

## **Basic buttermaking on a somewhat small scale:**

### **Equipment needed :**

1 plastic bucket w. Lid  
1 large tub ( Bucket must fit in this )  
1 thermometer  
1 24 hour timer ( an alarmclock will do )  
Buttermaking churn or a large jar

### **Ingredients needed:**

Cream  
Starterculture ( mesophilic, fresh buttermilk will do )  
Salt, preferrably the powdered type

### **Process:**

Start off by sterilizing the equipment..

There are 2 different temperature/time sequences to use depending what time of the year it is.

The explanation lies in the feed the caddle gets.. The summer grass gives a higher content of unsaturated fatty acids than the winter feed.. The temperature sequence is a method of controlling the size of the fat crystals in the finished product.. The faster you chill the fat the smaller the crystals are, and the butter gets harder..

In other words: If you want soft butter you want large crystals.. Hard butter can be achieved with more and smaller crystals.. You can use the winter method in the summertime too, but the butter will most likely be extremely soft.. If you use the summer method in the wintertime the butter will be extremely hard

On with the buttermaking:

### **Summer method:**

Heat the pasteurised cream to 19C and pour into the bucket and add 1% starterculture ( Fresh buttermilk )

Leave for 5-8 hours ( pH ~5.15 )

Cool to 16C and leave for another 5 hours ( pH~4.8)

Cool to 8C and leave for atleast 4 hours ( Start the process in the late afternoon and start churning the next day around noon )

### **Winter method:**

Add starterculture and cool cream to 8C

Leave for 2 hours

Heat to 19C and leave for 6-8 hours ( pH~5.15)

Cool to 16C and wait till the next day ( pH~4.8)

In both methods it is extremely important that you dont agitate the cream at all after adding the starterculture

Churning the butter:

If you dont have access to a real churn you can do it in a large jar with a lid..

Move the ripened cream to the jar, making sure its only about 1/3 full, put the lid on and start shaking it hard..

Stop shaking when the chunks of butter are about the size of small walnuts..

It should look something like this:



Drain off the buttermilk and enjoy immediately while continuing your project ( And Yes, this is REAL buttermilk, not the fake stuff you get nowadays).. You may want to keep a little in a clean

jar for next time you want to make butter, but it will start tasting metallic very fast since the leftover fatglobules in the buttermilk are very sensitive to oxidation..

Draining the buttermilk from the churn:



After you drained off the buttermilk you are ready to start kneading it.. You should be able to do this, just by shaking the jar some more.. You may need to drain some more buttermilk while doing this, but that is perfectly normal

When the butter is just a few large chunks it is time to add salt:



Typical Lurpak grade butter contains 1% salt, altho there are several other versions..

Heres how to figure out how much butter you made, and how much salt to add:

$$(1.2 * X * Y) / 100$$

X is the fat content of the cream in %

Y is the quantity of cream in kg

1.2 is an average factor that may change depending on method, equipment and operator, so the results might vary slightly

An example:

You made butter from 120 kg of cream w. 36.8% fat

$$(1.2 * 36.8 * 120) / 100 = 52.99 \text{ kg}$$

To get approx. 1% of salt in this you need to add 0.53 kg of fine salt ( If possible get the powdered salt )

Add the dry salt to the churn/ jar and start kneading until the salt is “gone”.. You can tell when you are done kneading if you scrape the top layer off a chunk ( use a clean knife for this ) and there are no visible pockets of liquid inside the chunk..

If you want to go the real high tech way you can measure the water content of the butter before adding salt.. You want it to be about 18% water.. Chill the butter with icecubes and knead a little more if the watercontent is too high... add a little water to the churn or jar if the water content is too low.. Too much water in the final product will also reduce the shelflife of the butter, but in general it should keep a few weeks..

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