it stimulates sensory perception, but the flavour of other accompanying dishes is not over-powered or incommodated by this product.

Mild cooked cheese varieties with low fat content (lean) are preferably mixed by consumers with butter and spices and are spread on a piece of bread. More solid varieties are well suited as a spread for dark bread. All cooked cheese varieties can be paired well with all kinds of beverages, from tea to wine.

5.2 Raw material – acid curd quarg

Cooked cheese is mainly prepared from acid curd quarg, which must meet certain requirements.

5.2.1 Raw material requirements

Raw material (acid curd quarg) is manufactured from pasteurised, low total count skim milk. It is acidified with a well-balanced mix of lactic acid streptococci and lactic acid rods, while not being acidified below pH 4.1. Lower pH-values lead to a wet and smeary quarg. For further processing into cooked cheese, it must be grainy. Species from the genus Lactobacillus, mainly *Lb. delbrueckii subsp. bulgaricus* and *Lb. casei subsp. casei* have the task to convert lactose completely into lactic acid. Latter one influences the structure of quarg and is considered a regulator of its microorganism flora. Further acidification of quarg to <pH 4.4, °SH ~150, during ripening is to be avoided at all costs. Only dry quarg can be spread properly (ROESLER).

5.2.2 Ripening of acid curd quarg

Quarg, which has been milled into grains, has to be subjected to a ripening processing before being thermally treated (melting), which will characterise the typical flavour of cooked cheese. Acid curd quarg has only a small percentage of calcium, as calcium diffuses to its greater part into whey during acidification. It could be melted into cooked cheese without ripening and addition of ripening salts. Ripening can be accelerated by incorporating 0.5% ripening salts (pH 9.5) during milling of quarg, which will permit a better control. Too much of ripening salts will affect the mild taste of cooked cheese (WAUSCHKUHN). This prepared quarg is spread in a loose way on trays at a height of 10...15cm. It ripens at 20...22 °C, mostly for 2...4 days. Yeast, mainly *Torulopsis*- and *Candida*-types as well as *Geotrichum candidum* (milk mould), coming from an internal flora, initiate ripening by acid decomposition. These are aerobic microorganisms. Quarg grains need to be turned over several times during ripening, so that all particles are sufficiently aerated. Ripening is an oxidation process (WAUSCHKUHN), generating heat. This needs to be removed by

- sufficient ventilation, if necessary by cooling of ripening rooms
- multiple turning over of quarg.

High humidity is necessary in ripening rooms, otherwise quarg grains would dry out too much on the surface, they would develop a skin, and would hardly or not at all dissolve during melting (cooking) (NIEMEYER).

During ripening, mainly after adding ripening salts, there are (is)

- neutralisation processes, mainly by yeast
- hydration processes on casein molecules
- partial inactivation of calcium ions
- quarg grains with slightly greasy consistency and uniform light-grey colour
- due to incorporation of suitable yeast cultures, ripening of quarg can be influenced in a positive way. Once quarg grains are ripened through to their white core, ripening must be stopped. °SH has decreased to 90...100, pH-value has increased to 5.5...6.0 and quarg is ready for melting. An over-ripening should be avoided as taste defects and a thin viscous structure can occur.