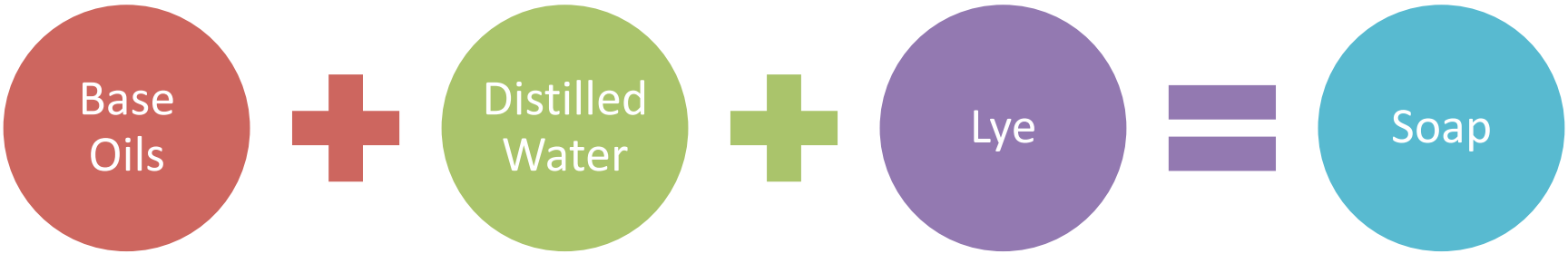
Handcrafted Soap

Kathy Mansfield
Snowbunny Soap
Kalispell, MT

What is Soap?



Soapmaking Process (Saponification)

Soap is the sodium or potassium salt of a fatty acid.

Fatty acids - fats/oils
Alkali - lye

Alkali splits fats/oils into two major parts:
fatty acids and glycerin

Every molecule of oil partners with a molecule of lye.
This combination becomes the sodium salt of the fatty acid.

Oils/Fats

Oil/Fat	Soap properties
Avocado Oil (specialty)	Rich, soothing to skin (superfat)
Castor Oil (specialty)	Mild & rich. A humectant – draws moisture to the skin. Makes thick, large bubbles- used in most shampoo bar recipes (superfat)
Cocoa Butter	Creamy & hard. Contains natural antioxidants. Helps retain & restore the moisture in skin.
Coconut Oil	One of the most common raw materials used in the soap. Creamy lather, yields a medium-hard soap, tends to dry skin.
Hemp Oil (specialty)	An antioxidant - protects skin from excessive water & moisture loss. Silky smooth bar - excellent lather.
Macadamia Nut Oil (specialty)	Easily absorbed into the skin and acts as an effective emollient.
Olive Oil	All grades suitable for soapmaking. Soaps are hard, brittle, mild, long-lasting, & lathers abundantly.
Palm Oil	Produces long-lasting bubbles - kind to skin - excellent facial soap.
Palm Kernel Oil	Hardens soap.
Sesame Oil (specialty)	High in antioxidants - great moisturizing qualities.
Shea butter (specialty)	Melts on contact with the skin, making it an excellent choice for lip balms and lotion bars – creates a hard bar.
Sunflower oil	High amount of Vitamin E. - an alternative to olive oil. Provide a stable, conditioning lather.
Sweet Almond Oil (specialty)	Adds moisturizing properties

Oil/Fat	Soap properties
Vegetable Oils -	10% olive oil and 90% either corn, soy or peanut, or a combination of these. Economical - yields a decent soap, lathers well, but generally softer than using all olive oil.
Vegetable Shortening -	Alternative to animal fats. Produce a soft, low lathering soap.
Vitamin E (specialty)	An antioxidant.
Beef tallow	Softer but more difficult to work with. Best used as a laundry soap.
Mutton tallow	Produces a more brittle soap than beef tallow.
Lard (pig fat)	Best used for making laundry soap. Mild but does not lather well.
Rendered Kitchen Fats	Produce too soft soap - quality is limited. Not recommended.
Suet	The preferred fat of all tallows - produces a mild soap.

Lye

1. NaOH - Sodium Hydroxide (caustic soda)

2. KOH - Potassium Hydroxide (caustic potash)

   caustic, corrosive, highly hazardous

Additives

1. Fragrance
    a) Essential oils
    b) Fragrance oils
2. Colorants
3. Other
    1. Herbs/botanicals
    2. Exfoliating ingredients

Soapmaking Process

1. Cold Process (CP)
   - CPOP
2. Hot Process (HP)
3. Melt & Pour (MP)

pH (scale 1 – 14)

- Degree of acidity or alkalinity of a substance in water
- Pure water has a pH of 7 (neutral)
- Acids decrease pH
- Alkali increases pH

The scale of 1-14 is logarithmic, meaning each full unit is different by a factor of 10 from the one adjacent to it. For example, a pH of 9 is ten times more alkaline than a pH of 8. So it follows that a pH of 10 is 1000 times more alkaline than an pH of 7 (10 x 10 x 10 = 1000).

Handcrafted VS Commercial

1. Superfatting - excess fat used to consume the alkali – moisturizing, emollient

2. Glycerin - is not removed, leaving a naturally moisturizing soap that draws moisture to skin

Handcrafted Soap

Kathy Mansfield
Snowbunny Soap
Kalispell, MT