



Obtaining Microcapsules with Albumin with Programmed Properties

Barbara DOLIŃSKA ^{1*}, Anna GAŁCZYŃSKA-PAWLIK ²,
Aneta OSTRÓŻKA-CIEŚLIK ¹, Janusz PLUTA ², Beata ROSAK ¹ & Florian RYSZKA ³

¹ *Department of Applied Pharmacy, Medical University of Silesia, 41-205 Sosnowiec, Kasztanowa 3, Poland*

² *Chair and Department of Pharmaceutical Technology,
Wrocław Medical University, 50-139 Wrocław, ul. Szewska 38, Poland*

³ *“Biochefa” Pharmaceutical Research and Production Plant, 41-205 Sosnowiec, Kasztanowa 3, Poland*

SUMMARY. The aim of this study was: a) the determination of the relation between composition of mixture for microencapsulation (gelatin concentration 5, 10, and 15 %; sodium alginate 2, 4, and 6 %; acetic acid 15, 20, and 30 %) and the efficiency of the obtained microcapsules, b) the degree of human serum albumin (HSA) incorporation, and c) the release time of HSA from microcapsules. Existing relations was described by multiple regression equations on the basis of which it can be obtained HSA gelatin-alginate micocapsules with specified release time and with specified efficiency and degree of protein incorporation. The aim was realized by modeling the composition of mixture for microencapsulation. HSA microcapsules were prepared using complex coacervation method. Based on presented multiple regression equations it was possible to obtain HSA microcapsules with specified efficiency, degree of incorporation and release time.

KEY WORDS: Microcapsules, Albumin, Efficiency, Degree of incorporation, Release time.

* Author to whom correspondence should be addressed. *E-mail:* b.dolinska@biochefa.pl