INFLUENCE OF GAMMA RADIATION ON THE RELEASE OF THE CONTROLLED DRUG POLYMER MATRIX

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Gamma radiation has been used for various applications, which extend from research and commercial manufacture area. With the use of gamma radiation to sterilize, the properties of materials may be also modified. The present work is a study of the effects of gamma radiation on natural and synthetic polymer matrices of loader drugs. The polymers used in the study were: regular starch, modified starch, chitosan and polyvinylpyrrolidone (PVP), focusing their influence on the release of diclofenac sodium dose rate and the dose of gamma radiation. This study did not aim at modeling the release of a drug through the use of radiation but to evaluate the possibility of sterilizing and synthesize controlled release systems in the form of hydrogels and membranes based polymers described above without interfering with degradation and release of drug molecules as well as the polymers used. The results showed that radiation depending on the dose used may interfere with the release and degradation of these systems, in addition to changing its mechanical properties[1,2].

REFERENCES

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