



Cheese making notes

Sanitising

Even home cheese makers need to thoroughly sanitise all your equipment. Cheese is a high risk food and will deteriorate quicker if the equipment is not clean.

I use a no-frills bleach that only has one active ingredient, Sodium Hypochlorite - 4% is used at a rate of 50ml Sodium Hypochlorite per 20 litres of clean water. 1% Sodium Hypochlorite is weaker so it needs to be mixed at 200ml of Sodium Hypochlorite per 20 litres water. Or you can pour boiling water over all equipment used. Whatever touches the milk or cheese needs to have been sanitized first. It takes a while to get used to this routine but the cheese will thank you for it. Do not over bleach as this can taint the cheese and kill everything! Make sure all equipment is clean before you put into the sanitizer or it will get too dirty.

Alternatively you can steam your equipment in boiling water for a minimum of 5 minutes.

Salt Brine

Salt brine is needed for the haloumi and feta. This brine gives the cheese a good shelf life or it would only last in the fridge around 5 days. I use 15% brine which is the lowest salt brine you can use. This is mixed up at 15gms salt per 100mls water. Or 150gms salt per 1 litre water. **Always use cooled boiled water to kill any bugs in the water.** Or mix the salt into the boiling water and cool to room temp.

Always use a good quality salt that does not contain iodine. Caking agent is OK.

When making salt brine for hard cheeses then it is usually 18% - 20% in strength. After the cheese has been brined then add some salt to the brine solution just to replace the salt the cheese has absorbed. Approx. a few tablespoons, then refrigerate until you're ready to brine again.

Calcium Chloride

When making cheese out of milk from the supermarket that has been pasteurised and homogenised Calcium chloride is used to keep the curds together. You may need to add Calcium Chloride when using some goat's milk.

You add Calcium Chloride when you add the starter before the rennet is added.

Cow cheese = 2.5ml CaCl per 10 litres milk needs to be diluted in cooled boiled tank water, 10 times the volume.

Items for Cheesemaking

All items that are used in Cheesemaking need to be kept dry and clean in a clip lock container and only used for Cheesemaking.

- Thermometer – a digital thermometer is easy to read and the better quality ones last well. I purchased mine at an electronic store like **jaycar Electronics** for \$24. A coffee thermometer from **Omega Hospitality Ballina** is around \$15

- Stirring spoons. The best ones don't have joins that curd can get stuck in. I bought a pack of 6 assorted black stirrers in Big W for around \$6.
- A cutting spatula, better than a sharp knife that could scratch your equipment. A good quality stainless steel icing spatula would do. **Price \$14**
- The best cheese making vessel is a smaller bain marie and lid \$50 and a larger bain marie tray, 100mm high, \$45 used as the water bath. These are available at hospitality shops but I use **Omega Ballina** as you can stroll through the display room and see what else they have to offer. A rack is needed to keep the smaller bain marie off the bottom of the direct heat. A steel cake rack is used to keep the top bain marie elevated slightly from the bottom of the direct heat. \$8
- 2 red décor containers or more is needed with the racks. The smaller ones are found in any supermarket for around \$6 each. Keep an eye out for specials. The larger ones are better as they provide more space, cost approx. \$11.
- Small camping gas burner. They are handy as you can move them to a quiet part of the room. The cost around \$14 at Big W and the gas canisters are around \$5 for a pack of 4.
 - A large storage container with lid can be used to store all your items and when Cheesemaking it can be used as your sanitizer container. Mark the side with the litre quantities that are regularly used, eg 20 litres, so you know where to fill the container up. \$8
 - A colander can be used for making ricotta
 - You can buy yoghurt makers from ebay but the best and easiest one I always use is the Easiyo maker that acts like a thermos. I bought mine 5 years ago in a supermarket but also picked one up in an op shop. It works on a thermos hot water system. The kit is around the \$22 price point. Also great for Kefir making but don't use boiling water in the thermos section as it will be too hot.

Haloumi

The history of haloumi is very controversial. The Greeks say they invented Haloumi and the Cypriots say they did. Whoever invented Haloumi created a versatile ingredient that is high in protein and calcium and is perfect in many savoury dishes.

Haloumi is just a curd, there is no starter added to Haloumi.

- Heat 5 litres pasteurized cow milk to 34°C
- Add 1.5ml of rennet to 25 ml cooled boiled tank water (optional) and stir into the milk stir for 1 minute
- Leave for 40 minutes maintaining 34°C
- Cut curd into 2cm cubes and start a gently stir while slowly heating the pot.
- Curds are stirred until temp reaches 40°C over 20 minutes

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- Once curds are firming up scoop into hoops and weigh down by placing one hoop on top of each other to expel whey turning hoops every 10 minutes
- **Heat whey to 90°C adding another litre of unhomogenised milk at 60°C if you would like to make ricotta. Once temp is reached slowly add approx. 80ml – 100ml of good quality vinegar to the pot and stir gently. Cover and leave 10 mins, gently hoop the ricotta into a basket and let it drain and cool completely then package and refrigerate. It will keep for 10 days in the fridge.**
- Bring the whey back up to 90°C, cut the haloumi into slices and add to the hot whey. Put the lid on the pot and leave 1 hour.
- Drain the haloumi onto a sanitized rack and once it has cooled slightly package into a container cover the cheese with 15% salt brine place in the fridge and it will keep for over 3 months.

Haloumi can be used in a soups, casseroles or sauces. Just chop it into the ingredients and it can simmer away without melting.

BBQ is a fantastic and easy way to cook haloumi, brush with oil and cook quickly until it brown on each side.

Cultured butter

Butter Making Facts:

- Only buy **Pure Cream** to make butter – the Norco brand is not working for me so the Paul's Parmalat Pure Cream is the best so far.
- Do not use cream with additives, preservatives or thickeners.
- Butter made from cream separated from raw milk will have a shorter shelf life and a stronger flavor than pasteurised cream.
- The expected yield for butter is approx. 40%.
- Do not fill your container up with cream; make sure the cream only ½ fills the container to allow for air space when the cream starts expanding.
- Do not use out of date cream, fresh is best.
- Fresh cream makes fresh butter. Cultured butter makes a tastier butter.
- The use by date of your butter will be 7 – 10 days
- If your lid isn't secure while you are shaking the cream then you will also have a lovely moisturising facial (isn't that right Elise!).

How to make cultured butter:

- ❖ Once you have purchased your Paul's Parmalat Pure Cream add a tiny speck of powdered culture, shake for a minute and leave on the bench for 12 – 24 hours.
- ❖ 12 – 24 hours later -
 - ✓ you could now refrigerate the cream and you will have made the best sour cream ever!

- ❖ Put your cream into a clean container with a very secure lid (Tupperware have these great milkshake containers, I find them in Op shops.) shake, shake, shake and the cream will become really thick then when you think I am having the greatest joke of all, the cream will then become loose again with a liquid shaking sound.
- ❖ **Stop shaking** and have a look in the container. There should be white liquid (buttermilk) and yellow butter floating all around the buttermilk.
- ❖ Strain the buttermilk into a jug and use this for everything to do with cooking! Catch the butter in another container and smooth it with a butter knife so it looks better than the shop stuff.
- ❖ You can rinse the butter under cold running water to remove all the buttermilk but I love it just the way it is. Don't add salt – just enjoy.

Crème Fraiche



- This whole rich dairy cream, ripened to a thick spoonable consistency, is a sour cream taken to another level.
- Use it in great dollops on cake or pie, float it on top of soup or add to a sauce. Terrific with fresh berries.
- Only buy **Pure Cream** to make Crème Fraiche. Do not use cream with additives, preservatives or thickeners.
- Do not use out of date cream, fresh is best.
- An Easiyo thermos or a hot water bottle in an esky is a great way to keep the temperature consistent.

How to make Crème Fraiche:

- ❖ Once you have purchased your Pure Cream add a tiny speck of mesophilic powdered culture, let rehydrate for 5 minutes then gently stir a minute.
- ❖ Pour the container in a water proof container and secure with a tight fitting lid.
- ❖ Warm the cream in a water bath until the cream reaches 30°C, no higher. The water bath should only be a few degrees warmer.
- ❖ Keep the cream at 30°C for at least 12 hours. The more consistent the temperature the better the end result.
- ❖ At the end of the ripening time place the container in the fridge at 4°C where it will thicken up. It will keep for up to 10 days.

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30 minute Mozzarella

Mozzarella is a very tricky cheese to make for most cheesemakers. Following these easy steps we can work through it coming out at the end of the day with some amazing cheese. This cheese is fast and can be a hit and miss cheese. Practice makes perfect.

Don't use Barambah milk as it hasn't been very reliable for mozzarella.

- Using 2 litres of good quality cows milk, bring to 13°C
- Add ¾ teaspoon freshly purchased citric acid dissolved in ¼ cup cooled boiled water. Stir 1 minute
- Keep stirring and bring the temp to 32°C
- Add rennet at 1/4th teaspoon directly to the milk and stir for 1 minute
- Cover milk with a lid and leave for 5 minutes
- Check the curd, it should look like custard with a clear separation between the curd and the whey. If the curd is too soft then leave a few more minutes.
- Cut curds into 2 cm and gently stirring move the curds around with the spoon until the temp reaches 40°C.
- Remove from the heat and continue to stir slowly for 2 minutes
- Scoop out the curds with a slotted spoon and put into a microwavable bowl. Press the curds gently with your hand and pour off as much whey as possible. **(No microwave stage – heat the whey to 80°C add a sprinkle of salt and then add the curd, using thick rubber gloves, when the curd starts to knit stretch in the curd and form into balls as below.)**
- Microwave the curd on HIGH for 1 minute. Drain off whey and gently fold the cheese over and over with your hand or spoon. This distributes the heat throughout the cheese, which will not stretch until it is too hot to touch. (63°C inside the curd).
- Microwave two more times for 35 seconds each, add salt to taste and knead to distribute the heat after each heating.
- Using rubber gloves stretch the curd until it is smooth and elastic when the curd stretches like toffee then it is ready. If the curd snaps and breaks then it needs to be heated again.
- Form a neat ball and drop into ice cold water or eat while warm. After an hour take ball out of water and place in a zip top bag. Consume within a week.

Recipe from "Home cheese making" by Ricki Carroll page 134.

I have made a 30 min Mozzarella video on Youtube for you to make your next batch. Just search for Debra Allard 30 minute Mozzarella. There are 2 parts to the video.

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Goat Feta

This recipe works really well with goat's milk, pasteurised cow's milk and even shop bought homogenised milk.

DAY 1

- Heat **5 litres** pasteurised goat's/cow's milk to 32°C
- **1/10th** tspn MA choozit (A starter) or MM choozit starter (B starter) stir in for 1 minute
- Leave for 30 - 60 (60 minutes is best) minutes maintaining 32°C
- Add **1.25ml** rennet to 50ml unchlorinated water (optional) stir for 1 min
- Leave for 30 minutes to set
- Cut curd into 2cm cubes and let stand for 5 – 10 mins to firm up.
- Stir curds gently for 15 minutes for a softer feta, 30 mins for a firmer feta. Let stand for 5 minutes. Keep at 32°C
- Ladle curds into a large hoop and let stand for 15 minutes. Turn the curd and place back into the hoop. Turn again another 1 hour later then every few hours for at least 6 hours.
- Make your 15% brine up. (150ml salt – 1 litre goat feta whey) and refrigerate until you add the cheese tomorrow.
- **DAY 2** take cheese out of hoop and drop into the 15% salt brine for at least 4 days. You can use the feta after a few hours of brining or keep in the brine for 4 days then take out of brine and cut into cubes and cover with a good olive oil. Refrigerate after the cheese has been taken out of the hoops and into the brine.

Cow's milk feta can be made the same way but you can add lipase to the milk with the starter culture at a rate of 1/8th teaspoon lipase to a few tablespoons of cooled boiled water. Lipase is a natural enzyme in goat milk and gives the feta a unique flavour.

If using homogenised or Pauls Parmalat milk add 2ml calcium chloride to 8 litres milk when the starter is added, before the rennet.

**Thanks to the Northern Rivers Regional Group
and Cheese Loves You – Debra Allard**

