

Anti-Inflammatory drug releasing nano fibrous sheet

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INTRODUCTION: The aim of this study was to develop a nanomat with the ability of diclofenac sodium releasing properties.

METHODS: A bioabsorbable polymer 1 was dissolved into a solvent. Test drug 1 was added. Nano-fibers were made by electrospinning onto substrate. Microstructure of the sheet was studied using SEM and drug release profiles with UV/VIS spectroscopy.

RESULTS: Thickness of the electrospun sheet was about 2 mm. SEM analysis showed that polymeric nano-fibers containing drug particles form very interconnected porous nano structure. The average diameter of nano-fibers was 130nm. In the beginning of drug release test a high start peak was observed. But, after this the rate was decreased. More details will be presented.

DISCUSSION & CONCLUSIONS: The nano-fibrous porous structure made of bioabsorbable polymer loaded with test drug is feasible to develop. This structure may have potential in analgesic drug release applications.

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