

off-flavour in raw material, caused by feed with off-flavour, bad ventilation in the barn, harmful germs and others. Basic raw material with high levels of total count does not only impair aroma and quality, but has an effect on shelf life too. Inhibitors of all kinds delay or impair growth of microorganisms, mainly acidification bacteria. Acidification is the basic process in the manufacture of fresh cheese varieties, therefore raw material must be free of antibiotics, which are used, e.g., as veterinary drugs. After treating milk cows with antibiotics, required latency periods must be complied with. Before processing milk into fresh cheese, test must be performed on inhibitory agents as well as acidification performance. In some countries, fresh cheese varieties are made by reconstituting milk powder (mostly skim milk powder). These milk powders must also be free of inhibitors, and must reconstitute without any problems.

3.2 Paste-like fresh cheese – quarg and others

Quarg (Food quarg) and Cream cheese are the best-known paste-like fresh cheese types. Quarg as well as cream- and double-cream fresh cheese are representatives of paste-like standard fresh cheese varieties. “Free” paste-like fresh cheese varieties are buttermilk, yoghurt quarg (Labneh) and quarg varieties with differing characteristics, mainly composition (minimum content of dry matter and/or protein) when compared to standard varieties. Key manufacturing steps for paste-like fresh cheese are shown in Fig. 3.1. Milk is predominantly coagulated by acidification, sometimes also in combination with small amounts of rennet, and whey is separated from gel in such a way that fresh cheese obtains its paste-like consistency. This consistency is further improved by kneading and/or blending operations.

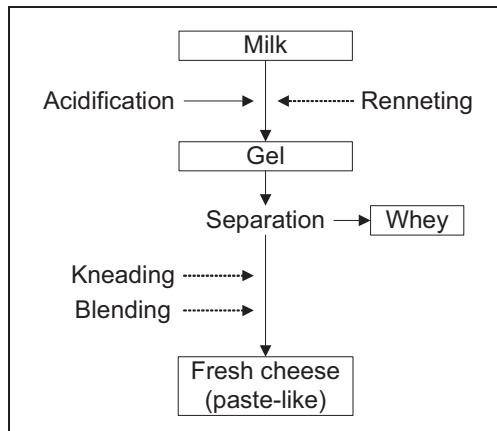


Fig. 3.1 Basic flowsheet for paste-like fresh cheese

3.2.1 Basics

During manufacture of quarg, it is predominantly skim milk (sometimes milk with an adjusted fat content in function of the finished product), which is coagulated primarily by acidification and a mild rennet effect. Various separation processes remove a required quantity of whey from this acid-rennet gel. Quarg with fat is preferably made by adding cream to low-fat quarg. There are a total of 8 different fat levels.

Previously, quarg was made only for own private consumption, as shelf life was very short at that time. Due to improved technologies, specifically effective heat treatment processes and good hygiene as well as a cold chain from the manufacturer to the consumer at low temperatures, shelf life