How to Make Fluid Hot Process doing the Counter Top Fluid HP/ High Temperature Hot Process Method CTFHP/HTHP

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Fluid Hot Process is not a new process, and it's been done for 20-30 years at least, probably longer. The stick blender method has also been done for at least as long. I've seen many people do this different ways, and I want you to know that it can be done different ways and it can always be improved. This is also something that takes a lot of practice and is for more experienced soap makers.

I'm going to go over some basic fluid hot process information and do a picture tutorial for the counter top fluid hot process method. I also have several videos on my YouTube channel. I am not a fan of the stick blender method, so this is not a tutorial on doing that. The Counter Top Method is a very fast cook, and barely uses the stick blender.

If you are brand new to soap making please watch my lye safety video and beginner cold process videos. Search for Tina Moenck on YouTube to find my channel. For more information please refer to my first soap making book, The Soap Making Handbook Vol 1. It's 250 pages, and is full of information for beginners to advanced soap makers. www.naturalsudsnmore.com

This information here is for people that are already familiar with soap making procedures and want to learn how to make Fluid HP.

There are many ways to cook hot process soap. I want you to find what works for you and what you like.

Let's go over some basics first.

If you are unfamiliar with hot process soap I do have a beginner hot process soap video on YouTube. Basically, after you get the soap to trace you force the gel either by cooking it or using high temperatures to finish the saponification.

The original purpose of HP soap was to force the water loss through the cook so that it'd be cured sooner. The problem with that, is the soap is really gloppy and hard to manage. You couldn't do anything fancy with it design wise. So, in comes fluid HP. The fluid HP allows you to do that, but it can extend cure time to regular CP times with the extra water and additives.

Let's talk cure time. A soap isn't fully cured until it's lost all of its water. This is highly dependent on additives, water amounts, and environment, and the recipe. I

do not recommend selling soaps until they are fully cured, and this can be 4-6 weeks… even for HP. Soap is a lesson in patience, and soaps only get better with age. I don't believe in rushing the curing process. I've seen several people put their HP soaps in the freezer and then sell it in 2 days. I explain this more in detail in my book, The Soap Making Handbook Vol 1. Freezing does cause some water to leave the soap, but unevenly. I've seen several people have warped soaps due to doing this. It still contains some water also, and your soaps can be mislabeled if you sell them too soon at that weight. They will continue to lose weight and shrink. Also, I don't recommend dehydrating your soaps either for the same reason. Dehydrating them can melt them and or warp them from an uneven cure. It's better to manipulate the cure time by how you make it. I think the cure time is part of the draw for consumers…. Like aged cheese or wine. Every time I tell a customer how long the cure is I always get a wow response, and it just amazes them. It makes handcrafted soaps special.

Terms to know…

HP- Hot Process (Basic HP done around 160 degrees F)

CP- Cold Process (done around 100 degrees F, but this can go from 90- 120 Degrees F)

RT- Room Temperature

HTHP- High Temperature Hot Process (200 degrees F or slightly higher)

CTFHP- Counter Top Fluid Hot Process (Same as HTHP)

LTHP- Low Temperature Hot Process (140 degrees F)

SBHP- Stick Blender Hot Process (Same as HTHP, but using a stick blender most of the time)

SGHP- Stained Glass Hot Process

PPO- Per Pound of Oil

If you have never attempted HP before, I suggest you don't start with the CTFHP/HTHP method. It's a much more advanced method. You had to crawl before you walked. I also suggest that you have several batches of CP under your belt before you attempt HP, so you know how soap behaves. Soap cooks

completely different, and every recipe cooks completely different. Let's go over those stages, but remember that your recipe may not get all of these stages.

Trace- If you aren't familiar with trace this is where your soap thickens. There are different kinds of trace. When doing HP, I recommend stick blending until you get a medium trace. Trace highly affects your designs in CP, but for HP we don't need to worry about that.

Pudding- This is a very thick trace

Oatmeal- sometimes your soap may turn to an oatmeal like consistency

Applesauce- It will look like applesauce and it may separate. If that happens you need to stick blend it back together.

Mashed Potato- It will look thick and white like mashed potatoes. This usually precedes the Volcano.

Volcano- Not every recipe will volcano and heat really determines this. You need to make sure your batter doesn't fill more than half your crock pot, because it will fluff up and you'll have to act fast to stir down the volcano. This is creating the heat you need to finish the saponification, but it isn't necessary to finish it. Temperatures are key here.

Gel stage- This is a translucent stage, it looks like Vaseline. Your soap is neutral at this point or it will be shortly.

Many people stress about the soap being neutral at this point, but don't because it'll lead to overcooked soap and soap chunks. It is so hot it'll finish neutralizing on its own. Remember CP will saponify without gel, soap knows what to do.

I don't recommend cooking soap longer than 30 minutes, and the CTFHP method cooks in under 10.

Fluid HP is highly dependent on your additives and water amounts. Let's go over those and when to add them.

Sodium Lactate: added at 1 tsp PPO to the water before lye is added or after the cook.

Pure Cane Sugar: added at 1-3% of the oil weight and dissolved in the water before the lye is added. Sugar creates bubbles in the lather, but it creates more heat to cook the soap faster. You can also add diluted honey or syrup after the cook.

Yogurt: Added cold or at RT… 1 TBSP PPO after the cook and mixed in very well. With my vegan palm free recipes, yogurt isn't needed. Some of the yogurt does get converted to sodium lactate. You can do this with vegan yogurt, but it hasn't worked as well.

Glycerin and Everclear: These are both solvents that break down the soap crystals to increase transparency and fluidity like syrup. I only use these in the SGHP method. **Everclear needs a lot more safety precautions to use and is for advanced soapers only**. Many do add glycerin though, I only suggest it at 1-2% for fluid hp. Keep in mind soap already creates glycerin naturally and the more you add it can make the soaps sticky and sweat like melt and pour soap, and the softer the soap will be.

Water: You need water for fluidity. I suggest 38-40% total liquid. I prefer 38%, because you can get warping if using a high amount of liquid with lots of additives. I know some use a water discount with fluid HP, but I've never gotten fluidity at 25-30% water, although it was still manageable. I don't suggest using a water discount with this until you have much more experience. **A water discount will create more heat and more volcanoes.**

Keep in mind that you may not always get a very fluid HP soap, but you will get a manageable soap. Fluid HP will always be thicker than a CP. They are completely different consistencies.

Benefits to doing HP soap…

1) You can control your superfat by adding it after the cook.
2) You can add things like milk and essential oils after the cook and don't have to worry about the lye affecting them.
3) You don't get soda ash.
4) You don't have to worry about ricing and partial gel and other CP issues.
5) You can cut your soap sooner. Although it is completely saponified after the cook, you still need to let it cure completely.

IMPORTANT THINGS TO NOTE:

1) As with all soap making your lye water and oils need to be within 10-15 degrees of each other before combining. With the HTHP it is especially important to have them close to the same temp, because if they are too far off you can get an explosion when combining. This is very dangerous.
2) Please review all the safety procedures and have all your PPE on.

3) As with any soap making, be sure to have all your prep work done ahead of time. The HTHP soap making goes fast and you need to have everything prepared.
4) A big note here is to never add anything cold to your soap after the cook, because it can seize it up.
5) DO NOT heat up essential oils and yogurt, leave those at RT.
6) You need to keep everything else warm, and work with it fast.
7) Do not worry about adding essential oils to hot soap, because the Flash Points are for shipping.
8) If you wait to work with the soap after it has cooled it'll be harder to manage and you won't get a smooth soap.
9) DO NOT over cook your soap, because you will end up with soap chunks.
10) If you don't mix in additives like yogurt well enough, you can get cooked chunks of it throughout the soap.
11) If adding things like syrup or honey after the cook, they need to be diluted to be thin enough to incorporate well into the soap. If not you can get some dark sugar spots.
12) I also don't recommend cooking longer than 30 minutes for the LTHP and regular HP.

Your recipe makes a huge difference too. Let's go over some things. I make my recipes completely different for HP soaps than my CP soaps. You *can* cook any recipe, but you can design a recipe to cook faster and be more fluid.

1) I already talked about adding sugar to your water. Sugar gets dissolved in the water first. I recommend pure cane sugar, if you use organic sugar your soap will be darker. Sugar creates more heat to cook the soap faster.
2) Your hardness number on Soap Calc makes a difference I've found. A good range is 40-43. Although some of mine have worked well at 45, and others use 38. You will have to find what you like through experimentation.
3) Using something to accelerate trace helps to cook the soap faster. Some like to use stearic acid. If you want to use stearic I

recommend 5% of the recipe for this. I don't use it in CP because it accelerates and thickens so much. Most stearic acid is palm derived and it also doesn't produce glycerin. You can do this vegan and palm free. If you don't want to use palm or animal fats, you can use butters high in stearic like Kokum, Mango, Cocoa, and Shea. I have found that Mango and Kokum butters work very well in fluid HP.

4) NOTE: stearic acid does not fully melt until 160 degrees. Anytime I use stearic or an oil or butter with it, I always heat until fully melted otherwise you can end up with stearic acid spots in your soap.
5) I also only use about 40% liquid oils for HP soaps. Saturated fats cook faster and trace faster.

There are several ways to do this, and the temperatures make a big difference. I'll give you a picture tutorial of the CTFHP, and then go over some variations for other temps.

Recipe I used for this Tutorial

(5% superfat included)

14 oz (23.3%) Coconut Oil

8 oz (13.3%) Mango Butter

20 oz (33.3%) Olive Oil

4 oz (6.7%) Castor Oil

6 oz (10%) unrefined shea butter

6 oz (10 %) Kokum butter

2 oz (3.3%) sweet almond oil

8.23 oz lye

22.8 oz distilled water

1.8 oz pure cane sugar

4 tsp sodium lactate

4 TBSP plain yogurt

Counter Top Fluid Hot Process

This is a very fast process, and cooks in less than 10 minutes. But times and cooks will vary with different recipes.

Let's go over the steps…

PREP:

1) Make sure your mold is lined if needed and ready to go.
2) Make sure your additives are weighed if needed and set out.
3) I set out my yogurt to come to room temp if using.
4) I always blend my eo or fragrances first too.
5) I always premix my colors with some of the water, and it's discounted from the lye water.
6) I premix clays now with water and my superfat. Clays absorb both oil and water, and premixing with both helps keep the soap more fluid. I normally cook with 30% water, and use the 8% water to premix my colors.
7) I use mini heated crock pots to mix the colored parts to keep the soap warm.
8) Use a checklist for your ingredients so you don't forget to add anything. I check every oil off as I add it to the crock pot.

To start HP, you need to weigh all of your oils and butters and put them in your crock pot to heat to the desired temp you want for the method you are doing. I weigh my water and discount what I need to for colors. I add my sodium lactate and sugar to the water, and make sure the sugar is dissolved and set in the sink. I wait until my oils are the desired temp before mixing the lye into my water when I'm doing the HTHP.

The first thing I do is turn my crock pot on to high. Also, I line my wood molds. I'll give you step by step instructions in a picture tutorial next. Please make sure to review safety procedures. Make sure you have a good scale too for soap making.

Figure 1 water weighed and sugar is dissolved in and sodium lactate is added. Set Aside.

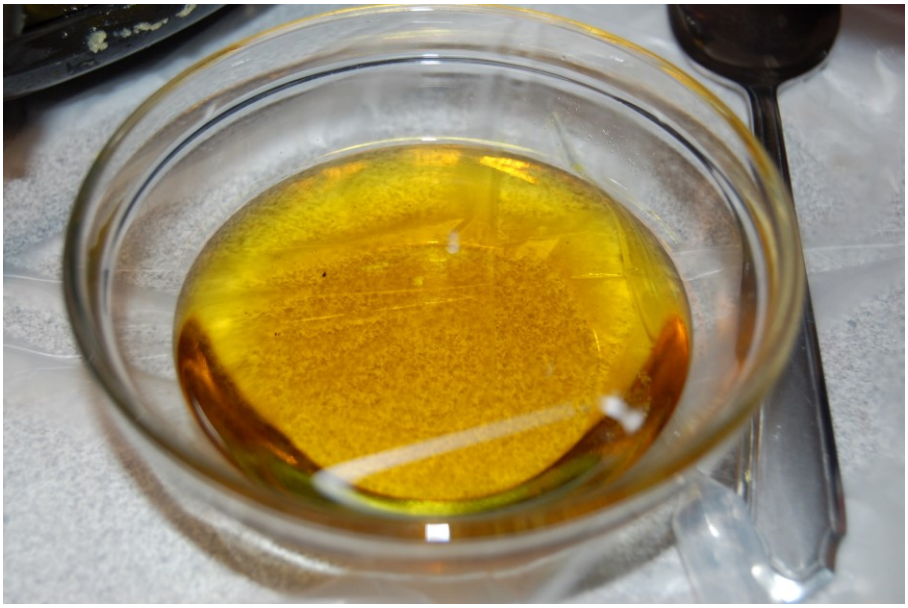

Figure 2 Essential oils are blended in a glass bowl, and set aside. For this I used Lavender, orange, and cedarwood essential oils.

Figure 3 I premix my colors in plastic cups for HP. I discount some of the water to do this. For clays, I now premix with the superfat and the extra water. These get set aside too. I used purple Brazilian clay, activated charcoal, and non nano particle zinc oxide. Yogurt is also set out.

Figure 4 I turn my mini crocks to warm so I can use them to keep my soap warm to color it later.

Figure 5 With the crock pot on high, I weigh all my oils and butters (minus superfat if adding after cook) and put them in the crock to melt and heat to 200 degrees F covered.

Figure 6 After the oils have reached 200 degrees F, the crock pot is taken out of the base and sits on the counter.

Figure 7 As soon as the crock is taken out of the base, mix your lye into the water. SAFETY FIRST! Mix well, and then immediately add the lye water to the oils... Both will be around 190-200 degrees F. They need to be close to the same temp before combining.

Figure 8 This is right after the lye water was poured in. I stir with the spatula a bit before I stick blend.

Figure 9 Stick blend until you reach a medium trace.

Figure 10 After you reach trace, cover it and leave it sit a few minutes. DO NOT walk away at any point in this process! This cooks fast.

Figure 11 After a few minutes take the lid off and stir. It'll start to change. Stir completely and then recover for another minute or two. Remember to cover when not stirring.

Figure 12 You can see some separation happening. This is the applesauce stage. Time to stick blend until it comes together. It may Volcano, so be prepared to stir with a whisk. This one did not volcano on me. Every recipe is different.

Figure 13 This was as close as I got to a volcano. It went to mashed potato stage here. I only stick blend until this or I get a volcano, then I whisk it.

Figure 14 Starting to Whisk.

Figure 15 Keep whisking! It's getting thicker.

Figure 16 Almost there. Keep Whisking! This is creating the heat needed to finish saponification.

Figure 17 It's done! This takes less than 10 minutes.

Figure 18 Just added the yogurt. Mix in very well. You can see a big change in the batter. This recipe worked great. I let this rest for 5 minutes after the yogurt was added to let it convert to sodium lactate. Then I mixed in my essential oils, and separated some out into the mini crocks to mix in the colors.

Figure 19 Soap was separated out into the mini crocks, and the premixed colors were added and mixed in well… purple Brazilian clay and activated charcoal. Use the lids to help keep moisture in or you can use plastic wrap. The big portion was mixed with zinc oxide to whiten it.

Figure 20 Premixed zinc oxide was added to this part. Zinc works really well to keep the soap fluid and to whiten it. Note: I don't scrape down the top part to keep clumps out of the finished soap.

Figure 21 Watch the video for all the details. It's hard to take pictures while I pour, but it was all filmed. I worked with this soap for a long time, so the top did get a little thicker than I like, but it still worked great.

As soon as I finish the pour I put this in the fridge, and then it's cut in about 3 hours. This will cure for at least 4 weeks.

Figure 22 Just cut 3 hours later.

The video is now done and available. Click here for the video. Or you can go to my Youtube Channel or my website www.naturalsudsnmore.com

Depending on what hot process method you want to do it'll vary slightly. If you want to do LTHP, you can watch my Aleppo video. Basically, you are starting with much lower temps around 130-140 degrees F, and you cook it in the base not on the counter. I still recommend not cooking longer than 30 minutes to prevent over cooked soap. I also recommend stirring often to help the soap heat evenly and prevent overcooked soap and/or hot spots. Remember to cover the soap when you are not stirring to help retain heat and moisture. You can cover with plastic wrap or just use the crock pot lid.

The regular HP done around 160 degrees F is going to be done the same way as LTHP, but it may cook different and faster. My beginner hot process video shows how that is done.

If you have any questions, please let me know. If anything needs explained more just let me know.

Remember for more information please refer to The Soap Making Handbook Vol 1.

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