

the decreasing particle size, in the stage of reduction of intraparticle pores in the range from 10.063 to 12.509 MPa and in the stage of reduction of the solid substance without pores in the range from 119.954 to 137.437 MPa. It means that with the diminishment of the particles of microcrystalline celluloses energies E_A are decreased with a concurrent increase in the “half-pressure” values.

Another microcrystalline cellulose under evaluation is Avicel PH 301. It differs from Avicel PH 102 in a substantially higher density D_{MAX} at the level of 6.507 g/cm³. Its particle size is 50 μm and humidity content, 5%. In contrast to Avicel PH 102, it has lower values of reductions of both interparticular and intraparticle pores, which may be caused by its particle size. On the other hand, the reduction of the solid substance without pores is higher, caused probably also by a higher density. Energies E_A in Avicel PH 301, in contrast to Avicel PH 102, are in all three stages of compression process lower and “half-pressures” higher.

An important criterion of evaluation is the values of “half-pressures”. Lower values in the stage of reduction of the solid substance without pores mean better compressibility. From the given aspect, the best compressibility is found in Avicel PH 102 with the “half-

pressure” value of 119.954 MPa and the worst compressibility in Avicel PH 301 with the “half-pressure” value of 151.449 MPa.

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