

Olmesartan medoxomil-loaded mixed micelles: Preparation,

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Abstract

Olmesartan medoxomil (OLM) is highly lipophilic in nature ($\log p \frac{1}{4} 4.31$) which attributes to its low aqueous solubility contributing to its low bioavailability 25.6%. OLM was loaded into mixed micelles carriers in a trial to enhance its solubility, thus improving its oral bioavailability. OLM-loaded mixed micelles were prepared, using a Pluronic® mixture of F127 and P123, adopting the thin-film hydration method. Three drug: Pluronic® mixture ratios (1:40, 1:50 and 1: 60) and various F127: P123 ratios were prepared. OLM Loaded mixed micelles showed stability up to 12 h. The particle size of the systems varied from 364.00 nm (F3) to 13.73 nm (F18) with accepted Poly dispersity index (PDI) values. The in-vitro release studies of OLM from mixed micelles versus drug aqueous suspension were assessed using the reverse dialysis technique in a USP Dissolution tester apparatus (type II). The highest RE% (43%) was achieved with OLM-loaded mixed micelles (F8) when compared to (35%) of drug suspension.

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