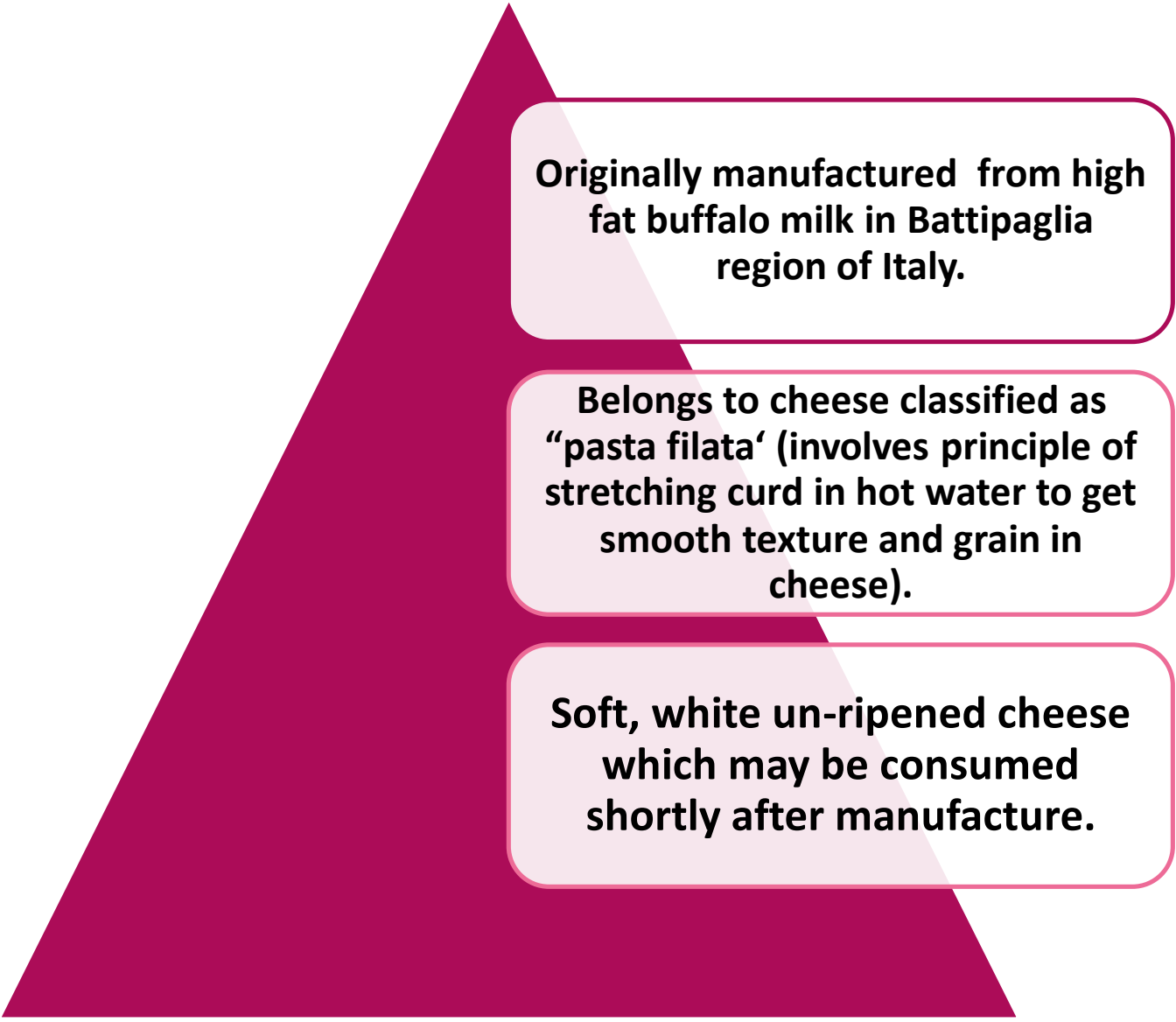




Mozzarella Cheese



Originally manufactured from high fat buffalo milk in Battipaglia region of Italy.

Belongs to cheese classified as “pasta filata” (involves principle of stretching curd in hot water to get smooth texture and grain in cheese).


Soft, white un-ripened cheese which may be consumed shortly after manufacture.

Melting and stretching characteristics are highly appreciated.....



Common Method of Manufacture

Optimum addition of starter culture/proper acidification of milk



Renneting of milk



Cutting curd at right firmness



Stirring and cooking curd particles to correct consistency



Proper cheddaring, stretching and salting curd for optimum plasticity and elasticity

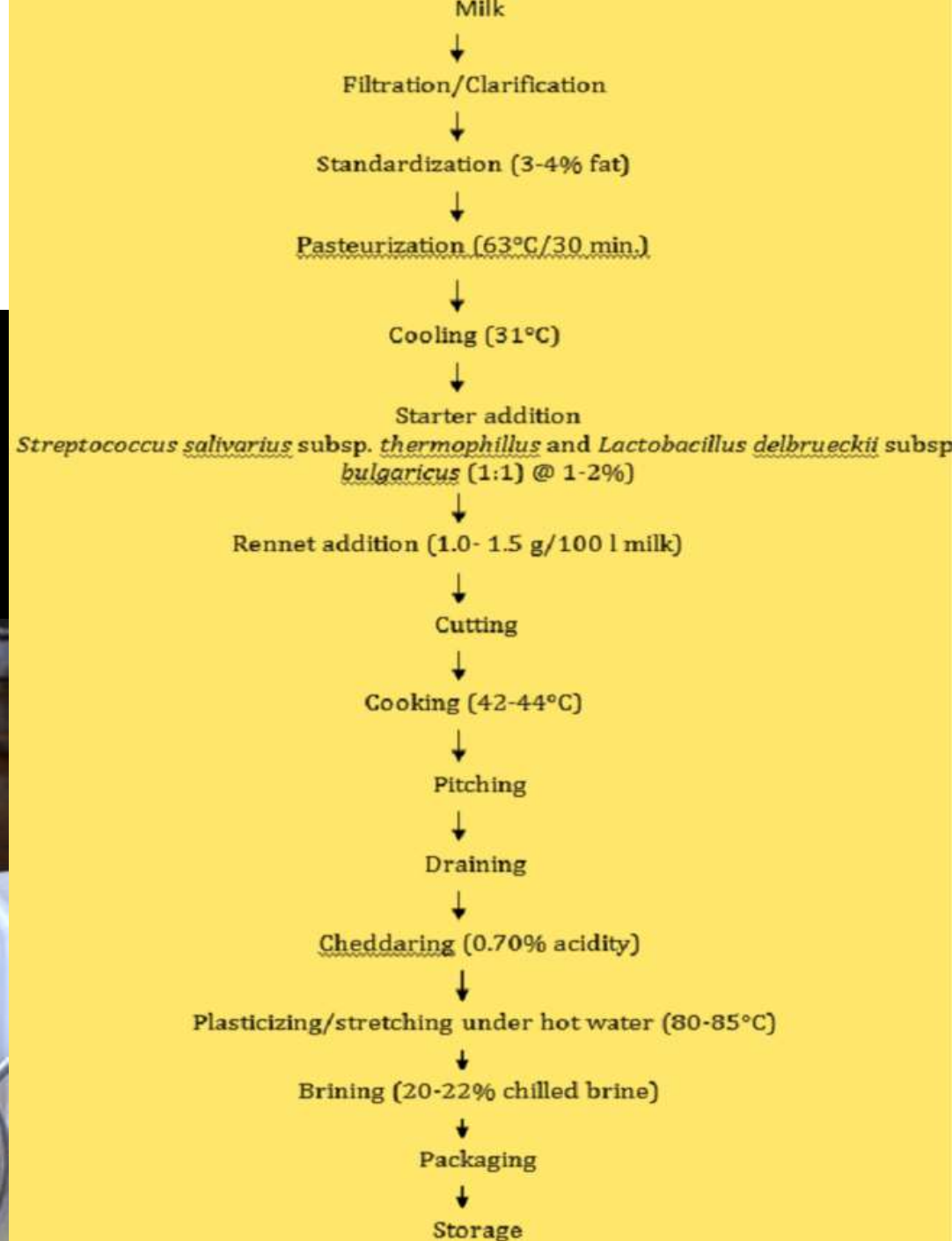
Chemical Composition

(%)	Mozzarella	Low moisture Mozzarella
Fat	18.0	23.7
Moisture	54.0	47.0
Total solids	46.0	53.0
Protein	22.1	21.0
Salt	0.70	1.00
Ash	2.30	3.00
pH	5.20	5.30

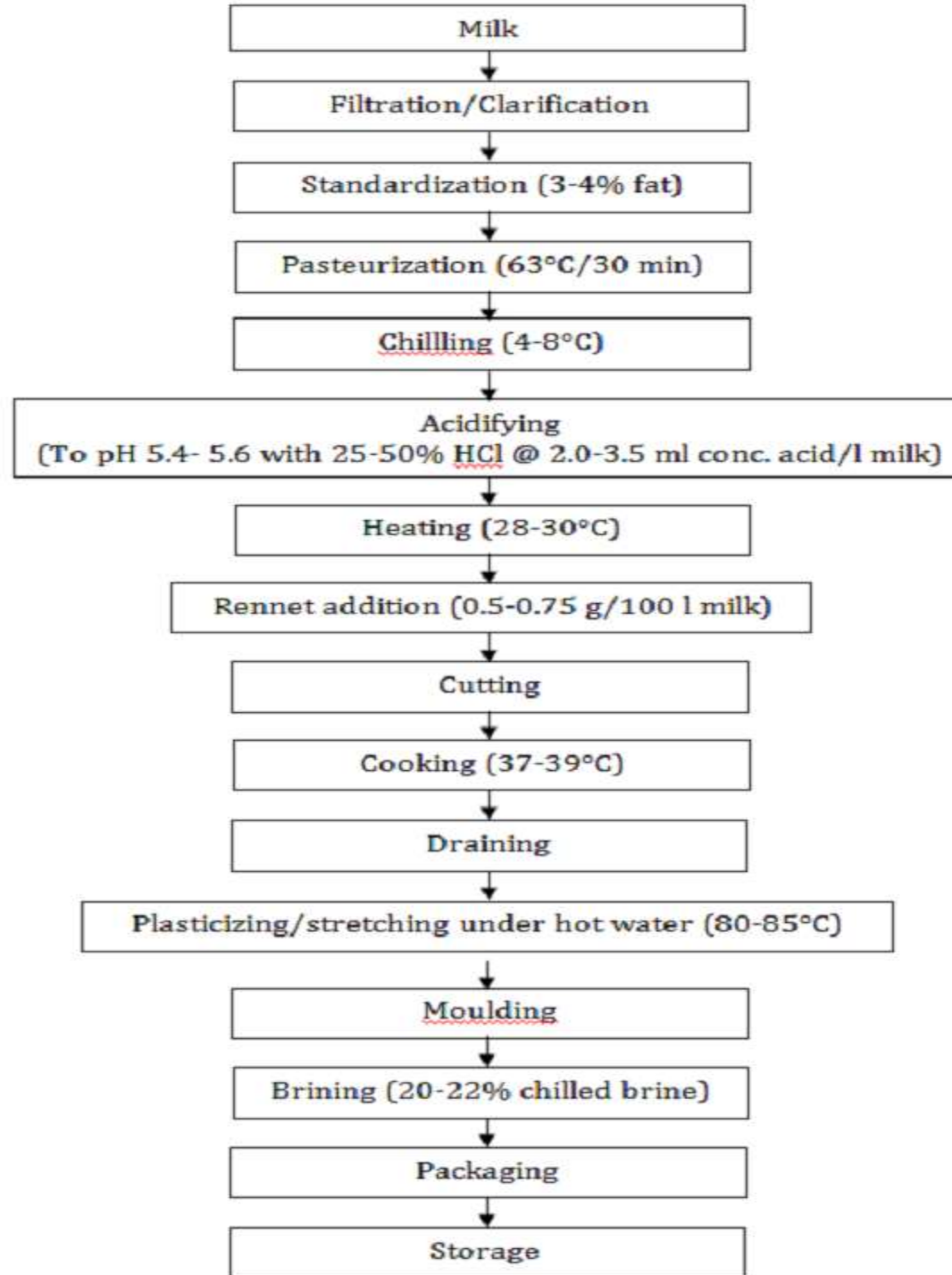
Chemistry of 'Stretch' of Mozzarella Cheese

- i) In calcium rich environment of milk, casein precipitates out of milk as di-calcium paracaseinate, entrapping fat, insoluble minerals and some sugar.
- ii) At pH 5.2-5.4, resulting from development of acid, some of calcium of dicalcium paracaseinate gets dissolved, leading to formation of monocalcium paracaseinate. This when heated to 54°C or higher becomes smooth and stringy and retains fat.
- iii) If acidification is excessive, generally below pH 5.2, monocalcium paracaseinate will continue to lose calcium and form paracasein, which may stretch, but has difficulty in retaining fat. The curd generally does not stretch above pH 5.6.

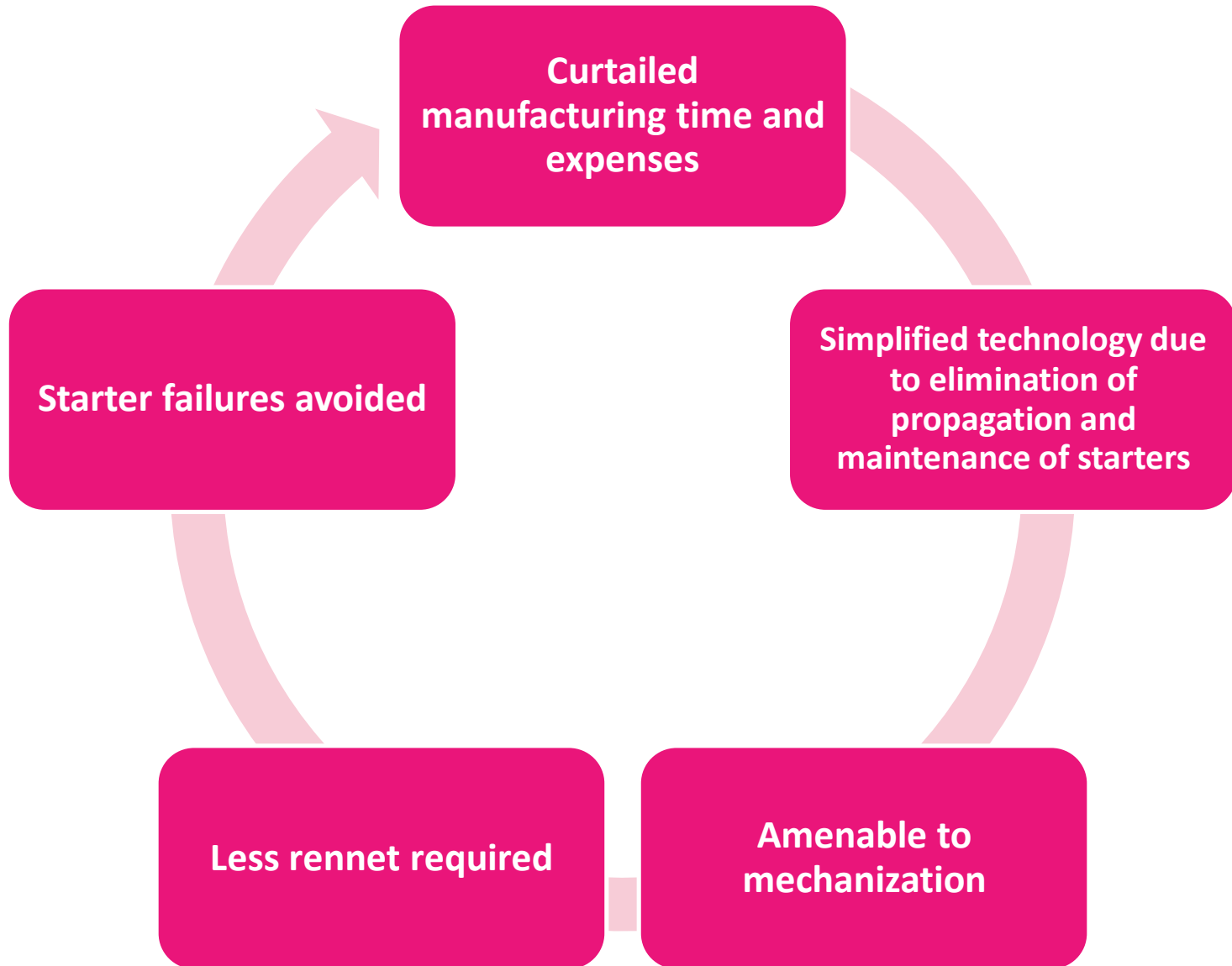
Manufacturing steps (Traditional Method)



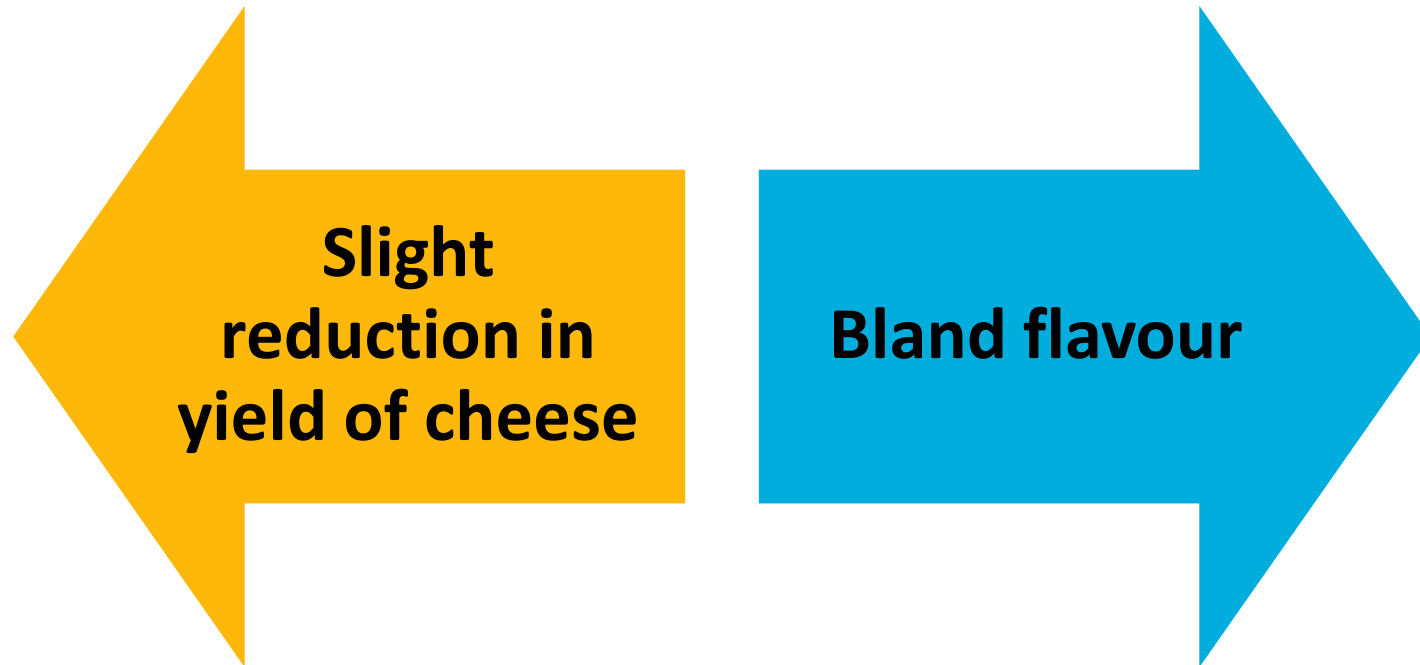
Manufacturing steps (Direct Acid Method)



Advantages of the Direct Acidification Techniques



Disadvantages



Ideal Mozzarella cheese has a smooth surface with a perfect sheen, elastic, stringy body free from mechanical openings