Receiving

Cooling to 5°C and storage

Preheating (35-40°C)

Filtration/ clarification

Cooling and storage (5°C or below)

Standardisation

Pasteurisation

Homogenisation

Packaging

Storage (5°C or below)

Pasteurised milk
Sterilised milk (In-bottle sterilisation)

Milk

Cooling to 5°C and bulk storage

Preheating (35-40°C)

Filtration/ clarification

Cooling and storage (5°C or below)

Standardisation

Pre-heating

Homogenisation

Clarification (60°C)

Bottle Filling and capping

Sterilising

Cooling (RT)

Storage (RT)
Flavoured milk

Receiving milk

Standardisation

Preheating (35-40°C)

Homogenisation

Mixing cocoa, sugar and stabiliser
Or
Mixing flavour/ essence, colour and sugar

Pasteurisation

Cooling (5°C or below)

Bottling and storage (5°C or below)
Butter milk

Skim milk
- Receiving
- Filtration
- Pasteurisation (UHT)
  - Cooling (22°C)
  - Inoculation (1%)
  - Incubation (21-22°C)
  - Coagulation 12-16 h, 0.8-0.85% TA
  - Creaming
- Breakup of coagulum
  - Adding butter granules
  - Cooling (5-10°C)
  - Packing and storage (5-10°C)
Milk
  ├── Preheating
  │     ├── Separation (centrifugal)
  │     └── Cream
  │          └── Neutralisation
  │               └── Cream
  │                    └── Standardisation
  │                             └── Pasteurisation or Vacreation
  │                                             └── Cooling (5-10°C)
  │                                                                 └── Ageing (5-10°C)
  │                                                                 └── Churning
  │                                                                                 └── Washing
  │                                                                                       └── Salting and working
  │                                                                                               └── Packaging and storage
  └── Cream
       └── Churning
            └── Washing
                 └── Salting and working
                      └── Packaging and storage

Butter
Icecream

- Ingredient-1
- Ingredient-2
- Ingredient-3
- Ingredient-4

Mixing

- Pasteurising the mix (68°C for 30 min)
- Homogenising the mix
- Colouring or ageing the mix (0-4°C)
- Freezing the mix (-4 to -5°C)
- Packaging the ice cream
- Hardening and storage of ice cream (-23 to -29°C)
**Cheddaring** is a process that cheese makers use to further acidify the curds and draw more whey out.

Rennet is used to separate milk into solid curds (for cheesemaking) and liquid whey, and so it or its substitutes is used in the production of most cheeses.

Curds are milled by hand. When the turning process is complete, the loaves must be cut down into a size that fits in the mill. The mill will cut the matted curd into about 1.3 cm (0.5 in) pieces. During this process, the milled curds are constantly stirred to avoid re-matting where the whey has been drained out completely and then placed in a round mould called a **hoop**.
Cottage Cheese

Pasteurised skim milk

- Adding CaCl₂
- Adding starter
- Adding rennet
- Setting
- Cutting
- Cooking
- Drainage of whey
- Washing and draining the curd
- Salting
- Creaming
- Packing and storage
Cottage Cheese

Flowchart for the mechanised production of Cottage cheese.

Curd
Skimmilk
Starter
Whey
Wash water
Dressing

1 Cheese vat
2 Whey strainer
3 Cooling and washing tank
4 Plate heat exchanger
5 Water drainer
6 Creamer
7 Dressing tank
8 Filling machine
<table>
<thead>
<tr>
<th>Step</th>
<th>Temperature</th>
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<tbody>
<tr>
<td>Filtration/clarification</td>
<td>38-40°C</td>
</tr>
<tr>
<td>Standardisation</td>
<td></td>
</tr>
<tr>
<td>Preheating</td>
<td>115-118°C</td>
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<tr>
<td>Evaporation</td>
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<td>Shaking</td>
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Thank You