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Thematic course: Spectral luminescence properties and complexing 5-fluorouracil tautomers with β-cyclodextrine. Report 1.

Fluorescence properties and content of 5-fluorouracil tautomers in water solutions

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Abstract

The spectral luminescence study of the tautomeric equilibrium of 5-fluorouracil in neutral water solutions was carried out. Quantum yields (φ) of fluorescence of 2,4-dioxo (I), 2-hydroxy-4-oxo (II), 4hydroxy-2-oxo (III), and, probably, 2,4- dihydroxy (IV) tautomers of 5-fluorouracil were estimated: 1.5×10-4 (I), $2.1 \times 10-2$ (II), 0.16 (III), 0.35 (IV), as well as their percentage: 99.5 (I), 0.4 (II), 0.03 (III), 0.008 (IV).