reach a light trace. Do not over-whizz as your mixture may thicken too soon and make it impossible to work with. You shouldn't need to whizz for more than a few minutes.
- 6) Any other ingredients (colour / fragrance) should be added at trace. It might help to have soaked pigments in a small amount of oil before adding, or removing a small amount of batter and mixing in your substances before mixing into the rest of the mixture.
- 7) Stir well to ensure colour / fragrance / exfoliants are well distributed and pour into your mould.
- 8) At this stage, you can add any decorative toppings – e.g., botanicals or poppyseeds.
- 9) Leave your soap to solidify at room temperature (this will take at least 24 hours).
- 10) Remove from the mould and slice into bars.
- 11) Leave your soap to cure – this will take up to 4 weeks.