

Tabelle 0.1: Parameters influencing the structure formation of model processed cheese

Investigated parameter	Key results
Stirring speed	Higher processing speed leads to weaker gels high shear might lead to structure corruption
Temperature	at least 70°C necessary to initiate creaming reaction
Protein composition	Model matrix was derived from natural cheese with addition of 2% (w/w protein) protein powder of varying sources . Presence of whey proteins, native casein and rennet casein promotes the occurrence of a distinct first exponential phase acid casein and sodium caseinate lead to absence of an early exponential increase in viscosity, but show a pronounced exponential increase in apparent viscosity at late processing times
Protein concentration	Higher concentration in proteins results in stronger gels and stronger display of a step-wise structure build-up
Addition of rework	values of 5% and 10% were investigated Highly accelerated structure formation, increasing with higher rework concentration
pH educt	Optimum pH for the creaming reaction: 5.83 - 5.96
Fat globule size	Smaller Fat globules accelerated structure formation
Fat composition	Use of surface active ingredient in systems prepared w oil strongly accelerated structure formation.
Fat concentration	Lactose was used as dry-matter add on very low structure formation without presence of fat Presence of fat is needed to display step-wise structure formation