

Abstract:

The essential condition for a compaction of materials are their viscoelastic properties. There are many methods how to determine them. During a compaction process we can obtain elastic and plastic energies or energy of particle friction from a force-displacement record. After compaction the Young's modul of elasticity can be calculated from the tablet dilatation's values. The stress relaxation test is used for working out the plasticity of a compacted material. Using this test we get values of the methods F_{minA} , F_{minB} , F_{pl} and parameters of first order equation describing the pressure decrease during the stress relaxation. The viscoelastic properties of calcium hydrogenphosphate dihydrate were evaluated in this work by above mentioned methods except for energies. The results obtained by these methods were 288,080 MPa for the Young's modul of elasticity and 700,5167 MPa.s for the total plasticity P_c . The greater this value is, the better compaction properties the material has.