Abstract

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The effect of antioxidant and filler type on diltiAzem hydrochloride sustained release tablet matrices containing polyethylene oxid

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Abstract

Diltiazem hydrochloride was obtained from Elan Drug Technologies. PEO grade 303, Vitamin E, Mannitol and dicalcium phosphate dehydrate were obtained from Merck, Germany. Diltiazem HCl:PEO with a ratio of (1:1) was prepared and Matrix tablets with target weights of 240 mg for pure samples, 242.4 tablets containing Vit E and 300 mg for filler tablets were prepared by the compression of the above mixtures at 1500 psi. In order to investigate the effect of different filler types diltiazem HCl : PEO : filler with a ratio of (1:1: 0.5) was prepared and mixed .Then the mixture was compressed at the same conditions as described above. Drug release was determined by dissolution testing for these tablets. Dissolution testing was performed for the non-aged polymer as the control. These were considered as zero (0) week. The USP paddle method (Erweka, Germany) was used to monitor the dissolution profiles of diltiazem HCl. The dissolution medium was 900 ml distillate water equilibrated to 37 ºC + 0.1 ºC and the paddles were rotated at 100 rpm. Viscosity of samples also was done using the Dr. Schleuniger® Pharmatron.

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Biography

Saeed Shojaee is an professor at Medway School of Pharmacy, Universities of Kent and Greenwich, Chatham, Kent, UK. He has interest on drug technologies. He has participated in many conferences and webinar internationally.

