Overview on pharmaceutical applications of cellulose ethers

Cellulose ethers are ubiquitous in pharmaceutical dosage forms. Derived from cellulose they are semi-synthetic polymers showing high chemical and physical stability, and they are considered non-toxic. Being described in the pharmacopoeias since decades, cellulose derivatives found their way into standard formulation strategies in the development of drug products. Cellulose ethers and esters are versatile excipients for oral and topical dosage forms. Within the solid dosage forms, cellulose ether applications span, depending on the substitution, from immediate release tablets over extended release tablets to enteric coating. In the last decade, solubility enhancement of poorly soluble drugs with cellulose ethers and especially esters opened the door to new applications. The presentation will cover cellulose ethers relevant for the pharmaceutical industry with emphasis on non-ionic methyl cellulose and hypromellose, and cellulose esters as hypromellose acetate succinate for oral solid dose.