

P91. DETERMINATION OF SILDENAFIL IN ADULTERATED HERBAL SUPPLEMENTS BY HPLC-UV

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The use of herbal supplements (HSs) for treatment erectile dysfunction (ED) has greatly increased in worldwide, mainly because of a well-entrenched belief that herbal products are reliable and free from adverse-toxic effects. Sildenafil (SD) is a potent and selective inhibitor of cGMP specific PDE-5 and causes relaxation of smooth muscle, particularly in the corpus cavernosum and pulmonary vasculature. The observed benefit of SD for the treatment of ED has led to the increase in prevalence of illicit herbal performance enhancement products. However, SD has serious side effects which can be fatal. Due to increased use of SD in HSs and its serious side effects have a non-sophisticated, simple, rapid, and reliable methods are needed. For this purpose, we developed and validated HPLC-UV based analysis method for the detection of SD in the HSs. Separation was carried out by an octadecylsilane C18 column. Mobile phase was consisted of acetonitrile, methanol and acetate buffer (52:40:8, v/v/v). Flow was 1 mL/min. Total run was <14 min. UV was set at 292 nm. Verapamil was used as an internal standard. A good accuracy (bias <7.39) was achieved. Precision of the method was observed between 1.74-5.68 and 2.58-6.23 (RSD %) intra-day and inter-day, respectively. Linearity, recovery, LOD-LOQ of the method has been determined. The method was found to be linear, precise, accurate, and sensible. Method has been successfully applied in analysis of 51 herbal products which were collected from internet and the market. As a result, SD has been detected various proportions in 18 products.

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