Formulation of telmisartan tablet, evaluation and determination by HPLC

Kahtan J Hasson
Al-Rasheed University College, Iraq

Abstract

Telmisartan is an angiotensin II type and is used as antihypertensive drug. It poses poor solubility which leads to low bioavailability in blood stream so that; this problem guides many scientists to work in improvement of telmisartan dissolution of its solid dosage forms. The present work shows the formulations of telmisartan as tablet with high enhancement degree in their dissolutions and stability in addition to the improvement in the physical characters of the tablet dosage forms. The formulations of telmisartan were prepared in consideration of manufacturing conditions rather than laboratory productions as it is prescribed over many previous academic papers. The manufacturing procedure of the tablet according to this new formulation is simple and readily applicable in pharmaceutical industries. The method depend on turning the telmisartan to amorphous crystals by mixing with solubilizing polymer and mixed with prepared DC excipients to be compressed as tablets. The DC excipients were modified during the preparation to act as alkalizing agent which in turn enhanced the dissolution rate of the tablets. The physical properties of the powder of formulations were evaluated and it gave an excellent degree of flowability and compressibility while, the compressed tablets showed fast disintegration time and very low friability percent. In addition the dissolution profiles of the produced tablet were more than 85%. For a comprehensive evaluation of this formulation procedure of tablets, a stability indicating method of analysis was developed by using reversed phase HPLC technique to follow the expected changing that might occur on storage of the product (tablets) at accelerated conditions of storage. The HPLC method was able to detect the degradation products of telmisartan in deliberately degraded sample and the produced telmisartan tablets which were stored at accelerated conditions showed good stability.

Biography

Kahtan J Hasoon has obtained his BSc in Pharmaceutical Sciences from College of Pharmacy, Baghdad University. He obtained his MSc in Pharmaceutical Analysis from Herriot-Watt University, UK. He has been a Member of Academic Staff of Al-Mustansiriya University. Now he is a Lecturer in the Al-Rasheed University College, and as a Technical Consultant in SAFA Pharmaceutical Industries Co., Al-Safa Group.

kjhassoun@yahoo.com