

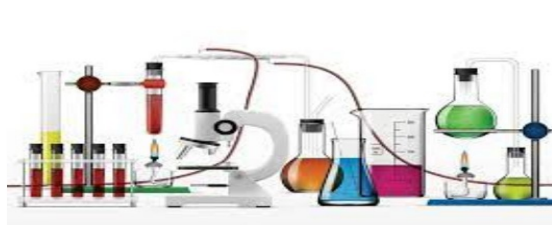
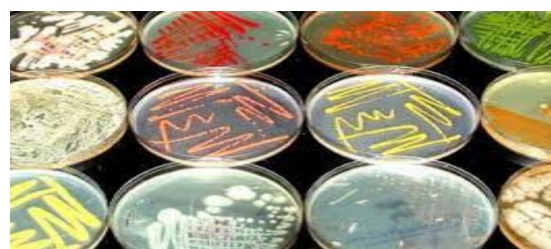
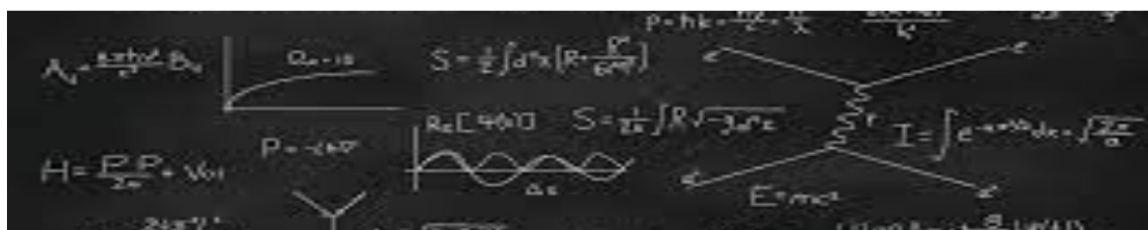


**Bharati Vidyapeeth's
Dr. Patangrao Kadam Mahavidyalaya, Sangli**

Accredited with 'B++' grade by NAAC, Bengaluru (CGPA-2.96)

DST-FIST Funded College (Level 0)

Affiliated to Shivaji University, Kolhapur



Souvenir

Third National Conference on
Recent Trends in Pure and Applied Sciences
(RTPAS-2021)

Saturday, 13th March 2021

Organized by

INTERNAL QUALITY ASSURANCE CELL



**Bharati Vidyapeeth's
Dr. Patangrao Kadam Mahavidyalaya, Sangli**

Accredited with 'B++' grade by NAAC, Bengaluru (CGPA-2.96)
DST-FIST Funded College (Level 0)
Affiliated to Shivaji University, Kolhapur

**Third National Conference on
Recent Trends in Pure and Applied Sciences
(RTPAS-2021)**

Saturday, 13th March 2021

**Organized by
INTERNAL QUALITY ASSURANCE CELL**



Souvenir



Bharati Vidyapeeth's
Dr. Patangrao Kadam Mahavidyalaya, Sangli

Accredited with 'B++' grade by NAAC, Bengaluru (CGPA-2.96)

DST-FIST Funded College (Level 0)

Affiliated to Shivaji University, Kolhapur

Third National Conference on
Recent Trends in Pure and Applied Sciences

(RTPAS-2021)

Saturday, 13th March 2021

Organised by
INTERNAL QUALITY ASSURANCE CELL

Souvenir

Editorial Board

Chairman

Prin. Dr. D. G. Kanase

Editors

Dr. A. R. Supale

Dr. Mrs. P. M. Patil

Technical Team

Mr. Nalesh G. Bahiram

Mr. Mangesh P. Gavit

PATRON

Hon. Dr. Vishwajeet Kadam M.L.A.
Minister of State, Co-operation, Agriculture,
Social Justice, Food, Civil Supplies and
Consumer Protection, Minorities Development,
Marathi Bhasha.
Secretary, Bharati Vidyapeeth, Pune

Hon. Dr. Shivajirao Kadam
Chancellor,
Bharati Vidyapeeth, Pune

ADVISORY COMMITTEE

Prof. M. M. Salunkhe-Vice-Chancellor, BVDU, Pune
Prof. D. T. Shirke- Vice Chancellor, Shivaji University, Kolhapur
Prof. P. S. Patil- Pro Vice Chancellor, Shivaji University, Kolhapur
Prof. S. F. Patil- Former Vice- Chancellor, North Maharashtra University, Jalgaon
Prin. Dr. H. M. Kadam-Regional Director, Bharati Vidyapeeth, Pune
Prof. R. K. Kamat-Dean, Faculty of Science Shivaji University, Kolhapur
Prof. A. S. Aswar- Department of Chemistry, SGBAU, Amaravati
Prof. P. K. Khanna- Scientist DIAT, Pune
Prof. G. S. Gokavi-Head, Department of Chemistry, Shivaji University, Kolhapur
Dr. B. B. Kale- Scientist, C-MET Pune
Dr. V.D. Jadhav- Head, Department of Botany, Shivaji University, Kolhapur
Dr. V. S. Manne-Head, Department of Zoology, Shivaji University, Kolhapur
Dr. Thiyagesan Dharmaraj- Scientist –D, Ministry of Earth Science (MOES), Govt. of India, New Delhi
Dr. K.Y. Rajapure- Head, Department of Physics, Shivaji University, Kolhapur
Prof. K. D. Sonawane- Head, Department of Microbiology, Shivaji University, Kolhapur
Dr. Mrs. H. V. Kulkarni- Head, Department of Statistics, Shivaji University, Kolhapur
Dr. Bhalchandra Kakade- Associate Professor, SRM Research Institute, Chennai
Prof. Dr. Ramesh L. Gardas- Department of Chemistry, Indian Institute of Technology Madras

Local Organizing Committee

Organizing Chairman: Prin. Dr. D. G. Kanase
Convener: Dr. Mrs. P. M. Patil
Coordinator: Dr. A. R. Supale
Secretary: Dr. V. B. Awale
Treasurer: Mr. C. A. Shete

Members: Mr. T. R. Sawant, Mr. P. N. Gaikwad, Ms. B. K. Bhavikatti

About Bharati Vidyapeeth:

During the last 50 years, Bharati Vidyapeeth has made astonishing strides in the field of education, particularly, higher and professional education. Today Bharati Vidyapeeth conducts more than 180 educational units of various kinds' right from pre-primary schools to postgraduate institutions and a fully-fledged professional university (BVDU). Among these are colleges of Medicine, Dentistry, Ayurved, Homeopathy, Nursing, Pharmacy, Law, Biotechnology, Engineering, Management, Hotel Management & Catering Technology, Environment Science, Agriculture, Physical education and more. With a view to promote research activities and to create a research culture on its campuses, Bharati Vidyapeeth has established five specialized research institutes in the areas of Health-Related Sciences, Biotechnology, Information Technology, Applied Chemistry and Social Sciences. Today, Bharati Vidyapeeth has its major campuses in New Delhi, Navi Mumbai, Pune, Solapur, Kolhapur, Sangli, Karad, Satara, and Panchgani and at quite a few other places.

About the College:

The College was established on 16th September 1985, as Arts, Science and Commerce College, Sangli, and it was renamed as Dr. Patangrao Kadam Mahavidyalaya, Sangli on 8th January 1999. The college boasts of a spacious, beautiful. The college is trying to bridge disparity between the rural and urban culture. Recently, UGC, New Delhi grant two Diploma courses under Community College Scheme. College also selected by DST, India to develop Instrumentation facilities under FIST scheme. In 2016-17, our college has been selected as a "Lead College" by Shivaji University, Kolhapur, for two academic years, for the second time, taking into account our academic, social and sports achievements. NAAC committee Re-accredited it with 'B⁺⁺' grade, in August 2018. We are the proud recipients of the Maharashtra State Award for our substantial work through N.S.S.

Theme of Conference:

This conference will provide an excellent forum for sharing knowledge and results in theory, methodology and applications of pure and applied sciences. The conference looks for significant contributions to the applied science in theoretical and practical aspects. The theme of conference is related to Chemistry, Statistics, Physics, Botany, Zoology, Microbiology, Engineering, Mathematics, Computer and Information Sciences, Environmental Sciences, Biomedical Engineering, Nanotechnology, and many other topics in related areas. Conference is expected to provide an opportunity for an interchange of ideas among researchers and practitioners in different fields of Sciences.

Day Programme Schedule

INAUGURAL FUNCTION			
11:00-11.05 am	Welcome and Foreword	:	Dr. Mrs. P. M. Patil Head, Department of Zoology
11:05-11.15 am	Introduction	:	Hon. Prin. Dr. D. G. Kanase Member, Management Council Shivaji University, Kolhapur
11.15 am onwards	Inaugural Address	:	Hon. Dr. Nitin R. Karmalkar Vice Chancellor Savitribai Phule Pune University, Pune
	Vote of Thanks	:	Dr. A. R. Supale Co-ordinator , IQAC
Session : I			
12:00 – 01:00pm	Resource Person	:	Dr. V. S. Manne Professor and Head, Department of Zoology. Shivaji University, Kolhapur. Topic: "Development of Integrated Pest Management Model for Whitefly".
	Chairperson	:	Dr. V. I. Kalamade Head, Department of Zoology Yashwantrao Chavan College of Science Karad.
Session : II			
01:00-02:00 pm	Resource Person	:	Dr. B. A. Kakade Associate Professor, SRM Research Institute, Chennai. Topic: “Sustainable Materials Design for Hydrogen Economy”
	Chairperson	:	Dr. S. S. Latthe Assistant Professor, Department of Physics, Raje Ramrao College, Jath.
02:00-3:00 pm	Paper Presentation		
Valedictory Function			
03:00 – 03:15 pm	Review	:	Dr. Mrs. P. M. Patil Head, Department of Zoology
	Vote of Thanks	:	Dr. V. B. Awale Head, Department of Botany.

Index of Abstracts

P Number	Title of Paper	Authors
PP-1	STUDY OF PISCINE DIVERSITY OF KRISHNA RIVER DISTRICT SHAMLI, UTTAR PRADESH (INDIA)	Neeraj Malik, Praveen Kumar Singh
PP-2	ENHANCING BIOLOGICAL ACTIVITY OF SCHIFF'S BASE BY COMPLEXING IT WITH TRANSITION METALS	Shri. Amol Laxman More, Dr. Sanjay Vishnu Pore
PP-3	QUANTITATIVE ANALYSIS OF CURCUMIN OF TURMERIC SAMPLES FROM SANGLI DISTRICT OF MAHARASHTRA.INDIA	Nasir Shaikh ,Dr.Sunil Kamble ,Dr.Dilip Bharamal
PP-4	SYNTHESIS OF COUMARINE DERIVATIVES CATALYZED BY Ni-SUBSTITUTED HPA	Amit R. Supale and Sandip R. Sabale
PP-5	GLOBAL WARMING: ACCUMULATION OF GREENHOUSE GASES	Dr Sujata Kawade
PP-6	BIOMASS FUEL SMOKE AND COPD IN RURAL AREA OF SANGLI DISTRICT.	Mrs. P.M. Patil
PP-7	ETHNOBOTANICAL ASPECTS OF KOKANA TRIBE IN KALWAN TEHSIL NASHIK DISTRICT, MAHARASHTRA	Gavit, M.P., Dr. Awale V. B., Wangikar H. V.
PP-8	DEVELOPMENT AND VALIDATION OF A HPLC-UV METHOD FOR DETERMINATION OF FORMALDEHYDE IN LEVOFLOXACIN HEMIHYDRATE DRUG SUBSTANCE	Santosh Patil, Poonam Koppula and K. S. Kumar
PP-9	COMPARATIVE STUDY OF LIFE CYCLE AND COCOON CHARACTERS OF SILKWORM <i>BOMBYX MORI</i> BIVOLTINE RACES	N. T. Pawar and A. U. Sutar
PP-10	MECHANISTIC INVESTIGATION BY KINETIC STUDY OF P-METHOXY BENZOIC ACID HYDRAZIDE BY VANADIUM (V)	Dr. Sanjay Vishnu Pore
PP-11	SOLVATOCHROMIC FLUORESCENCE BEHAVIOR OF 2-AMINO-3-CYANO-5-BROMOSPIRO (5H-INDENO [1,2-B] PYRAN-4,3'-INDOLINE)-2'5,-DIONE IN VARIOUS SOLVENTS AND IT'S INTERACTION WITH BOVINE SERUM ALBUMIN	Shilpa Y. Salunkhe, Dhanaji G. Kanase, Govind B. Kolekar
PP-12	STUDY OF HEMOGLOBIN IN WOMEN'S BLOOD USING STATISTICAL TOOLS	Dr. Prakash R. Chavan

PP-13	ENUMERATION OF MEDICINAL PLANTS OF SANGLI DISTRICT. MAHARASHTRA	Vikas Awale, Harshal Wangikar, Mangesh Gavit
PP-14	EFFECT OF PLANT EXTRACTS (<i>MURRAYA KOENIGII</i> , <i>EUCALYPTUS</i> , AND <i>RICINUS COMMUNIS</i>) AGAINST THE RED FLOUR BEETLE (<i>TRIBOLIUM CASTANEUM HERBST</i>)	Nalesh Bahiram, Shantaram Bhoje, Ashutos Nirbhavane
PP-15	THERMAL, ANTIFUNGAL AND ANTICANCER INVESTIGATION OF TB (III) JUGLONATES	Vishwambhar Shinde, Abhaysinh Kadam, Mrudula Wadekar
PP-16	THE LATITUDINAL TREND VARIATION IN TCO OVER INDIA	R. P. Pawar, O. M. Patil, S. T. Mane, S. B. Wategaonkar, D. P. Nade, D. G. Kanase
PP-17	ASSESSMENT OF PHYSICO-CHEMICAL PROPERTIES OF SOIL FROM REGION OF CHANDANAPURI, SANGAMNER TEHSIL, (M.S.) INDIA.	Shantaram Bhoje, Pankaj Bhoje, Nalesh Bahiram, Pradnya Bhalerao
PP-18	ALBINO MICE GENOTOXICITY OF ENDOSULFAN IN FEMALE SWISS ALBINOMICE	Sharma A, John. P.J, and Bhatnagar P.
PP-19	CHARACTERIZATION OF EXOCHELIN AN EXTRACELLULAR IRON CHELATOR SIDEROPHORE OF <i>PSEUDOMONAS STUTZERI</i> OF SGM 1 STRAIN	S. D. Adole, S.M. Chavhan
PP-20	TOTAL HAEMOCYTE COUNT CHANGES DURING THE DEVELOPING STAGES OF <i>ANTHERAEAPROYLEI</i> J.	V. S. Kumbhar

STUDY OF PISCINE DIVERSITY OF KRISHNA RIVER DISTRICT SHAMLI, UTTAR PRADESH (INDIA)

NeerajMalik¹, Praveen Kumar Singh²

¹*Assistant Professor Department of zoology S.M. college, Chandausi, Dist-Sambhal [U.P] PIN CODE 244412*

²*Assistant Professor 2 Department of zoology D.N. College Meerut
E-mail-neeraj.malik1979@gmail.com*

Abstract

The studies of fish fauna of different water bodies were made by different worker however the study of ichthyofauna of the Krishna river District Shamli, Uttar Pradesh is scanty. The study area (Stretch) is 35km in District Shamli in three different site of river Krishna.

The study revealed the presence of 12 species of fish belong 5 order in (Cypriniformes, Perciformes, Siluriformes, Synbranchiformes and Osteoglossiformes) These fish belong into 6 families which are Cyprinidae, Channidae, Siluridae, Bagridae, Mastacembelidae, Notopteridae. Cyprinidae family is dominant over other families. The paper describes the detailed species composition their relative contribution and also some important point that may help to better understand the current scenario of piscine diversity in Krishna river District Shamli, Uttar Pradesh (India)

Keyword- (Krishna river, Diversity, Cyprinidae)

ENHANCING BIOLOGICAL ACTIVITY OF SCHIFF'S BASE BY COMPLEXING IT WITH TRANSITION METALS

Shri. Amol Laxman More, Dr. Sanjay Vishnu Pore*

Department of Chemistry

*Bharati Vidyapeeth's Matoshri Bayabai Shripatrao Kadam Kanya Mahavidyalaya Kadegaon
Dist. Sangli.(M.S) India.*

Email id – poresanjay67@gmail.com,9881442429

Abstract:

In medicinal chemistry, biological activity is an important aspect in the study of various organic compounds. Dehydroacetic acid is very important fungicide and bactericide, similarly benzothiazoles and their derivatives are also used in the synthesis of biologically active compounds. In this research work, the study of biological activity of transition metal complex with Schiff bases synthesized from dehydroacetic acid and benzothiazoles and its various derivatives is done. It is observed that, biological activity of transition metal complex with Schiff base is enhanced than their parent organic compounds dehydroacetic acid and various derivatives of benzothiazoles and subsequent Schiff base formed from the subsequent reactions. Hence it is concluded that, transition metal complex with Schiff base are highly important biologically active compounds.

Key words: Dehydroacetic acid, Benzothiazoles, Schiff base, Transition metal complex.

QUANTITATIVE ANALYSIS OF CURCUMIN OF TURMERIC SAMPLES FROM SANGLI DISTRICT OF MAHARASHTRA.INDIA

¹Nasir Shaikh ²Dr.Sunil Kamble ³Dr.Dilip Bharamal

Name of Institute (Department of Zoology,Shikshanmaharshi Dr Bapuji Salunkhe College, Miraj, M.S., India, 416101.

Email: nasirshaikh1288@gmail.com

Abstract

Curcumin, derived from the rhizome of *curcuma longa*, the principle content of turmeric is used as spices on the Indian sub continent. Laboratory studies reveals many biochemical activities such as anti-oxidant and anti-inflammatory in animal so it has many clinical applications. The information on bioavailability of curcumin from different species of *Curcuma longa* is of important aspect of present study. The rhizome samples of turmeric were collected from different part of sangli district and curcumin was analysed on spectrophotometer at 425nm.

Keywords: Turmeric; Curcumin; Anti-oxidant; Spectrophotometer.

SYNTHESIS OF COUMARINE DERIVATIVES CATALYZED BY NI-SUBSTITUTED HPA

Amit R. Supale¹ and Sandip R. Sabale²

1 Department of Chemistry, Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya, Sangli, M.S., India, 416416

2 Department of Chemistry, Jaysingpur College, Jaysingpur 416101

Email: amitsupale@gmail.com

Abstract

A methodology for synthesis of coumarin derivatives by using Ni-MPA catalyst is reported. The reaction was carried out in ethanol under reflux condition. The method gave good yields of products in short reaction time compared with previous methods. This methodology offers significant improvements for the synthesis of coumarin derivatives.

Keywords: Heteropoly acid, Pechmann condensation, Coumarin derivatives, One pot reaction.

GLOBAL WARMING: ACCUMULATION OF GREENHOUSE GASES

Dr Sujata Kawade,
Assistant Professor ,

*Department of Zoology,
Shri Shivaji Science College, Amravati, Maharashtra.
Email: sujata_4980@rediffmail.com*

Abstract:

Global warming is an increase in the average temperature of earth's atmosphere. It is caused due to the greenhouse effect. This effect emerges due to high concentration of greenhouse gases (Carbon dioxide, methane and nitrous oxide) in the earth's atmosphere. These gases result to a large extent from human activities like Vehicular and industrial emissions, deforestation, etc. This affects the climate and the life on earth. Therefore, a joint effort is required to significantly decrease greenhouse gas emission so that their levels in the atmosphere are stabilized thus saving our planet.

Keywords: Global Warming, Green house gases, Climate change, Human activities.

BIOMASS FUEL SMOKE AND COPD IN RURAL AREA OF SANGLI DISTRICT.

Mrs. P.M. Patil

*Head, Department of Zoology
Dr. Patangrao Kadam Mahavidyalaya, Sangli
Email – patilpm16@gmail.com*

Abstract

On a global scale the household use of solid fuels is the most important source of indoor pollution and the exposure to the byproducts of combustion of biomass fuel particularly wood smoke has been related to chronic obstructive pulmonary diseases.

In India 95% households use wood as the primary cooking fuel. The smoke released due to incomplete combustion of unprocessed solid biomass fuel contains high volume and number of health damaging air borne pollutants such as PM, CO, NO₂, SO₂ formaldehyde and other organic compound. Prolong exposure to such air borne pollutants have adverse effect on lung function which causes COPD in which lung functions is reduced.

In this study 50 women exposed to biomass fuel were selected from village Malwadi. Information regarding age, height, weight, type of fuel, number of hrs exposed to smoke, no. of yrs., types of kitchen were collected. Spirometry was performed in these women. Spirometric parameter forced expiratory volume per second and forced vital capacity were recorded.

In this study we found out of 50 women 18 (36%) were suffered from COPD.

Keyword – COPD, Biomass Fuel, FEV₁ (Forced Expiratory Volume per one second), FVC (Forced Vital Capacity)

ETHNOBOTANICAL ASPECTS OF KOKANA TRIBE IN KALWAN TEHSIL NASHIK DISTRICT, MAHARASHTRA

Mr. M.P. Gavit, Dr. V. B. Awale, Mr. H. V. Wangikar

Department of Botany

Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya Sangli, 416 416

.Email: mangeshgavit439@gmail.com

Abstract

The present investigation is an attempt to document ethnobotanical uses of plants by Kokana Tribe in Kalwan tehsil Nashik district, Maharashtra. Kokana tribe is one of the primitive tribe is accustomed with medicinal, edible and other economic uses of the plants. They were used many herbal remedies to cure many diseases. In the present study, documentation of traditional knowledge associated with 25 plant species were documented during survey. The information is based on correct botanical identification with local name, family, part used, disease treated and administration of 25 plant species.

Keywords: (Ethnobotany, Kokana, Bhagat, Kalwan)

**DEVELOPMENT AND VALIDATION OF A HPLC-UV METHOD
FOR DETERMINATION OF FORMALDEHYDE IN LEVOFLOXACIN
HEMIHYDRATE DRUG SUBSTANCE**

Santosh Patil¹, Poonam Koppula¹ and K. S. Kumar^{2*}

¹*Ipca Laboratories Ltd., Vadodara - 391445*

²*School of Sciences, GSFC University, Vadodara, Gujarat, 391750*

**Corresponding author: School of Sciences, GSFC University, Vadodara, Gujarat,
391750*

E - mail address: ksk.india@gmail.com, ORCID: 0000-0002-8334-2350

Abstract

Trace level determination and quantification of potentially genotoxic impurities (PGIs) in drug substances is a challenging task. Formaldehyde is a known PGI and analysis of it is very taxing due to its volatility, low molecular weight, high polarity and absence of any chromophore. The present study demonstrates development and validation of an HPLC-UV method for quantification of formaldehyde in Levofloxacin hemihydrate. The LOD and LOQ achieved are 0.01 and 0.03 % w/w respectively. The calibration curve was found to be linear over a range of 0.03% to 0.15%. The validated method is precise, sensitive, accurate and has been successfully utilized to ascertain formaldehyde content in scale up batches of bulk drug.

Key words: Genotoxic impurity, HPLC-UV, derivatization, active pharmaceutical ingredient

COMPARATIVE STUDY OF LIFE CYCLE AND COCOON CHARACTERS OF SILKWORM *BOMBYX MORI* BIVOLTINE RACES

N. T. Pawar and A. U. Sutar¹

P.G. Department of Zoology, Sadguru Gadage Maharaj College, Karad M.S.India.

Email: nirmalapawar1507@gmail.com

Abstract:

Commercial bivoltine races viz; CSR2, CSR2x4 and CSR4 were reared as per the standard method of rearing and used for present study. All mentioned races eggs were ovoid, ellipsoid or spherical and diapaused. The fecundity rate was maximum in CSR2. Incubation period was 10-12 days in all races. The maximum weight of larva showed in CSR2X4 on one day before spinning. The shortest larval span showed in CSR4. The largest pupal period recorded 11-13 days in CSR2. The moth life span was 4-5 days in all races. Cocoon colour is white in all mentioned races. The shape of cocoon was oval in CSR2, oval and domble in CSR2X4 and domble in CSR4. The maximum cocoon weight showed in CSR4 while shell weight and shell ratio in CSR2. The maximum filament length, filament weight and denier recorded in CSR2X4.

Keywords: Bivoltine races, life cycle, cocoon characters.

MECHANISTIC INVESTIGATION BY KINETIC STUDY OF P-METHOXY BENZOIC ACID HYDRAZIDE BY VANADIUM (V)

Dr. Sanjay Vishnu Pore
Associate Professor & Head

Department of Chemistry
Bharati Vidyapeeth's Matoshri Bayabai Shripatrao Kadam
Kanya Mahavidyalaya Kadegaon, Dist. Sangli.(M.S) India.
Poresanjay67@gmail.com, 9881442429

Abstract:

Hydrazides are Pharmaceutically important compounds used as an antitubercular and antibacterial agents. Some of them have reported to possess anti-inflammatory and diuretic activities. Recently interest in the use of Vanadium in the oxidation of organic compounds has increased and research in this regard has not been done extensively. The kinetics of oxidation of p-hydroxy benzoic acid hydrazide by Vanadium (V) in an acidic medium has been planned to study spectrophotometrically at 415 nm by recording optical density. The reaction was studied under pseudo-first order condition in which concentration of p-hydroxy benzoic acid hydrazide was in excess as compared to that of Vanadium(V). In order to determine the effect of concentration of p-hydroxy benzoic acid hydrazide, Vanadium, medium of the reaction, ionic strength, specific ions, temperature, dielectric constant, Various solvent, the reaction was carried out. The detection of reactive intermediate, intervention of free radical, determination of stoichiometry of the reaction, identification of end product analysis was done by maintaining standard parameters of the reaction. The order of oxidation reaction with respect to Vanadium(V) is one. The decrease in rate constant as the concentration of p-hydroxy benzoic acid hydrazide increases can be attributed to greater stability of the complex due to solvation. The specific reaction rate increases as the concentration of acid increases. The oxidation rate is not influenced by increase in ionic strength as well as changing the various salts. The specific rate of the oxidation of p-hydroxy benzoic acid hydrazide is directly proportional to dielectric constant of the medium of the reaction. The thermodynamic parameters were obtained by carrying out the reaction at seven different temperatures and the parameters like temperature coefficient (1.79), Energy of activation ($E_a=48.35 \text{ KJmol}^{-1}$), Enthalpy of activation ($\Delta H^\ddagger=46.60 \text{ KJmol}^{-1}$), Entropy of activation ($\Delta S^\ddagger=-171.79 \text{ J K}^{-1}\text{mol}^{-1}$), & Free energy of activation ($\Delta G^\ddagger = 100.80 \text{ KJmol}^{-1}$)

¹).The mol ration of reaction p-hydroxy benzoic acid hydrazide:Vanadium(V) is found to be 1:4 and it is independent of concentration of acidic medium of the reaction.The mechanism in terms of the active species of the Vanadium(V) and p-hydroxy benzoic acid hydrazide is proposed.

Keywords: Mechanistic, Investigation,. p-hydroxy benzoic acid hydrazide, Vanadium(V)

RTPAS-2021

SOLVATOCHROMIC FLUORESCENCE BEHAVIOR OF 2-AMINO-3-CYANO-5-BROMOSPIRO (5H-INDENO [1,2-b] PYRAN-4,3'-INDOLINE)-2'5,-DIONE IN VARIOUS SOLVENTS AND IT'S INTERACTION WITH BOVINE SERUM ALBUMIN

Shilpa Y. Salunkhe^{1,2}, Dhanaji G. Kanase², Govind B. Kolekar^{1*}.

1 Name of Institute (Department of Chemistry, Shivaji University, Kolhapur, M. S., India, 416008.)

2 Name of Institute (Department of Chemistry, Dr. P. K. Mahavidyalaya, Sangli, M. S., India, 416101.)

Email: gbkolekar@yahoo.co.in

Abstract:

A 2-Amino-3-cyano-5-bromospiro (5H-indeno [1, 2-b] pyran-4, 3'-indoline)-2'5,-dione (ACBSIPID) was synthesized by Knoevengel reaction. The solvatochromic fluorescence behavior of ACBSIPID has been investigated in various polar and non-polar solvents which featuring electron withdrawing –CN, -C=O groups, electron donating –NH₂, -NH, -Br groups and conjugated pi electron system. The fluorescence of the compound exhibits bathochromic shift and correlated with the solvent polarity. The interaction of bovine serum albumin (BSA) with ACBSIPID was also investigated. The fluorescence intensity of BSA quenches with increasing concentration of ACBSIPID and quenching is in accordance with Stern-Volmer equation.

Keywords: Knoevengelreaction, Fluorescence quenching, Solvatochromic effect.

STUDY OF HEMOGLOBIN IN WOMEN'S BLOOD USING STATISTICAL TOOLS

Dr. Prakash R. Chavan

*Head & Assistant Professor, Department of Statistics,
Smt. Kasturbai Walchand .College, Sangli -416 416,
Affiliated to Shivaji University, Kolhapur, INDIA.
E-mail: prchavan83@gmail.com*

Abstract:

Good victuals habits always give us healthy welfare. But in this Scurried world people ignore their health. Due to change in lifestyle and Food style we give invitation to many diseases. Iron is essential during times of rapid growth and development, pregnant women and young children may need even more iron-rich Foods in their diet. Body needs iron to make a protein called as “Hemoglobin” which is responsible for carrying oxygen to our body Tissues and it helps to our tissues, muscles to function effectively. In this paper we study Hemoglobin level in women’s blood and Impact of diet in Hemoglobin. The relation between Rural and Urban women’s Hemoglobin. Check the awareness of hemoglobin level by using statistical tools.

Keywords: :Hemoglobin, statistical tools, lifestyle, Portion, Diet.Introduction

ENUMERATION OF MEDICINAL PLANTS OF SANGLI DISTRICT. MAHARASHTRA.

Vikas Awale, Harshal Wangikar, Mangesh Gavit

Department of Botany, Dr. Patangrao Kadam Mahavidyalaya, Sangli (MS.) 416416.

vikasawale@gmail.com

Abstract:

Sangli district is one of southern district of Maharashtra State. It is situated between the latitudes of 16° 43' and 17° 38' N and the longitudes of 73° 41' and 75° 41' E. The district is bordered by Satara district on the north – western side. On the north – eastern side it is bordered by Solapur district. On the southern side it is bordered by Belgaum and Bijapur district of Karnataka State. It meets Kolhapur district in south – western side and Ratnagiri district lies on the west of Sangli district. Total area of district is 8501.05 sq. km. and lying mainly in the basin of river Krishna and tributaries Warana, Yerala, Agni and Man. District has ten talukas, of which Shirala taluka and to some extent Atpadi taluka are hilly, while the greater part of district lies in plains. The average rain fall of the district is 692.40 mm per annum. Petland region of the Shirala taluka and its adjoining is a part of Chandoli Wild Life Sanctuary recently declared as Chandoli National Park and Sahyadri Tiger Project. Another Wild Life Sanctuary in the Sangli district is Sagreshwar Wild Life Sanctuary. Westward part of the district is situated in the Western Ghats ranges shows tropical evergreen, tropical semi-evergreen and tropical moist deciduous type of vegetation, while eastern part and major region of district shows tropical dry deciduous and open thorny scrub vegetation. Various types of vegetation of district harbours variety of medicinal plants. Survey of plant wealth of Sangli district resulted in enumeration of over 300 plant species of some therapeutic value. List of the medicinal plants with their botanical and vernacular names, part of plant used, medicinal values along with their status of occurrence are discussed in the present paper.

Keyword:- (Ethno-botany, Plant parts uses, tradition)

**EFFECT OF PLANT EXTRACTS (*MURRAYAKOENIGII*,
EUCALYPTUS, AND *RICINUS COMMUNIS*) AGAINST THE RED
FLOUR BEETLE (*TRIBOLIUMCASTANEUM HERBST*)**

*Nalesh Bahiram¹, *Shantaram Bhoje², Ashutosh Nirbhavane³

1. Department of Zoology. Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya Sangli. E.mail id: naleshbahiram22@gmail.com
 2. Department of Zoology. Shri Pundlik Maharaj Mahavidyalaya, Nandura Rly., Dist. Buldana. E.mail id: shantarambhoje8@gmail.com
 3. School of Architecture and Science Technology, Yashwantrao Chavan Maharashtra Open University, Nashik. Email id: ashunirbhavane@gmail.com
-

Abstract:

Stored grains, cereals are important resources of the food. The effective conservation of this resources is very important of subsistence of mankind. But the storage grain pest and some other insects are destroying stored food or other valuable organic matter. That damage is mostly influence by *Triboliumcastaneum* insect. In this study we are used some plant extract which is effective against the stored grains pests. First, we are identified the plant which are produce antibacterial secondary metabolites. The plant species are *Murraya koenigii* (Curry leaves), *Eucalyptus* (Nilgiri), and *Ricinus communis* (Castor), for the extraction we are use the dry leaves. The plant extract is diluted with ethanol at various concentration and use in experiment. Some plants are very effectively work against the pest and some are shows intermediate effect. The all process is without any harmful chemical and very effective. It can handle easily by any person. No toxic effect on human health and no side effect and economically also low value.

Keywords: Stored grains, secondary metabolites, *T. castaneum*.

THERMAL, ANTIFUNGAL AND ANTICANCER INVESTIGATION OF Tb (III) JUGLONATES

Vishwambhar Shinde^{1*}, Abhaysinh Kadam² and Mrudula Wadekar²
Department of Chemistry

¹*Bharati Vidyapeeth's Matoshri Bayabai Shripatrao Kadam Mahavidyalaya Kadegaon.*

²*Bharati Vidyapeeth's Yashwantrao Mohite college of Art's Science and commerce Pune.
India (M.S.)*

Vishushinde9@gmail.com

Abstract

Ligand Lawsone, Juglone, Phthiocol, Plumbagin and their Metal chelates of Tb(III) are prepared and its chemical composition of Ligand and their metal chelates are obtained by microanalysis and Thermogravimetric analysis. The antifungal activity of ligands and their metal chelates is examined against four fungal strains and anticancer investigation of ligands and their metal chelates are examined against MCF-7 human breast cancer cell. The antifungal and anticancer properties are compared within the isomeric pairs of chelates.

Keywords: Tb (III) chelates, Lawsone, Juglone, Phthiocol, Plumbagin, antifungal and anticancer activity

THE LATITUDINAL TREND VARIATION IN TCO OVER INDIA

R. P. Pawar¹, O. M. Patil¹, S. T. Mane², S. B. Wategaonkar³, D. P. Nade², D. G. Kanase^{*2}

*1Center for Space and Atmospheric Science, Department of Physics, Sanjay Ghodawat University Kolhapur 2Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalay (Shivaji University, Kolhapur), Sangli 3Sanjay Ghodawat Polytechnique, Atigre *Corresponding author email: dgkanase@gmail.com (D.G. Kanase)*

Abstract:

To study the latitudinal variation in total column ozone (TCO) during the period of 22 years from 1986 to 2008 over eight multiple stations of the India. We have used, the linear regression analysis technique to identify the trend variations in the TCO time series. The period includes three solar cycles (i) 22nd solar cycle (September 1986 to July 1996), (ii) 23rd solar cycle (August 1996 to November 2008). Our results are well agree with solar cycles and TCO trend shows in increasing mode from 23rd solar cycle. This may result of Montreal Protocol. The latitudinal variations in TCO trend are may due to the Brewer-Dobson circulation. This work will help to understand the dynamics of stratospheric ozone layer over the India.

**ASSESSMENT OF PHYSICO-CHEMICAL PROPERTIES OF SOIL
FROM REGION OF CHANDANAPURI, SANGAMNER TEHSIL, (M.S.)
INDIA.**

*Shantaram Bhoje¹, Pankaj Bhoje², Nalesh Bahiram³, Pradnya Bhalerao⁴

1. Department of Zoology, Shri Pundlik Maharaj Mahavidyalaya, Nandura Rly., Dist. Buldana (M.S.), India. Email id: shantarambhoje8@gmail.com
2. Kr. Vasantao Narayanrao Naik Shikshan Prasarak Sanstha's, Arts, Commerce and Science College Nashik.
3. Department of Zoology. Bharati Vidyapeeth's Dr. Patangrao Kadam Mahavidyalaya Sangli. E.mail id: naleshbahiram22@gmail.com
4. Department of Zoology, S. N. Arts, D. J. Malpani Commerce and B. N. S. Science College, Sangamner, Dist. Ahmednagar (M.S.), India.

Abstract:

Soil is one of the most important components of Agriculture. Soil is mixture of organic matter and minerals that can support, plant life. Now a day's large number of fertilizers are used in the Agriculture instead of natural manure. Which increases crop productivity while decreases the soil quality so, attempt has been made to analyze the Various Physico-chemical properties of soil such as pH, Alkalinity, EC, Chloride, Calcium Carbonates, Carbonates, Calcium, Magnesium and Organic matter which helps to farmer to maintain the nutrient requirement for the plant and crop.

Keywords: Physico-chemical; pH; Alkalinity; EC; Chloride; Chandanapuri; Calcium Carbonates; Magnesium; Organic matter.

ALBINO MICE GENOTOXICITY OF ENDOSULFAN IN FEMALE SWISS ALBIN MICE

Sharma A*, John. P.J**, and Bhatnagar P*.

*Department of Zoology, IIS (Deemed to be
University) Jaipur, Rajasthan*

*** Centre for Advanced Studies in Zoology, University of Rajasthan, Jaipur-302004, India.*

**Email: dranju1110@gmail.com*

Abstract:

Endosulfan an organochlorine pesticide is widely recommended for the control of various crop pests' viz. cotton, rice, pulses, plantation crops, fruit crops and vegetables. The residues of Endosulfan and its metabolites reportedly find their way into various organisms including human beings through the contaminated air, water and food which in turn produce various toxic effects. Therefore the aim of the study was to investigate the genotoxic effects of Endosulfan on female Swiss albino mice. Two groups of female mice were administered 5.6mg/kg. bw/day (high dose) and 2.8mg/kg. bw/day (low dose) of Endosulfan by oral intubation for 5 days. Control group was administered plain tap water. Animals from all the three groups were sacrificed. For *in vivo* genotoxic study the femur bones of the treated animals were removed and bone marrow cells were examined. One hundred well spread metaphases per animal were examined to determine the frequency of various chromosomal aberrations like chromosome break, chromatid break, dicentric rings, centric rings, exchanges, fragments, translocations, polyploidy, pulverization, and total number of aberrant cells. The present study reveals that genotoxicity of Endosulfan was elicited by various chromosomal aberrations which were found to be more in the higher dose group.

Key words: Endosulfan, Genotoxicity, Chromosomal aberrations, female Swiss

**CHARACTERIZATION OF EXOCHELIN AN EXTRACELLULAR
IRON CHELATOR SIDEROPHORE OF *PSEUDOMONAS STUTZERI*
OF SGM 1 STRAIN**

S. D. Adole*, S.M. Chavhan*

*Vidyabharati College Seloo, Dist- Wardha 442104
Maharashtra- India**

*K.V.N.Naik's Arts, Commerce and Science ,Nashik 422002
Maharashtra- India**

*Corresponding Author E-mail: surajadole18@gmail.com
shubhamchavhan808@gmail.com*

Abstract

The present research deals with extraction, characterization and identification of extracellular iron chelator molecules siderophore of an indigenous salt tolerant bacterium *Pseudomonas stutzeri* SGM-1. This is the first report known so far for any genus to produce Exochelin siderophore other than *Mycobacterium*. In iron limited conditions the strain does not only survived but also yielded the iron chelator molecules the Siderophore of hydroxamate as well as a mixed type. The plant growth promoting features of siderophore produced as well as the strain are of great interest to use this Organic Chelator and its producing strain as a bioinoculants for effective use of available micronutrients in agricultural soils to nourish the plants to yield high quality food from such soils to feed the growing need of food by world's population.

Keywords: Iron, Chelator, Siderophore, *Pseudomonas stutzeri*, bioinoculant

TOTAL HAEMOCYTE COUNT CHANGES DURING THE DEVELOPING STAGES OF ANTHERAEA PROYLEI J.

V. S. Kumbhar

*Dr. Patangrao Kadam Mahavidyalaya, Sangli, M.S.,
India, 416101*

Email: varshakumbhar2@rediffmail.com

Abstract

The present study was carried out on the total haemocyte count in the developing stages of *A. proylei* J. The THC steadily increases during the developmental stages, attains its peak in the 5th instar and steeply declines in the pupa. The total haemocyte count in female larva is higher than male.

Key words: Haemocytes, total haemocyte count, differential haemocyte count,

Antheraea proylei.
