

**CONTENT****REVIEW ARTICLE**

- **Chemo informatics: Newer Approach for Drug Development**  
*Deepak Bharati, Jagtap RS, Kanase KG, Sonawame SA, Undale VR and Bhosale AV* .....01

**ABSTRACT**

Chemo informatics is a scientific discipline that has evolved in the last 40 years at the interface between chemistry and computer science. It has been realized that in many areas of chemistry, the huge amount of data and information produced by chemical research can only be processed and analyzed by computer methods. Furthermore, many of the problems faced in chemistry are so complex that novel approaches utilizing solutions that are based on informatics methods are needed. Thus, methods were developed for building databases on chemical compounds and reactions, for the prediction of physical, chemical and biological properties of compounds and materials, for drug design, for structure elucidation, for the prediction of chemical reactions and for the design of organic syntheses.

**KEY WORDS** Chemo informatics, drug development, structure activity relationship

- **A Review –Garlic, the Spice of Life-(Part –I)**  
*Kishu Tripathi* .....08

**ABSTRACT**

Garlic [*Allium sativum*] is among the oldest of all cultivated plants. It has been used as a medicinal agent for thousands of years. It is a remarkable plant, which has multiple beneficial effects such as antimicrobial, antithrombotic, hypolipidemic, antiarthritic, hypoglycemic and antitumor activity etc

**KEY WORDS** Garlic, *Allium*

- **A Review – Can metal ions be incorporated into drugs?**  
*Kishu Tripathi* .....14

**ABSTRACT**

Metallopharmaceuticals used as anticancer agents, metal-mediated antibiotics, antibacterials, antivirals, antiparasitics, antiarthritics, and radiosensitizing agents appear in therapeutic medicinal inorganic chemistry.

**KEY WORDS** Metallopharmaceuticals; metallodrugs

- **Microwave assisted extraction for phytoconstituents – An overview**  
*Tripti Jain, V Jain, R Pandey, A Vyas and SS Shukla* .....19

**ABSTRACT**

At the present time, there are a number of non-conventional extraction methods in use that are all, in principle, solid-liquid extractions (SLE) but which introduce some form of additional energy to the process in order to facilitate the transfer of analytes from sample to solvent. These methods include fairly inert, insoluble, and often polymeric material, such as

cellulose of plants or fungi and the microbial cell wall. The first step of the extraction is therefore to release and solubilize the smaller secondary metabolites in the matrix, resulting in the initial extract. Forced-flow solid-liquid extraction (FFSLE) techniques, such as medium-pressure solid-liquid extraction (MPSLE) and rotation planar extraction (RPE), in these methods the extraction solvent is forced through the sample bed either by means of pressure or by centrifugal force, thus increasing the efficiency of the extraction process. Even extraction by electrical energy has been studied. The main advantage of these non-conventional methods compared to conventional SLE methods is the increase extraction efficiency, which leads to increased yields and/or shorter extraction times. Indigenous cultures have learnt to exploit the properties of secondary metabolites in many ways, e.g. specific plants or parts of them have been used as poisons, analgesics, stimulants, preservatives, colorants, tanning agents for tanning leather etc. As our understanding of chemistry and other natural sciences has increased, the active chemical compounds of these traditionally used plants have been successfully isolated and identified. There is an increasing trend of using pure compounds instead of crude extracts prepared from plant material, irrespective of their intended use.

**KEY WORDS** Extraction methods, Microwave, phytoconstituent

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## RESEARCH ARTICLE

- **Isolation of secondary metabolites from *Pseudomonas fluorescens* and its Characterization**  
*Prasanna Reddy Battu and MS Reddy* .....26

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### ABSTRACT

Twenty *Pseudomonas fluorescens* strains were isolated from rice growing soil samples and characterized. One of the *P. fluorescens* isolated and identified from the dual culture test. It was fermented for secondary metabolite in a small scale and extracted with ethyl acetate. The isolated metabolite tested against rice fungal pathogens. The structure of the compound was elucidated by high-resolution NMR spectroscopy.

**KEY WORDS** *Pseudomonas fluorescens*, antimicrobial metabolites, rice fungal pathogens

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- **Spectrophotometric Methods for Simultaneous Estimation of Dexibuprofen and Paracetamol**  
*Sohan S Chitlange, Ranjana Soni, Sagar B Wankhede and Amol A Kulkarni* .....30

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### ABSTRACT

Three simple spectrophotometric methods have been developed for simultaneous estimation of dexibuprofen and paracetamol from tablet dosage form. Ethanol (95%) was used as solvent. Method-I involves, formation of Q-absorbance equation at 235.5 nm (isoabsorptive point) and 249.5 nm ( $\lambda_{\max}$  of paracetamol); Method-II simultaneous equation method involves the measurement of absorbances at two wavelengths 223 nm ( $\lambda_{\max}$  of dexibuprofen) and 249.5 nm ( $\lambda_{\max}$  of paracetamol) and Method-III multicomponent mode of analysis involves the measurement of absorbances at two wavelengths 223 nm ( $\lambda_{\max}$  of dexibuprofen) and 249.5 nm ( $\lambda_{\max}$  of paracetamol); The linearity lies between 2-7  $\mu\text{g/ml}$  for dexibuprofen and 4-14  $\mu\text{g/ml}$  for paracetamol for all the three methods. The accuracy and precision of the methods were determined and validated statically. All the methods showed good reproducibility and recovery with % RSD less than 1. All method were found to be rapid, specific, precise and accurate and can be successfully applied for the routine analysis of dexibuprofen and paracetamol in bulk and combined dosage form.

**KEY WORDS** Dexibuprofen, Paracetamol, Q-Absorbance ratio method, Simultaneous equation method.

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- **Synthesis and Biological Evaluation of 2, 5 Di-substituted 1, 3, 4 oxadiazoles**  
*Rakesh Saini, Awani K Rai, AN Kesari and M Shahar Yar* .....34

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### ABSTRACT

Synthesis of (ethyl 2- (1H Benzo [d] [1, 2, 3] triazole -1- yl) acetate) and (2H - benzo [d] [1, 2, 3] triazole - 1 - yl) aceto hydrazine) alongwith their derivatives has been done. The entire synthesized compounds were characterized by UV, IR and

<sup>1</sup>H-NMR spectroscopy. The Antimicrobial activity of the synthesized compounds was evaluated, on *Sreptococcus aureus* and *Esteria coli*. The present investigation deals with the synthesized compounds possessing good antimicrobial activity.

**KEY WORDS** Esterification, Benztriazole, Antimicrobial activity

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- **Reverse Phase HPLC Method for Determination of Aceclofenac and Paracetamol in Tablet Dosage Form**

*Godse VP, Deodhar MN, Bhosale AV, Sonawane RA, Sakpal PS, Borkar DD and Bafana YS*.....37

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**ABSTRACT**

A simple, rapid and selective HPLC method has been developed for quantitation of aceclofenac and paracetamol from bulk drug and pharmaceutical formulations using a mobile phase consisting mixture of methanol and water (70:30 v/v) at the flow rate of 1mL/min. An ODS C-18 (Intersile 25 cm x 4.6 mm, 10 µm.) column was used as stationary phase. The retention time of aceclofenac and paracetamol were 1.8 min. and 2.7 min. respectively. Linearity was observed in the concentration range of 2-50 µg/mL for aceclofenac and 5-50 µg/mL for paracetamol. Percent recoveries obtained for aceclofenac and paracetamol were 100.6 and 100.7 respectively. The proposed method is precise, accurate, selective and rapid for the simultaneous determination of aceclofenac and paracetamol.

**KEY WORDS** Aceclofenac, Paracetamol, HPLC Method

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- **Ester and Fatty Acid from *Pleurospermum densiflorum***

*Rakesh Saini, Saurbh Chaturvedi, HP Bhartiya and Priyanka Singh*.....41

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**ABSTRACT**

High altitude herbs were used as herbal perfume and used incense in the folk of Himalayan region. From aerial part of the plants the alcohols and higher ester of fatty acids were isolated and identified. It is used in the manufacture of metallic stearates, pharmaceuticals, soaps, cosmetics, and food packaging. It is also used as a softener, fragrance.

**KEY WORDS** *Pleurospermum densiflorum*, ester and fatty acid

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- **Simultaneous RP-HPLC Estimation of Nitazoxanide and Ofloxacin in Tablet Dosage Forms**

*R Siva Kumar, P Kumar Nallasivan, S Saravanakumar, CS Kandasamy and R Venkatnarayanan*.....43

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**ABSTRACT**

Reverse Phase HPLC method for the determination of nitazoxanide and ofloxacin in bulk and tablet formulations. The determination was carried out by using Phenomenex C18 column with 0.24% sodium lauryl sulphate: acetonitrile: acetic acid (pH-4.0) (58:40:02) as the mobile phase. The flow rate was 1.5 ml/ min. and the eluent was monitored at 295 nm. The Retention time of nitazoxanide and ofloxacin were 2.2 and 5.4 respectively. Linearity for the nitazoxanide and ofloxacin were found in the range of 400-600 µg/ml and 160 - 240 µg/ml respectively. The method was reproducible, with good resolution between nitazoxanide and ofloxacin and can be use for routine analysis.

**KEY WORDS** RP-HPLC, Nitazoxanide and Ofloxacin

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- **Synthesis and Biological Screening of Some Novel Coumarin Derivatives**

*Gummudavelly Sandeep, Y Sri Ranganath, S Bhasker and N Rajkumar* .....46

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**ABSTRACT**

A new series of 7-methoxy-4-methyl-8-[5-(substituted aryl)isoxazol-3-yl]-2H-benzopyran-2-ones were synthesized by cyclization of chalcones, 8-(2-substituted prop-2-ene)-7-methoxy-4-methyl-2H-benzopyran-2-ones with hydroxylamine hydrochloride. The chalcones were synthesized starting from 7-hydroxy-4-methyl coumarin in 4 steps. The structures of the synthesized compounds have been established on the basis of physical and spectral data and are screened for anti microbial and anti inflammatory activities; some of them exhibited significant activity.

**KEY WORDS** Benzopyran, Coumarin, Antimicrobial and Anti inflammatory.

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- **Development and Validation of RP-HPLC for the Rabepazole sodium in Pharmaceutical formulation and Human Plasma**

*Prasanna Reddy Battu and MS Reddy* ..... 49

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**ABSTRACT**

A simple, selective, accurate high Performance Liquid Chromatographic (HPLC) method was developed and validated for the analysis of Rabepazole sodium. Chromatographic separation achieved isocratically on a C<sub>18</sub> column [Use Inertsil C<sub>18</sub>, 5 $\mu$ , 150 mm x 4.6 mm] utilizing a mobile phase of acetonitrile/phosphate buffer (70:30, v/v, pH 7.0) at a flow rate of 0.8 ml/min with UV detection at 228 nm. The retention time of Rabepazole sodium was 2.44 min. The method is accurate (99.15-101.85%), precise (intra-day variation 0.13-1.56% and inter-day variation 0.30-1.60%) and linear within range 0.1-30 $\mu$ g/ml (R<sup>2</sup>=0.999) concentration and was successfully used in monitoring left over drug. The detection limit of Rabepazole sodium at a signal-to-noise ratio of 3 was 1.80ng/ml in human plasma while quantification limit in human serum was 5.60 ng/ml. The proposed method is applicable to routine analysis of Rabepazole sodium in pharmaceutical formulations as well as in human plasma samples.

**KEY WORDS** Rabepazole sodium, RP-HPLC, Validation, Human blood samples, Pharmaceutical dosage forms.

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- **Development and Validation of Method for Simultaneous Estimation of Atorvastatin Calcium and Ramipril from Capsule Dosage Form by First Order Derivative Spectroscopy.**

*Thamake SL, Jadhav SD, Pishawikar SA*..... 52

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**ABSTRACT**

Atorvastatin Calcium and Ramipril are used in combination for treatment of hypertension. The present work deals with simple spectrophotometric method development for simultaneous estimation of Atorvastatin Calcium (ATR) and Ramipril (RAM) in two component capsule formulation. The method employed first order derivative spectroscopy<sup>1</sup>. For determination of sampling wavelength 10  $\mu$ g/ml of each of ATR and RAM were scanned in 200-350 nm range and sampling wavelengths were 294 nm for ATR were RAM showed zero crossing point and 229 nm for RAM were ATR showed zero crossing point in first order derivative spectroscopy. For this method linearity observed in 5-40  $\mu$ g/ml for ATR and 2-20  $\mu$ g/ml for RAM. The recovery studies confirmed accuracy of proposed method and low values of standard deviation confirmed precision of method. The method is validated as per ICH guidelines.

**KEY WORDS** Atorvastatin Calcium, Ramipril, Derivative spectroscopy

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- **The Estimation of Irinotecan HCl in Parenterals by RP-HPLC.**

*V Kiran Kumar, N Appala Raju, Namratha Rani, JVLN Seshagiri Rao and T Satyanarayana*..... 54

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## ABSTRACT

A simple, precise, rapid and accurate reverse phase HPLC method developed for the estimation of Irinotecan HCl in tablet dosage form. A X-Terra RP C18, 250x4.6 mm i.d, 5 µm partical size, with mobile phase consisting of Methanol and 0.01 M Ammonium Acetate containing 0.1% formic acid and methanol in the ratio of 50:50 v/v was used. The flow rate was 1 ml/min and the effluents were monitored at 250 nm. The retention time was 4.69 min. The detector response was linear in the concentration of 120-360 mcg/ml. The respective linear regression equation being  $Y=166582.24x+86439.5$ . The limit of detection and limit of quantification was 0.06 and 0.18 mcg/ml respectively. The percentage assay of Irinotecan HCl was 99.09 %. The method was validated by determining its accuracy, precision and system suitability. The results of the study showed that the proposed RP-HPLC method is simple, rapid, precise and accurate, which is useful for the routine determination of Irinotecan HCl in bulk drug and in its pharmaceutical dosage form.

**KEY WORDS** Irinotecan HCl, RP-HPLC, Estimation, and Tablets.

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- **Studies on Physico-chemical and Sensory Characteristics of Whey Based Watermelon Beverage**

*Naik YK, Khare A, Choudhary PL, Goel BK and Shrivastava A* ..... 57

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## ABSTRACT

Whey Based Watermelon Beverage (WBWB) prepared by bending watermelon juice (15%), sugar (7%) and different concentration of Betel leaves distillate (0, 1, 2, 3%) into chhanna whey (78-75 %). The prepared beverage has red colour, highly acceptable taste and overall acceptability. The overall acceptability of beverage improved with increase in betel leaves distillate up-to 2%. After in-bottle sterilization and cooling, the beverage was stored at refrigerated temperature. The storage study showed that there is an increasing trend in the TSS, acidity, and reducing sugar and a decreasing trend in the pH and ascorbic acid but total sugar has non significant effect during storage. The sensory quality of fresh beverage containing 2% betel leaves distillate on the preparation as well as 30 days of storage were found to be highly acceptable. Additions of 3% betel leaves distillate do not improve the mouth-feel but they extend the storage period of the product. This indicates that antimicrobial and anti-oxidant properties in essential oil of betel leaf increase the storage stability of the beverage.

**KEY WORDS** Whey, Whey beverage, Watermelon, Betel leaves distillate

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- **Simultaneous Spectrophotometric Estimation of Ofloxacin and Ornidazole in Tablet Dosage Form**

*Bhusari KP and Chaple DR* ..... 60

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## ABSTRACT

Two simple, sensitive, accurate and economical spectrophotometric methods were developed for the estimation of ofloxacin and ornidazole simultaneously in tablet dosage form. First method is based on the simultaneous equations and second method is based on Q-analysis (absorbance ratio method). Ofloxacin and ornidazole shows absorbance maxima at 294 nm and 317 nm in N/2 acetic acid, respectively. The linearity was obtained in the concentration range of 2-10 µg/ml for ofloxacin and 2-30 µg/ml for ornidazole. In the first method, the concentrations of the drugs were determined by using simultaneous equations; and in the second method, the concentrations of the drugs were determined by using ratio of absorbance at isoabsorptive point and at the  $\lambda_{max}$  of the one drug. The results of analysis have been validated statistically and by recovery studies.

**KEY WORDS** Ofloxacin, Ornidazole, Spectrophotometry, Validation.

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- **Simultaneous Spectrophotometric Estimation of Tamsulosin in Pharmaceutical Dosage Form**

*Nanda RK, Gaikwad J and Prakash A* ..... 63

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## ABSTRACT

Three simple, precise and economical UV methods have been developed for the estimation of Tamsulosin in pharmaceutical dosage form. Tamsulosin has the absorbance maxima at 281.0 nm (Method A), and in the first order derivative spectra, showed sharp peak at 234.5 nm (Method B). Method C applied was area under curve (AUC), in the wavelength range of 286.0-276.0 nm. Linearity for detector response was observed in the concentration range of 5-25 µg/ml for all three methods. The proposed methods were successfully applied for the simultaneous determination of Tamsulosin in commercial pharmaceutical preparation. The results of the capsule analysis were validated statistically and by recovery studies. It was found to be satisfactory.

**KEY WORDS** Tamsulosin; Absorbance maxima; Derivative spectroscopy; Area under curve.

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- **A Selective High Performance Liquid Chromatographic Method for Estimation of Catechin in Ayurvedic Taila Preparations.**  
*Nidhi Dubey, Nitin Dubey, Rajendra Mehta and Ajay Saluja* ..... 66

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**ABSTRACT**

A simple, sensitive, rapid and selective high-performance liquid chromatographic (HPLC) method has been developed and validated for the analysis of catechin in marketed Ayurvedic *Taila* (oil) formulations containing *Acacia catechu*. Chromatography of methanolic: 0.1% formic acid (7:3, v/v) extracts of these formulations was performed on C<sub>18</sub> (5 µm x 25cm x 4.6mm i.d) column using isocratic mobile phase consisting of methanol: acetonitrile: water (40:15:45, v/v/v) containing 1.0% acetic acid at a flow rate of 0.5ml/min and SPD-10 A<sub>VP</sub> photodiode array (PDA) UV-Visible detector. The analytical marker, catechin, was quantified at 279 nm. The retention time of catechin was about 3.27 min. The linear regression analysis data for the calibration plot showed a good linear relationship with correlation coefficient of 0.9988 in the concentration range of 15 to 90 µg/ml for catechin with respect to peak area. The limit of detection and limit of quantitation values were found to be 0.5µg/ml and 1.7µg/ml respectively. Repeatability of the method was found to be 0.62 RSD. Recovery values from 99.73 to 100.22 % indicate excellent accuracy of the method. The developed HPLC method is accurate, precise, and cost-effective, and it can be successfully applied for the determination of catechin in marketed ayurvedic oil formulations containing *Acacia catechu*.

**KEY WORDS** *Acacia catechu*; HPLC; oil; quantitation

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- **RP-HPLC Method for Simultaneous Estimation of Paracetamol and Ibuprofen in Tablets**  
*Prasanna Reddy Battu and MS Reddy* ..... 70

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**ABSTRACT**

A simple, selective, accurate high Performance Liquid Chromatographic (HPLC) method was developed and validated for the analysis of Paracetamol and Ibuprofen. Chromatographic separation achieved isocratically on a C<sub>18</sub> column [Use Inertsil C<sub>18</sub>, 5µ , 150 mm x 4.6 mm] utilizing a mobile phase of acetonitrile/phosphate buffer (60:40, v/v, pH 7.0) at a flow rate of 0.8 ml/min with UV detection at 260nm. Aceclofenac was used as an internal standard. The retention time of ibuprofen, paracetamol and aceclofenac was 2.48, 4.45 and 6.34 min respectively. The developed method was validated in terms of accuracy, precision, linearity, limit of detection, limit of quantitation. This study aimed at developing and validating an HPLC method, being simple, accurate and selective, and the proposed method can be used for the estimation of these drugs in combined dosage forms

**KEY WORDS** Paracetamol, Ibuprofen, RP-HPLC, Validation

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- **Spectrophotometric Method for Estimation of Ticlopidine HCl in Bulk and Dosage Form**  
*RB Kakde, AG Barsagade, NK Chaudhary and DL Kale* ..... 73

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**ABSTRACT**

A simple, precise and accurate spectrophotometric method has been developed for the determination of ticlopidine HCl in bulk and pharmaceutical dosage form. Standard stock solution was prepared in methanol and further dilutions were carried out with distilled water. The  $\lambda_{\text{max}}$  of ticlopidine HCl was found to be 213.60. The A (1%, 1cm) value of ticlopidine HCl was found to be  $405.204 \pm 2.243$ . Calibration graph was linear over the range of 1-50 $\mu\text{g/ml}$ . The correlation coefficient (r) was found to be 0.999. The limit of detection (LOD) and limit of quantitation (LOQ) was found to be 0.6344  $\mu\text{g/ml}$  and 1.9224  $\mu\text{g/ml}$  respectively for ticlopidine HCl. The result of estimation in marketed tablet formulation was found to be  $100.72 \pm 0.84 \%$ . The proposed method was applied successfully for the determination of ticlopidine HCl in tablets with average recovery of  $99.93 \pm 0.27 \%$ . The method was then validated statistically as per ICH guidelines, which yielded good results concerning range, linearity, precision, accuracy, specificity, robustness and ruggedness.

**KEY WORDS** Ticlopidine HCl, Spectrophotometry

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- **Phyto-Physico chemical evaluation, Anti-Inflammatory and Anti microbial activities of Aerial parts of *Gmelina asiatica***  
*Merlin NJ Parthasarathy V, Manavalan R, Devi P and Meera R* ..... 76

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**ABSTRACT**

The present study was carried out to investigate the anti inflammatory, anti bacterial and anti fungal activity of petroleum ether, chloroform, ethyl acetate and ethanolic extract obtained from *Gmelina asiatica*. All the extracts were prepared from aerial parts of *Gmelina asiatica* by hot percolation method in soxhlet apparatus. All extracts of *Gmelina asiatica* were tested for antibacterial efficacy against *Bacillus subtilis*, *Staphylococcus aureus*, *Micrococcus luteus*, *Escherichia coli*, *Salmonella typhi* and *pseudomonas aeruginosa* and antifungal efficacy against *Candida albicans* and *Aspergillus niger*. The Antibacterial and Anti fungal effect produced by petroleum ether, chloroform, ethyl acetate and ethanol extract were comparable to that of Amikacin and Griseofulvin. The Chloroform extract was found to be more effective and showed Anti bacterial and antifungal activity against the entire organism tested. All the extracts at dose concentration (500 mg/kg) were screened for antimicrobial activity. The ethanolic extract of *Gmelina asiatica* at (250 and 500 mg/kg) concentrations exhibited anti inflammatory activity in carrageenan induced rat paw oedema, histamine induced odema, dextran induced odema and cotton pellet induced granuloma method, and the results are compared to that of standard drug Indomethacin. The results were found to be significant ( $P < 0.001$ ) when compared to control.

**KEY WORDS** *Gmelina asiatica*, anti-inflammatory activity, indomethacin, antimicrobial activity, amikacin, anti fungal activity, griseofulvin

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- **Antidiabetic potential of aqueous and alcoholic leaf extracts of *Pithecellobium dulce***  
*M Sugumaran, T Vetrichelvan and S Darlin Quine* ..... 83

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**ABSTRACT**

Ethanolic and aqueous leaf extract of *Pithecellobium dulce* was studied for its antidiabetic activity using streptozotocin-induced diabetic model in rats. The aqueous extract showed significant activity ( $P < 0.01$ ) than the alcoholic extract at the tested dose level which was comparable to glibenclamide, a standard antidiabetic drug. HPTLC fingerprinting profile of the aqueous extract was also developed which would serve as reference standard for quality control of this extract.

**KEY WORDS** Alloxan, Anti-diabetic, Leaf extracts, *Pithecellobium dulce*

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- **Simultaneous Spectrophotometric Estimation of Ezetimibe and Atorvastatin in Pharmaceutical Dosage Form**  
*Godse VP, Deodhar MN, Bhosale AV, Sonawane RA, Sakpal PS, Borkar DD and Bafana YS* ..... 86

**ABSTRACT**

Two simple, sensitive accurate, precise, rapid and economical methods were developed for the estimation of Ezetimibe and Atorvastatin in two components solid dosage form. First method is based on simultaneous equations and second method is based on absorbance ratio method. Ezetimibe has absorbance maxima at 232.5 nm and Atorvastatin has Absorbance maxima at 246.5 nm in methanol. The linearity was obtained in the concentration range 5-30 mcg/ml for both Ezetimibe and Atorvastatin. In the first method the concentration of the drugs were determined by using simultaneous equations and in second method, concentration of the drugs were determined by using ratio of absorbance at iso-absorptive point and at  $\lambda_{max}$  of one of the drug. The results of analysis have been validated statistically and by recovery studies.

**KEY WORDS** Ezetimibe, Atorvastatin, Simultaneous Equations, Absorbance Ratio, Iso-absorptive Point.

- **The Estimation of Paclitaxel in Parenterals by RP-HPLC.**  
*V Kiran Kumar, N Appala Raju, Namratha Rani, JVLN Seshagiri Rao and T Satyanarayana* .....90

**ABSTRACT**

A simple, precise, rapid and accurate reverse phase HPLC method developed for the estimation of Paclitaxel in Parenterals dosage form. A Unison US C18, 250x4.6 mm i.d, 5  $\mu$ m partical size, with mobile phase consisting of Methanol and 0.02 M potassium dihydrogen phosphate in water (pH 2.5 adjusted with o-phosphoric acid) in the ratio of 80:20 v/v was used. The flow rate was 1 ml/min and the effluents were monitored at 225 nm. The retention time was 4.978 min. The detector response was linear in the concentration of 15-180 mcg/ml. The respective linear regression equation being  $Y = 46411.83x + 29.2578$ . The limit of detection and limit of quantification was 0.03 and 0.09 mcg/ml respectively. The percentage assay of Paclitaxel was 99.09 %. The method was validated by determining its accuracy, precision and system suitability. The results of the study showed that the proposed RP-HPLC method is simple, rapid, precise and accurate, which is useful for the routine determination of Paclitaxel in bulk drug and in its pharmaceutical dosage form.

**KEY WORDS** Paclitaxel, RP-HPLC, Estimation, and Parenteral

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