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Injectable Thermosensitive Gels Based in Poloxamer as Modified Drug Release Systems for Veterinary Use

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***SUMMARY*. The purpose of this work is to explore the potential of combining poloxamer 407 and carrageenan for its utilization in an injectable depot drug release system. Reverse thermal gelation of these formulations allow the local injection in liquid form, gelling *in situ* after its administration. Carrageenan reinforces the structure of poloxamer gels (after 50 h of testing only 20 % of the system is eroding) and allows to modulate the release rate of progesterone as a function of formulations composition. The elastic modulus of sole poloxamer gels (G' = 56 Pa) increases significantly in presence of carrageenan (G' = 1 347 Pa) at 10 °C. The gelation temperature of tested formulations is between 17 and 22 °C and the gelation process is very quick. Poloxamer-carrageenan systems offer a promissory alternative approach to development of injectable depot systems for veterinary use.**

KEY WORDS: Injectable depot, Modified release, Thermosensitive gel.

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