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Characteristics of interpolyelectrolyte complexes of Eudragit E 100 with sodium alginate

Moustafine R., Kemenova V., Van Den Mooter G.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

With a view to the application in oral drug delivery formulations, the possibility to form interpolyelectrolyte complexes (IPEC) of Eudragit E 100 (EE) with sodium alginate (AL) was investigated, employing turbidimetry, apparent viscosity measurements, FT-IR and elementary analysis. The interaction or binding ratio of a unit molecule of AL with EE was largely affected by the pH value of the media, showing a change from 1.5:1 to 1:1.25 ($0.66 < Z < 1.25$) with increase in pH value from 2.5 to 6.0. Based on the results of elementary analysis and FT-IR, the interaction ratio of each component in the solid complexes was very close to that observed in turbidity and apparent viscosity measurements thus proving that the synthesized products actually can be considered as IPEC. © 2005 Elsevier B.V. All rights reserved.

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Keywords

Elementary analysis, Eudragit E 100, Infrared spectroscopy, Interpolyelectrolyte complex, Sodium alginate, Solution apparent viscosimetry, Turbidimetry