

## Interaction of Pectin with Casein

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### Summary

Pectins are frequently used in dairy deserts and acidified milk drinks. Their functionality derives from the interaction of pectin with the casein (micelles) in milk products. We investigated the phase behaviour of high methoxy (HM) pectin/caseinate dispersions as a function of pH and concentration. We found that there is a very sharp borderline between segregative phase separation at pH 5.73 and associative phase separation below pH 5.73. The interaction between pectin and casein appears to be mainly entropy driven as the phase behaviour is nearly temperature independent. At higher temperature the kinetics of macroscopic phase separation increase. At low concentrations the HM pectin and caseinate mixture phase separates microscopically only, into water in water emulsions. Depending on the mixing ratio either the pectin or the caseinate phase may be the dispersed phase with the other phase rather than being the continuous one.