ABSTRACT The paper deals with a study of tensile strength and disintegration time of compacts made from silicified microcrystalline celluloses, Prosolv SMCC 90, and Prosolv HD 90, in dependence on compression force, addition of two types of lubricants, and two active ingredients. The lubricants were magnesium stearate and sodium stearyl fumarate in a concentration of 0.5%, the active ingredients being ascorbic acid and acetylsalicylic acid in a concentration of 50%.

Prosolv SMCC 90 proved to be better compatible than Prosolv HD 90; the compacts were of higher strength, which was markedly increased with increasing compression force. Prosolv HD 90 was more sensitive to additions of lubricants, and a greater decrease in strength was recorded due to the influence of sodium stearyl fumarate. The effect of lubricants on the strength of compacts in the presence of active ingredients was not identical. The disintegration time of compacts from Prosolv HD 90 without as well as with lubricants was shorter than from Prosolv SMCC 90 and was increasing with increasing compression force. Disintegration time was increased with added lubricants, and it was markedly shortened by addition of active ingredients. Compacts containing ascorbic acid possessed a shorter disintegration time than those containing acetylsalicylic acid, and it was not markedly influenced by the presence of lubricants.