Olmesartan medoxomil-loaded mixed micelles: Preparation,

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Abstract

Olmesartan medoxomil (OLM) is highly lipophilic in nature (log p ı 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 PluronicÈ mixture of F127 and P123, adopting the thin-film hydration
method. Three drug: PluronicÈ mixture ratios (1:40, 1:50and 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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