DETERMINATION OF CITALOPRAM IN PHARMACEUTICAL PREPARATION BY HPLC-UV METHOD

Onur Şenol1, Mehmet Emrah Yaman1, Yucel Kadioğlu1*, Ömer Faruk Koçak1

Department of Analytical Chemistry, Faculty of Pharmacy, Ataturk University
25240 Erzurum-Turkey
*E-mail: yucelkadi@yahoo.com

Citalopram is an antidepressant drug of the selective serotonin reuptake inhibitor (SSRI) class who is named as 1-[3-(dimethylamino)propyl]-1-(4-fluorophenyl)-1,3-dihydroisobenzofuran-5-carbonitrile. It has U.S. Food and Drug Administration (FDA) approval to treat major depression, which it received in 1998 and is prescribed off-label for other conditions1. It is aimed to develop and validate a high performance liquid chromatography method with UV detection for determination of citalopram and apply these methods on pharmaceutical formulations that include citalopram. In HPLC-UV study, parameters were chosen as follows: C18 (250x4.6 mm, 5µm) column, mobile phase of 0.1% formic acid-acetonitrile-methanol (30:40:30; v/v/v), 0.9 mL/min of flow rate, 239 nm of wavelength, 10 µL of injection volume. In HPLC-UV method, the concentration range of 1-40 µg/mL the method is found to be linear. Within- and between-day precision values for citalopram were less than 5.45% and accuracy (relative error) was better than 6.98%. Developed and validated methods were successfully applied on 4 pharmaceutical preparations which are named as Cipram, Vodelax, As-Cilog ve Citol. As a result, it is claimed that proposed method is sensitive, precise, accurate and successfully used in quality control studies in drug industry.

KEYWORDS: Citalopram, HPLC, Pharmaceutical Preparations

REFERENCES: