

Epicurean

cheese making solutions

Camembert & Blue Cheese Kit

INSTRUCTION MANUAL

Congratulations on your decision to become a cheese maker! The whole family can enjoy this great hobby! Within this starter kit you will find all the basic equipment to enable you to make your own Camembert and Blue Cheese. The ingredients in this kit will process 100 litres of milk and produce up to 80 Cheeses.

This kit contains:

4 x Cheese Hoops

1 x 45L Camembert Culture / Mould Blend

1 x 50L Penicillium Roqueforti

1 x 50L MM100 Mesophilic Culture

2 x Bamboo Draining Mats

1 x Plastic Aging Mat

1 x 8L Ripening Container

50ml Calcium Chloride

250ml Liquid Sanitiser

40 Cellophane Cheese Wraps

50ml Rennet

100g Salt



You will also need:

10L Pot / Double Boiler (or equivalent)

6 L of Skim Milk and 400ml Full Cream per batch

Slotted Serving Spoon

2 x Cutting Boards

Long Bladed Knife

Milk Thermometer

RECIPES

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For more cheese making recipes, we recommend the "Home Cheese Making" book by Ricki Carroll.

Camembert (makes 4 cheeses, approx. 250g each)

- 7½ Litres Full Cream Milk (6 Litres Skim Milk and 400ml Full Cream gives a creamier product)
- 2 ml Calcium Chloride dissolved in ¼ cup cool water (only add when using homogenised milk)
- ½ teaspoon of Camembert Culture Blend
- 2 ml Rennet dissolved in 20ml cooled boiled water
- 2 teaspoons Cheese Salt

1. **Prepare the Starter.** The day before cheese making, prepare a Mesophilic starter as described in the “Cheese Making Basics” information sheet.
2. **Preparing the Milk.** Warm the milk and cream combination to 32°C (if using homogenised milk and no cream, add the Calcium Chloride solution at this time). Add the prepared starter and mix well. Leave covered for 75 minutes to ripen.
3. **Renneting.** Gently stir in the diluted Rennet with an up and down motion for at least 1 minute. Cover and allow to set for 60 minutes or until you get a “clean break”.
4. **Testing for a Clean Break.** Test for a “clean break” by sliding your knife into the curd at an angle and lifting some on the side of the blade. If the curd breaks cleanly around the knife and whey runs into the crack that is made, you have a “clean break”.
5. **Cutting the Curd.** Cut the curds (according to the method described in the “Cheese Making Basics” information sheet) into 2cm cubes. Allow to stand for 30 minutes to set.
6. **Stirring the Curd.** Turn all the curds over gently for 3 minutes. Any larger curds that come up from the bottom may be cut at this stage. Do this at least 3 times.
7. **Preparing the Curd.** After the final rest, the curds mass will sink in the whey. Using a glass or ladle, scoop out 405 – 60% of the whey and discard. After the whey has been



removed, give the curds a gentle stir to keep them from setting. This will make it easier to scoop them into the hoops.

8. **Filling the Hoops.** Place a bamboo draining mat on a cutting board, cover with a sheet of greaseproof paper and place the 4 hoops on top. The greaseproof paper will stop the curds from falling through your draining mat. Filling is best done on the kitchen sink with one end of the board slightly elevated to allow the whey to drain away. Using your slotted spoon, scoop a small amount of curds into each hoop, then go back and put more in each and so on until they are evenly filled. Fill the hoops just short of the top. When turned repeatedly they will settle down to the thickness required. Leave to drain for 20 minutes.
9. **Turning the Hoops.** For the first turn, place another sheet of greaseproof paper on top of your hoops, then the second bamboo draining mat and finally a second cutting board. By holding both boards firmly you should be able to flip all the hoops over in one movement. From this point, greaseproof paper is no longer required. Turn your hoops hourly for the next 5 hours. The hoops should be turned a minimum of 3 times prior to allowing them to set overnight covered with a tea towel.
10. **Salting the Cheese.** The following morning the young cheese will have firmed and pulled away from the edges of the hoop. This indicates that they can now be removed for salting. Sprinkle the cheese salt lightly over the top of the cheese and let stand for 15 – 30 minutes. Turn the cheese over and lightly sprinkle the bottom and sides with more cheese salt and let stand another 15 – 30 minutes. Place on a bamboo draining mat, cover with paper towel and allow drying for 24 hrs at room temperature.
11. **Agging the Cheese.** Place some paper towel then black plastic agging mat into the bottom of your agging container. Space your cheese on the draining mat and with the lid ajar, store in a cool humid environment at 11 – 15°C for 8 – 10 days. Turn daily to avoid the cheese sticking to the mat. Elevate one end of your ripening container to allow any additional whey to drain away from your agging cheeses. The cheese should be totally covered with white mould after 10 days. Agging can be done in a fridge down to 5°C, but will take considerably longer.
12. **Monitor the Cheese Daily.** If you see any hard yellowing on the edges of the cheese they are too dry and the white mould will have difficulty spreading over this surface. Add a small amount of water to the bottom of the agging container. If there is excessive condensation on the lid of the agging container, this can drip on the cheese causing a yellowish slime. Remove the lid, wipe away the any moisture and replace the lid leaving it slightly ajar. Check the bottom of the agging container for excessive moisture. You may choose to replace the paper towel if this occurs.
13. **Wrapping the Cheese.** Once the cheeses are fully covered in white mould, they are ready to wrap. Using the wraps provided, centre the cheese on the film and fold the corners onto the cheese until it is completely covered. Place the wrapped cheese back into the agging container with the folded side on the bottom. Seal and age for a further 2 – 4 weeks at 11 – 15°C.
14. **When is it Ready to Eat?** The perfect camembert is soft and creamy and bulges slightly when it is cut. You may want to experiment with agging times and temperatures to achieve the texture and flavours you prefer.



Blue Cheese (makes 3 cheeses, approx. 250g each)

- 7½ Litres Full Cream Milk (*cow or goat*)
- 2 ml Calcium Chloride dissolved in ¼ cup cool water (*only add when using homogenised milk*)
- ¼ teaspoon of Penecillium Roqueforti (*Blue Mould*)
- ½ teaspoon MM100 Mesophilic Culture
- 5 ml Rennet dissolved in 20ml cup of cooled boiled water.
- 2 tablespoons Cheese Salt
- 2 teaspoons of Cheese Salt for sprinkling.

1. **Prepare the Starter.** The day before cheese making: Prepare a Mesophilic starter as described in the “Cheese Making Basics” section.
2. **Preparing the Milk.** Warm the milk to 32°C if using cow’s milk or 30°C if using goat’s milk (*if using homogenised milk, add the Calcium Chloride solution at this time*). Add the mould and the prepared starter and mix well. Leave covered at the same heat to ripen for 60 minutes.
3. **Renneting.** Gently stir in the diluted Rennet with an up and down motion for at least 1 minute. Cover and allow to set at 32°C if using cow’s milk or 30°C if using goat’s milk, for a further 45 minutes or until you get a “clean break”.
4. **Cutting the Curd.** Cut the curds (according to the method described in the “Cheese Making Basics” information sheet) into 2cm cubes. Allow to stand for 5 minutes to set (*allow a further 5 minutes if using goat’s milk*).
5. **Stirring the Curd.** Turn all the curds over gently at 5 minute intervals to stop them from matting. Continue this for 60 minutes.
6. **Rest the Curd.** After the final turn, allow the curds to set for 5 minutes.
7. **Preparing the Curd.** Pour the curds and whey into a colander and allow it to drain for 5 minutes. Put the curds back into the pot and gently mix them by hand so as not to matt them. Add the salt and mix well. Allow the curds to rest for 5 minutes so that they set.
8. **Filling the Hoops.** Place a bamboo draining mat on a cutting board, cover with a sheet of greaseproof paper and place 3 cheese hoops on top. The greaseproof paper will stop the curds from falling through your draining mat. Filling is best done on the kitchen



sink with one end of the board slightly elevated to allow the whey to drain away. Using your slotted spoon, scoop a small amount of curds into each hoop, then go back and put more in each and so on until they are evenly filled. Fill the hoops just short of the top. When turned repeatedly they will settle down to the thickness required. Leave to drain for 15 minutes.

9. **Turning the Hoops.** For the first turn, place another sheet of greaseproof paper on top of your hoops, then the second bamboo draining mat and finally a second cutting board. By holding both boards firmly you should be able to flip all the hoops over in one movement. From this point, greaseproof paper is no longer required. Turn your hoops every 15 minutes for the first 2 hours and then once an hour for the next 2 hours. Let them drain overnight covered with a tea towel.
10. **Salting the Cheese.** The following morning the young cheese will have firmed and pulled away from the edges of the hoop. This indicates that they can now be removed for salting. Use a little more cheese salt and lightly sprinkle over the top, bottom and sides of the cheese. Shake off any excess salt and let stand for on a board for a total of three days at 15°C and a humidity of 85%. Make sure that the cheeses are re-salted and turned once a day during this time.
11. **Spiking the Cheese.** Using a sterilised meat skewer or knitting needle, poke 35 to 40 holes from the top of each cheese through to the bottom. This will allow the blue mold to travel through the cheese creating the “veins”.
12. **Aging the Cheese.** Place some paper towel then black plastic aging mat into the bottom of your aging container. Space your cheese on the draining mat and with the lid ajar, store in a cool humid environment at 10°C for 30 days. Turn every 4 days to avoid the cheese sticking to the mat. Elevate one end of your ripening container to allow any additional whey to drain away from your aging cheeses. Mold will appear within 10 days.
13. **Scrape the Cheese.** After 30 days, the blue mold will have covered the outside of the cheeses. There will also be a reddish-brown smear evident. Gently scrap the mold and the smear off the cheeses using a long-bladed knife. Follow this same procedure for 20 to 30 days.
14. **Wrapping the Cheese.** After 90 days of aging, scrape the cheeses one last time and wrap each cheese in foil.
15. **Second Aging.** Place the wrapped cheeses in the refrigerator and allow them to age a further 60 days between 1°C and 3°C. Turn the cheese on a weekly basis.
16. **When is it Ready to Eat?** Continue aging the cheese in the refrigerator for a further 3 months for a mild blue and 6 months for a more robust flavour.



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Cheese making Basics

CHEESE MAKING BASICS

Fundamentally, cheese making is the process of removing water from milk. The volume of water removed will dictate the essential characteristic of the cheese: hard cheese like cheddar retains far less water than a soft cheese like feta. Achieving these different characteristics might only require slight variations from one style to the next. Following are some cheese making basics needed to make the recipes in the Country Cheese kits.

STERILISING - The most important step by far. When making cheese, ensure that all your equipment is sterilised thoroughly to eliminate contamination of your milk, which will result in off flavours.

MILK – Cheese can be made from any animal milk, with the most common being cow, goat & sheep. Not many have access to a cow for fresh raw milk, but store bought milk still makes excellent cheese. Being pasteurised and homogenised, we recommend the addition of calcium chloride to assist in curd formation.

To pasteurise RAW milk, heat to 63°C and maintain for 30 minutes. Cool quickly by placing the pot into a sink full of cold water.

CALCIUM CHLORIDE – This is a salt solution used to restore the calcium balance of heat treated homogenised milk. It is highly recommended for goat's milk as it is naturally homogenised directly from the animal. Always dilute the Calcium Chloride in 10 times its volume of cooled boiled water. Recommended dose of 2.5 ml per 10 litres of milk.

STARTER CULTURE

Added to the milk, these bacteria convert the lactose already present in the milk into lactic acid. The acid assists the rennet to coagulate the milk, aids in expelling the whey, inhibits the growth of pathogens and helps preserve the final cheese. Starters also contribute to the body, flavour, and aroma of cheese.

The cultures supplied are as follows:

STARTER CULTURE - Continued

- Mesophilic MA11 – Used for Cheddar, Colby, Monterey Jack, Fetta, Chevre, etc
- Mesophilic MM100 – Used for Brie, Camembert, Havarti, Gouda, Edam, Fetta, Blue, Chevre, etc.
- Thermophilic TA61 – Used for Parmesan, Romano, Provolone, Mozzarella, Emmental/Swiss
- Helvetic LH100 – Used in conjunction with thermophilic cultures to make Italian cheeses.
- Proprietary Bacteria – Used for the eye formation, aroma, and flavour production in Swiss type cheese.
- Camembert Blend – Used for Camembert and Brie, this blend contains a combination of Flora Danicum providing the creamy consistency and internal flavour and Penicillium Candidum that provides the white skin and earthy flavour of the outer layer.

Average Composition of Milk

	Cow	Goat
Proteins	3.7%	3.4%
Lactose	4.8%	4.7%
Fat	3.8%	4.1%
Salts	0.7%	0.8%
Water	87%	87%



PREPARING A STARTER (the day before)

Preparing a starter ensures that your cultures are active. The starter will thicken to the consistency of yoghurt ... if this does not happen, get some fresh culture.

- Boil, then cool 200ml of fresh milk
- Add ½ tea spoon of Culture and stir well
- Store at 25-30°C covered until it thickens (approx 12-24 hrs.)
- Will store in the fridge for a couple of days until needed.

LIPASE – An enzyme added to the milk to give a strong flavour and aroma to Italian style cheeses, such as Parmesan and Feta.

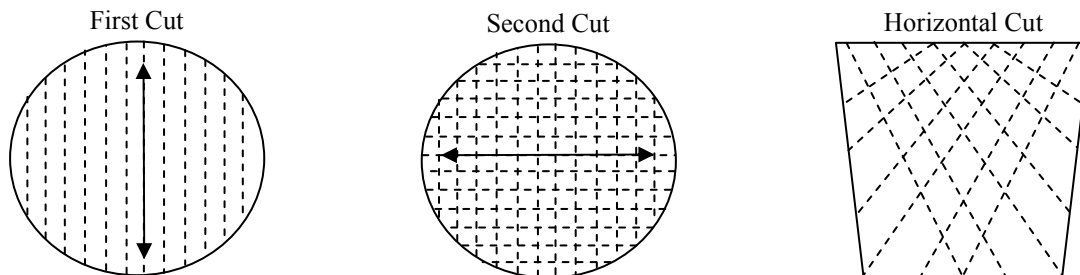
RENNET – Rennet is used to coagulate or set milk. It contains enzymes that react with milk protein (casein), which separates the milk into curds (solids) and whey (liquid). When using rennet, always dilute it in 10 times its volume of cooled boiled water before adding to your milk

TESTING FOR A CLEAN BREAK

- The curds are ready to cut when it shows a clean break.
- Slide your knife into the curd at an angle and lift some on the side of the blade.
- If the curd breaks cleanly around the knife and whey runs into the crack that is made, you have a “clean break.”

CUTTING THE CURD

- Using a long knife, cut vertically across the curd one way, then again perpendicular to the first cuts. (See diagrams)
- Insert your knife at an angle to make horizontal cuts.
- The width between cuts will depend on the style of cheese you are making.



COOKING THE CURD

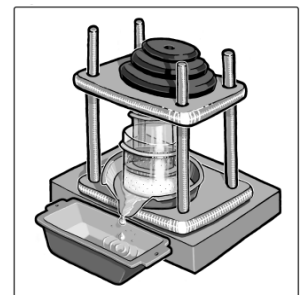
- After the curds are cut, the temperature is increased, causing more whey to be expelled.
- Heating should be gradual and no greater than 2°C every 5 minutes.
- Target temperature will depend on the specific recipe.

SALTING

Salting enhances the flavour of the cheese, assists in drawing whey from the curd and helps preserve the final cheese. We recommend using a coarse salt free of any additives like Iodine.

PRESSING

- Line your cheese basket with cheesecloth.
- Place the basket on a drip tray, which will allow the whey to drain into a sink or other container.
- Ladle the curds into the basket with a slotted spoon, cover with a layer of cheesecloth, and insert the follower.
- Once the follower is in, pull on the cheesecloth to eliminate any bunching.
- Place the top board onto the prepared basket and add the appropriate weights.



****For more in depth cheese making information, we recommend the “Home Cheese Making” book by Ricki Carroll**