

Lenze_res

Table 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 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 |

Table 2

| Author(s) | Variable |
|---|---|
| _at_Brighenti2018 | Effect of low or high pressure (HP) pre-treatment fermentation temperature (F |
| _at_Berta2016 | high Temperature |
| Sadlikova et al. (2010) | salt concentration |
| _at_Salek2015b Salek et al. (2017) | salt content |
| _at_Brickley2008 | salt composition |
| _at_Hougaard2015 | salt content |
| _at_Chen2012 | salt concentration |
| _at_Cunha2013 | fat type |
| _at_Soowiej2014 | fat content |
| _at_Cernikova2018a | addition of rework |
| _at_El-Bakry2011 | salt reduction processing time |
| Noronha et al. (2008(1) 2008(2) 2008(3) | Additives processing time |
| _at_Sharma2016 | shear work input |
| _at_Kosfa2018 | fat reduction salt reduction |
| _at_Vogt2015 | temperature increase |
| Author(s) | Variable |
| _at_Brighenti2018 | Effect of low or high pressure (HP) pre-treatment fermentation temperature (F |
| _at_Berta2016 | high Temperature |
| Sadlikova et al. (2010) | salt concentration |
| _at_Salek2015b Salek et al. (2017) | salt content |
| _at_Brickley2008 | salt composition |