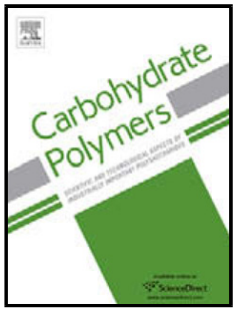

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Interactions between microfibrillar cellulose and carboxymethyl cellulose in an aqueous suspension

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Highlights

- CMC improves redispersibility and reduces aggregation of MFC microfibrils
- NMR relaxation measurements give an insight into the mechanisms of redispersibility
- Polymer aggregation dominates the T_2 value and NMR behaviour of suspensions
- Improved re-dispersion is correlated with higher shear viscosity and increased T_2
- Unique microstructures relevant to foods have been created

Abstract

New microstructures with interesting, unique and stable textures, particularly relevant to food systems were created by redispersing Microfibrillar cellulose (MFC). This paper reports the interactions between microfibrillar cellulose and carboxymethyl cellulose (CMC) in redispersed aqueous suspensions ~~and the effects of formulation~~, by using rheological measurements on variable ratios of MFC/CMC and correlating these with apparent water mobility as determined by time domain NMR. MFC is a network of cellulose fibrils produced by subjecting pure cellulose pulp to high-pressure mechanical homogenisation. A