Tab. 2.79 *Standard working times (min) for the manufacture of semi-hard and hard cheese varieties*

Cheese variety	Coagulation time	Pre-cheesemaking	Pre-heating	Post-cheesemaking	Total time
Edam	30-35	15-20	15-25	20-40	80-120
Gouda	35-40	15-25	15-30	20-60	110-130
Tilsit	35-40	15-20	15-30	15-50	85-130
Appenzeller	32-37	30-40	15-20	15-30	100-120
Emmental	30-40	20-50	30-45	30-50	120-150
Greyerzer	25-35	30-40	30-45	30-50	120-150
Sbrinz	30-40	40-50	35-45	5-20	110-150

Time requirements vary widely between individual production facilities, as is shown for the example of Greyerzer. For a normal burning temperature of 53 °C, curd needs to be worked for 30... 50 min. Post-cheesemaking time can be reduced to max. 10 min for a burning temperature of 56...57.5 °C.

Coagulation- and solidification time are key factors in regard to syneresis during manufacture of semi-soft cheese and especially of soft cheese. At the beginning of curd processing, the gel is cut to a particle size of 10...35 mm. Curd remains at rest most of the time (settling), sometimes combined with a removal of whey, interrupted by some warping (relayering). Curd is rarely stirred in the manufacture of these cheese types, and if, then very slowly and very gentle. As long as curd is not heated, then it does not make sense to distinguish between pre- and post-cheesemaking. It would make more sense to classify processing times as shown in Tab. 2.80.

Tab. 2.80 *Standard processing times (min.) for the manufacture of semi-soft and soft cheese varieties*

Cheese variety	Coagulation time	Thickening time	Solidification time	Curd processing time	Total time
Camembert	15-20	30-50	45-70	60-100	105-150
Limburger	20-25	20-25	40-50	30- 40	70- 90
Romadur	27-32	32-37	55-70	25- 35	80-100
Buttercheese	3-5	12-15	15-20	25- 30	40- 50
Blue cheese	20-25	30-35	50-60	35- 55	85-115
Weißlacker	30-45	30-45	75-90	90-120	170-210

There are some cheese varieties with very short total cheesemaking times (Buttercheese) and then some with very high time requirements (Weißlacker) during production. Typical curd for the manufacture of individual cheese varieties must always have an appropriate size, ripeness as well as consistency (firmness) and acidification, so that the formed cheese gets its necessary characteristic properties. Proper firmness of curd is also called *grip* or *core* or *dryness* .

2.4.4.5 Testing of curd

For the manufacture of each cheese variety of good quality, a typical curd is required. It must have a uniform size and firmness as far as possible. Moisture and lactic acid content are important.

2.4.4.5.1 Acidification of curd

Progression of acidification, best depicted by pH-development, does have a significant impact on the eco-system in cheese, which itself characterises properties and quality of cheese. Formation of lactic acid has a stabilising influence on existing groups of microorganisms. Lactic acid bacteria, mostly used as starter cultures, decompose lactose, and result in acidification. A greater part of lactose is dissolved in whey, and is removed (whey removal) during production of cheese. Dissolved lactose in