

# Soap Making: Where Do I Start?

## **M&P soap, CP soap, CPOP soap, HP soap, which method is right for you?**

We hope that you find this class informative and that it may help to answer any unresolved questions in your mind when it comes to making soap.

The first decision you need to make before you start making soap is what soap you want to make. Just so that everyone is starting off on the same base, a general definition for soap is: an emulsified product of an alkali treated fat yielding a cleansing agent.

There are 4 different types of soap making. They are M&P (melt and pour), CP (cold process), HP (hot process), and CPOP (cold process oven process). Each group has its own pros and cons. Each process differs in varying ways, but there are two similarities that all of the groups share: Each group's process has already gone through, or must go through the chemical reaction of saponification. And, each process results in finished soap.

### **MP soap**

One of the greatest advantages of melt and pour soaps is that the actual soap making chemical process (lye process) has already be completed; technically making this a ready-made product. When working with M&P, you are dealing with soap that essentially only needs melted, fragranced, colored, and molded.

For precautionary reasons, this is a perfect soap making process for anyone with small children or pets, since the process does not require working with lye. Melt and pour soap is also a great place to start if you have never made soap before. The steps are very simple. Melt the soap, add color, add fragrance, and, place in mold to harden. That is it! There is no cure time. Soap bars are able to be used once they are popped out of the mold. Colouring M&P soap is also very predictable. Unlike the other soap making processes, the color that your liquid soap is before you pour it in the mold, will be the same color of your finished bars. There is no color morphing since that soap has already been saponified.

Melt and Pour soap is also known as glycerine soap. Glycerine is a natural by-product of the chemical reaction of lye and water. Having glycerine as a component in your M&P soap is very beneficial because glycerine is not only an emollient keeping the moisture in your skin, but it is also considered a humectant- absorbing the moisture from the air so that the skin does not dry out. Additives such as herbs and exfoliates can also be added to M&P soap, resulting in bars that can do various things for your skin.

This is a very forgiving soap for error. If soap hardens too quickly, it can always be re-melted in the microwave or by using a double boiler. Since M&P is very pliable you can safely handle the soap without the worry of being burned by lye; forming swirls and other shapes. This process is very cost effective, and allows for you to have a healthier bar of soap for your skin than any store bought brand that has had the glycerine stripped from it.

The cons of M&P soaps are that you do not have direct control of all of the ingredients in your soap. Melt and Pour soap can also easily burn during the heating process so you will want to watch it closely. Because glycerine is the most prominent ingredient, your M&P bars are softer and tend to not last as long as the other processed bars of soaps. This is because glycerine is quick dissolving in water. Aesthetically speaking, due to its humectant tendencies, this soap is very prone to sweating (or beading).

### **CP soap**

Cold process soap is generally accepted as the most commonly used process by soap crafters. The term cold process is actually attributed to the fact that there is no outside heating source required for saponification; the lye mixture itself heats and saponifies the oils.

The CP process includes making a lye water mixture, melting your oils, blending the lye water and oils together- bringing it to a very light trace, adding fragrance and/or color, and molding. For the first 24 hours, your soap molds need to be insulated with towels or blankets. After 24 hrs., the soap can be cut and laid out to cure.

If you are not a patient person, then one downfall of CP soaping is the cure time. This averages 4-6 weeks before the soap is safe to use. During the cure time a lot occurs. Any residual lye is counteracted by saponification. This cure time is needed to make soap milder on your skin. Any excess water is evaporated out, allowing for a nice hard bar of soap. The soap bars have to be manually rotated and flipped so that air touches all of the sides. It is also during this time that soda ashing occurs. This ash is not harmful, but it can be unsightly, especially if you have decorated the tops of your bars.

The biggest and most rewarding benefit of cold process soap is that you make it completely from scratch. You control each and every aspect of the soap from beginning to end. Because cold process soap directly relies on a chemical reaction to occur, ingredients and measurements have to be exact. Each component of your cold process soap has a specific SAP value. This value is the amount of lye needed to saponify each oil in your recipe. Therefore, it is impossible to swap out anything or add anything once your lye water ratio has been figured out. Adding a little too much lye can result in soap that is lye heavy. This means that the pH level will be very high, and it could result in burns or irritation to your skin. On the opposite end, adding too much oil can result in bars that are soft and greasy due to the unreacted oils. CP recipes usually contain either palm oil or coconut oil, or both. Their values in any recipe are generally 20-30%. This is because these oils provide for a bar of soap that is gentle, lathers, and cleans.

With CP soaping it is very important to know how a fragrance oil will affect the mixture. Some fragrance oils cause soap batter to accelerate trace, rice, discolour, or will seize the batch (become soap-on-a-stick). Vice versa, there are also fragrance oils that do not adversely affect the soap batter, and allow for plenty of time to decorate. Swirling is one decoration technique that requires soap batter that is slow to trace. Trace can be affected by the actual soaping oils used in your recipe, the temperature of your lye solution, the temperature of your soaping oils, and by the fragrance oil you select. This type of artistry provides an exclusive look that is almost impossible to duplicate again. Columning and funnelling can also be used with cp soap batter for a very unique look.

Since CP soap must undergo the saponification process, color morphing can become an issue. FD&C or D&C dyes tend to morph (change color) in the presence of lye. Oxides and ultramarines can withstand the high pH environment of the saponification process, and are much less likely to morph in CP soap. Depending on the ingredients found in mica pigments, you will find some micas that do not morph in CP soap, and some that do. To easily test to see if your color choice will morph in CP soap, you can always add a small amount of your color to a small amount of lye mixture and observe any changes. This will save you the frustration of ruining an entire batch of soap that is colored a color you do not desire.

## **HP Soap**

HP soaping is the second most popular process of crafting soap. With this process you now have the control of what goes into the soap like CP provides with the ready-to-use-now element of M&P soaps. Hot Process soap has steps very similar to the CP soap steps, but varies in that you are adding heat to the equation to speed up the saponification process. The HP process includes: making your lye water mixture, adding your oils to the heat source, blending the lye water and oils together, stir, cook, stir, stir, stir, add fragrance/ additives, stir some more. With this process, it is not until the soap batter is closer to a solid than a liquid that it is scooped and packed into a mold. Since the saponification process has already completed from the heat, there is no need to insulate your mold.

This process is done in a crock pot or on a stove top. Crock pots are recommended over stove tops because a crock pot allows for slow, even heating of the batter and it is less likely to scorch. The most important key to remember when doing this method is to stir and stir often. One of the biggest benefits of this heat addition is that it does not require a curing period. Although, for harder, milder bars that will last longer, Natures Garden suggests that you allow these bars to cure for at least a week before using.

The finished soap bars of the hot process have a very rustic appeal. The soap bars individually are not completely uniform in shape nor are they completely smooth. This is due to the scoop and pack method of filling the molds. Color morphing, like experienced in the CP method, can also be a problem. Therefore, choosing colorants that can withstand high pH environments is a must when making HP soap. Getting uniform colouring throughout your bars of soap will be more challenging with HP than with CP.

## **CPOP Soap**

Often dubbed as the best of both worlds, CPOP, or cold processed oven processed soap allows for cold processed soap to saponify quicker with the extra step of heat and therefore directly shortens the cure time. This is a very good method for soap crafters who love to do CP without the long wait of cure time.

The CPOP method includes: preheating your oven to 170 degrees F, making a lye water mixture, mixing your oils, blending the lye water and oils together- bringing it to a very light trace, adding fragrance and/or color, molding, baking for 1- 2 1/2 hrs., turn off the oven, and let it sit for 24 hours in oven. Finally, remove, cut, and start the cure time of 4 weeks. This cure time allows for milder, harder bars of soap that will last longer.

Visually, CPOP soap bars are very close to that of CP bars. The only slight difference is that the tops of CPOP bars are not as smooth as CP ones. CPOP soap can appear dry on top, but this can easily be remedied by spraying the tops of the soap with rubbing alcohol.

**In summary**, the first step to soap making is deciding which type of soap making process is right for you.