

# *The Essentialist*

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## **CHEESE MAKING**

### **Equipment:**

- Large stock pot (enamel or stainless steel, no aluminum)
- Thermometer (dairy preferred but a candy thermometer will work)
- Cheese cloth – 10 yards, approximately - game bags provide more substance
- large spoon
- long knife
- spatula
- Cheese press – see photo-check Google “make cheese press” for other designs

### **Ingredients:**

- Milk: raw or pasteurized, Not Ultra-pasteurized  
3 ¾ gallons == 3 - 5 pounds cheese (semi-hard)  
5 quarts == 1 pound cream cheese, or 1 ¼ pound cottage cheese
- Cultured buttermilk (as starter)
- Rennet tablets (¼ tablet/2 gallons milk), vegetable alternatives are available, see References
- Salt (optional) canning/pickling salt works well- do not use iodized salt

### **1st Step: Prepare activator:**

Pour ¼ cup cultured buttermilk into each of 4 quart jars. Fill jars with milk, put on clean caps, shake, allow to stand for 24 hours at room temperature.

### **2nd Step: Inoculate milk:**

Add contents of 1 quart of buttermilk that you inoculated the night before, to large stock pot, pour in 2 gallons of milk, mix with a clean spoon. Warm the milk over low heat to 86-90 degrees F. Remove from heat and allow to ripen for 1 - 2 hours.

### **3<sup>rd</sup> Step: Curdling:**

Dissolve  $\frac{1}{4}$  of rennet tablet in  $\frac{1}{2}$  cup cool water, for each 2 gallons of milk (better a little too much than too little) make sure the ripened milk is between 86 and 90 degrees; check with thermometer. Add rennet solution to milk; stir thoroughly. Cover and let stand for about an hour.

To see if it is done: Stick a clean finger into the curd at an angle and lift up slowly. If the curd makes a clean break over your finger, it is ready. If it is still the consistency of tired yogurt, be patient.

### **4<sup>th</sup> Step: Cutting the curd:**

When ready, take a long knife and slice the curd up into cubes about  $\frac{1}{2}$ " square. Don't worry about exact size or nice looking cubes. Holding the knife vertically, slice in a parallel fashion in lines about  $\frac{1}{2}$ " apart, in one direction; then slice in the same manner in a direction perpendicular to the first slicing to make a square grid. Then slice at a sharp angle across one way, as best as you can to undercut the curds and make into cubes. Do this undercutting in several directions until the curd is pretty well cut up.

### **5<sup>th</sup> Step: Heating the curds:**

Place kettle on very low heat setting on stove. Stir with a clean spoon constantly in order not to burn the curd at the bottom. As you stir with one hand, have your knife in the other, ready to hack up any large pieces of curd that you missed in the first cutting. As you stir, the contents will warm slowly. It should take 45 - 60 minutes to get to 105 degrees. The lumps will get smaller and a yellowish, cloudy liquid called whey separates. Keep the curds in motion during the heating. Yes, this requires almost constant stirring, so maybe have a tall stool to sit on while you are doing so.

When you reach 105 degrees F, take the kettle off the stove and let stand for an hour. That should be long enough for the curd to harden. What you will have is something resembling a white rubber bathmat at the bottom of the pot full of whey. Pour or ladle off the whey. You can feed this to your pigs, chickens, goats or dogs; they love it! Or you can use it to make Ricotta Cheese (see below), or to inoculate a fruit or vegetable ferment (chutney, pickles, kraut, etc.)

Add salt, if you wish, 1  $\frac{1}{4}$  teaspoonful to 4 gallons worth of curd. Using a spatula, slice into a curd left in the pot and mix in salt. A small amount of whey will be left in kettle and will help disperse the salt throughout the curds. To flavor the cheese, I add several cloves of minced garlic or several tablespoons of mixed herbs, when I add the salt, per 2 gallons of milk batch.

### **6<sup>th</sup> Step: Pressing the curds:**

Place your cheesecloth over a clean pan or bowl at least the same volume as the curd you have. Dump the curds into the cheesecloth, scraping out kettle with spatula.

When all the curd is in the cheesecloth, pick up the corners and form the curd into a ball by twisting the cheesecloth and squeezing to form a smooth ball. Hang above the pail and let drain 15 minutes. Put into press, apply pressure, and let set for 12 hours.

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Here is where I departed from the book, which recommends removing from press, wrapping in fresh cheesecloth and turning the cheese several times a day for 5 - 6 days to form a rind over the surface. Then remove cheesecloth, wipe off surface, re-wrap with fresh cheesecloth, and coat with melted paraffin, and let stand for 60 days. I never did this.

I would wipe down the cheesecloth-wrapped cheese with a cloth moistened with cider vinegar, during the 4 - 5 day ripening time, then we would eat it. In the eight years I made cheese regularly, I doubt any of it stayed around for 60 days. I did not make a hard cheese, which may require that aging process; only a semi-hard cheese, rather like a mozzarella.

### **Cream Cheese**

Use either cream or milk, at room temperature. Measure, and to each gallon, add ½ cup cultured buttermilk, mixing well. Dissolve ½ rennet tablet in ¼ cup of cool water for each gallon of milk. Stir it well into milk; stir for about 10 minutes or until the milk just begins to clabber. Stop stirring when you feel a slight thickening. Then cover and keep it about 85 degrees F until completely clabbered -- 12 hours or so. You can do this by wrapping bowl in towel and placing in unheated oven.

When the whey has separated out and curds have formed one soft but solid mass at bottom of bowl, the milk has clabbered. To be sure, tip the bowl and see if the curds break clean from side of bowl. Take several layers of cheesecloth and wet it with clean water. Wring it out and line a colander with it; place colander in a large bowl to catch whey. With a clean knife, slice through the clabbered milk so curds are cut into 1" cubes (refer to 4<sup>th</sup> Step: Cutting the curd, above). Then pour clabber and whey into colander and let it drip for a minute or so. Pick up cheesecloth by corners, being careful not to pour out any of the curds, and tie the corners to form a bag.

Suspend the bag over bowl and let it drip until all the whey is drained off and a gelatinous solid mass remains. Let it drip overnight. To speed up the process, gently squeeze the bag every so often and change the cheesecloth once or twice when it gets plugged with cream cheese. When it reaches the consistency you like, take it out of the cheesecloth and place in a clean bowl; salt it you wish, t teaspoon or so to taste.

Pack into rigid container and refrigerate. Unsalted cream cheese will keep 3 - 4 days, salted will keep 4 - 5 days; if you prefer not to salt it, it isn't going to make much difference. It can be frozen for longer keeping -- up to 4 months -- but it may be crumbly once thawed.

## Ricotta Cheese

A great way to use some of that liquid whey left over from making semi-hard cheese.

- 2 ½ gallons liquid whey
- 1 pint whole fresh milk
- ⅓ cup cider vinegar

Heat the whey until the cream rises to the surface. Add fresh milk and continue heating to just below the boiling point (about 200 degrees F). Stir in the vinegar and remove from heat immediately. Dip out the curds and drain. Salt, if desired.

Yield: about 1 pound

## Tofu

- 1 cup dry soybeans
- 9 cups water, divided
- 1 ½ tablespoons vinegar or lemon juice

Soak beans in 3 cups water overnight, drain and rinse, put through meat grinder. Put mash and 6 cups water into large pot over low/medium heat and bring to a boil. Watch that it doesn't boil over. Put muslin or dish towel in a colander and strain through.\* Add 1 ½ tablespoons vinegar or lemon juice to liquid. Let stand 5 minutes to curdle. Put curds into cheesecloth-lined press and weight on top, or make into a ball with cloth and drain over night. If not used immediately, put tofu in container and cover with cool water, refrigerate. Keeps a couple days.

\*The hulls remaining can either be spread on a cookie sheet and roasted in oven until golden or used fresh. If roasted, the resulting Soy Grits can be added to breads or muffins or cookies to add protein to diet. If you prefer to use them fresh, they can be mixed with seasoning, some flour and made into soy burgers.

### Sources for Equipment & Supplies:

- [Cheesemaking.com](http://Cheesemaking.com) for cheesecloth, presses, cultures, and more
- Cheesecloth substitutes: JoAnn's for cotton scrim; Sportsman Ski Haus or Snappy's for game bags
- SoyaJoy (<http://www.soymilkmaker.com>) for total tofu kit (includes cedar tofu press)
- See also: [The EssentialList: How to Make a Cheese Press](#)

### References:

- *Stocking Up*, by the editor of *Organic Gardening & Farming*
- *The Book of Tofu*, by William Shurtleff & Akiko Aoyagi
- [Cheesemaking.com](http://Cheesemaking.com) web page gives a lot of information and supplies