Approximately 5 to 8 µg extract was loaded on each band. The plate was developed upto 9 cm in the mobile phase, dried in the oven at 100° for 10 min, cooled and scanned at 280 nm.

UV spectra obtained for solutions of EGCG in acetate buffer at slightly acidic pH showed peaks at 273 nm for EGCG and there are no peaks in the visible region of these spectra[10]. Under the HPTLC conditions mentioned in the experimental part the Rf value obtained for both pure EGCG and EGCG in the green tea extract was 0.12. The green tea extract used was EGCG enriched green tea extract in which the major peak corresponded to EGCG. The same procedure was used for pure catechin, epicatechin and epigallocatechin for which the Rf values obtained were different.

This method is very specific, less time consuming and accurate. By this method we can determine the EGCG content of fresh green tea as well as purified green tea extracts and tablets or capsules containing EGCG. Since HPLC method and HPTLC methods are comparable this analysis procedure is helpful to industries and professionals who are more particular about epigallocatechin gallate (EGCG) rich green tea extract.

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High Performance Thin Layer Chromatographic Method for Estimation of Lovastatin from Tablets

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A new simple, specific and precise high performance thin layer chromatographic method has been developed for estimation of lovastatin in its tablet formulations. In this method, standard solutions and sample solution of lovastatin were applied on precoated silica gel G60 F_{254} TLC plate and developed using toluene:methanol (75:25 v/v) as mobile phase. The plate was scanned and quantified at 239 nm for lovastatin. The method was validated for precision, accuracy and reproducibility.

Lovastatin is an antihyperlipidemic drug, widely used in the treatment of hypercholestremia. It acts by competitively inhibiting HMG Co-A reductase, the key enzyme in cholesterol biosynthesis[1]. It is an official drug in USP[2]. Various methods like spectrophotometry[3], spectrofluorimetry[4], HPLC[5-8] have been reported for the estimation of lovastatin from its formulations. In the present article, we report a simple, specific high

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TABLE 1: ESTIMATION OF LOVASTATIN FROM ITS FORMULATIONS

Formulations	Labeled amount (mg)	Amount found (mg)*	% of drug found*
Tablet formulations			
A	10	9.914 ± 0.103	99.14 ± 1.03
B	10	9.833 ± 0.128	98.33 ± 1.28
C	10	9.883 ± 0.135	98.83 ± 1.35

* Each value is a mean ± standard deviation of three determinations

performance thin layer chromatographic (HPTLC) method for estimation of lovastatin from tablets.

Instruments used for the estimation were CAMAG Linomat IV automatic sample spotter, CAMAG TLC Scanner 3, and CATS 4 software for interpretation of the data. Standard solutions of lovastatin (30, 60, 90, 120, 150 and 180 µg/ml) were prepared by suitably diluting the stock solution (1 mg/ml) in methanol. Ten microlitres of standard solution of lovastatin were applied on pre-coated TLC Silica gel G60 F_{254} plates (E. Merck) using a CAMAG Linomat IV automatic sample spotter. The plate was developed with toluene:methanol (75:25 v/v), in a twin-trough chamber to a distance of 5 cm. After removal from the chamber, the plate was dried in air for 15 min, was scanned and quantified at 239 nm, using a CAMAG TLC Scanner 3. Data of peak area of each band was recorded. Standard curve for lovastatin in the range of 30-180 µg/ml was generated by plotting the peak area against concentration of lovastatin spotted.

Twenty tablets were crushed and ground to fine powder. A weight equivalent to 10 mg of lovastatin was transferred to a conical flask and extracted with methanol (3 x 25 ml). The extracts were filtered through Whatman filter paper No. 41 and the residue was washed with 10 ml of methanol. The extracts and washings were pooled and transferred to a 100 ml volumetric flask and volume was made up to 100 ml with methanol. Twelve microlitres from the above sample solution was spotted in triplicate along with 10 ml of standard solution (120 µg/ml) on precoated silica gel G60 F_{254} TLC Plate. The plate was developed and scanned as mentioned above. Peak areas were recorded and the amount of lovastatin present in formulations was estimated using the calibration curve for lovastatin. Results of analysis of three different brands of formulations are tabulated in Table 1.

The developed method was validated for specificity, repeatability and accuracy. The method is found to be specific for lovastatin, since it resolved the peak of

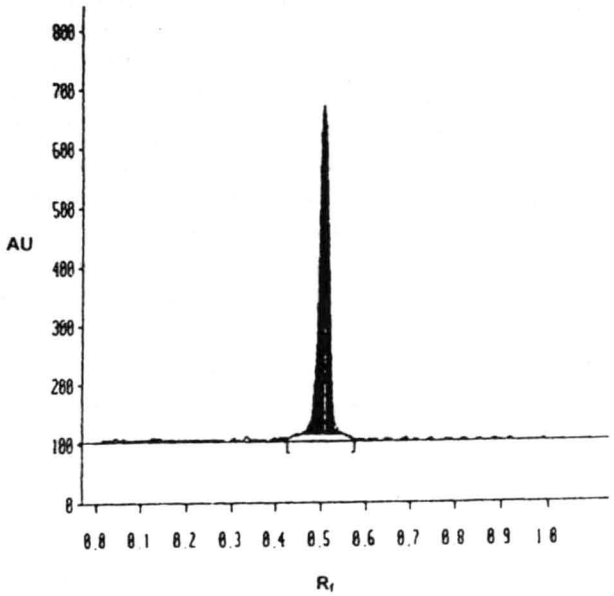

Fig. 1: TLC Chromatogram of lovastatin from tablets

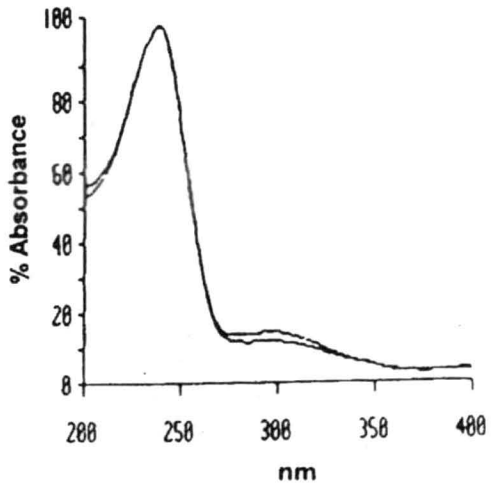

Fig. 2: Overlay absorption spectra

Overlay absorption spectra of standard lovastatin and lovastatin from tablets, taken on the CAMAG TLC Scanner 3.

TABLE 2: METHOD VALIDATION PARAMETERS

Parameter	Result
Instrumental precision (% CV) (n=7)	0.043
Repeatability (% CV) (n=6)	0.65
Specificity	Specific
Accuracy (%)	99.05 ± 1.14*
Linearity range (µg/ml)	30-180
Correlation coefficient (r)	0.999

* Mean value ± standard deviation of three determinations

lovastatin (R_f value=0.50) in presence of other excipients in the formulations (fig. 1). The specificity was also confirmed by overlaying the spectra of standard lovastatin with the spectra of sample recorded on TLC scanner in UV range (fig. 2). Linearity range for lovastatin was found to be in the range of 30-180 µg/ml. The correlation coefficient (r) and other method validation parameters are given in Table 2. Precision of the instrument was checked by repeated scanning of the same spot (1200 ng/spot) of lovastatin seven times and the % CV was found to be 0.043. Repeatability of the method was checked by analysing a standard solution of lovastatin (120 µg/ml) after application (10 µl) on a TLC plate (n=6) and the % CV for peak area was found to be 0.65. Accuracy of the method was evaluated by carrying out a recovery study. A known concentration of the standard Lovastatin solution (equivalent to 45 µg) was added to a preanalysed tablet sample solution (45 µg/ml), extracted and quantified as mentioned above. The percentage recovery was found to be 99.05. Thus the method was found to be simple, specific, precise and accurate and can be used for routine quality control purpose.

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Chemical Constituents of the Roots of *Vitex negundo*

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Five compounds were isolated from the methanolic extract of the roots of *Vitex negundo* linn and purified by crystalisation and preparative TLC. They were identified as 2 β, 3α-diacetoxyoleana-5,12-dien-28-oic acid, 2α, 3α-dihydroxyoleana-5,12-dien-28-oic acid, 2α, 3β-diacetoxy-18-hydroxyoleana-5,12-dien-28-oic acid, vitexin and isovitexin by spectral data and chemical conversions.

Vitex negundo Linn (Fam: Verbenaceae), a large aromatic shrub with bluish-purple flowers widely prevalent in North-Western Himalayan region, has been used for various medicinal purpose in the Ayurvedic and Unani systems of medicine[1]. The roots (3 kg) of *V. negundo* were collected from Siripalli, Ganjam District, Orissa and

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