

Swiss Cheese

Yield: 2 lbs

2	gallons	whole milk
1/4	tsp	calcium chloride diluted in 1/4 cup cool water (if using pasteurized milk)
1	pkt	thermophilic culture
1/8	tsp	propionic shermanii
1/2	tsp	liquid rennet dissolved in 1/4 cup of water or 1/2 tablet of vegetable rennet dissolved in 1/4 cup of water
16	oz	kosher salt
1/2 gal		whey, from the cheese make
1		4 inch cheese mold

- Heat the milk to 90°F. Add the starter and mix well. Add the calcium chloride if using it.
- Remove 1/4 cup of milk from the pot and add the propionic shermanii. Mix thoroughly to dissolve the powder. Add the mixture to the milk and stir. Cover and allow the milk to ripen for approximately 10 minutes.
- Add the diluted rennet and stir gently with an up-and-down motion for approximately 1 minute. Cover and let the milk set at 90° for approximately 30 minutes.
- Using a curd knife cut the curds in 1/2" slices. Stir gently for 40 minutes.
- Begin heating the curds by 2 degrees a minute for 10 minutes. While this is heating, take a stainless steel wire whisk and slowly break down the curds until they are about 1/4".
- Temperature is now 100°. Now increase the temperature and heat the curd one degree every minute until the temperature is 120°. This will take approximately 30 to 35 minutes. I have taken 45 minutes to do this many times and I couldn't tell the difference.
- Maintain the temperature at 120° Fahrenheit for another 30 minutes, stirring often. The curds must be cooked until they reach a stage called the "proper break." To test for this, wad together a handful of curds and rub it gently between your palms. If the ball readily breaks apart into individual particles, the curds are sufficiently cooked. If they are not sufficiently cooked, they will be too soft to hold the cheese together. Let the curds set for approximately 5 minutes.

If you are checking PH levels it should be 6.3 to 6.4 at draining.

- Pour off the whey and reserve it for the brine and pressing.
- For the brine, set 1/2 gallon of whey aside.
- Line a 2 pound mold with cheesecloth and place it in the sink or over a large pot. Quickly ladle the curds into the mold. You do not want the curds to cool.
- Some recipes say that the first 2 pressings should be "under whey" to make the cheese knit properly. I don't do this, and mine always knits properly. However, if you want to try it, you put the mold with the curds inside of a pot, and get it in the press. Then pour warm whey in the pot to cover the sides of the mold.
- Press at 10 pounds of pressure for approximately 15 minutes.

- Remove the cheese from the mold and gently peel away the cheesecloth. Turn over the cheese, re-dress it, and press at 25 pounds of pressure for 30 minutes. If pressing under whey be sure that the whey is still warm, 90° to 100° is fine.
- Repeat the process and press at 25 pounds of pressure for 2 hours. This would not be pressed under whey, only the first two would be. The whey would get cold during a 2 hours press and that would not be a good thing.
- Repeat the process but press at 25 pounds of pressure for 12 hours.

If you are checking PH levels, it should be 5.3 to 5.4 at end of pressing.

- Make a saturated brine bath by combining the 1lb of salt and ½ gallon of whey in a noncorrosive pot; stir well. Heat the whey just enough to melt the salt.
- Place the brine in the cheese cave while the cheese presses for 12 hours.
- Remove the cheese from the mold, peel away the cheesecloth, and soak the cheese in the brine. If the cheese floats, sprinkle a pinch of salt on the surface of the floating cheese. I always weigh mine down so it is submerged. Place in the cheese cave and let soak. To determine brine time I multiply the weight of the cheese times the height of the cheese. A 2lb cheese that is 3" high will brine for 6 hours.
- Remove the cheese from the brine and pat dry.



Washed Rind

- Make a wash from 4 cups of water, 1 cup of dry white wine, and 2 tablespoons of salt.
- As soon as the cheese comes out of the brine, pat it dry.
- Using a natural bristle paint brush, (those cheap ones that you buy at the grocery store for BBQ sauce) brush the wash on the cheese. The point is to get it wet.
- Place the cheese on a cheese board, and set it in a plastic ripening box. My cheese boards are made from maple wood, my husband bought a piece and cut it up for me, and sanded them and oiled them with food grade linseed oil. These boards emulate the wooden shelves used by creameries.
- Wet a sponge and set it in the plastic box, to keep the humidity up.
- Sit the box in the cave. I leave the lid loose, I just sit it on the top.
- Every day you need to pick up the cheese, wash the board, flip the cheese over and set it on the board. Then wash the top and sides with the paint brush.
- If the cheese gets some mold spots on it, use a piece of cheese cloth dipped in the wash to wipe it off. If that doesn't work, dip a nail brush in the wash and scrub it a little. If it grows a lot of mold overnight then you have too much moisture and need to take the lid half way off.
- After one week remove the cheese from the cave and bring it in the house for the warm aging period. You still have to flip it and wash it every day. Keep it in the box with the wet sponge, and keep propping the lid on in different amounts of open and closed to keep it moist, but not too moist.
- The goal in the cheese washing is to have it form a slimy schmear on the outside. You are not trying to wash this off, you are trying to encourage it's growth. My cheese above has a very thin white smear, I did not succeed at getting it to the proper growth because this is the first time that I ever tried a washed rind.
- You save the wash as you use it from cheese to cheese, and the bacteria that grows this schmear will get in your wash and on your board, so next time you use them, it will be easier to start.
- Add more water, wine and salt to your wash as it diminishes, but don't get rid of it unless it starts to smell like poison or ammonia or something non-cheese like. Mine has a very nice yeast smell to it.
- You cannot allow the cheese to dry out during this washing phase, it must remain moist.
- Wash for 10 days
- Sometimes the white mold doesn't show up until you quit washing it.
- Let the cheese set out for 2-6 weeks, until eye formation is noticeable. The cheese will swell somewhat and become slightly rounded on the top and bottom. I have seen this take 5 days and I've seen it take 2 weeks.
- Once you notice the cheese has a rounder top or sides, let it sit out for another 24 to 48 hours continuing to flip it. Keep in mind that the gasses that are accumulating inside of the cheese are blowing holes in the cheese. If you leave it out too long the inside will look like a bomb went off inside of it. (I know this from experience.)

- If you leave it out of the cave for 5 or 6 weeks and it doesn't swell, just give up on it and put it back in the cave. Eyes don't have flavor anyway, the cheese will still be delicious without them. (See the section on eye development for more information.)
- Return the cheese to the cave, and age the cheese at 50 degrees Fahrenheit and 80% humidity for at least 3 months. I leave mine in the ripening container with the sponge in it to maintain the humidity. Now that I'm not washing the cheese, I just leave the top across the top of the box, but not fastened down.
- The rind on the cheese will dry out slowly, and there will be spots of mold that appear on the rind, but the rind should be thick enough that the mold will not get to the cheese.
- Continue to flip the cheese once a week and keep an eye out for unwanted mold growth.

I age my Swiss for at least 4 months. The longer you age it, the better it gets. While it's good at 4 months, it's a lot better at 6 months.