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Development and Evaluation of Carvedilol/ Polyethylene Oxide Matrix Tablets

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SUMMARY. Hydrophilic matrix tablets were developed with carvedilol (CRV), using different molecular weights of polyethylene oxide (PEO). Investigations were carried out in order to verify the tablets performance. All formulations satisfied the official requirements. Water uptake studies were influenced by pH value and polymer concentration. CRV release was sustained for 23 and 19 h, in acid and neutral conditions, respectively. The mechanism involved in drug release was characterized by anomalous behavior for all formulations in phosphate buffer whereas in acid conditions they presented a Fickian kinetics, Case II transport and Super Case II transport kinetics for different formulations.

KEY WORDS: Carvedilol, Matrix tablets, Polyethylene oxide, Release behavior.

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