

A study of the properties of tablets made of directly compressible sorbitol.

SUMMARY :

The thesis deals with the study of the properties of tablets from two types of directly compressible sorbitol, namely SorbitabTM SD 250 a SorbitabTM SD 500. The focus of the study was the dependence of the tensile strength and disintegration time of the tablets on the compression force, the addition of lubricants magnesium stearate and sodium stearyl fumarate (Pruv[®]), with concentrations of 0,5% and 1% and a 50% addition of model active ingredients, namely acetylsalicylic acid and ascorbic acid. The compression forces were used 3, 4,5 and 6 kN; tablets containing the drugs were compressed only with a force of 6 kN.

The tensile strength of tablets from SorbitabTM SD 500 was higher than of tablets from SorbitabTM SD 250. SorbitabTM SD 500 has demonstrated sensitivity to addition of both lubricants in both concentrations, unlike SorbitabTM SD 250, when the tensile strength of tablets decreased only with the addition of 1% magnesium stearate. The disintegration time of tablets was prolonged by the lubricants, in the case of tablets with SorbitabTM SD 500 most with 1% magnesium stearate at all compression forces. Higher tensile strength was found for tablets containing acetylsalicylic acid and for both drugs with SorbitabTM SD 250. Magnesium stearate decreased more the tensile strenght for tablets with acetylsalicylic acid, for ascorbic acid was not a statistically significant difference in the context of the type of lubricant. Shorter disintegration time were found for tablets containing ascorbic acid and for this drug it was longer for SorbitabTM SD 500 and it was not affect of type of used lubricant . The longest disintegration time of tablets had tablets with SorbitabTM SD 500 with 1% magnesium stearate in the case of tablets with acetylsalicylic acid.