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ABSTRACT BOOK

P1

STABILITY OF KOLLIDON® SR AND EUDRAGIT® RS 100 POLYMERIC NANOPARTICLES

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Polymeric nanoparticles based on biocompatible and biodegradable polymers are preferred for drug delivery owing to their property of being adsorbed intact in the gastrointestinal tract after oral administration [1]. Stability of polymeric nanoparticles are generally described as physical, chemical, long-term "pharmaceutical" and colloidal stabilities [2]. Objective of this study was to evaluate the stability of dexketoprofen trometamol-loaded Kollidon® SR and Eudragit® RS 100 polymeric nanoparticles. Polymeric nanoparticles were prepared by the spray-drying (Büchi, Nano Spray Dryer B-90) and stored at different temperatures (4±1°C, 25±1°C, 40±1°C) for six months [3]. Stability parameters studied within the scope of the study were: physical appearance, particle size, polydispersity index, zeta potential, SEM imaging, thermal analyses (DSC), entrapment efficiency (EE %), FT-IR and NMR spectroscopic analyses. Time dependent variation in EE % was calculated using a validated high performance liquid chromatography (HPLC) method. No significant difference ($p>0.05$) in dexketoprofen trometamol-loaded polymeric nanoparticles stored at 4±1°C, 25±1°C, 40±1°C was found after 6 months and also DSC, FT-IR and NMR analyses were found to be similar to the freshly prepared sample. The results demonstrated some variation in particle size of nanoparticles stored at 40±1°C. Results indicated that optimum temperature for long-term storage of the nanoparticles prepared is room temperature (25±1°C).

References

[1] Mathew B et al. WJPPS 3(11), 609-624, 2014.
[2] Lazzari S et al. J Nanopart Res 14(920), 1-10, 2012.
[3] Guidance for Industry, Q1A(R2) Stability Testing of New Drug Substances and Products, U.S. Department of Health and Human Services Food and Drug Administration, ICH guidance: Revision1&2; 2003.

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