methods for pharmaceutical dosage forms. The other active ingredients and excipients usually present in pharmaceutical dosage forms did not interfere in the estimation when some commercial dosage forms (T_1 and T_2) were analysed by this method. The accuracy of the method was confirmed by the recovery studies, by adding a known amount of the pure drug to the formulation already analysed by this method and the analytical data is presented in Table 2. The methods reported here are found to be simple, sensitive, accurate and can be used in the determination of satranidazole from pharmaceutical dosage forms in a routine manner.

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Spectrophotometric Determination of Trimetazidine Dihydrochloride in Bulk and Solid Dosage Forms

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A new simple, sensitive spectrophotometric method in ultraviolet region has been developed for the determination of trimetazidine dihydrochloride in bulk and in tablet dosage form. Trimetazidine dihydrochloride shows maximum absorbance at 270 nm. Beer's law was obeyed in the concentration range of 400-700 µg/ml. Results of the analysis were validated satistically and by recovery studies.

Chemically, trimetazidine dihydrochloride is 1[(2,3,4-trimethoxy pheny1) methy1] piperazine dihydrochloride, which is a unique antianginal and antiischemic agent[1] belonging to a new class of compounds called cytoprotectives that display antischemic effects without inducing haemodynamic changes and improve the status of the ischemic myocardium. A precise spectrophotometric method is developed for the determination of trimetazidine dihydrochloride in bulk and in solid dosage forms.

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Literature survey reveals that the drug is determined using HPLC[2] and GCMS[3] method in biological fluids. The present study describes a simple UV spectrophotometric method of determination of trimetazidine dihydrochloride in bulk as well as from solid dosage forms using distilled water as a solvent.

An Elico UV visible spectrophotometer-159 with 1 cm matched quartz cell was used. Pure trimetazidine dihydrochloride was obtained as a gift sample from Micro Labels Pondicherry. It's tablet formulations were obtained from market.

Trimetazidine dihydorichloride (10 mg) was accurately

TABLE 1: RESULTS OF ASSAY AND RECOVERY STUDIES

Pharmaceutical Formulation	labeled Amount (mg)	Amount found (mg)	Percentage	% Recovery*	Standard Deviation	Co-efficient of variation
A	20	19.98	99.92	99.30	0.247	1.2120
B	20	20.23	100.99	100.97	0.103	0.518
C	20	19.91	99.57	99.18	0.0395	0.199

*Mean ± S.D. of 6 observations

weighed and dissolved in 10 ml of distilled water to give a stock solution of concentration 1000 µg/ml. From this stock aliquots of solution were transferred into eight 10 ml volumetric flasks and the final volume was adjusted with distilled water to give concentrations of 100, 200, 300, 400, 500, 600, 700 and 800 µg/ml. The solutions were scanned in the UV range. The absorbance was measured at 270 nm against a distilled water blank.

For analysis of trimetazidine from formulation, 20 tablets were weighed and powdered well. The tablet powder equivalent to 60 mg of trimetazidine was transferred into a 100 ml standard flask. A small quantity of distilled water was added and it was shaken well to dissolve the drug and then volume was made up to mark with distilled water and filtered. The absorbance of this solution was measured at 270 nm against distilled water as blank.

Recovery studies were carried out by adding 1,2 and 3 mg of pure drug to different samples of tablet powder containing the equivalent of 20 mg of drug in sample A, B and C. From the amount of drug found, percentage recovery was calculated. The proposed method of determination of trimetazidine shows molar absorptivity 773.48×10^{3L} mol^{-1} cm^{-1}. Linear regression of absorbance with concentration gave a correlation coefficient of 0.9996.

Trimetazidine dihydochloride exhibited its maximum absorption at 270 nm and obeyed Beer's law in the concentration range of 400-700 µg/ml. The results of analysis and recovery studies are presented in Table 1. The percentage recovery obtained indicated that there is no interference of excipients present in the formulation.

The developed method was found to be sensitive, accurate, precise, and reproducible and can be used for the routine determination of trimetazidine in bulk and in dosage forms.

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