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Metoprolol-Eudragit Microcapsules: Pharmacokinetic Study using Convolution Approach

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***SUMMARY*. The objective of this study was to employ convolution approach for the calculation of blood drug levels for various release types (1:1, 1:1.5, and 1:2, drug:polymer) of metoprolol tartrate microparticulate formulations from *in vitro* drug dissolution profiles. Using USP 2007 dissolution apparatus II, dissolution testing was carried out by employing sequential pH change method with and without 0.5 % soudium lauryl sulphate, surfactant. The values of derived pharmacokinetic parameters like C_{max} (Maximum blood drug concentration), T_{max} (Time needed to reach maximum blood drug concentration), and AUC (area under blood drug concentration curve) from the predicted drug concentration in blood were amazingly comparable to that calculated from the corresponding human *in vivo* data as stated in literature. As per conclusion, convolution approach is a useful analytical tool for computing drug concentration in blood as well as for evaluating product quality.**

KEY WORDS: Convolution, Dissolution, Pharmacokinetics, Metoprolol.

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