

Cheese Making References

Ricki Carroll, “Home Cheese Making”, Storey Publishing. The best home cheese making book. Available locally at TSC and on line at numerous sites.

Univ of Guelph cheese site – lots of technical information on the commercial cheese making process: <http://www.uoguelph.ca/foodscience/cheese-making-technology>

Includes this article “Making Cheese at Home”, with recipes, instructions, and links to Canadian sources:

<http://www.uoguelph.ca/foodscience/dairy-science-and-technology/dairy-products/cultured-dairy-products-and-cheese/cheese-short-versio-01>

FiasCo Farm lots and lots of links, instructions, recipes, sources

<http://fiascofarm.com/dairy/>

Lots and lots of **articles, recipes and advice** for the beginner:

<http://biology.clc.uc.edu/fankhauser/cheese/cheese.html>

A review article on **cheese making videos** for beginners:

<http://cheesemakinghelp.blogspot.ca/2012/02/cheese-making-videos-at-youtube.html>

Supply sources

Main Ingredient, Charlotte St, Peterborough. The best local source of supplies. They carry most of the basics you will need (see next page for details.)

Canadian Homebrew Supplies Inc, Brampton ON Canadian mail order source for basic supplies. No minimum order.

<http://homebrew-supplies.ca/viartshop/>

Glengarry Cheesemaking All supplies (they are Main Ingredient’s source)

<http://glengarrycheesemaking.on.ca/index.htm>

New England Cheesemaking Supply - The preeminent home cheese making site. Lots of articles, blog, supplies and recipes

<http://www.cheesemaking.com/>

Leener’s Supplies – kits, ingredients, equipment, on-line articles and recipes

<http://www.leeners.com/cheese/>

Cheese Making - Basic ingredients

Milk

Important: Do not use ultra-pasteurized milk. If you can find a source of low-temperature/vat-pasteurized or non-homogenized milk, you will get superior results.

Coagulants

Acids:

- Lemon juice
- Vinegar
- Citric acid
- Tartaric acid

Rennet (for coagulating without acid):

- Tablet
- Liquid
- Vegetable
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(note: $\frac{1}{4}$ tablet is equivalent to $\frac{1}{4}$ tsp liquid rennet and will coagulate 1 gallon of milk.)

Cheese cultures

Bacterial cultures to ripen hard cheese, add flavour, protect against pathogens, and preserve the cheese,

- Mesophilic (low temperature)
- Thermophilic (higher temperature)

Salt

non-iodized. Cheese salt, sea salt and kosher salt work well.

Calcium chloride

helps restore pasteurized and homogenized milk so that it will coagulate properly. Especially important with vegetable rennet.

Lipase

Used primarily in sharp cheeses to enhance the flavor (eg feta, parmesan)

Note that Main Ingredient carries almost all of these supplies (citric acid, liquid and tablet rennet, mesophilic and feta culture, and calcium chloride) as well as cheesecloth and fresh cheese molds. Tartaric acid can sometimes be found at winemaking supply places. Lipase will have to be mail ordered.

Cheese Making Equipment

Non-reactive pan

Thermometer

Slotted skimmer

Long knife

Cheesecloth (not supermarket cheesecloth, it should be both thin and tightly woven – carried by Main Ingredient or you can order from cheese supply companies)

Colander or strainer

Cheese mold

Measuring cups / spoons

Additional equipment for hard cheese

Cheese press

Cheese forms

Cheese wax

Cheese Recipes

Ricotta (adapted from Ricki Carroll, "Home Cheese Making", p. 89)

2 litres whole milk
1 tsp salt (optional)
acid: 1/2 tsp citric acid dissolved in 1/4 cup cool water
OR 1/4 cup lemon juice or vinegar
1-2 tbsp heavy cream (optional)

Step 1. Add optional salt and acid to milk in large pot and stir thoroughly.

Step 2. Slowly heat milk to 185-190 degrees. It should be steaming and just on the point of simmering. Stir often to prevent scorching.

Step 3. As soon as the curds and whey separate, move pot off heat. Let sit for 10-15 minutes.

Step 4. Line a colander with cheesecloth or thin muslin. Ladle curds into muslin. Tie the muslin into a knot and hang to drain for 30 minutes or more (up to overnight) until the cheese is at desired consistency. Add the optional heavy cream for more creaminess. Store covered in the refrigerator for up to 2 weeks.

Feta Cheese

4 litres 2% or whole milk
1/4 tsp calcium chloride dissolved in 1/2 cup water
1/2 tsp lipase dissolved in 1/2 cup water (allow 20 min to dissolve)
1/2 tsp mesophilic culture
1/4 tsp liquid rennet
1 -2 tbsp salt (kosher, sea, or cheese salt) or more, to taste

Step 1. Add calcium chloride and lipase to milk.
In water bath, slowly heat milk to 92 degrees.

Step 2. Add mesophilic culture. Let sit 2 minutes, then gently stir in.
Ripen for 1 hour at 92 degrees.

Step 3. Add rennet. Gently stir with an up and down motion for 1 minute.
Rest at 92 degrees till obtain a clean break (45 minutes or longer).

Step 4. Cut into 1/2 inch cubes.
Rest for 20 minutes at 92 deg, stirring gently occasionally to keep from matting.

Step 5. Scoop curds into cheese muslin, hang to drain for 4 hours (or longer)

Step 6. Unwrap curd. Cut into 1-2 inch chunks. Sprinkle with salt.
Let sit on counter or in refrigerator for 4 days to age.

Soft Goat Cheese (from Ricki Carroll, “Home Cheese Making”, p. 183)

2 litres goat milk

1/8 tsp mesophilic starter

Rennet:

Either ¼ tablet dissolved in ¼ cup water – use 2 tsp of solution

Or 1 drop liquid rennet in 5 tbsp water – use 2 tbsp of solution

Cheese salt, dried herbs, etc. to taste (optional)

Step 1. Heat the milk to 76 degrees. Add starter, wait 2 min then stir.

Step 2. Add rennet solution (amount depends on which type of rennet you are using – see above). Stir with an up and down motion for 1 minute.

Step 3. Cover pot and allow to set for 12-18 hours, or until it coagulates. Ideal room temperature is under 72 degrees.

Step 4. Scoop curds into cheesecloth-lined mold or strainer. Drain for 2 days.

Unmold. Stir in or coat with optional flavorings. Store covered in fridge for up to 2 weeks.

Mascarpone (from Ricki Carroll, “Home Cheese Making”, p. 73)

1 litre 10% or 18% cream

¼ tsp tartaric acid

Step 1. In a double boiler, heat cream to 185 degrees

Step 2. Add tartaric acid and stir for several minutes. Should slowly thicken to a cream-of-wheat consistency, with tiny flecks of curd. After 5 minutes, if it doesn't coagulate, add a speck more tartaric acid and leave for 5 more minutes. (Too much tartaric acid will produce a grainy texture.)

Step 3. Line a colander with cheesecloth or thin muslin. Gently ladle the cheese into the muslin. Tie the muslin and suspend over a bowl for an hour to drain.

Store in covered bowl in fridge for up to 2 weeks (but it won't last that long!) (If cream ingredients are just milk and cream uses less acid. If includes thickeners then need more acid.)

Homemade Yogurt

There are lots of recipes on line. This is how I do it.

1 liter milk (1%, 2% or whole) – make sure it's not ultra-pasteurized

1 tbsp plain yogurt as a starter (don't try to use more – using more starter make thinner yogurt)

note: use the freshest yogurt you can, with only milk and live cultures listed as ingredients. If I run out of homemade yogurt, I usually buy one container of Astro Balkan style to start off, then save a spoonful of each batch to start the next.

1. Heat milk over gentle heat till it is steaming and starting to bubble. For thicker yogurt, hold at this temperature for 15-30 minutes.

2. Cool milk to around 110 degrees.

Note 1: You don't need a thermometer. If you can hold your index finger in the milk for a count of 10, it is cool enough.

Note 2: I fill a sink or basin with a couple of inches of cold water and put the pan of heated milk in the water. It takes about 5 minutes to cool to proper temperature.

3. Whisk the starter into the milk and keep warm till it thickens (may take 8=10 hours, or more or less, depending on the temperature and the vigor of the starter culture)

Note: the tricky part is keeping the yogurt warm. Some suggestions: use a heating pad; cover it with something warm and quilted, like a tea cozy or a down pillow or jacket; warm up the oven, turn off the heat, and put the yogurt in the turned off oven. Experiment!

4. Refrigerate and eat!

Greek Style Yogurt/ Yogurt Cheese

Drain the finished yogurt either in a cheesecloth-lined colander or in a cheesecloth tied into a bundle and hung over a bowl to drip.

If you drain for an hour or two, you will get Greek yogurt.

If you drain it overnight, you will get yogurt cheese.

Renneted Curd Cheese

(Adapted from: <http://cheesemakinghelp.blogspot.ca/2011/06/mcminnarella-easy-soft-and-mozzarella.html>)

1/2 teaspoon calcium chloride

1 1/2 level teaspoons citric acid dissolved in 1/2 cup cool water

1 gallon whole milk

1/4 teaspoon liquid rennet diluted in 1/4 cup cool, unchlorinated water

cheese salt

Step 1. Add the 1/2 teaspoon calcium chloride directly to the milk when you put it in the pot. While stirring the milk constantly, add the citric acid solution.

Step 2. Begin heating the milk, continuing to stir, until it reaches 90 degrees.

Step 3. Stir in the diluted rennet with an up-and-down motion for 1 minute.

Turn off the heat and let sit for 15 minutes. Check the curd. If it's too soft, let it sit a few more minutes. Cut the curd into 1-inch squares with a knife that reaches the bottom of the pot. Place the pot back on stove and heat to 105 while stirring slowly. Take it off the heat and continue stirring slowly for 2-5 minutes.

Step 4. Scoop out the curds with a slotted spoon, transferring to a colander or strainer lined with fine muslin set over a bowl (to collect the whey). As you ladle the cheese from the pot to the colander, sprinkle cheese salt in the layers of curds.

Step 5. Work with the curds as little as possible while still allowing as much whey to drain as you can.

Use a slotted spoon to just sort of lift up and move around the curd mass without disrupting it. (Don't stir up the curds or knead them.) Within about 5-10 minutes of draining, the curd mass will become small enough that you can move it to either a smaller draining basket or strainer.

Continue draining until it is at desired consistency.

Now the cheese is ready to eat, or store, covered, in the fridge for 1-2 weeks.