Provolone Cheese

2 gallons whole cow's milk
½ teaspoon Thermo B thermophilic culture (1/2 this amount if using raw milk)
1/8 – ¼ teaspoon Lipase (optional)
1 ½ teaspoons rennet diluted in unchlorinated water
Salt that DOES NOT contain iodine

Heat milk to 97 degrees F over medium low heat. Remove from the heat.

Sprinkle the culture over the milk and let it rehydrate for 5 minutes. After the 5 minutes, stir well in an up and down motion moving your spoon all the way around the pot – this should take about 15 stirs. Cover and let sit for 45 minutes maintaining the temperature at 97 degrees F. Note: Milk retains its temperature very well especially if you are using a stainless steel pot with a reinforced bottom. If you are in a colder climate or your home is very cold, you can use a water bath to maintain the temperature at 97.

Lipase – Using lipase is optional. If you are going to use lipase this is the point that you will add it. Sprinkle the lipase on the milk to rehydrate and let sit for a couple minutes. Stir into your milk and let sit for 10 minutes.

Add the diluted rennet, stirring into your curds in an up and down motion. Cover and let sit, maintaining the temperature at 97F, for 1 hour.

Check for a clean break. If a clean break has been achieved cut the curds, vertically and horizontally, into ½ inch cubes. Cover and let sit – maintaining heat at 97F – for 30 minutes.

Over LOW heat slowly raise the temperature of your curds to 108F over 30-35 minutes stirring frequently. You do not want to heat your curds too quickly as you want the whey to be released from your curds slowly. Once 108 is reached, remove from the heat and scrape the sides and bottom of your pot with a plastic spatula. Do this gently for 10 minutes.

Let curds rest in covered pot for 15 minutes.

While curds are resting, line a strainer with cheese cloth and place it over another pot or bowl to catch the whey. The heat of the whey will help extract more whey from the curds and you can use it to stretch your curds if you like versus using water. I prefer stretching in hot water.

Slowly pour the whey and curds into prepared strainer. The curds should have started to knit together a bit during the 15 minutes they were sitting. You are using this step to get your curds to knit into a slab. Let sit and drain for 10 minutes.

During these 10 minutes. Prepare a water bath that you will need to maintain at 115 degrees F. I do this by using a sous vide. After the 10 minutes remove the slab of curds from the strainer and place in the bottom of the original pot and put your covered pot containing the curd slab in the

water bath. The goal is to maintain the temperature of your curds in the 102-105 degree range. Leave your curds in the covered pot in the 115 degree water bath for 2 hours.

When 2 hours have passed, check the pH of your curds. The goal for stretching your curds is to get the pH into the range of 4.9 to 5.2 (most cheese have a pH of 5.6-5.8). Getting the pH correct is critical to being able to successfully stretch your curds. This is going to take time and heat. It is not uncommon for this step to take as long as 5-6 hours. I use raw milk and I experience getting to 4.9 to 5.2 in about 3-4 hours. DO NOT be inpatient with this step. IF your pH is not in the 4.9 to 5.2 range put your covered pot with the slab back into the water bath and recheck pH every 30-45 minutes.

When your pH reaches in the range of 5.5 put about 2 gallons of water in a pot and heat to 185 degrees F. You could also use the saved whey if you like. If your water reaches temp prior to your curds reaching pH just put the lid on it and leave it on low heat. It should maintain its' temperature.

When your pH reaches 4.9 to 5.2 they are ready to stretch. Place your slap into a strainer over a pot (you do not need any liquid in the pot) and cover. Let drain for 10 minutes. After 10 minutes have elapsed, transfer slab to a cutting board and cut into 1 inch cubes. Place the cubes into a large bowl for stretching. I prefer stainless steel because it retains the heat of the water better than other materials. Pour your hot liquid over the curds giving yourself about 4-5 inches of liquid covering the curds so you have enough room to work the curds in the hot water.

Wearing heat resistant gloves, use your hands to move the curds around for 30-60 minutes to let the hot water "massage" the curds. Then start working the cubes of curds into one mass. If you like, just to ensure they are going to stretch, pinch off a small piece and try to give it a good stretch. If it starts to stretch then you have a good curd. If you get no stretch at all remove the curds from the hot water, put back in the pot, and put in the 115F water bath for another 30 minutes. Retest pH.

After you have worked your curds into a single mass start to stretch them, stretching just until there is a shine to them that resembles a raw chicken breast. This shine is your indicator that your curds are ready to shape. DO NOT over stretch your curds, this can result in some toughness to the texture of your cheese.

Once you achieve your shine, shape your curds as you see fit – the traditional "jug" shape, a ball, whatever you like. Immediately put your shaped cheese into a bowl of ice water and leave it submerged for 30 minutes. This is done so that your curds – which you just had in 185 degree F water – doesn't turn in to a Provolone pancake.

After the 30 minutes place your cheese in a brine of 2 quarts water and 5-6 tablespoons of salt. Leave in the brine for two hours, flip and leave for another two hours. Pat dry your cheese and let it sit for an hour or two.

Either string up your cheese or put in a mesh bag (plastic preferably) and let hang to age at 52-55 degrees F and 80-85% humidity for about 7 days. This will create a nice rind on your cheese. At

this point you can either continue to hang for another 2 weeks and mitigate the mold using a brine wash or you can coat with olive oil to mitigate the mold. For a mild cheese you can eat at this point. For a sharper cheese continue to age for 3 to 12 months. If you prefer to vacuum seal your cheese you can do that as soon at day 7 when a good rind has been formed. If you vacuum seal prior to the rind being formed you run the risk of your cheese collapsing while you are sealing.

***Note: If you are using pasteurized or pasteurized/homogenized milk do not use calcium chloride. Calcium chloride can interfere with successfully getting your curds to the proper pH. I have been told that some have been successful suing calcium chloride when making stretched curds cheeses and it is your call but I do not recommend it.