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Author	Maria Lindgren	
Title (English)	Polymer systems for extended release – rheology and in vitro release	
Title (Swedish)		
Abstract	<p>Hydroxypropyl methyl cellulose (HPMC) is used as a hydrophilic matrix in extended release tablet formulations. A rheological evaluation of three different qualities of HPMC was performed. The rheological information was compared with dissolution profiles and texture analysis of the outer gel layer of water-swollen tablets. The effects of addition of mannitol, glycerylbehenate and/or HMHEC (hydrophobically modified hydroxy ethyl cellulose) to HPMC formulations were examined with focus on sensitivity to hydrodynamic forces.</p> <p>Rheological data correlates in some cases with dissolution tests and texture analysis, but for some of the systems investigated, further studies are necessary. Addition of mannitol results in a dilution of the system and increases the sensitivity to hydrodynamic forces. Glycerylbehenate increases the gel strength to some extent, and makes water penetration into tablets more difficult. HMHEC strengthens the polymer network but makes the tablet more hydrophilic and hence result in a higher water uptake.</p>	
Keywords	HPMC, Hydrodynamic forces, Robustness, Rheology, Dissolution test, Texture analysis	
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