

Название публикации:

Spectral-Fluorescent Properties of Supramolecular Systems Based on Chlorin e(6)

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Аннотация:

The spectral-fluorescent properties of various supramolecular systems based on chlorin e(6) (Ce-6) are determined to facilitate the development of new medicines for photodynamic therapy and diagnostics. The effect of various excipients, such as poly-N-vinylpyrrolidone (PVP), polyethylene glycol (PEG), bovine serum albumin (BSA), chitosan, Triton X-100 (TX-100), sodium hexametaphosphate (SHMP), and poly(dimethyldiallylammonium chloride) chloride (PDDAC), on the optical absorption and fluorescence of Ce-6 is demonstrated. In the Ce-6-PVP, Ce-6-PEG, Ce-6-BSA, Ce-6-TX-100, Ce-6-SHMP, and Ce-6-PDDAC systems, Ce-6 molecules are disaggregated and complexes thereof with excipients are formed. The quantum yield of Ce-6 fluorescence in supramolecular systems is close to that of the free-form photosensitizer, in the absence of excipients. The results suggest that supramolecular complexes of Ce-6 are promising for the development of medicines with controllable photodynamic activity.

Ключевые слова:

chlorin e(6); supramolecular systems; spectral-fluorescent properties; molecular aggregation