

Spectrophotometric Method for the Estimation of Terazosin in Tablets

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A simple and sensitive method has been developed for the estimation of terazosin in tablet formulations. The method is based on diazotisation of primary amine group of terazosin with sodium nitrite and hydrochloric acid followed by coupling with β -naphthol (in alkaline medium) to form an orange red dye, which has the characteristic light absorption in the visible region and having the absorption maximum at 560 nm. So the determination of the drug was based on the absorption at this wave length. Beer's law is obeyed in the concentration range of 1-10 $\mu\text{g/ml}$. The proposed method is precise, accurate and reproducible and it is extended to the analysis of terazosin in the tablet formulations.

Terazosin is a new antihypertensive drug^{1,2}. Terazosin is 1-(4-amino-6,7-dimethoxy-2-quinazoliny)-4-[(tetrahydro-2-furanyl) carbonyl] piperazine (or) 2-4[(tetrahydro-2-furoyl)-1-piperaziny]-4-amino-6,7-dimethoxy quinazoline. Reported analytical methods include, *florimetric*², *UV* and *HPLC*³⁻⁵. In the present communication, a new simple, selective and sensitive spectrophotometric method is reported for the determination of terazosin in tablet formulations.

Pure terazosin was obtained from Abbott laboratories, Gujarat, India. Sodium nitrite solution was freshly prepared. Alkaline solution of 1.0% β -naphthol was prepared by dissolving μg of sodium hydroxide with a small quantity of distilled water in a 100 ml standard flask to which 0.1g of β -naphthol was added and the volume was made upto 100 ml with distilled water. A systronic UV-Spectrophotometer type-150 was used for analysis. Stock solution of pharmaceutical grade terazosin was prepared by dissolving 10 mg of the terazosin in 100 ml of methanol in a standard flask.

Aliquots of standard solution representing 1-10 μg of terazosin were transferred into ten separate 100 ml standard flasks previously numbered. Two millilitres of freshly prepared 1% sodium nitrite solution and 2 ml of concentrated HCl was added. A reaction time of 15 min at 0-5° was given for the completion of reaction. Then, 0.3 ml of

0.1% β -naphthol in 4% sodium hydroxide solution was added to the above solution and the volume was made upto 100 ml with distilled water. A blank also prepared in the same manner as described above.

For analysis of tablets, 10 mg equivalent of tablet content was transferred into a 100 ml standard flask and was dissolved in methanol. The solution was filtered to obtain a clear solution. Required quantity of the filtrate was treated with 2 ml of freshly prepared sodium nitrite solution, 2 ml of concentrated HCl, allowed to stand at 0-5° for 15 min, 0.3 ml of 0.1% β -naphthol in 4% sodium hydroxide solution was added and final volume was made upto 100 ml with distilled water. Absorbance was measured at 560 nm against reagent blank.

Terazosin undergoes diazotisation due to presence of a primary amine group, which has a lone pair of electron, followed by coupling with β -naphthol solution in alkaline medium giving an orange red coloured dye. The dye exhibits absorption maximum at 560 nm. This orange red coloured dye has been found to be stable upto one hour and Beer's law was found to be obeyed in the concentration range of 1-10 $\mu\text{g/ml}$. The percentage recovery ranged from 100.1 to 100.2 and is indicative of non-interference of excipients in the determination of drug. The low value of % relative standard deviation (0.05958 and 0.01045 for tablet sample 1 and 2 respectively) indicated that the proposed method is quite simple, fast and economical. This method can be used in routine analysis of terazosin in tablet formulations.

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TABLE 1 : ANALYSIS OF TERAZOSIN TABLETS

Formulation	Labeled amount (mg)	Amount found		% Recovery ^c
		Proposed method ^A (mg)	UV-method ^B (mg)	
Tablet sample-1	5	5.01	5.04	100.18
Tablet sample-2	1	0.996	1.03	100.12

A denotes average of five determinations. B represents tablet sample was dissolved in methanol, water hydrochloric acid (3000:9000:9) and filtered before the absorbance was measured at 246nm. C denotes recovery of 1mg pure drug added to tablet sample preparations.

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Antifungal Activity of *Calendula officinalis*

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The *in vitro* antifungal activity of *Calendula officinalis* flower extracts have been investigated against *Aspergillus niger*, *Rhizopus japonicum*, *Candida albicans*, *Candida tropicalis* and *Rhodotorula glutinis*. The extracts of *Calendula officinalis* showed high degree of activity against all test fungi. The inhibitory effects of extracts are very close and identical in magnitude and are comparable with that of standard antibiotics used.

Calendula officinalis Linn. (Compositae) which is also known as marigold, is a herb employed in traditional medicine in many parts of India. The medicinal properties of this plant has been mentioned in Ayurvedic and Unani System of Medicine indicating that the leaves and flower extracts are antipyretic, antiinflammatory, antiepileptic and antimicrobial. It is used internally for

fevers to promote perspiration and to prevent suppuration¹. It is also reported to posses wound healing activity². Infusion of *C. officinalis* is also popularly used in anaemia and in ointment for sores, cuts, bruises and for the treatment of cracks in hands³. The present study was undertaken to evaluate antifungal activity of *C. officinalis* extracts.

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The *C. officinalis* flower were procured from the