



Review Article

## SCIENTIFIC APPROACHES OF STRESS RELEASING TECHNIQUES AND MEDITATION: A REVIEW STUDY

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### ARTICLE INFO

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Cortisol, Nor-Adrenalin, Cytokines,  
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### ABSTRACT

It is the pressure exerted by increasing demands of human life leads to develop stress on every cell and tissue of human body. Stress created by cravings and aversion produces lots of adverse effects on physiology, anatomy and psychology of a person. Levels of Cortisol hormone in blood is responsible for developing stress. SudarshanKriya and Meditation are the basic techniques used as stress releasing techniques since 1980s. Present study discusses effect of SudarshanKriya and Meditation on human body. SudarshanKriya is a natural rhythmic breathing technique used to release stress, tensions, and depression by minimizing stress hormone, Cortisol level in the blood. Prolactin, a beneficial hormone, level has been found to increase simultaneously. The blood lactate levels shown remarkably fall while there is increase in anti-oxidant enzymes levels. Electroencephelogram has shown indications of high alertness with increase in Beta-activity is observed in the left frontal occipital and midline regions of brain. SudarshanKriya is taught in special programmes conducted by Art Of Living Foundation worldwide. Meditations taught by this foundation has shown to increase confidence, concentration and creativity along with calmness of mind and clarity of thoughts as the prominent effects.

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### INTRODUCTION

In ancient times, in India, purification of body was done by using several techniques like meditation, and yoga. With the evolution process stress started developing on human body since childhood with increasing demands and luxury. Tension and stress are being pulled out from every cell of human body along with the basic needs, stress release has found its way as a daily need in human life. A process called Sudarshan Kriya, is a rhythmic breathing technique which releases stress, tensions, depression and also brings an effective control on emotions. It is an unique and the only tool which helps in directly controlling emotions through rhythmic breathing. Rhythmic breathing is a unique method for balancing the autonomic nervous system and influencing psychological and stress-related disorders. It is the only technique which shows impact effectively in controlling emotions. Meditation creates calmness in mind and it is the serene and calm mind which is most powerful in taking and implementing decisions. The word Sudarshan means proper vision and Kriya means a purifying action. Through the action of our breath we get a proper vision of who we really are. There is a rhythm in the nature, like seasons come and go in time.

Similarly there is a rhythm in human body in thoughts, in emotions, in breath and in life. SudarshanKriya helps in experiencing rhythm of a Being and through the rhythms of the breath different seven levels of existence of human being gets harmonize. Harmonising all systems of the human body rhythm, is the main effect caused by SK, through which stress gets released. Depression is being spreading and increasing day by day and in developed countries like Europe, U.S.A, U.K its percentage is near about 40-45% which is increasing and becoming risky to human health. SudarshanKriya and its accompanying practices (SK&P), are time-honored stress management health promotion techniques whose health benefits are being validated by modern medical science and obtaining transcendental meditative state of mind is an ultimate result of it. It can be applied as an alternative medicine with all stress related ailments as; in 2010; SudarshanKriya has been declared by World Health Organisation, as an anecdote for more than 150 psychosomatic diseases.

#### Objective

The main aim of the present study is thus to study the scientific approaches towards these stress releasing techniques and their effects on human body after practising it regularly. Present studies includes review of researches on SudarshanKriya and Meditation.

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## RESEARCH ARTICLE

COMPLEXOMETRIC STUDIES ON DYE- SURFACTANT BINARY COMPLEX OF ERIOCHROME  
AZUROL B AND CETYL TRIMETHYL AMMONIUM BROMIDE

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## ABSTRACT

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Surfactants enhances complexation of triphenylmethane dyes by formation of a new dye-surfactant complex which is as an intermediate stable complex. Addition of quaternary salts of surfactants to the deeply colored solution of dyes causes a marked change in its color. The absorption spectra of Eriochrome Azurol B (EAB), a triphenylmethane dye, has been studied in the presence as well as in the absence of cationic surfactant, Cetyl Trimethyl Ammonium Bromide (CTAB). At different pH values ranging from 2 to 10 (0 to 100), the spectra studied by spectrophotometric observations. Absorption spectra in the presence of surfactant. Dissociation constant has been calculated for dye-proposed and absence of surfactant. Decrease in the values of dissociation constant proposed with increasing dye to surfactant is observed which indicated formation of water soluble, stable dye-surfactant complex. Composition of stable dye-surfactant complex is determined and effect of foreign ions such as Chlorides ( $\text{NaCl}$ ,  $\text{KCl}$ ,  $\text{NH}_4\text{Cl}$ ), Nitrates ( $\text{NaNO}_3$ ,  $\text{KNO}_3$ ,  $\text{NH}_4\text{NO}_3$ ) and sulphates ( $\text{Na}_2\text{SO}_4$ ,  $\text{K}_2\text{SO}_4$ ,  $\text{NH}_4\text{SO}_4$ ) has been studied in detail. It is found out that the Binary micellar aggregates can be proposed as the active species in primary complex formed with transition and heavy metal ions in modified reagents, as EAB-CTAB.

Dr. Suparna Deshmukh, has been working as Assistant Professor in Chemistry, S. K. Gandhi College, Kadu, Dist. Beed, Maharashtra, India. She has published several research papers in national and international journals and reproduced in books. She is also a member of Indian Chemical Society.

## INTRODUCTION

It was reported by Ramanuskas *et al.* (1969) that decrease in the color intensity of organic dyes in the presence of surfactants. These newly formed dye-surfactant complexes are termed as modified reagents which are used for the sensitization of the color reactions even with weakly colored dyes. The addition of quaternary salts to the solution of dyes, causes a marked color change with shift in wavelength of maximum absorption. The color shift is caused by short range electrostatic interaction on the surface of the micelle double layer. The purpose of adding surfactants to the dyes is thus to decolorize the dyes followed by Sign Rule (Hardy and Downey, 1930) which is an empirical statement. The interesting property of micelles formed is their ability to form colored complexes with various cations. Another advantage is that the detection of micro amounts of metal ions can be done with higher sensitivity in the presence of these long chain quaternary salts. Composition of dye-surfactant complex is determined by adding varying concentration of surfactants to the dye solutions. Higher concentration of mineral salts (Muller *et al.*, 1965) prevents the micelle formation due to the presence of inorganic anions which displace dye as counter ions. The effect of mineral salts has been studied.

This unusual property has applied for direct determination of Transition metal ions and even rare earths in several studies. With this in present studies has been undertaken and involves a detail study of the interaction of surfactant, EAB with a triphenylmethane Dye, Eriochrome Azurol B.

## Experimental

**Instruments:** The absorption measurements were done on a UV Shimadzu spectrophotometer UV-240. Glass cuvettes of 1cm thickness supplied with the instrument were used; distilled water blanks were used. For pH measurements, a digital pH meter LI-10 operated on 220volts stabilized AC mains were used, with a glass electrode of ceramic system.

**Materials:** All the reagents used were of BDH, Analytical grade purity. The surfactant, Cetyl Trimethyl Ammonium Bromide (CTAB), in 20% aq. methanol. The Dye solution was prepared in double distilled water by dissolving their purified samples and the standard solutions of metal solutions were prepared from different salts.

**Procedure:** Preparation of mixtures, measurements of absorbance, adjustment of pH etc. were carried out at room temperature. In all the experiments, 1X solution was added to the reagent solutions which was for at least 10min for maximum decolorizing effect. The absorbance readings were recorded only after 10 minutes of the addition of the reagents, a time necessary for equilibration.

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## USE AND ESSENTIALS OF GEOGRAPHICAL INFORMATION SYSTEM

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### Abstract:

The management of spatial data usually involves processes of data acquisition, storage and maintenance, analysis and output. From many years, this is done by using analogue data sources and manual processed. The introduction of modern techniques as an increased use of computers and information technology in all aspects of spatial data management. The various software's are used in this domain i.e. Geographic Information Systems (GIS). GIS is used by various disciplines as tools for spatial data management in a geographic environment.

**Key Words:** hardware, software, data and Persons

### 1. Introduction:

The twenty first century with the fast growing trends in computer technology, information systems and virtual world to obtain data about the physical and cultural biospheres, and to use these data for research or to answer practical problems. The current digital and analog electronic devices facilitate the record of resources and the rapid implementation of arithmetic or logical operations. This Information Systems are undergoing much improvement and this is able to create, manipulate, store and use spatial data much faster and at a rapid rate as compared to conventional methods.

This System is a collection of data and

tools for working with those data, contains data in analog form or digital form about the facts in the real world. Our observation of the world through selection, generalization and synthesis give us information and the representation of this information i.e. the data constitute a model of those facts. So the collection of data, the database is a physical repository of various views of the real world representing our knowledge at one point in time. Information is resulting from the individual data elements in a database, the information directly apparent i.e. information is produced from data by our thought processes, perception or whatever based on our knowledge. Therefore in a database context the terms data, information and knowledge are differentiated. It can be summarized that, the data are very important and add value as we progress from data to information, to knowledge. The data, which has many origins and forms, as real, captured, Interpreted, Encoded, and Structured.

### 2. Objective:

This paper deals with history of GIS and fundamentals of GIS such as elements of GIS; data models; data structures & data base; and elementary spatial analysis.

### 3. Data and methodology:

Data source is published literature of the known and unowned authors is used for this paper and data is presented with the help of figures and charts.

### 4. Space and time in spatial information systems:

Spatial information is always related to geographic space on large-scale. This is the space beyond the human body, space that represents the surrounding geographic world. Within such space, we constantly move around, we navigate in it, and we conceptualize it in different ways. Geographic space is the space of topographic, land use or land cover, climatic, cadastral, and other features of the geographic world. Geographic information system is used

## BIOACCUMULATION OF HEAVY METALS FROM RADISH COMMONLY CONSUMED IN AHMEDNAGAR, MAHARASHTRA

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### ABSTRACT

Bioavailability of heavy metals was determined from soil to plant. The levels of seven different heavy metals viz. lead (Pb), cadmium (Cd), chromium (Cr), nickel (Ni), zinc (Zn), copper (Cu), and arsenic (As) were analyzed in spinach. Radish showed high level of arsenic. It is concluded that the vegetables grown in this region especially leafy ones are highly contaminated with Pb, Cd, and Ni and can cause health hazard for human consumption. Therefore, to reduce the health risk and the extent of heavy metal contamination, steps must be taken for efficient treatment of sewage.

**KEYWORDS:** pesticides, health hazard, vegetable, public health

### Introduction:

Vegetables constitute an important part in our daily life. With the increase in population as well as due to increased awareness about their nourishment value, the demand of vegetables is increasing. Vegetables are not only a source of carbohydrates and protein but also of vitamins and trace elements [1]. Vegetables have significant value and are used as protective food for prevention of diseases [2]. However, consumption of heavy metals (HM) contami-

nated vegetables causes health problems because HM interfere with normal body biochemistry [3]. The constant use of vegetables contaminated with heavy metals may be mutagenic or carcinogenic, causing serious health hazards for human life [4]. The routes of deposition of HM in vegetables are from airborne polluted environments and by absorption through roots from the soils and accumulation in vegetables. Heavy metals deposited on surface can be removed easily by simple washing but the metals incorporated into the edible parts as bioaccumulation, are of major concern because they are difficult to remove [5]. The aim of present study was to determine concentrations of metals in areas of WWI, to find out the suitability of WWI soils for vegetable development and evaluate the pattern of transfer of metals.

**Study Area.** Ahmednagar was the study place which is included among large cities of Maharashtra. The climate of Ahmednagar varies according to season; the temperature is high in summer and low in winter.

### Sampling procedure

The fully grown vegetable (spinach) edible portion irrigated with wastewater was randomly collected from four different areas of Ahmednagar. All the samples were taken randomly. Same number of soil samples was also collected from the site of vegetable collection. The samples were packaged in cleaned containers and properly labeled.

### Washing of samples

The collected vegetable samples were washed with tap water and thereafter with deionized water to remove dust particles. The samples were then cut to small pieces using a knife.

### Drying of samples

All samples (soil and vegetable) were air-dried and then dried in an oven at 69 °C for 24 hours. All the dried samples were placed in plastic bags.

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**Research Article**



## Eco-friendly management of root wilt of chickpea and pigeon pea by using plant leaf extract

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Antifungal activity, disease management, food poisoning method, leaf extract, Pathogenic fungi.

**Abstract**

Antifungal activity of *Azadirachta indica* L., *Jatropha curcus* L., *Datura stramonium* L. and *Annona squamosa* L. were assessed against *Fusarium* wilt of chickpea and pigeon pea (*Fusarium oxysporum* f. sp. *ciceri* and *F. oxysporum* f. sp. *udum*) *In vitro*. Leaf extract of selected medicinal plant preparing various concentrations viz. 5, 10, 15 and 20 percent were tested against pathogenic fungi of selected pulses by food poisoning method. As concentration increases inhibitory activity also increases. Aqueous leaf extract of *J. curcus* shows maximum inhibitory effect on tested pathogens followed by *A. indica* and *A. squamosa*.

**INTRODUCTION**

*Fusarium* sp. is the most important and severe plant pathogenic fungi. It infect any stage of growth and reduce total production of respective plant. After harvesting the plant it survive on the plant trashes and soil. It infect also in post harvest stage.

Medicinal plants represent a rich source of antimicrobial agents (Mahesh and Satish, 2008). Many of the plant materials used in traditional medicine which are readily available in rural areas at relatively cheaper than modern medicine (Mann *et al.*, 2008). The use of biological compounds extracted from plants may be an alternative to conventionally used fungicides to control phytopathogenic fungi, due to their being bioactive chemicals such as flavonoids, phenols, tannins, alkaloids, quinones, saponins and sterols (Burt, 2004).

In recent year a number of plant extract their essential oils and their volatile components have been reported to have strong antifungal activity (Siripornvisal, 2009). According to (Thangavelu *et al.*, 2004), the mycelial growth of *Colletotrichum musae* was inhibited by the

*Jatropha curcus* leaves extracts which are able to control the anthracnose disease in three banana varieties: 'Robusta', 'Rasthali' and 'Ney Poovan'. The use of medicinal plant materials for the inhibition of fungal diseases is an old practice in many countries and is still offers an enormous potential source of antifungal agent (Usharani and Chitra, 2014). Many phyto-chemical pesticides exhibiting broad spectrum of activity against pest and diseases have long been considered as attractive alternative to synthetic chemical pesticides as they are biodegradable, target specific and pose no or less hazard to the environment or to human health. (Walia *et al.*, 2014).

Plants have been a rich source of medicines because the produce a bioactive molecules, most of which probably evolved as chemical defenses against predation or infection (Anitha *et al.*, 2016). The testing of the efficacy of such potential plant based sources for antifungal activity could an important step towards the assessment of the degree of variability among the diverse natural flora (Manoorkar and Gachande, 2014).

## 22. Potentiometric Investigation of Complexation of Lisinopril Drug with Transition Metal Ions in Mixed Solvent Media

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### Abstract:

In the present work we investigate the stability constant of Lisinopril hydrochloride drug with transition metal ions Co, Ni, Cu, Zn, and Cd using potentiometric titration technique in 20%(v/v) ethanol-water mixture at 27 °C temperature and at an ionic strength of 0.1M NaClO<sub>4</sub>. {Metal to ligand ratio=1:5 & 1:1} The method of Calvin and Bjerrum as adopted by Irving and Rossotti has been employed to determine proton ligand (pKa) and metal-ligand stability constant (logK) values. It is observed that a transition metal ion forms 1:1 and 1:2 complexes.

**Keywords :** Stability Constant, transition metal ions, Lisinopril drug, Potentiometric.

### Introduction

Metal complexes are widely used in various fields, such as biological processes pharmaceuticals, separation techniques, analytical processes etc. To understand the complex formation ability of the ligands and the activity of complexes, it is essential to have the knowledge about solution equilibria involved in the reactions. The extent to which the ligand binds to metal ions is normally expressed in terms of stability. Potentiometric titration is accepted as a powerful and simple electro analytical technique for determination of stability constants. Most of the d-block elements form complexes. There are different kinds of ligand used for complexation. For the present investigation, we selected Lisinopril hydrochloride (2S)-1-[(2S)-6-amino-2-[(1S)-1-carboxy-3 phenylpropyl] amino}hexanoyl] pyrrolidine-2-carboxylic acid is an angiotension-converting enzyme (ACE) inhibitor, the enzyme responsible for the conversion of angiotensin I (ATI) to angiotensin II (ATII). It is antihypertensive agent and cardiogenic agent. It is used for the treatment of hypertension and symptomatic congestive heart failure. It may be used to slow the progression of renal disease in hypertensive patients with diabetes mellitus. Historically, lisinopril

# Co-ordination and Analytical Studies Of Cu(II), And Ni(II) Using Pyrocatechol Violet and CTAB As Modified Reagents

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## ABSTRACT

The study of the absorption spectra of the complexes formed between metal ions selected for the present study viz. Cu(II), and Ni(II) and the dye-surfactant species ( i.e. Pyrocatechol Violet and Cetyltrimethyl ammonium bromide); as ligands forms the first subject matter of the study of metal complexes. Quantitative information on complex formation is obtained by determining the composition and the stability constants of the chelates formed. Pyrocatechol Violet (PCV) is a triphenylmethane dye which forms stable complexes with CTAB and Metals under study. Dye- Surfactant complexes showed Hypsochromic Shifts while with Metal chelates a large bathochromic shift has been observed. Composition of the complexes remains unchanged in presence of CTAB as 1:1. Stability Constants has been evaluated which revealed to increase the stability of chelates in the presence of CTAB. Studies were also carried out on various analytical parameters revealed that Pyrocatechol Violet (PCV) is an effective reagent to be used for microdetermination of Cu(II) and Ni(II).

## Introduction:

Reactions of surfactants in bringing a change in spectral characteristics of triphenylmethane dyes & their use in determination of metal ions was studied<sup>(1, 2,3)</sup>. The mechanism of the interaction of surfactants with Triphenylmethane Dyes used for the spectrophotometric determination of metal ions is discussed<sup>(4)</sup>. The systematic design of surfactants induced dye metal interactions leading to the sensitized photometric metal ion determination could obviously be facilitated by an accurate model of detail chemistry involved<sup>(5-9)</sup>. Complexation of (Cu(II), Fe (II) & Al(III) with Chrome Azurol S in the presence of non ionic surfactants was studied<sup>(10)</sup>. The present investigation undertaken involves a detail study of the interaction of surfactant CetylTrimethylAminonium Bromide with a triphenylmethane dye Pyrocatechol Violet (PCV). The dye surfactant complexes thus formed was used to study complexation reactions of Cu (II) and Ni (II) in presence as well as in the absence of surfactant CTAB.

**Experimental :** The absorption measurements were done on UV Shimadzu - UV240 Spectrophotometer. Distilled water blanks were used for pH measurements Elico pH meter LI- 10 with glass calomel electrode system was used after standardization.

All the reagents used were of BDH Anala R grade purity. The surfactant Cetyltrimethyl ammonium bromide (CTAB) was prepared in 20% aqueous methanol in double distilled water and were standardized by usual procedures.



## Studies on Precision and Accuracy in Microdetermination of Transition Metals Using Ternary Complex EAB-CTAB-Metals

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### ABSTRACT:

Spectrophotometric and Analytical studies have carried out by forming ternary complex between Eriochrome Azuro B, and Cetyl Trimethyl Ammonium Bromide (CTAB), and some transition metal ions mainly  $Cu^{2+}$ ,  $Ni^{2+}$  and  $Cd^{2+}$ . The absorption spectra of Eriochrome Azuro B a triphenylmethane dye, has studied in the presence as well as in the absence of surfactant, Cetyl Trimethyl Ammonium Bromide at different pH values ranging from pH 1.00 to 12.00. Hypochromic shift is observed in the absorption spectra in the presence of surfactant. I.e. dissociation constant values are found to decreased, in the presence of surfactant is observed. Composition of chelates EAB-CTAB-Metal is found to be 1:1:1, and effect of foreign ions such as chlorides, nitrates, and sulphates of sodium, potassium and ammonium has been studied in detail. Stability constants of the chelates are determined. Sensitivity and Stability of chelates and increases in the presence of surfactant. Various analytical parameters including range of adherence to Beer Law, Molar Extinction Coefficients, Sandell's Sensitivity, were studied for all systems by its interaction with and without CTAB. Precision and Accuracy of the method suggested for microdetermination of metal ions is determined and found out that method is both precise as well as accurate.

### KEYWORDS:

Accuracy and Precision, Hypochromic Shift, Sensitivity, Surfactant, Stability, Triphenylmethane Dye

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### Introduction

Efficiency of formation of colored complexes has successfully applied for the spectrophotometric estimation of metal ions since last few decades. The addition of long chain quaternary salts to the deeply colored solution of dyes causes a marked color change with the change in wavelength of maximum absorption. Short range electrostatic forces, on the surface of micelle double layer changes the max and hence hypochromic shift is observed. The purpose of addition of surfactants to the dyes is to decolorize them. It is followed by Sign Rule<sup>1</sup> which is a useful statement. The interesting property of the aggregates formed is its ability to form colored complexes with various cations. The advantage is that the determination of microamounts of metal ions can be done with much higher sensitivity in the presence of surfactants. Reaction of triphenylmethane dyes with 4f and 5f metal ions have been a subject matter of study by several workers.<sup>2-8</sup> Studies were carried out on the mechanisms of interactions between dyes, surfactants and metal ions for analysis of metals in solutions.<sup>9-10</sup> Ions between  $Cu^{2+}$ ,  $Fe^{2+}$  and  $Al^{3+}$  with Chrome Azuro S and non ionic surfactants has studied in detail.<sup>11</sup> Present study aims to determine metals under study with simple and sophisticated instruments like Shimadzu Spectrophotometer at micro levels if present in water samples. With this aim present studies are taken to develop a sensitive process for microdetermination with higher sensitivity by using ternary complex of Triphenylmethane dye EAB, and surfactant Cetyl Trimethyl Ammonium Bromide. Complexation of dye and metal ions under study  $Cu^{2+}$ ,  $Ni^{2+}$  and  $Cd^{2+}$  has been discussed in both absence and presence of surfactant. Composition of dye-surfactant complex is determined by adding varying concentration of surfactants to the dye solutions. Higher concentration of mineral salts<sup>12</sup> prevents the micelle formation due to occurrence of inorganic anions which displace dye as counter ions. Hence effect of mineral salts has also been studied.

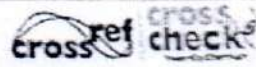


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# Analytical Studies On Precision And Accuracy In Microdetermination Of Pb(II), Cd(II), Cr(III) And Hg(II) With Modified Reagent EAB- CTAB

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**Abstract:** Analytical studies have been carried out by forming 1:1 molar complex between Eriochrome Azurol B, triphenylmethane dye, cationic surfactant Cetyl Trimethyl Ammonium Bromide CTAB; and some heavy metal ions mainly Cd(II), Hg(II), Cr(III) and Pb(II). The absorption spectra of Eriochrome Azurol B (EAB; a triphenylmethane dye), has been studied in the presence as well as in the absence of cationic surfactant, Cetyl Trimethyl Ammonium Bromide, CTAB. At different pH values ranging from pH 1.00 to 12.00, the spectra of Eriochrome Azurol B shows bathochromic shift is observed in the absorption spectra in the presence of surfactant. Decrease in the molar absorptivity and association constant, pK values in the presence of surfactant is observed. Such indicated formation of more soluble, stable, dye-surfactant complex. Composition of stable dye-surfactant complex is determined by Job's method of continuous variation. It is found to be EAB:CTAB as 1:2, and effect of foreign ions such as Chlorides i.e. NaCl, KCl, NH<sub>4</sub>Cl, Nitrates i.e. KNO<sub>3</sub>, NaNO<sub>3</sub>, NH<sub>4</sub>NO<sub>3</sub>, and sulphates i.e. CaSO<sub>4</sub>, Na<sub>2</sub>SO<sub>4</sub> and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> has been studied in detail. Bathochromic shift has been observed in the presence of CTAB with metal ions under study. CTAB have shown increase sensitivity of the 100% reactions of these complexes with greater solubility and higher stability. The formation of some heavy metal ions such as Cd(II), Hg(II), Cr(III) and Pb(II) to these sensitized modified complexes resulted in the formation of intense, water soluble and stable colored complexes and there is increase in sensitivity in presence of surfactant. Various analytical parameters including rate of color formation, effect of temperature and stability of color formation, range of adherence to Beer's Law, Molar Extinction coefficient, selectivity, were studied for all systems in absence as well as in presence of CTAB. Precision and Accuracy of the method suggested for microdetermination of metal ions was determined and found on this method which is as well as accurate.

**Keywords:** Triphenylmethane Dye, Surfactant, Hypsochromic Shift, Bathochromic Shift, Stability, Selectivity, Precision and Accuracy.

Submission: 05-06-2018 Date of acceptance: 20-06-2018

## 1. Introduction

The property of formation of colored complexes has been successfully applied for the photometric estimation of metal ions since last few decades. The addition of quaternary salts to the colored solution of dyes, causes a marked color change with the change in wavelength of maximum absorption. The hypsochromic shift is caused by short range electrostatic forces on the surface of the micelle layer. The purpose of addition of surfactants to the dyes is thus to decolorize them. It is followed by the formation of aggregates which is an empirical statement. The interesting property of the aggregates formed is their ability to form colored complexes with various cations. Another advantage is that the determination of microamounts of metal ions can be done with much higher sensitivity in the presence of these long chain quaternary salts. The study of triphenylmethane dyes with 4f and 5f metal ions have been a subject matter of study by several workers. The systematic design of surfactants induced dye metal interactions leading to the sensitized photometric metal ion determination could obviously be facilitated by an accurate model of detail chemistry. Complexation of Cu(II), Fe(II) & Al(III) with Chrome Azurol S in the presence of non ionic surfactants was studied. The present investigation undertaken involves a detail study of the interaction of Cetyl Trimethyl Aminonium Bromide with triphenylmethane dye Eriochrome Azurol B. Composition of dye-surfactant complex is determined by adding varying concentration of surfactants to the dye solutions. High concentration of mineral salts prevents the micelle formation due to occurrence of inorganic anions which displace dye as counter ions. Hence effect of mineral salts has been studied. The dye-surfactant complex thus formed was used to study complexation reactions of Cd(II), Hg(II), Cr(III) and Pb(II), and are compared with the complexation reaction of these metal ions with Eriochrome Azurol B in absence of detergents.



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## Studies On Interaction Of Dye- Surfactant Binary Complex Of Pyrocatechol Violet and Cetyl Trimethyl Ammonium Bromide

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**Abstract:** Surfactants enhances complexation of triphenylmethane dyes by formation of a new dye : surfactant complex which is as an intermediate stable complex. Addition of quaternary salts of surfactants to the deeply colored solution of dyes causes a marked change in its  $\lambda_{max}$ . The absorption spectra of Pyrocatechol Violet, PCV; a triphenylmethane dye, has been studied in the presence as well as in the absence of cationic surfactant, Cetyl Trimethyl Ammonium Bromide, CTAB. At different pH values ranging from pH 1.00 to 12.00, the spectra is studied. Hypsochromic shift is observed in the absorption spectra in the presence of surfactant. Dissociation constant has been evaluated both in the presence and absence of surfactant. Decrease in the values of dissociation constant, pK values in the presence of surfactant is observed which indicated formation of water soluble, stable, dye-surfactant complex. Composition of stable dye-surfactant complex is determined and effect of foreign ions such as Chlorides i.e NaCl, KCl, NH<sub>4</sub>Cl; the nitrates i.e KNO<sub>3</sub>, NaNO<sub>3</sub>, NH<sub>4</sub>NO<sub>3</sub> and sulphates K<sub>2</sub>SO<sub>4</sub>, Na<sub>2</sub>SO<sub>4</sub> and (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> has been studied in detail. It is found out that the Binary submicellar aggregates can be proposed as the active species in ternary complex formation with metal ions and hence can be termed as modified reagents, as PCV:CTAB.

**KeyWords:** Triphenylmethane Dye, Surfactant, Modified reagent, Hypsochromic Shift

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### I. Introduction

Some reactions were reported by Ramanuskas et al(1) which showed decrease in the color intensity of organic dyes on the addition of surfactants. These newly formed dye-surfactant species are termed as modified reagents which are suitable for the sensitization of the color reactions even with metal ions. The addition of quaternary salts to the deeply colored solution of dyes, causes a marked color change with the change in wavelength of maximum absorption. The hypsochromic shift is caused by short range electrostatic forces on the surface of the micelle double layer. The purpose of addition of surfactants to the dyes is thus to decolorize them. It is followed by Sign Rule (2), which is an empirical statement. The interesting property of the aggregates formed is their ability to form

colored complexes with various cations. Another advantage is that the determination of microamounts of metal ions can be done with much higher sensitivity in the presence of these long chain quaternary salts. Composition of dye-surfactant complex is determined by adding varying concentration of surfactants to the dye solutions. Higher concentration of mineral salts (3) prevents the micelle formation due to occurrence of inorganic anions which displace dye as counter ions. Hence effect of mineral salts has been studied.

This unusual property has applied for microdetermination of Transition metal ions and even rare earths in several studies. With this aim present studies has been undertaken and involves a detail study of the interaction of surfactant, CTAB with a Triphenylmethane Dye, Pyrocatechol Violet.

### Experimental

**Instruments :** The absorption measurements were done on a UV Shimadzu spectrophotometer UV-240. Glass cuvettes of 1cm thickness supplied with the instrument were used; distilled water blanks were used. For pH measurements, Elico pH meter LI-10 operated on 220volts stabilized AC mains were used, with a glass calomel electrode system.

**Materials:** All the reagents used were of BDH, Anal R grade purity. The surfactant, Cetyl Trimethyl Ammonium Bromide (CTAB), in 20% aq. methanol. The Dye solution was prepared in double distilled water by dissolving their purified samples and the standard solutions of metal solutions were prepared from different salts.

**Procedure:** Preparation of mixtures, measurements of absorbance, adjustment of pH etc. were carried out at room temperature. In all the experiments, TX solution was added to the reagent solutions which was for it

**महात्मा गांधीच्या विचारांचा मराठी साहित्यावरील प्रभाव****डॉ. अनिल गर्जे**

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म. गांधीजींचा भारतीय राजकारणातील उदय १९२० नंतरचा आहे. आपल्या दक्षिण आफ्रिकेतील कार्यामुळे ते भारताला पूर्वीच सुपरिचित झालेले असले तरी भारताचे अग्रगण्य नेते म्हणून त्यांना जी मान्यता मिळाली ती लोकमान्य टिळकांच्या निधनानंतर १८९९-२० नंतर. १९२० नंतर 'खेड्याकडे चला' हा संदेश म. गांधींनी दिला. साहजिकच त्याचा परिणाम मराठी साहित्यावर झालेला आढळतो. गांधीवाद ही एक अध्यात्मिक विचार प्रणाली आहे. गांधीवाद भारतीय जीवनाला फार जवळचा आहे. गांधीवाद हा तसा विशिष्ट देशकाल, प्रांतापुरता मर्यादित नाही. तो सर्वव्यापी आहे. त्यामुळे गांधीवादचा ठसा समकालीन साहित्यावर पडलेला दिसतो. त्यात गांधीजी हे भारतीय राजकारणाचे प्रमुख शिल्पकार व सूत्रधार म्हणून दीर्घकाळ वावरलेले असल्यामुळे त्यांच्या कृती, उक्ती तसेच संप, मोर्चे, सत्याग्रह, खादी प्रामोद्योग, अस्पृश्यता निवारण या सारख्या राजकीय, सामाजिक व आर्थिक आंदोलनाची प्रतिबिंबे तत्कालीन साहित्या उमटलेली आढळतात. गांधीजींची 'हिंद स्वराज्य' नावाची १९०९ साली प्रकाशित झालेली २० प्रकरणांची वाचक - संपादक प्रश्नोत्तर स्वरूप पुस्तिका ही गांधीवादी वैचारिक साहित्याची प्रेरणा आहे. आचार्य भागवत यांच्या मते, " गांधीजींचे 'सत्याचे प्रयोग' हे आत्मचरित्र आणि त्यांचे एकूण जीवनच गांधीवादी साहित्याचे ऊर्जा केंद्र आहे. 'जगा आणि जगू द्या' या कल्पनेवर आधारित विश्वस्ताची कल्पना, हृदय परिवर्तन त्यासाठी सत्याग्रह, बहिष्कार ही सर्व गांधीवादाची सूत्रे आहेत." आचार्य भागवत यांचे मत योग्य वाटते कारण गांधीजींनी सत्याग्रह, बहिष्कार आणि अहिंसा याद्वारे स्वातंत्र्य भारताला मिळवून दिले. राजकीय तत्वज्ञान, स्वराज्याची कल्पना गांधीवादात समाविष्ट आहे. सर्वोदय समाज निर्मितीचे स्वप्न, आदर्श समाजाचे स्वप्न पाहणारा एक 'युटोपिया' असेच गांधीवादाचे वर्णन करता येईल. गांधीवाद हा माणसातील उदात्त भावनांना साद घालतो.

'प्रज्ञा' आणि 'करुणा' यांना गांधींच्या जीवनात अतिशय महत्त्वाचे स्थान होते. गांधींचे विचार देशकाल, प्रांतापुरते मर्यादित नाही ते सर्वव्यापी आहेत. 'ग्रामोद्धार' हा गांधी चळवळीचा एक पायाभूत पैलू होता. विनोबा भावे म्हणतात, "भगवान बुध्दानंतर धर्मवक्ते, अर्थतज्ज्ञ, सत्य, अहिंसेचा एवढा मोठा पुढारी दुसरा झाला नाही." विनोबा भावे म्हणतात ते अगदीच खरे आहे. महात्मा गांधींनी आपल्या जीवनात ईश्वर, नैतिकता, प्रेम, करुणा, दया, अहिंसा, क्षमा, शांती इत्यादी मूल्यांना अनन्य साधारण महत्त्वाचे स्थान त्यांनी दिले. अध्यात्म आणि जीवन या एकाच नाण्याच्या दोन बाजू आहेत असे ते म्हणाले. सत्य, शिव व सुंदर या चिरंतन मूल्यांवर त्यांची निष्ठा होती. टॉलस्टॉय, थोरो आणि रस्किन इ. विचारवंतांचा त्यांच्यावर प्रभाव होता. सत्य, अहिंसा, अपरिग्रह, अस्तेय, निर्भयता, नम्रता, सर्वधर्मसमभाव अशी त्यांनी समाजाला शिकवण दिली. धर्म आणि राजकारण यांची सांगड घातली. ग्रामोद्योग, चरखा, मुल्योद्योगी शिक्षण, अस्पृश्यता निवारण, आश्रम व्यवस्था ही गांधीवादी विचारसरणीची फलित होती. आत्मसाक्षात्कार हेच त्यांचे अंतिम जीवनोद्दिष्ट होते. ते स्वतःला सत्याचे नम्र उपासक व दरिद्री नारायणाचे सेवक मानीत असत. 'वैष्णव जन तो' हे त्यांचे आवडीचे भजन होते. लोकराज्याचा पाया अहिंसात्मक असला पाहिजे असे त्यांचे मत होते. 'दांडीयात्रा' त्यांच्या दृष्टीने एक तिर्थयात्रा होती. साधारणतः १९२० पासून गांधीवादाचा प्रभाव तत्कालीन साहित्यावर दिसतो. म. गांधींबद्दल वाटणाऱ्या आदराचे प्रतिबिंब त्या काळातील मराठी कवितेत मोठ्या प्रमाणावर पडलेले दिसते. कवितेच्या क्षेत्रात गांधीजींवर गौरवपर कविता करणारे भा.रा.तांबे, माधव ज्युलियन, कुसुमाग्रज, बा.भ. बोरकर हे कवी लक्षणीय होत. बोरकरांनी तर गांधींच्या जीवनावर 'महात्मायन' नावाचे महाकाव्य लिहिण्याचा संकल्प सोडला होता. साने गुरुजींची 'महात्माजीस' ही कविता गांधी भक्तीने भारावलेली आहे. बा.सी.मढेकर, कवी अनिल, वा.रा. कांत, श्रीकृष्ण पोवळे यांनीही आपल्या कवितांमधून गांधीजीविषयी आदर व्यक्त केला आहे. कुसुमाग्रज आपल्या 'वैष्णव' या कवितेत त्यांनी

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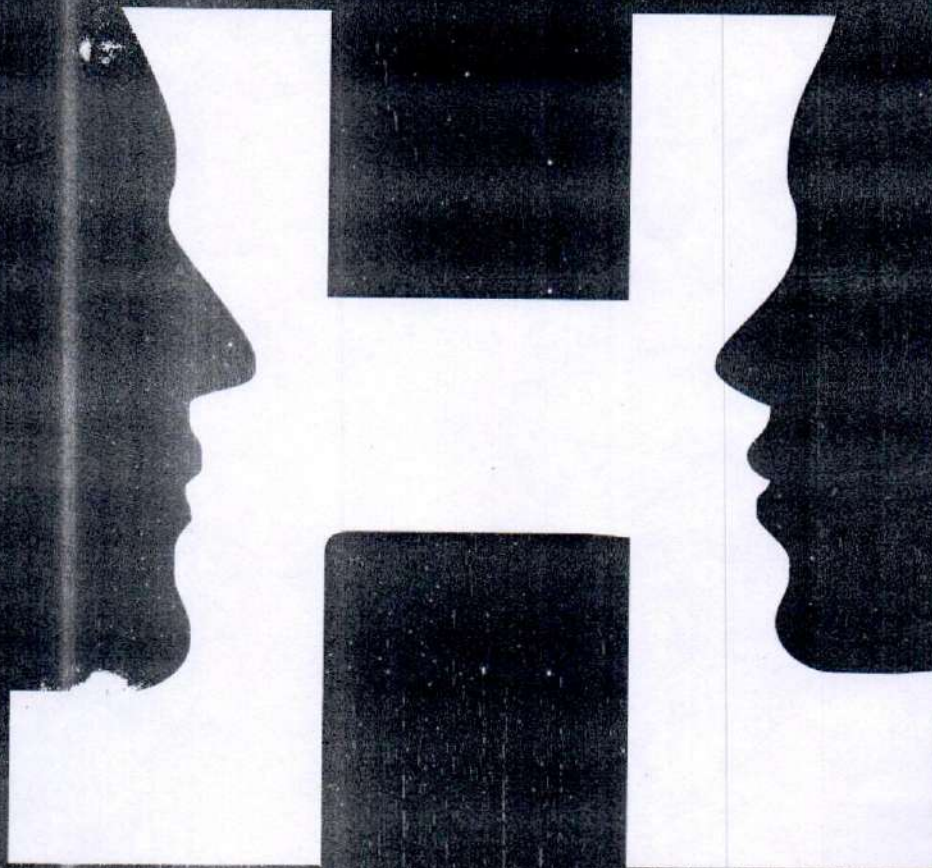
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## 25.

## भारतीय राज्यघटनेतील महत्वपूर्ण घटनादुरुस्त्यांचा राजकीय अभ्यास

तुकाराम दत्तात्रय गोंदकर

गांधी महाविद्यालय, कडा जि.बीड

स्वातंत्र्यप्राप्तीनंतर सर्वात पहिले आणि महत्वपूर्ण कार्य म्हणजे राज्यघटनेची निर्माती होते. घटनाकारांनी भारताला व्यवस्थितपणे तसेच येथील जनतेला परीपूर्णरितीने लागू होईल, अशी राज्यघटना निर्माण करण्याचा प्रयत्न केला. परंतु सामाजिक शास्त्रातील सिध्दान्तानुसार मानवी जीवन व मानवी समाज यास कोणताही समाजशास्त्रीय सिध्दांत तंतोतंत लागू होत नसतो. तो स्थळ काळ सापेक्ष असतो. स्थळ काळानुसार राज्यघटनेचे स्वरूपही बदललं जाऊ शकते त्यातील विषय बदलू शकतात तर काही मुद्दे नवीन प्रकारे निर्माण होऊ शकतात. म्हणजेच राज्यघटनेवर देखील स्थळ - काळ - वेळ आणि परिस्थितीचा प्रभाव पडत असतो. या दृष्टिकोनातून त्याला व्यवहारीक रूप देणे आवश्यक असते. राज्यघटना निर्माण करणारे डॉ. बाबासाहेब आंबेडकर देखील एके ठिकाणी म्हणतात 'संविधान चांगले किंवा वाईट नसते. संविधान संचलित करणारे लोक जर वाईट असतील तर चांगले संविधानही वाईट ठरू शकते' याच दृष्टिकोनातून आवश्यक मुद्द्याचा समावेश करण्याच्या उद्देशाने वेळोवेळी घटना दुरुस्त्या करण्यात आल्या त्याचा आढावा या शोध निबंधाद्वारे घेण्यात आला आहे.

## शोध निबंधाचे उद्देश :

1. भारतीय राज्यघटनेतील महत्वपूर्ण विषयांचे अवलोकन करणे.
2. वेळोवेळी झालेल्या घटना दुरुस्त्यांचा आढावा घेणे.
3. महत्वपूर्ण घटना दुरुस्त्यांची आवश्यकता स्पष्ट करणे.

भारतीय राज्यघटनेत स्वातंत्र्यप्राप्ती पासून आज पर्यंत अनेक दुरुस्त्या करण्यात आलेल्या आहेत. त्यातील काही महत्वपूर्ण घटनादुरुस्त्यांचा आढावा खालीलप्रमाणे घेण्यात आलेला आहे.

## 1. पहिली घटनादुरुस्ती:-

26 जानेवारी 1950 रोजी भारतीय राज्यघटना लागू करण्यात आली. त्यानंतर 1 वर्षांच्या कालावधीतच पहिल्या घटनादुरुस्तीची गरज निर्माण झाली. त्या दृष्टिकोनातून 1951 साली पहिली घटनादुरुस्ती करण्यात आली. या घटना दुरुस्तीद्वारे भारतीय राज्यघटनेतील अनुच्छेद - 15,19,31,85,87,174,176,341,342,312,316 यात संशोधन करण्यात आले. या संशोधनाच्या माध्यमातून राज्यघटनेत नवीन सुचिचा समावेश करण्यात आला. मुलभूत अधिकारांच्या माध्यमातून विधिच्या समक्ष समानता तसेच भाषण स्वातंत्र्य आणि संपत्ती संबंधी आधिकारामध्येही व्यवहारीक अडचणींना दूर करण्याच्या उद्देशाने ही घटनादुरुस्ती करण्यात आली.

## 2. दुसरी घटनादुरुस्ती :-

पहिल्या घटना दुरुस्ती नंतर आणिखी एका वर्षाच्या कालावधीतच दुसरी घटना दुरुस्ती करण्यात आली. 1952 साली ही दुसरी घटना दुरुस्ती करण्यात आली. या घटना दुरुस्तीच्या माध्यमातून राज्यघटनेतील अनुच्छेद - 81 मध्ये संशोधन करण्यात आले. पूर्वी राज्यघटनेत लोकसभासदस्यांची संख्या 500 पेक्षा अधिक असू नये असे निर्देशित करण्यात आले होते. तसेच प्रत्येक लोकसभा सदस्यासाठी 7.5 लाख मतदारांची संख्या निश्चित करण्यात आली होती. परंतु भ्रमताची वाढती लोकसंख्या पाहता हे शक्य नव्हते त्यामुळे ही मतदाराची संख्या आणि लोकसभा सदस्यांची संख्या या घटना दुरुस्तीच्या माध्यमातून व्यवस्थित करण्यात आली.

## 3. 42 वी घटनादुरुस्ती :-

ही घटना दुरुस्ती 1976 मध्ये करण्यात आली मागील 26 वर्षांच्या कालावधीत झालेल्या 42 घटना दुरुस्त्या पैकी सर्वात व्यापक आणि विवादास्पद घटना दुरुस्ती ही 42 वी घटना दुरुस्ती ठरली. ही घटना दुरुस्ती मुलभूत अधिकार अनुच्छेद 31-32, राज्याची मार्गदर्शक तत्वे अनुच्छेद 21-45-48, मुलभूत कर्तव्य तसेच केंद्रीय कार्यपालिका, संसद, न्यायपालिका, राज्य कार्यपालिका, उच्चन्यायालय, आशा व्यापक विषयांना अनुसरून ही घटना दुरुस्ती करण्यात आली. सरकार पक्षाकडून विकासाच्या मार्गावर आग्रेसर होण्यासाठी ही घटना दुरुस्ती आवश्यक असल्याचे स्पष्ट करण्यात आले. मात्र विरोधी पक्षाकडून यावर टिका करून राज्यघटनेचे लोकशाही स्वरूप नष्ट करून त्यात हुकुमशाही मार्ग अवलंबण्याच्या सरकारचा प्रयत्न असल्याची टिका करण्यात आली.

## 4. 44 वी घटनादुरुस्ती :-

ही घटना दुरुस्ती 1979 मध्ये करण्यात आली या घटनादुरुस्तीद्वारे राज्यघटनेतील अनुच्छेद - 22(4), यात संशोधन करण्यात आले. यात लोकसभा आणि राज्यविधान मंडळाचा कार्यकाळ निश्चित करण्यात आला. तसेच कोणत्याही राज्यात राष्ट्रपती राजवट लागू करण्याचा कालावधी 1 वर्षा वरून 6 महिन्यापर्यंत कमी करण्यात आला.

## 5. 73 वी घटनादुरुस्ती :-

भारतीय राज्यघटनेतील 73 वी घटनादुरुस्ती 1993 साली करण्यात आली. ही स्थानीक स्वशासनाच्या दृष्टिने अत्यंत महत्वपूर्ण घटना दुरुस्ती मानली जाते. भारतातील पंचायत राजव्यवस्थेचे नियोजन बंध संचलन तसेच त्याची नियमावली या संबंधीची विस्तृत माहिती घटना दुरुस्तीद्वारे समाविष्ट करण्यात आली. भारतातील पंचायतराज व्यवस्थेला घटनात्मक दर्जा याच घटना दुरुस्तीद्वारे बहाल करण्यात आला. या घटना दुरुस्तीद्वारे एक नवीन 11 वी सुची

## भारतातील जिल्हा मध्यवर्ती सहकारी बँक - एक दृष्टिक्षेप

पाऊलबुध्दे अनुराधा रामभाऊ

संशोधक विद्यार्थिनी

डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ,

प्रा. डॉ. अशोक कोरडे,

मार्गदर्शक

अर्थशास्त्र विभाग प्रमुख, एस. के. गांधी महाविद्यालय, कडा

प्राचीन काळापासून शेती व्यवसायाला अत्यंत महत्वाचे स्थान देण्यात आले आहे. आधुनिक औद्योगिक युगात जागतिक पातळीवर जास्त लोकसंख्या असलेल्या देशात प्रमुख व्यवसाय म्हणजे कृषी क्षेत्र आहे. भारतीय राष्ट्रीय उत्पन्नत कृषी क्षेत्राचा वाटा सर्वाधिक आहे. म्हणून भारतीय अर्थव्यवस्था कृषी क्षेत्रावर अवलंबून आहे.

कृषी क्षेत्राच्या विकासाबद्दल महात्मा गांधी म्हणतात की कृषी क्षेत्रामुळेच भारतातील आर्थिक सामाजिक समस्या दूर होतील. छ २० व्या शतकातील नोबेल पुरस्कार प्राप्त असणारे अर्थतंत्र गुन्नर मिझल यांनी आपल्या च आशियन ड्रामाछ ग्रंथात भारतासारख्या विकसनशील देशाचा आर्थिक विकासाची दिर्घकालीन लढाई कृषी क्षेत्र व ग्रामीण भाग यावर अवलंबून आहे हे स्पष्ट केले.

### भारतातील सहकारी बँक प्रणालीची पार्श्वभूमी :

भारतात सहकारी चळवळीच्या वाटचालीतील टप्पे तसेच ग्रामीण प्रश्नांची सोडवणूक सहकाराच्या सहाय्याने कितपत करता येईल हा प्रश्न मद्रास प्रांताच्या सरकारने केला. १८९२ मध्ये मद्रास सरकारने सर फ्रेडरिक निकोलसन यांना मद्रास प्रांतात शेतीसाठी कशा प्रकारच्या सहकारी बँका स्थापन करता येईल याचा अभ्यास करण्यासाठी युरोपमध्ये पाठविले. निकोलसन यांनी सन १९९५ मध्ये सादर केलेल्या अहवालात जर्मनीतील रायफेझन सहकारी संस्था भारतात स्थापन कराव्यात अशी शिफारस केली. सन १९०१ मध्ये भारत सरकारने सर एडवर्ड लॉ यांच्या अध्यक्षतेखाली एक समिती स्थापन केली. या समितीनेही रायफेझन प्रकारच्या सहकारी संस्था स्थापन करण्याची शिफारस केली. भारत सरकारने २५ मार्च १९०४ रोजी पहिली स्वातंत्र्य सहकारी पतपुरवठा संस्था (Co-Operative credit Societies act) हा कायदा संमत केला. या कायद्याने केवळ पतपुरवठा सहकारी संस्थाच (ग्रामीण व नागरी) स्थापन करण्याची संमती दिली. सन १९१२ मध्ये दुसरा सहकारी संस्था कायदा संमत करण्यात आला. त्यामुळे जिल्हा मध्यवर्ती सहकारी बँका स्थापन करण्यात सुरुवात झाली होती. सन १९१४ मध्ये सरकारने एडवर्ड मॅकलॅगन समितीची स्थापना केली. या समितीने सन १९१५ च्या अहवालात कृषी पतपुरवठ्याच्या समस्यांचा अभ्यास करून त्रिस्तरीय सहकारी संघटना निर्माण करण्याची शिफारस केली. सन १९४५ मध्ये श्री. आर.जी. सरैय्य यांच्या अध्यक्षतेखाली चसहकारी नियोजन समितीची स्थापना करण्यात आली. सहकारी चळवळीच्या इतिहासात प्रथमच सहकारी चळवळीने साध्य करण्याची उद्दिष्टे ठरवून दिली. त्यानंतर सन १९४९ मध्ये भारतीयांनी तसेच आशिया खंडातील पहिला सहकारी साखर कारखाना प्रवरानगरला श्री. पद्मश्री विठ्ठलराव विखे पाटील व श्री. धनंजयराव गाडगीळ यांच्या प्रेरणेनेच सुरु केली. सन १९५१ मध्ये आर.बी. आय ने ए.डी.गोरवाला यांच्या अध्यक्षतेखाली आखिल भारतीय ग्रामीण पतपाहणी समितीची स्थापना केली. गोरवाला समितीने केलेल्या अहवालात सहकारी चळवळीच्या ५० वर्षांच्या (सन १९०४ ते १९५४) अस्तित्वाचे मुल्यमापन केले. त्यानुसार प्रत्येक जिल्हयामध्ये एक मध्यवर्ती सहकारी बँक असावी असे धोरण ठरविण्यात आले. ठरविण्यात आलेल्या धोरणांच्या अंमलबजावणी दुसऱ्या पंचवार्षिक योजनेच्या (सन १९५५-१९६०) काळापासून सुरु करण्यात आली. सन १९६० मध्ये महाराष्ट्र राज्य सहकारी संस्था कायदा संमत करण्यात आला.

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## 4. Mineralogical and Physicochemical in Order to Assess the Potential Use in the Field of Ceramics

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### Abstract

The clay in the locality of Sangaré-Paul referred to as SP, has been the subject of a mineralogical and physical characterization in order to assess the potential use in the field of ceramics. Firing experiments were carried out on experimental bri-quettes at temperatures of 900°C, 1000°C and 1100°C after which physical tests and mineralogical analyzes were made on the cooked products. The results obtained from the mineralogical analyses show that the clay in the locality of Sangaré-Paul contains kaolinite, illite, quartz and feldspar, and when cooked, the presence of a new crystal phase is detected. From the granulometrical and physical tests, the material has a particle size spread with a plasticity index greater than 20%. Its activity is less than 0.75. It is kaolinite sandy clay with a low plasticity. The hydrogen potential (pH) measurement shows the weakly basic character of this clay. The technological parameters of experimental bri-quettes show that the percentage of water absorbed is less than 15%. The linear withdrawal of all experimental briquettes presents values less than or equal to 10%. The values of the mechanical resistances of the briquettes increase globally with the temperature not exceeding 10 MPa for the bending, but reaching 38 MPa for the compression. All these parameters, except the linear withdrawal, present optimum temperature at 1100°C. The clay material of Sangaré-Paul is suitable for the manufacture of bricks and tiles at 1100°C.

**Keywords:** Sangaré-Paul, Clay, Mineralogy, Ceramic

### Introduction

Clays have been used by man since the beginning of time. The natural abundance and immediate availability of clays explain their great uses over time. The peculiarity of this material is its capacity to have a plastic state with appropriate levels of water. This material also has the power to be shaped, to shrink, to harden after drying and to consolidate after firing, which allows the formation of a vitreous phase more or less important. This last discovery (consolidation by fire) was in the same way as the agriculture at the base of the first human civilization. Today, they are used as a minor constituent (paints, plastics, cosmetics, pharmaceuticals, etc.) as a



# Cardiological Advantages Of Stress Releasing Tool : A Review Study On Sudarshan Kriya

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## ABSTRACT

Stress is the outcome of increasing daily needs, food habits, changing behavioral patterns as well as thought processes in human being. Increasing luxurious daily needs, environmental pollution, advancing technology, climatic changes, puts an extra pressure on human body. Various tensions in human life leads to stress on every cell and tissue of human body. Such stress has lots of adverse effects on physiology, anatomy and psychology of a person. Sudarshan Kriya brings a natural rhythm in breathing which releases stress, tensions, and depression and also brings an effective control on emotions simultaneously by minimizing stress hormone. Large number of biochemical changes occur in human body including changes in the levels of Cortisol, Nor-adrenaline and Cytokinines in blood. Cortisol level in blood decreases upto negligible while Prolactin, a beneficial hormone, level has been found to increase. The blood lactate levels shown remarkable drop immediately after practicing Sudarshan Kriya. Significant drops in total Cholesterol and Low Density Lipoprotein LDL, as well as increase in High Density Lipoprotein HDL, were observed. Body Mass Index becomes normalized by regular practicing. Mild to moderate hypertension study group has shown reduction in Blood Pressure after practicing it daily. Sudarshan Kriya is taught in special programmes, conducted by Art Of Living Foundation worldwide for all ages. Present study discusses cardiological advantages of Sudarshan Kriya.

**KEY WORDS :** Cortisol, Nor-Adrenalin, Cholesterol, LDL, HDL, BMI, BP, Sudarshan Kriya.

## INTRODUCTION :

Since 1982, a specific process named Sudarshan Kriya is taught in well designed format of courses developed by internationally renowned organization in India, the Art Of Living Foundation Bangalore. People from more than 152 countries are today practicing this technique for stress releasing. For proper metabolism of human body oxygen is required which releases energy through respiration process. During breathing process oxygen is supplied to the cells in the body while carbon dioxide is removed as a waste. Breathing is organized by inhalation of oxygen and exhalation of carbon dioxide through voluntary action of chest muscles. Several studies have shown that rhythm of the breath is changed and gets disturbed due to stress and other metabolic disorders. Hence breathing is supposed to be the most important function to control the metabolic activities of the body. Breath forms a connective bridge between body and mind and thus the emotions. Sudarshan Kriya, is a rhythmic breathing technique which brings an effective control on emotions. Rhythmic breathing is a unique method for balancing the autonomic nervous system and influencing psychological and stress-related disorders and thereby improving biochemical metabolism of the body. The word Sudarshan means proper vision and Kriya means a purifying yogic action. Through the rhythmic breath we get a proper vision of who we really are. Sudarshan Kriya helps in experiencing rhythm of a Being and through the rhythms of



## संत जनाबाईच्या अभंगातील भावोत्कटता

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प्रस्तावना :-

वारकरी संप्रदायात अनेक संत कवयित्री होऊन गेल्या. सर्व संत कवयित्रीमध्ये जनाबाईचे स्थान वेगळे आहे. जनाबाईचे 350 अभंग श्री सकल संतगाथेमध्ये प्रसिद्ध आहेत. परभणी जिल्हयातील 'गंगाखेड' या खेडेगावात जनाबाईचा जन्म झाला. पाच-सहा वर्षांची जनाबाई असताना तिचे मायेचे छत्र हरपले. नामदेवांचे वडील दामाजी जनाबाईचा सांभाळ करतात. अनेक बरे-वाईट अनुभव ती पचवते. धीर गंभीरपणे जनाबाई स्वतःला नामदेवांच्या आणि विठ्ठलाच्या सेवेत गुंतवून घेते. संत नामदेवांच्या सहवासात ती स्वतःला धन्य समजते. नामदेवांचे कवित्व तिला मोहिनी घालते. विठ्ठल भक्तीची आस तिला लागलेली आहे. विठ्ठल भक्तीची आस तिला लागलेली आहे. विठ्ठल भक्तीचे द्वार तिच्यासाठी खुले होते. ती स्वतःला धन्य समजते. संत नामदेव तिचे आदर्श बनतात. 'नामयाची दासी जनी' असे त्या शीलतेने म्हणतात. त्यांचे उभे आयुष्य पंढरीत संत नामदेवांच्या घरी व्यतीत झाले. जनाबाईची अभंगवाणी मोठी रसाळ व भाव मधुर आहे. भावोत्कटता काठोकाठ भरलेली आहे. उदाहरणार्थ;

ये गं ये गं विठाबाई, माझे पंढरीचे आई ।  
भीमा आणि चंद्रभागा । तुझे चरणींच्या गंगा ॥  
इतुक्या सहित त्वा बा यावे । माझे रंगणी नाचावे ॥  
माझा रंग तुझिया गुणी । म्हणे नामाची जनी ॥

दळिता कांडीता गुज गाईन अनंता ।  
मी तो समर्थाची दासी । मिठी घालीन पायासी

अशी सौम्य, संयत व आर्त-उत्कृष्ट रचना जनाबाईची आहे. जनाबाई विठ्ठलाच्या जनाबाई विठ्ठलाच्या रूपातून प्रेमभाव रुजविण्याचा प्रयत्न करते. विठ्ठल प्रेमाचा भुकेला आहे. 'आळविता धाव घाली । ऐसी प्रेमाची भुकेली ॥' (श्रीसकल संतगाथा, 27) भिल्लीण बोरे चोखून चांगली बारे देवाला देते. देव तिची उष्टी बोरे मोठया आवडीने खातो. त्याठिकाणी तिच्या अतःकरणातील भाव शुद्ध आहे.

भिल्लीणीची फळे कैशी । चाखोनी वाहातसे देवासी ॥  
भावे तिची अंगीकारी । सर्वाहूनी कृपा करी ॥  
गुज वानरांसी पुरावे । राक्षसाते हो जिंकावे ॥

श्रद्धापूर्वक भावनेने केलेले कोणतेही काम पूर्णत्वास जाते हे जनाबाई आवर्जून सांगते. जनाबाईला आईची माया विठ्ठलाजवळ मिळते. त्याच्या भक्तीरंबात ती दंग होते. जीवनातील सर्व दुःखाचा तिला विसर पडतो.



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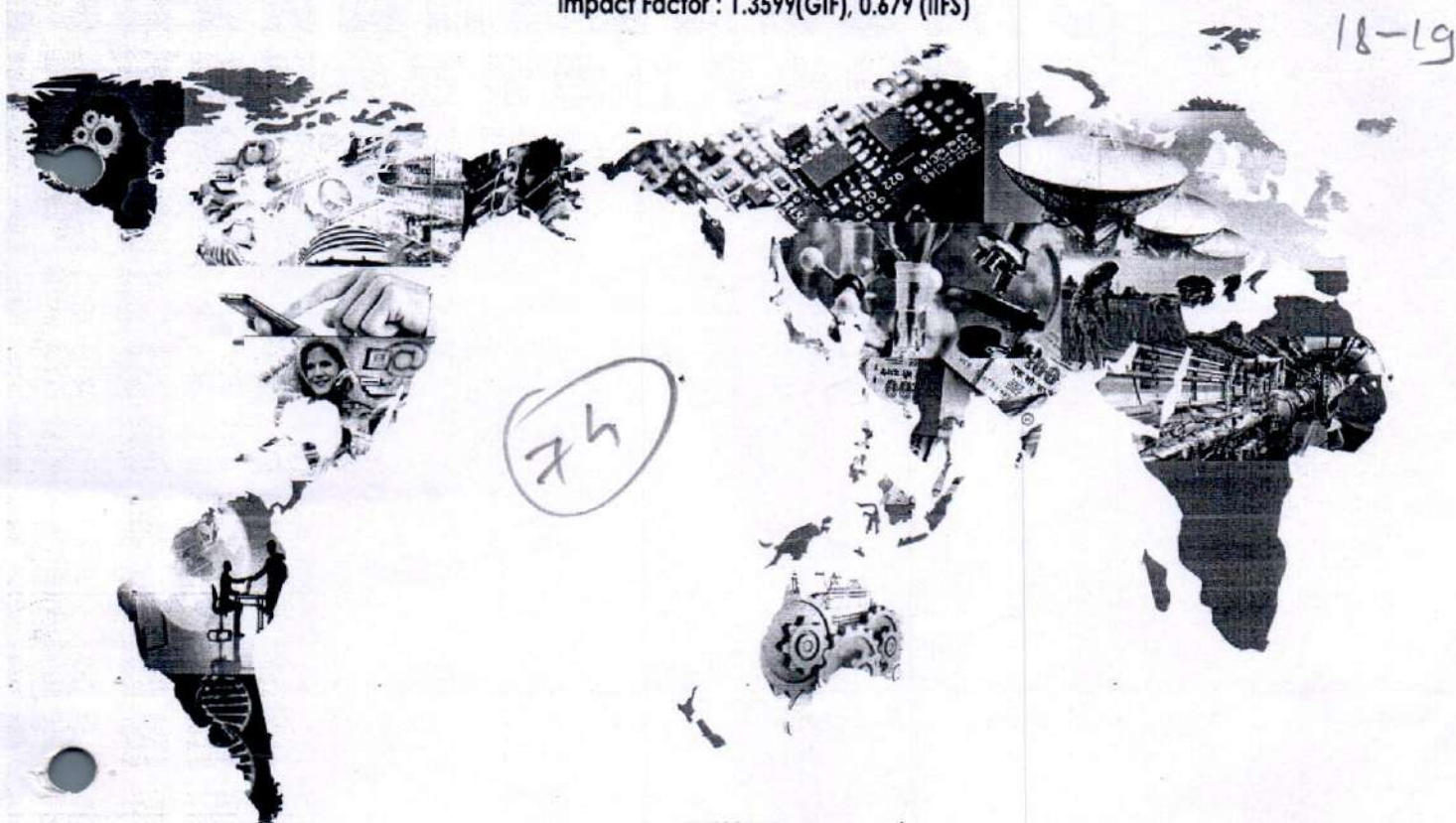
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**Diversity and Distribution of Aquatic Insects Fauna of Mehakari Water Reservoir  
Marathwada (M.S) India**

**Ramesh N. Abdar**

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**Abstract**

*The insects are the most diversified group and plays and major role in lentic as well as lotic food chain of fishes and other animals such as birds. From the known species of insects, near about ninety percent of all species of animal kingdom on the earth planet is insects. Insects are also being the indicators of human interference and water pollution of the water bodies. The present investigation was done where ecology of aquatic insects conducted during the period of one year June 2016 to May, 2017 The four sampling sites were selected for the sampling water with aquatic insect nets of various sizes. Total 1064 aquatic insects were collected during the study time belongs to 5 orders and 14 families. It is recorded that during the spring seasons insect's diversity is more.*

*Key words: Aquatic Insect, Species Diversity, Mehakari Water Reservoir Marathwada (M.S) India*

**Introduction**

The water is the unique component of nature plays an important role in the life from molecules to man, hence since the time memorable the great human civilization has originated. About seventy-one percent of earth surfaces covered with water. The water spread area in India is about 4.5 million hectares. The major habitats in fresh water include the lotic bodies (Rivers and streams), lentic bodies (Ponds and lakes) ground water zones and of ecotonal water bodies where aquatic habitats meet. (E.g. wet lands, marshes and estuaries) (Palmer et. al. 1997). The fresh water aquatic insects inhabit reservoir, streams, and lakes reservoirs. Insect surpasses all other both in number of their ecological distribution. They undergo an adaptive radiation for aerial, aquatic, terrestrial, and parasitic environment with every considerable ecological niche. Man and Insects have been at war for the same food and same place to live. They attack man and his domestic animals by causing disease, they destroy his property and his crop hence they are very great importance to human. Insects are dominating animals in the world .they occur all over the globe from Antarctica to the tropics ,in air, in water even in deep sea, on land even in deserts, in caves and on the mountains. In terms of mega biodiversity India is ranked 9<sup>th</sup> position in world (Mittermeier & Mittermeier, 1997). Aquatic insects show a multitude of cleaver refinements. Almost all the more important orders of insects are represented in the wet elements. Only a few species spend their lives uninterruptedly in water. Some live out of water only as pupae. But major pass through their developmental stages in water and adult respire in air. The water quality is also dependent on the presence and absence of some insects in the water bodies. Some insects in the water bodies either it is polluted or non-polluted.

**Material and Method**

The Mehakari Water Reservoir from Marathwada Selected for the present investigation it is located in the Eastern side of Western Maharashtra on west of Ashti Tahasil Beed District. It is large minor project with catchment area about 150sq.miles situated at about 450 meters of sea level located at 75.00<sup>o</sup> 30 (E) longitude and 18<sup>o</sup> 50<sup>1</sup> (N) Latitude. It is an irrigation project on

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transformation, by demonstrating how the nationalistic fervor in rural India in the 1930s blended completely with age-old, deep-rooted spiritual springs within and helped rediscover the Indian soul." [1977: 378]

#### REFERENCES

- Rao, Raja. Introduction to Kanthapura. London: George Allen and Unwin. 1938. Bombay: Oxford University Press, 1947.
- Iyengar, Srinivas, K. R. Indian Writings in English. 2nd ed. New Delhi: Asia Publishing House, 1973.
- Parameswaran, Uma. A Study of Representative Indo-English Novelists. New Delhi : Vikas Publishers, 1998.
- Shymala, A. Narayan. Raja Rao : Man and his Works. New Delhi: Sterling Publishers, 1988.
- Williams, H. M. Literary Expression of Indian Nationalism, 1919-47. Delhi: Chanakya Publishers, 1972.
- Bhagavad Gita, Chapter III [nd : np]
- Naik, M. K. 'Gandhiji and Indian Writing in English,' in M. K. Naik ed. Critical Essays on Indian Writing in English. Dharwar: Karnataka University Press, 1968, rev. 1972, 1977.

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## MANAGEMENT PRACTICES AND RURAL DEVELOPMENT

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#### ABSTRACT

India has been witnessing a blinding pace of growth and development in recent times. There is talk of the country leapfrogging into the league of developed nations sooner than later. But this growth has raised concerns from sundry quarters as regards its basic texture and health. Experts are now calling for "sustainable development" and the term has gained currency in the last few years. In spite of fast growth in various sectors, Agriculture remains the backbone of the Indian economy. This paper attempts compare the sustainable agriculture system with the traditional system and current system in practice across the dimensions of ecological, economic and social sustainability. It also tries to give long term solutions to solve the problems plaguing the system so that sustainable practices can be promoted and practiced.

**Keywords:** Sustainable Development, Agriculture, Ecological Sustainability. Economic Sustainability, Social Sustainability

#### Introduction:

The Rural development generally refers to the process of improving the quality of life and economic well-being of people living in relatively isolated and sparsely populated areas. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is considered as a "Silver Bullet" for eradicating rural poverty and

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## महाराजा सयाजीराव गायकवाड यांचे वैचारिक

### साहित्य : एक अभ्यास

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### प्रास्ताविक : -

महाराजा सयाजीराव गायकवाड हे बडोदा संस्थानचे राजे होते. १८८५ ते १९३९ हा कालखंड सुवर्णअक्षरांनी लिहून ठेवावा एवढा अनेक दृष्टीने महत्त्वपूर्ण आहे. महाराजांनी प्रजाहित आणि राज्याची सुख-समृद्धी हाच एकमेव संकल्प करून त्याचा पाठपुरावा केला. याचा परिणाम असा झाला की, पहिल्या दोन दशकांतच त्यांनी समाजहिताची प्रचंड कामे हाती घेऊन पूर्णत्वास नेल्यामुळे अखिल भारताचे लक्ष बडोदे संस्थानाकडे लागले. महाराज सयाजीराव गायकवाड यांची कीर्ती एक पुरोगामी आणि प्रजावत्सल राजा म्हणून भारताता सर्वत्र पसरली. यामुळे भारतीय प्रदेशांमध्ये संस्थानांमध्ये बडोदा संस्थानाचे वेगळेपण आणि अनन्यसाधारण सर्वत्र उठून दिसते. महाराजांनी शिक्षण, समाजसंवर्धन, जनजागृती, संस्कृती इत्यादी घटकांना अधिक महत्त्व दिले. ग्रंथालय चळवळ, स्त्री शिक्षण, ग्रंथप्रसार या गोष्टींवर अधिक प्राधान्य दिले. प्रत्येक गावात एक शाखा आणि एक ग्रंथालयाची स्थापना केली. एवढेच नाही तर फिरत्या ग्रंथालयाचा जनतेसाठी योजना सुरू केली. सर्वसामान्य माणसांपर्यंत उत्तमोत्तम ग्रंथ पोहोचते केले.

महाराजा सयाजीरावांचे मराठी भाषेवर नितांत प्रेम होते. असे असले तरी त्यांनी इतर भाषांचा अजिबात तिरस्कार केला नाही. १९०९ साली बडोदा शहरात त्यांनी मराठी साहित्य संमेलन भरवले. संमेलनाच्या अध्यक्षपदावरून बोलताना ते म्हणाले, भाषा ही समजाच्या प्रगतीची व विचारांची तसबीर आहे. भाषेवरून राष्ट्राची प्रगती कळते. भाषेचा विचार प्रांतिकदृष्ट्या न करता राष्ट्रीयदृष्ट्या करा हा महत्त्वपूर्ण विचार भाषेच्या बाबतीत त्यांनी मांडला. हिंदी, इंग्रजीचा तिरस्कार न करता त्या भाषांनाही तेवढेच महत्त्व त्यांनी दिले. एक द्रष्टे राजे म्हणून त्यांची ख्याती होती. पुरोगामी विचाराचा हा राजा अष्टपैलू व्यक्तीमत्त्वाचा होता. राज्याचा सर्वांगीण विकास घडून आणण्यासाठी शिक्षण ही पहिली पायरी आहे. स्त्री शिक्षणाला अधिक महत्त्व दिले. स्त्री शिकली तर सामाजिक जीवनात आमूलाग्र बदल होती. सार्वत्रिक शिक्षणाला प्राधान्यक्रम दिला.

महाराजा सयाजीराव गायकवाड यांनी आपल्या कारकिर्दीत साहित्य-संस्कृतीबरोबरच प्रशासकीय, सामाजिक आणि राजकीय विषयांकडे अधिक लक्ष दिले. समाजहितासाठी विविध कायदेअंमलात आणले. बाल विवाहाविरोधी कायदा, विधवा सुधारणा कायदा, स्त्री शिक्षण सुधारणा कायदे असे कायदे करून अंमलात आणले.

जातीप्रथा, शिवाशिव आणि उच्च-नीचतेची भावना मुळातून उपटून टाकण्यासाठी महाराजांनी अतोनात प्रयत्नांची पराकाष्ठा केली. गोर-गरिबांच्या मुलांच्या शिक्षणासाठी मदत केली. त्यांना स्कॉलरशीप दिल्या. समाज उन्नतीसाठीच आयुष्य वेचले.

महाराजांकडे जीवनाच्या विविध अंगांकडे पाहण्याची विलक्षण अशी दृष्टी होती. राज्याची सामाजिक, सांस्कृतिक आणि साहित्यिक हित कसे जपले पाहिजे याचे भान त्यांना होते. महाराजांनी खऱ्या अर्थाने





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## **Dr. Babasaheb Ambedkar : Farmer and financial policy play an important role**

\* Dr. A.M. Korade \*\* Prakash T. Kharat

### **Introduction :**

Indian's heritage of agriculture has been inherited from ancient times. The remains of the ancient civilization of India known as the Indus culture are seen in social and cultural system. The maternal culture of Indus culture does not seem to be similar in the way it has acquired and progressed in the later years of development in India. The change of Indian society and the system has changed in alphabetical order the impact of this change also affects the agricultural economy. Raja Umrao, Bhoswam assumed the responsibility of agricultural land and agriculture to work as a farmer in the field of agriculture. This important agricultural economy got secondary status in such a way that the agriculture system which was the ear of the economy of Sindhu culture. The erosion of agricultural economy continued to prevail. In 1823 Mahatma Phule tried to solve the problems of farmers by taking care of the chronology of the exploitation of the farmers, especially in the modern era social rearmers who conducted a systematic study of Indian society and caste in which Mahatma Phule and Dr. Babasaheb Ambedkar took care of the exploitation of the farmers. Depicted holding the poor farmers have reported very appreciative.

### **Objective :**

The objective of the financial philosophy of Dr. Ambedkar is social justice for the farmers and the laborer of the country is hidden from the level of interest in this article Dr.

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\* Research Guide, Dept. of Economics, S.K. Gandhi College Kada, TA. Ashti, Beed

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\*\* Research Student, Thoughts of Mahatma Phule & Dr. Babasaheb Ambedkar, (Eco.) Dr. B.A.M.U., Aurangabad

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१९६० नंतर ग्रामीण साहित्याचा प्रवाह मराठी साहित्यात निर्माण झाला. ग्रामीण साहित्याचा प्रवाह लोकसाहित्याशी जवळिक सांगणारा आहे. ग्रामीण साहित्याची नाळ लोकसाहित्याशी अधिक जुळते. ग्रामीण साहित्यातील कसदार साहित्य कथा, कादंबरी, कविता यांचा लोकसाहित्यातील लोककथा गीते, लोकगीते यांच्याशी नाते जोडता येऊ शकते. ग्रामीण साहित्य लिहिणारी साहित्यिक मंडळी ही ग्रामीण जीवनानुभव घेतलेली होती. ग्रामीणतेवरती त्यांचा पिंड पोसलेला होता. ग्रामीण परिसर, तेथील संस्कार, बोलीभाषा यातून ग्रामीण साहित्याची जडणघडण झाली. ग्रामीण साहित्याचा लोकसाहित्याशी झालेला हा आविष्कार मौखिक परंपरेने चालत आलेल्या लोकसाहित्याशी जोडता येऊ शकतो. याविषयी डॉ. मधुकर वाकोडे म्हणतात की, "आधुनिक काळातील सर्वच ग्रामीण साहित्याचा लोकसाहित्याशी संबंध जोडता येत नाही. मात्र उत्तराधुनिक काळातील मोजकी ग्रामीण कथा, कविता लोकजीवनाच्या विविध अंगांना नी लोकसाहित्यातील विविध पैलूंना स्पर्शून जाणारी असल्याने त्या निवडक ग्रामीण साहित्याचा लोकसाहित्याशी अनुबंध असल्याचे जाणवते."<sup>१</sup> डॉ. मधुकर वाकोडे यांचे मत यथार्थ असले तरी आजच्या काळातील अनेक साहित्यिक दर्जेदार साहित्य निर्मिती करत असून लोकसाहित्याशी त्यांचा अनुबंध असल्याचे दिसते.

लोकसाहित्याचा पसारा अतिशय मोठा आहे. परंपरा, चालीरिती, श्रध्दा, धर्मधारणा इ. मधून लोकमानस प्रकट होते. प्रतिके, प्रतिमा, मिथके, संकेत, रिवाज, विधी इत्यादीमधून लोकसंस्कृतीचे दर्शन घडते. लोकसाहित्य ही अनामिकांची निर्मिती असते. कविवर्य सोपानदेव चौधरी म्हणतात,

"काव्यसंपदा कुणाची

इथे नाही नाव गाव ।

इथे सारे अनामिक

उरे मनातला भाव ॥"<sup>२</sup>

सोपानदेव चौधरी मताप्रमाणे साहित्य ही अनामिकांची निर्मिती असून तो समूह मनाचा गजर असतो. ग्रामीण साहित्य लिखित साहित्य आहे. मराठीत १९२५ पासून ग्रामीण साहित्य लेखनास सुरुवात झाली. 'मीठभाकर', 'सुगी' हे ग्रामीण कवितासंग्रह होते. या कविता इंग्रजीतील 'पॅस्टोरल पोएट्री' यांच्याशी नाते सांगणारी आहे. या कवितांतील प्रतिके, प्रतिमा लोकसाहित्याशी जवळिक साधणारी आहेत. तिची पाळंमुळं लोकसाहित्यात सापडतात. प्रा.डॉ. नागनाथ कोतापळे म्हणतात, "ग्रामीण जीवनातून फुलणारे, ग्रामीण वास्तवातून साकार होणारे साहित्य ते ग्रामीण साहित्य. कृषीकेंद्रितता हाच ग्रामीण साहित्याचा पाया आहे. निसर्गसन्मुखत्व हे ग्राम संस्कृतीचे लक्षण आहे."<sup>३</sup> ग्रामीण साहित्य हा व्यक्तीमनाचा आविष्कार असला तरी

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## आधुनिक महाराष्ट्रातील कामगार चळवळ

डॉ. एन. डी. नाईक

श्री पंडितगुरु पार्डीकर महाविद्यालय, सिरसाळा  
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इतिहास विभाग, एस. के. गांधी महाविद्यालय  
कडा ता. आष्टी जि. बीड

### प्रस्तावना

युरोपातील औद्योगिक क्रांतीने भांडवलदार व्यवस्थेबरोबरच कामगार वर्गालाही जन्म देऊन विषम वर्ग व्यवस्था निर्माण केली. या क्रांतीने युरोपातील समाजजीवन ढवळून निघाले. अनेक स्थित्यंतरे घडवून आणली. औद्योगिक क्रांतीने मध्ययुगाचा अंत घडवून आणला म्हणून आधुनिक युग अवतरले. नव्या मूल्यांना महत्त्व आले. तळागळातल्या वर्गांत जागृती निर्माण झाली. शोषणाला वाचा फुटली. न्याय हक्क मिळविण्यासाठी संघटन शक्तीची उपयुक्तता लक्षात आली. त्यामुळे समान हितसंबंध गुंतलेले कामगार एकत्र येऊन व्यवस्थेवर दबाव निर्माण करू लागले. समूहशक्तीच्या जाणीवेतून महानायक मार्क्स आणि एंगल्स यांनी भांडवलशाहीचे उच्चाटन करणे राजसत्तेला काबीज करून वर्गविहीन समाजरचना निर्माण करण्याचे ध्येय उराशी बाळगले आणि या ध्येयपूर्तीचे साधन म्हणून त्यांनी कामगार संघटनेकडे पाहिले. १९१७ च्या रशियन राज्यक्रांती नंतर सान्या जगामध्ये कामगार चळवळी निर्माण झाल्या. त्यास भारत ही अपवाद नक्ता.<sup>१</sup>

१९ व्या शतकात ब्रिटीश सत्तेची स्थापना झाली आणि भारतीय उद्योगधंद्याचा न्हास झाला. बेकार कामगार शेतीकडे किंवा मजुरी करण्यासाठी शहराकडे वळाले आणि कारखाने गिरण्यांमध्ये कमी वेतनावर काम करू लागले. मुंबईत ५० व्यापारी एकत्र येऊन ५ लाख भांडवलाची संयुक्त स्टॉक कंपनी काढली आणि ११ जुलै १८५१ रोजी महाराष्ट्रात पहिली कापड गिरणी सुरु केली. १८९० पर्यंत १३७ कापड गिरण्या सुरु झाल्या. पहिले महायुद्ध सुरु होईपर्यंत महाराष्ट्रात २६४ गिरण्यांची स्थापना झाली होती. **RESEARCH JOURNEY**

### संशोधनाची उद्दिष्टे

१. महाराष्ट्रातील कामगार चळवळीचा आढावा घेणे.
२. महाराष्ट्रातील कामगार चळवळीच्या कार्याचे विश्लेषण करणे.

भारतात ब्रिटीश सत्तेची स्थापना झाल्यानंतर युरोपातील घडामोडीला येथील कामगारांवर परिणाम होणे अपरिहार्य होते. परंतु तरीही युरोपीयन कामगार संघटनेच्या लढाऊ प्रवृत्तीचे प्रतिबिंब महाराष्ट्रीय कामगारांवर पडण्यास बराच काळ लागला.<sup>३</sup> १८७५ पासून कामगार संघटनेच्या दिशेने काही पावले पडली. कारखान्यात काम करणाऱ्या कामगारांचे हाल कमी करण्यासाठी व विशेषतः स्त्री कामगारांची आणि बाल कामगारांची परिस्थिती सुधारली जावी म्हणून सरकारला विनंती करणे हे त्याच्या कार्याचे उद्दिष्ट होते. परंतु गिरणी मालकांनी सरकारला हाताशी धरून कामगारांचे प्रयत्न हाणून पाडले. इ.स. १८९० मध्ये नारायण मेघाजी लोखंडे या सत्यशोधक गृहस्थांच्या अध्यक्षतेखाली 'मुंबई गिरणी कामगार संघटना' स्थापन झाली. या संघटनेच्या स्थापनेत अनेक मोठी मंडळी अग्रेसर होती. त्यात नारायण सुखदेव, गेणू बाबाजी, रघु भिकाजी, विठ्ठलराव कोरगावकर, रामचंद्र शिंदे, नारायण पवार, कृष्णाजी अर्जुन इ. या संघटनेकडे आपले नियम, पैसा नक्ता तरीही भारतातील ही पहिली कामगार संघटना बराच काळ कार्य करत राहिली.<sup>४</sup>

### फॅक्टरी कमिशन

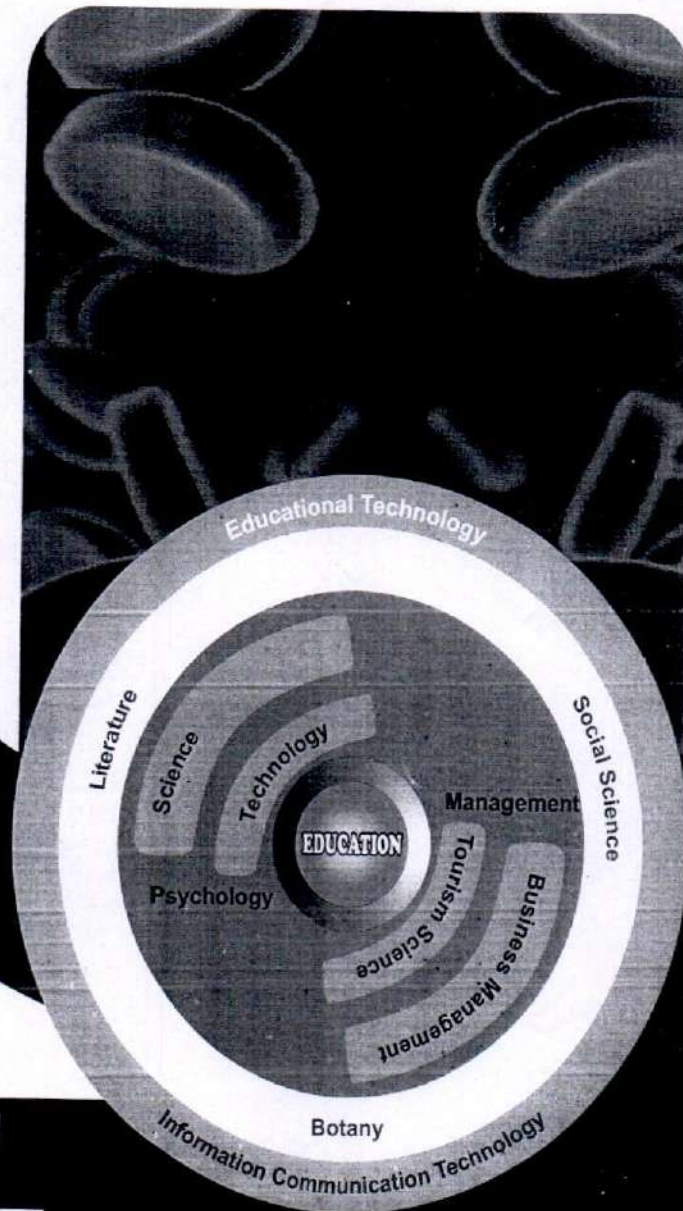
मुंबईतील कामगार संघटीत नसल्यामुळे त्यांना कमी वेतनावर राबवून उत्पादन काढले जाई. गिरणी मालक जाडेभरडे कापड स्वस्तात खपवत असत. त्यांच्या तुलनेत मॅचेस्टरहून आणलेले साधे कापडही गिन्हाईकाला महाग

18-19  
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#### **Abstract**

*The Birds are glorious, beautiful animal and always fascinated to human beings with beautiful plumage and autistic behavior. Wetland destruction and degradation in the region are reducing the diversity of wetlands and population of many birds' species. The models of freshwater food webs assume that fish occupy the top trophic level. These are the most important biotic determinant of trophic abundance lower down in the food web (Vannote et al. 1980, Fry 1991, Well Born et. al. 1996). However, many terrestrial predators, including many bird species, feed on aquatic system and therefore are components of trophic level in aquatic food webs (Steinmetz 2003). Adaptations in birds to life around water are related to feeding style (Storer 1971) traditionally such morphologically distinct groups have been given taxonomic and evolutionary status. The paper is a record of birds seen in the Sina dam India. Thirty-nine Species of birds belonging to 5 orders and 15 families were recorded during a period of one year during June 2016- May 2017*

**Keywords:** *Wetland Avifauna, Sina dam, District Ahmednagar.*

**Introduction:** Birds have been a source of fascination and inspiration of people since the dawn of history. Birds have also influenced our culture in spiritual way, as reflected e.g. by the Phoenix featured in mythology of ancient civilizations. Birds occupy an important position in the animal kingdom especially in relation to man. Economically, they are both useful and harmful to human interest. The models of freshwater food webs assume that fish occupy the top trophic level. These are the most important biotic determinant of trophic abundance lower down in the food web (Vannote et al. 1980, Fry 1991, Well Born et. al. 1996). However, many terrestrial predators, including many bird species, feed on aquatic system and therefore are components of trophic level in aquatic food webs (Steinmetz 2003). Based on their behaviors water birds are grouped into several categories Waterfowl, Diving birds, Wading birds, Shore birds, Gulls and Terns (Eleanor C. Foerste 2000). The most common diving birds seen locally are the Common Coot. It feeds aquatic plants, including hydrilla and insects. A variety of ducks that are commonly found on the water, they are belonging to waterfowl. Wading birds are especially adapted to the dry weather and feed on fish that are trapped in shallow water pool. The Great blue heron is one of the largest wading birds; this bird has great eyesight and spears fish with its sharp bill. Large wading birds including storks, ibis, spoonbill and flamingoes wade in shallow water or across mud flats, wet fields Black Necked Stilt is a distinctive shore bird with its black and white feathers and pink legs. It has counter shading, similar to killer whales, with black on the top of the head and black and white on the belly. They peck at food at the shoreline and among vegetation feeding on small aquatic insects, fish, reptiles and amphibians. The Sina Dam is an irrigation project with an earthen dam on river Sina near village Nimgaon Gangarda. The river Sina is a tributary of the river Bhima in a Krishna basin. It irrigates about 1900-hectar land in Karjat Tahsil at Ahmednagar district, Ashti Tahsil of Beed district. The Dam Sina is located at an altitude of 18<sup>o</sup>.50' (N) and longitude 74<sup>o</sup>.55' (E). Present dam is extremely productive in terms of food; plants and animals the aquatic weeds provide support, shelter and oxygen to other organisms such as fishes, aquatic birds and play an important role in biological production so it is signal of great diversity of fishes as well as birds.

**Methodology:** Regular monthly survey was carried out for the observation of aquatic birds for the period of two years. The record of observations was maintained for the selected area of the Sina dam near Nimgaon Gangarda, Sangavi Chaval, Nimgaon Bodkha and Sangavi Thete. They were identified



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Prelim & Content

Proceeding

**BIOACCUMULATION OF HEAVY METAL (LEAD NITRATE) IN TISSUES OF FRESH WATER CRAB BARYTELPHUSA GUERINI****Jadhav S. S.**

Dept. of Zoology, Smt. S. K. Gandhi Arts, Amolak Science and P.H. Gandhi Commerce College, Kada, Tq. Ashti, Dist. Beed.(M.S.)

**Abstract**

The fresh water crab, *Barytelphusa guerini* is a key-species in Marathwada region having good nutritional value and the crab is constantly exposed to heavy metal pesticides, which are used extensively to control agricultural pests. Pesticides of heavy metal salts are common pollutants of freshwater ecosystems where they induce adverse effects on the aquatic biota. Acute toxicity tests were conducted against the pesticides Lead nitrate. Higher and lower sublethal concentration of Lead nitrate were found to be 1.69 and 1.27 ppm respectively for 96 h. It is concluded that the accumulation of heavy metal in the hepatopancreas is found to be exponential in an environment of heavy metal which is commonly used as biocides and fertilizers. Pattern of accumulation in tissues of, *Barytelphusa guerini* Hepatopancreas > Gills > Muscle.

**Keywords:** Lead nitrate, *Barytelphusa guerini*, Godavari River, sublethal concentrations.

**Introduction:** The natural aquatic systems may extensively be contaminated with heavy metals released from domestic, industrial and other man-made activities Conacher *et al.*, (1993). Heavy metal contamination may have devastating effects on the ecological balance of the recipient environment and a diversity of aquatic organisms Farombiet *al.*, (2007). Thus, determination of harmful and toxic substances in water sediments and biota will give direct information on the significance of pollution in the aquatic environment Hugget *et al.*, (1973). In aquatic ecosystem, heavy metals are considered as the most important pollutants, since they are present throughout the ecosystem and are detectable in critical amounts. Heavy metals are non-biodegradable and once discharged into water bodies, they can either be adsorbed on sediment particles or accumulated in aquatic organisms. Crab may absorb dissolved elements and heavy metals from surrounding water and food, which may accumulate in various tissues in significant amounts and shows toxicological effects at critical targets Conacher *et al.* (1993). Edible crab are often contaminated with heavy metals as a result of agricultural technology, industrial pollution, sewage drainage and other sources, which could affect human health and cause chronic diseases, Craig and Overnell, (2003). The heavy metals, being conservative in nature have the maximum probability of biomagnifications, when they are transferred to the human beings through the various members of different trophic levels in the food chain. Human beings are affected negatively as a result of their accumulation. The bioaccumulation in few crustaceans has been studied Lyla and Khan (2011), Sreenivasan *et al.*, (2011), Chourpagarand Kulkarni (2011), Kamaruzzaman *et al.*, (2012), Shaikh (2014) and Chourpagar *et al.*, (2015). *Barytelphusa guerini* is one of the important fishery commodities in Marathwada. This species is a very popular food and has a high commercial value, and it is extensively used in aquaculture practices. Their distribution was recorded in the present sampling site (Dharmabad) which is situated along the Godavari river, the state of Maharashtra. Their feeding behaviour will lead to a higher accumulation of toxic metals in their body parts which are biomagnified through food chain. They have limited territorial ranges and are large enough to provide ample tissue for chemical analysis Ryan, (2003). Various studies have been carried out on heavy metal accumulation in *Barytelphusa guerini* but similar studies from Godavari river waters on this very species are still scanty. Hence, the present research was conducted to examine the bioaccumulation level of selected heavy metals in various parts of fresh water crab (*Barytelphusa guerini*) sampled from Dharmabad, Godavari river, the state of Maharashtra.

Vaidya V. V.

Dept. of Zoology, S. K. Gandhi Arts, Amolak Science College, Kada, tq. Ashti, Dist. Beed. (M.S)

**Abstract**

There are increasing concerns over the environmental implications of metal concentrations in the surrounding soils. Earthworms are regarded as a model organism for evaluation of terrestrial environmental pollution. The biochemical responses in the earthworms, *Perionyx excavates*, exposed to polluted soils were investigated. In the present study a megascolecid worm *Perionyx excavates* having approximately equal size (10cm long) and weight (3gm) were exposed for 5 days separately to lower (60mg/kg) and higher (150mg/kg) sublethal concentration of copper sulphate. A correlative change in the activities of the enzyme catalase and xanthine oxidase estimated in the skin, intestine, and nephridia of *Perionyx excavates*. The activity pattern of catalase and xanthine oxidase measured in the present study indicates that there is an enhancement in its activity in copper sulphate treated earthworm, and increased in its activity is observed through experimental span, with maximum activity in nephridia, followed by skin and intestine.

**Keywords:** *Megascolecid, nephridia, catalase, xanthine oxidase activity, copper sulphate.*

**INTRODUCTION:** The interaction of toxic material with living matter generally disturbs enzymecatalyze reactions. Any kind of disturbance in the activity of animal during chemical toxicities will be reflected through changes in the activity pattern of enzymes. Therefore the enzyme studies would be useful and form a type of meaningful biochemical indices of toxicant action. A number of reports available on metal induced enzymological alternations in several animals Kondekar, (1998); Booth *et.al.*, (1998) Free radicals can define as molecules or molecular fragments with an unpaired electron in their outer orbit. The free radicals in cells, therefore, are no more biological curiosities but occur in the oxido-reductions essential of usable energy Kehrler, (1993); Byungpal, (1994). Catalases are antioxidative enzymes. Antioxidative plays the role of blocking the process of free radical production and oxidative stress, Byungpal, (1994); Halliwell *et al.*, (1995). Catalase is manganese containing enzyme functions to rapidly dismutase H<sub>2</sub>O<sub>2</sub> to water and oxygen. In the present study an attempt has been made to study changes in anti oxidative enzyme in different tissues skin, intestine and nephridia of earthworm *Perionyx excavates* after exposure to copper sulphate. The chemical reactivity of free radicals is usually high. Free radicals are capable of damaging chemical constituents of the membranes resulting in deleterious biological effects (Mason, 1979). The free radicals in cells, therefore, are no more biological curiosities but occur in the oxido-reductions essential of usable energy (Kehrler, 1993). One potential source of oxygen free radicals is the enzyme xanthine oxidase. It is the most free radicals producing enzyme, which generates O<sub>2</sub> during the reduction of oxygen to H<sub>2</sub>O<sub>2</sub> (Jaitovitch *et.al.*, 2000). In the present study an attempt has been made to study changes in oxidative enzyme in different tissues skin, intestine and nephridia of earthworm *Perionyx excavates* after exposure to zinc sulphate.

**MATERIAL AND METHODS:** The earthworms *Perionyx excavates* were collected from an upland non-irrigated field, which had no record of input of agrochemicals. They were maintained in their habitat soil for 10 days with adequate provision of food (10% organic matter, cow dung + leaf litter), moisture (20%) and temperature (25°C). Earthworms having approximately equal size (10cm in length) and weight (3gm) were exposed for 5 days separately to higher and lower sub lethal concentrations of copper sulphate in soil. The study was carried out in plastic culture pots under laboratory conditions following the protocol of, Panda and Sahu (2002). The pesticide was chosen on the basis of its extensive use in this area.

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## ओवी गीतातील स्त्रियांचे भावविश्व

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ओवीगीत हा प्रकार ग्रामीण भागातील स्त्रियांमध्ये खूप लोकप्रिय आहे. जात्यावर बसलं की ओवी ओठांवर येते. इतके ओवी आणि स्त्रीचे घट्ट नाते आहे. दैनंदिन कामातही अनेकदा स्त्रिया गाणी, ओव्या, उखाणे म्हणतात. त्याने त्यांचे श्रम हलके होते. विरंगुळा मिळतो. अशिक्षित स्त्रीचं हे लेणं मोठं लोभसवाणं आहे. जात्यावरच्या ओव्या खूप सुंदर व भावनात्मक आहेत. मानवी जीवनातील प्रत्येक नातं किती सुंदर देखणे हे त्यांच्या ओवीगीतातून समजते. त्यात समयसूचकता असते. पुढील पिढीसाठी एक ऊर्जास्रोत म्हणून ही ओवीगीते आगळीवेगळी ठरतात. सानेगुरुजी म्हणतात, “स्त्रियांनी संपूर्ण आत्मा या गीतात ओतला आहे.”<sup>१</sup> याचा अनुभव स्त्रीगीताचा आस्वाद घेताना येतो. स्त्री जीवनातील सुखदुःखे, वात्सल्य, आंतरीचा उमाळा, ओवीतून ओसंडून वाहताना दिसून येतो.

ओवीगीतातील भाव मनाला गुंगवतो. याविषयी श्रीराम कऱ्हाळे म्हणतात की, “स्त्री मनातील भाव-भावना, सुख-दुःखे यांचे दर्शन स्त्री गीतांमधून आपल्यापर्यंत येते. ओवीगीतांतील भावदर्शनामुळे ओवीगीतांनी मराठी मनावर एक भूरळ टाकली आहे. मानवी मनाशी चटकन पकड घेणाऱ्या या गीतांमध्ये स्त्री जीवनाचा व स्त्री जीवनाशी संबंधित असलेल्या एकूणच अनुभवांचा सहजपणे आविष्कार झालेला आहे.”<sup>२</sup> श्रीराम कऱ्हाळे यांचे मत अगदीच योग्य वाटते कारण स्त्री मनातील अनेक अनुभवांचा, भावभावनांचा परिपोष ओवीगीतातून दिसून येतो. हृदय पिळवटून टाकणाऱ्या या ओव्या आहेत. जात्याच्या साक्षीने गायिलेल्या भावनघन अशा ओवीगीतांची विपुल संख्या स्त्रीगीतात ओतप्रोत भरलेली आहे. आशयगर्भित या ओव्या स्त्रीला जीवन जगण्याची उभारी देतात. आई-बाप, सासु-सासरे, भाऊ-बहिण, पती, दीर, नणंद, भावजय व नात्यातील इतर व्यक्तींना ती ओवी गीतातून हळुवारपणे गुंफते. स्त्रीच्या विविध भावभावनांचा आविष्कार ओवीतून होतो. याविषयी डॉ. शरद व्यवहारे म्हणतात, “ओवीगीते म्हणजे स्त्री लोकतजीवनाची भावगंगा आंतरीच्या उमाळ्याने, जिवाच्या जिव्हाळ्याने ओथंबून वाहताना दिसते. अशा या भावगंगेत डुंबण्याचा एक प्रकारचा आनंद आपल्याला ओवीगीतांचा आस्वाद घेताना मिळतो.”<sup>३</sup> डॉ. शरद व्यवहारे यांच्या मतानुसार ओवीगीतातून विविध भावतरंग ओवीगीतातून दिसून येतात. कौटुंबिक जिव्हाळ्याची ओवीगीते म्हणजे या स्वरूपाच्या ओवीगीतातून स्त्री जीवनाच्या अनेकविध पैलूंचे दर्शन घडते.

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SWATIDHAN PUBLICATIONS



## सरदार वल्लभभाई पटेल का देसी राज्यों (रियासतों) के एकीकरण में योगदान

डॉ. जोशी राधाकृष्ण

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### प्रस्तावना

सरदार वल्लभभाई (३१ अक्टूबर, १८७५ - १५ दिसंबर, १९५०) भारत के स्वतन्त्रता संग्राम सेनानी थे। भारत की आजादी के बाद वे प्रथम गृहमंत्री और उप-प्रधानमंत्री बने। बारडोली सत्याग्रह का नेतृत्व कर रहे पटेल का सत्याग्रह की सफलता पर वहाँ की महिलाओं ने सरदार की उपाधि प्रदान की। आजादी के बाद विभिन्न रियासतों में बिखरे भारत के भू-राजनीतिक एकीकरण में केंद्रीय भूमिका निभाने के लिए पटेल को भारत का बिस्मार्क और लौह पुरुष भी कहा जाता है।

### जीवन परिचय

पटेल का जन्म नडियाद, गुजरात में एक कृषक परिवार में हुआ था। वे झवेरभाई पटेल एवं लाडबा देवी की चौथी संतान थे। सोमाभाई, नरसीभाई और विठ्ठलभाई उनके अग्रज थे। उनकी शिक्षा मुख्यतः स्वाध्याय से ही हुई। लन्दन जाकर उन्होंने बैरिस्टर की पढाई की और वापस आकर अहमदाबाद में वकालत करने लगे। महात्मा गांधी के विचारों से प्रेरित होकर उन्होंने भारत के स्वतन्त्रता आन्दोलन में भाग लिया।<sup>१</sup>

### उद्देश्य

१. सरदार पटेल के कार्य का अध्ययन करना।
२. सरदार पटेल ने देशी रियासतों के एकीकरण में किस तरह योगदान दिया, इसका विश्लेषण करना।

### देसी राज्यों (रियासतों) का एकीकरण

सरदार पटेल ने आजादी के ठीक पूर्व (संक्रमण काल में) ही वीपी मेनन के साथ मिलकर कई देसी राज्यों को भारत में मिलाने के लिये कार्य आरम्भ कर दिया था। पटेल और मेनन ने देसी राजाओं को बहुत समझाया कि उन्हें स्वायत्तता देना सम्भव नहीं होगा। इसके परिणामस्वरूप तीन को छोड़कर शेष सभी राजवाडों ने स्वेच्छा से भारत में विलय का प्रस्ताव स्वीकार कर लिया। केवल जम्मू एवं कश्मीर, जूनागढ़ तथा हैदराबाद स्टेट के राजाओं ने ऐसा करना नहीं स्वीकारा। जूनागढ़ के नवाब के विरुद्ध जब बहुत विरोध हुआ तो वह भागकर पाकिस्तान चला गया और जूनागढ़ भी भारत में मिल गया। जब हैदराबाद के निजाम ने भारत में विलय का प्रस्ताव अस्वीकार कर दिया तो सरदार पटेल ने वहाँ सेना भेजकर निजाम का आत्मसमर्पण करा लिया। किन्तु नेहरू ने काश्मीर को यह कहकर अपने पास रख लिया कि यह समस्या एक अन्तराष्ट्रीय समस्या है।<sup>२</sup>

### गांधी, नेहरू और पटेल

स्वतंत्र भारत के प्रथम प्रधानमंत्री पं.नेहरू व प्रथम उप प्रधानमंत्री सरदार पटेल में आकाश-पाताल का अंतर था। यद्यपि दोनों ने इंग्लैण्ड जाकर बैरिस्टरी की डिग्री प्राप्त की थी परंतु सरदार पटेल वकालत में पं.नेहरू से बहुत आगे थे

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SWATIDHAN PUBLICATIONS





## आझाद हिंद सेनेतील नेताजी सुभाषचंद्र बोस यांचे योगदान

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### प्रस्तावना

भारतीय स्वातंत्र्य आंदोलनातील एकमेवाद्वितीय लोकनेते सुभाषबाबूंचा जन्म २३ जानेवारी १८९७ रोजी कटक येथे झाला. बालपणापासूनच सुभाषबाबू क्रांतीकारी विचारांचे होते. महाविद्यालयीन शिक्षण घेत असतांना त्यांनी ब्रिटिश विरोधी अनेक चळवळीत भाग घेतला. १९२१-मध्ये सुभाषबाबूंनी नोकरी सोडून दिली आणि स्वातंत्र्य चळवळीत स्वतःला वाहून घेतले. द्वितीय महायुद्धासमयी इंग्लंड एकाकी झूज देत होते आणि जीवमरणाचा संघर्ष करीत होते. अशावेळी कौटिल्य नीतीनुसार 'शत्रुचा शत्रु तो आपला मित्र' या नीतीने इंग्लंडच्या शत्रूराष्ट्रांची मदत घेऊन भारताला स्वातंत्र्य मिळवून द्यावे असा सुभाषबाबूंनी आपल्या भाषणातून ठिकठिकाणी प्रचार केला. म्हणून २ जुलै १९४० रोजी त्यांना अटक केली आणि तुरुंगात डांबले. तुरुंगात त्यांनी आमरण उपोषण सुरु केल्याने त्यांना मुक्त करण्यात आले. आता त्यांच्या राहत्या घरातच त्यांना स्थानबद्ध करण्यात आले.

गुप्त पोलीसांचा कडक पहारा असतांनाही सुभाषबाबू १५ जानेवारी १९४१ मध्यरात्री दाढी वाढविलेल्या डिग्याउद्दीन वेष्टां शिताफीने निसटले. गोमाहा-पेशावर-जामरूद-काबूल मार्गे ते रशियाला गेले. त्यांनी ऑरलॅंडो मॅझोटा नावाने पासपोर्ट मिळवून ते जर्मनीला गेले. एप्रिल १९४१ मध्ये त्यांनी हिटलरची बर्लिन येथे भेट घेतली. बर्लिन आकाशवाणीवरून आपल्या भाषणात त्यांनी हिंदी लोकांना साम्राज्यवाद्यांविरुद्ध संघटित होण्याचे आवाहन केले. हिटलरच्या सल्ल्याने सुभाषबाबू जर्मनीच्या पाणबुडीतून जपानला निघाले. ओळख पटवून जपानी पाणबुडीने मध्य समुद्रात रबरी होडी सोडली. यावेळी नेताजी व त्याचा सहकारी अबिद हसन त्या होडीत बसले आणि अशा रितीने नेताजी जपानला पोहोचले.

### उद्दिष्टे -

१. सुभाषचंद्र बोस यांच्या कार्याचे संक्षिप्त अध्ययन करणे.
२. आझाद हिंद सेनेचा कामगिरीचे अध्ययन करणे.

### आझाद हिंद सेनेची कामगिरी -

आझाद हिंद सेनेतील सैनिकांना जपानने प्रशिक्षित केले. आता ती युद्ध सज्ज झाली होती पण जपानी अधिकारी तिला आपल्या बरोबरीची समजण्यास तयार नव्हते. नेताजींना आपल्या सैन्याबद्दल आत्मविश्वास होता. म्हणून त्यांनी आपले सैन्य जपानी सैन्याबरोबर मुद्दाम पाठविले. यावेळी आझाद हिंद सेनेचा पराक्रम पाहून जपानीही आश्चर्यचकीत झाले. १९४४ च्या मार्च महिन्यात भारताच्या ईशान्य सीमेवर करण्यात येणाऱ्या आक्रमणासमयी आझाद हिंद सेनेतील काही पथके पाठविण्यात आली. इम्फाळ येथे झालेल्या लढाईत ह्या सेन्यातील काही पथकांनी चोख कामगिरी बजावली. १९४४ च्या मे महिन्यात शाहनवाज खान य च्या नेतृत्वाखाली एका पथकाने भारतीय सीमेत प्रवेश करून मोडोक हे ठाणे जिंकले. याचप्रमाणे इतर लढ्यांमध्येही यां सेनेने चांगला पराक्रम गाजविला. आझाद हिंद सेनेचे मनसुखलाल यांच्या नेतृत्वाखाली त्यांच्या मूठभर सैनिकांनी जीवाची पर्वा न करता मोक्याची टेकडी जिंकली. आझाद हिंद सेनेच्या इतर पथकांनीही अशीच उत्तम कामगिरी बजावली.

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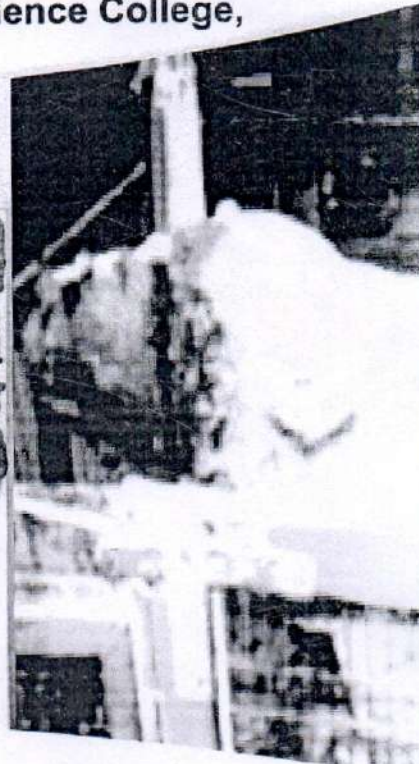
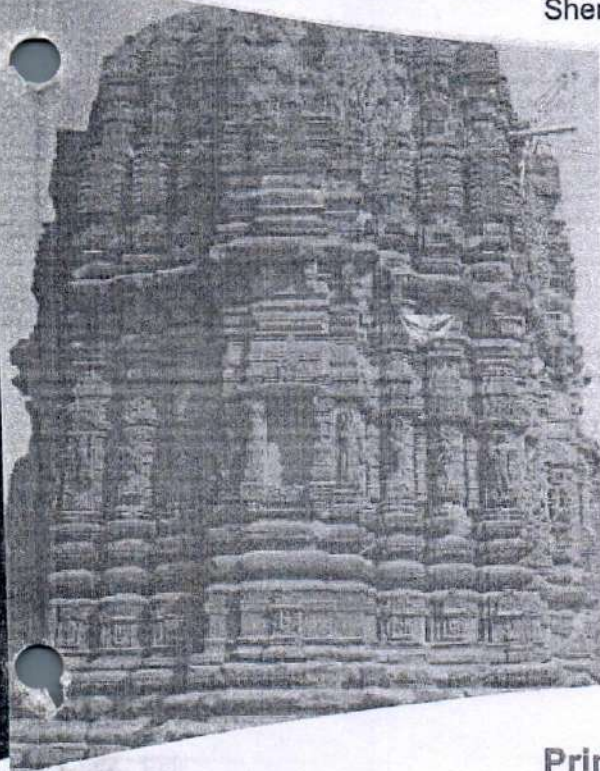
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## खानदेशातील कादंबरी आणि कादंबरीकाराचा एक अभ्यास

डॉ. जोशी राधाकृष्ण

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### प्रस्तावना

खानदेशास साहित्याची उज्वल अशी परंपरा लाभली आहे. खानदेशात अनेक साहित्यिक आणि कवी यांनी साहित्यामध्ये मोलाची भर टाकलेली आहे. कादंबरीला आज एक प्रधान वाङ्मय प्रकार म्हणून जागृतीक मान्यता आणि लोकप्रियता लाभलेली असली तरी तिचा विकास खऱ्या अर्थाने प्रथम पाश्चात्य देशात झाला. मराठी वाचक लेखकांना मराठी कादंबरीची ओळख खऱ्या अर्थाने सन १८१८ नंतरच झालेली आहे. खानदेशातील प्रसिध्द कादंबरीकार म्हणून ज्यांचा उल्लेख केला जातो. ते म्हणजे श्रीराम आत्तरदे यांनी सावलीच्या ऊन्हात ही कादंबरी प्रकाशीत झाली. त्यानंतर मधुकर पाठक यांनी भावीकाचे बंड ही कादंबरी आपल्या स्वतंत्रादिनाच्या दिवशी प्रकाशीत केली आहे. त्यातील काही कादंबरीकार आणि त्यांच्या साहित्याची ओळख व्हावी म्हणून प्रस्तुत शोध निबंधाचा उद्देश ठरविण्यात आली आहेत.

### शोध निबंधाचे उद्देश

१. खानदेशी साहित्यातील कादंबरीकाराची माहिती स्पष्ट करणे.
२. खानदेशातील कादंबरीकाराच्या कार्याचा आढावा घेणे.
३. खानदेशी साहित्याची ओळख करून घेणे.

**श्रीराम आत्तरदे :-** यांची पहिलीच कादंबरी म्हणजेच सावलीच्या ऊन्हात प्रकाशीत झाली. ही कादंबरी उपेक्षितांच्या जवळ जाऊन टिपलेल्या सुख दुःखांचे वास्तव चित्रण म्हणून उल्लेखनीय आहे. या कादंबरी मध्ये साम्यावादी विचार सरणी दिसते. त्या बरोबरच समाज सेवेची मुळ बैठक दिसते. या मध्ये भिल्ल, वारली लोंकाचे सवार्थ दर्शन आपणस पहायला मिळते. आदिवाशी समाजातील लोंकाना संघटीत होण्यासाठी आब्व्हान देणारी अशी ही कादंबरी अत्यंत प्रखर आहे. सावकार लोक देश भक्तीचा बुरखा घालून लोंकाचे आतोनत शोषण करित असत. त्यांचे झालेले दंब स्फोट या कादंबरीत वर्णिलेला आहे. पारतंत्र्य संपुष्टात येण्याच्या सीमेवरील ही काहणी. त्यावेळी देशभक्त देशाला स्वतंत्र मिळविण्यासाठी एकीकडे जीवाची पर्वा न करता झटत होते. आणि दुसरीकडे सावकारी गरीब दारिद्र्य लोकावर अत्याचार करून त्यांचे हक्क त्यांना मिळु देत नव्हते. खादीधारी बगळ्याच्या सावकारी छायेच्या दाहक मायेची लाखो श्रमजीवी जीव भाजून निघाले होते. सावली म्हणजे आधार दुसऱ्याला मदत करणे. त्याचा विविध प्रश्नावर मायेची पारवर घालून ते सोडवणे.

**डॉ. मधुकर पाठक :-** यांची भाविकांचे बंड ही कादंबरी आपल्या स्वातंत्र्य दिनादिवशी प्रकाशीत झालेली आहे. स्वातंत्र्य मिळून बरीच वर्ष झाली असली तरी. स्वातंत्र्य मिळवून देणाऱ्या मं. गांधीजीचा खून एका ब्राम्हणाने केला म्हणून संपुर्ण देशात ब्राम्हण वर्गाला सहन करवा लागणारा त्रास या कादंबरीत विस्तृतपणे वर्णन केला आहे. याशिवाय ग्रामिण भागातील राजकारणावर प्रकाश झोट टाकण्याचा यशस्वीपणे प्रयत्न कादंबरीकाराने केलेला आहे. कादंबरी वाङ्मय प्रकार हा कथा वाङ्मयाशी निगडित आहे. एक मुख्य कथानक व त्याच्या जोडीला अनेक उपकथानकाची शृंखला असते. सत्य सृष्टीच्या आधारे काल्पनीक प्रतीसृष्टी निर्माण करून काल्पनीक पत्राची स्वभाव चित्रे व काही अंशी तद्दोलबीत जिवीत घटना यांचे गोष्टी रूपाने वर्णन करून आणि कलानंदाची प्राप्ती करून जिवीतातील गुंता गुंतीच्या प्रश्नावर प्रकाश टाकणाऱ्या वाङ्मय विभागास कादंबरी म्हणतात.

**के.नारखेडे :-** यांनी बालसाहीत्या मध्ये अत्यंत मोलाची भर घातली आहे. एक प्रसिध्द कादंबरीकार यांचा जन्म यावल तालुक्यात झाला. ते व्यवसायाने शिक्षक होते. त्यांच्या नावाने आज ही के. नारखेडे हायस्कूल ही शाळा प्रसिध्द आहे. ज्यांचा आनंदवन, मथुरानी, जलवंती, तारकापुष्प या बाल कादंबऱ्या ही लोकप्रिय झाल्या त्यांनी साकार केलेल्या राधेय हा बालनाट्य प्रयोग यशस्वी ठरला तसेच त्यांचे कादंबरी साहित्यातील योगदान ही विशेष उल्लेखनीय स्वरूपाचे आहे त्यांचे बालसाहित्य प्रसिध्द आहे. या कादंबरीत त्यांनी खानदेशातील लोक पाटीदार समाजामध्ये सतपंथाची जी वावटळ उडाली होती तीचे ओझरते दर्शन या कादंबरीत दाखवले आहे. संतपंथी असणाऱ्या लोकांनी इतर पंथ स्विकारावा आणि तो स्विकारल्या नंतर त्याचे परिणाम काय होतात त्याचे हुबेहुब चित्रण या कादंबरीत करण्यात आले आहे.

**भालचंद्र नेमाडे :-** डॉ. भालचंद्र नेमाडे हे खानदेश पुत्रच होते. परंतु शिक्षण संपवून नौकरी निमत खानदेशा बाहेर जावे लागले. त्या मुळे बाहेर राहूनही त्यांनी प्रचंड साहित्य निर्माण केलेले आहे. त्या बरुण खानदेशासी असलेला दुवा कायम राहिलेला दिसतो. इंग्रजी व मराठी या दोन्ही विषयाचे गाडे अभ्यासक चिंतक असून संत साहित्यावर ही त्यांचा प्रचंड अभ्यास आहे. मुंबई विद्यापीठामध्ये इंग्रजीचे प्रपाठक म्हणून कार्यरत असताना नेमाडे नि कोसला, जरीला, बिडार, झुल अशा कादंबऱ्या आणि मिलडी व देखनी हे काव्य संग्रह लिहिले आहेत. त्यांच्या कोसला या कादंबरीला खानदेशातील उत्तर महाराष्ट्र विद्यापीठाणे त्यांना डि.लीट ही पदवी देऊन त्यांचा सन्मान व गौरव केला. मुंबई पुण्या सारख्या चंदेरी दुनीयेत राहण ही नेमाडे मधला भाग भागवत हा खानदेशी मातीतच रमला नेमाडेच्या साहित्याची लोकप्रियता फार मोठी आहे. त्यांच्या साहित्या विषयी चंद्रकांत बोधबडेकर म्हणतात बीडार हे आत्मचरित्र आणि कादंबरी यांच्या समन्वयाने बनवलेला साहित्य प्रकार होय. एका सिमीत जगाचा घेतलेला आनुभव भालचंद्र नेमाडेनी अत्यंत प्रभावित पणे मांडला आहे. खरेतर साहित्यातील संकेत एकिकडे त्यांनी तोडले असले तरीही तोडतांना त्यांनी कोठेही अतीरेकी पणा येऊ दिला नाही.

### समारोप

कादंबरीच्या माध्यमातून अनेक कादंबरीकाराने समाजाच्या वास्तवतेचे दर्शन परखड पनाणे मांडण्याचा प्रयत्न केलेला आहे. साम्यावादी विचार सरणीचा पुरस्कार करणारी तसेच भिल्ल आणि वारली या लोकांचे यथार्त लोंकाचे जीवन प्रकट करणारी प्रादेशीक कादंबरी म्हणून सावलीच्या ऊन्हात ही कादंबरी आहे.

### संदर्भ सूची

१. मनोहर जाधव :- के नारखेडे यांच्या ग्रामिण साहित्याचा अभ्यास, प्रबंध पृष्ठ क्र. ६२
२. आनंद यादव :- ग्रामिण साहित्य स्वरूप आणि समस्या, मेहता पब्लिकेशन्स हाऊस पुणे
३. श्रीराम आत्तरदे :- सावलीच्या ऊन्हात, नागपुर प्रकाशन-प्रथमावृत्ती १९४६



महाराष्ट्रच्या राजकारणात  
राष्ट्रवादी काँग्रेस  
पक्षाची भूमिका : एक अभ्यास

डॉ. तळेकर चंद्रशेखर काशिनाथ  
राज्यशास्त्र विभाग, गांधी महाविद्यालय  
कडा ता. आष्टी जि. बीड

भारतात स्वातंत्र्यापूर्वी केवळ एकच पक्ष होता. तो म्हणजे काँग्रेस पक्ष होय. या पक्षाची स्थापना ब्रिटिशांच्या विरुद्ध स्वातंत्र्य आंदोलन करण्याच्या उद्देशाने करण्यात आली होती. परंतु स्वातंत्र्यप्राप्ती नंतर विचारसरणीच्या आधाराने काही पक्ष उदयास आले. राजकीय दृष्टिकोनातून या पक्षांनी आपआपले स्थान निश्चित केले. महाराष्ट्राचा विचार करता महाराष्ट्रात देखील काँग्रेस पक्षाचे वर्चस्व असल्याचे दिसून येते.

परंतु महाराष्ट्रात राज्याच्या निर्मातीनंतर हळुहळु नवनवीन पक्ष उदयास आले. ज्यात शिवसेना, भारतीय जनता पक्ष, जनता दल, बहुजन समाज पक्ष, राष्ट्रवादी काँग्रेस पक्ष व महाराष्ट्र नवनिर्माण सेना यांचा समावेश आहे. या सर्व पक्षांनी मिळून महाराष्ट्राच्या राजकारणात आपली भूमिका निश्चित केलेली आहे. त्यातील राष्ट्रवादी काँग्रेस पक्ष हा एकमेव असा पक्ष आहे. जो जन्मानंतर लगेच सत्तेत बसला. पक्षाच्या जन्मासोबतच सत्ता प्राप्ती हे समिकरण भारतात क्वचितच आढळून येते. परंतु राष्ट्रवादी काँग्रेस पक्षाच्या वाट्याला मात्र जन्मानंतर लगेचच सत्ता आली.

यांची काही प्रमुख कारणे आहेत. यात राष्ट्रवादी काँग्रेस पक्षाचा जनाधार, पक्षाचे नेतृत्व, पक्षाची विचारसरणी व कार्यपध्दती यांचा समावेश आहे. या बरोबरच पक्षाच्या ध्येयधोरणाचा व पुरोगामी विचारसरणीचाही यात समावेश आहे. या सर्व बाबींचा विचार करून राष्ट्रवादी काँग्रेस पक्षाने महाराष्ट्राच्या राजकारणात जी भूमिका बजावली आहे. त्याचे अध्ययन करण्याच्या हेतुन प्रस्तुत शोधनिबंधाची दिशा ठरविण्यात आली आहे.

शोध निबंधाचे उद्देश :

१. राष्ट्रवादी काँग्रेस पक्षाच्या विचारसरणीचा आढावा घेणे.
२. राष्ट्रवादी काँग्रेस पक्षाच्या महाराष्ट्रातील राजकीय वाटचाली बाबतचे अध्ययन करणे.
३. राष्ट्रवादी काँग्रेस पक्षाची महाराष्ट्र विधानसभा निवडणूक २००९ व २०१४ मधील कामगिरीचा अभ्यास करणे.

महाराष्ट्राच्या राजकारणात राष्ट्रवादी काँग्रेस पक्षाची कधी सत्ताधारी तर कधी विरोधीपक्षाची अशाप्रकारची जी भूमिका राहिलेली आहे. त्याचा आढावा पुढीलप्रमाणे घेण्यात आला आहे.

१. राष्ट्रवादी काँग्रेस पक्षाची विचारसरणी :

राष्ट्रवादी काँग्रेस पक्षाचा जन्म पक्षाचे राष्ट्रीय नेते शरद पवार यांच्या नेतृत्वात १९९९ साली झाला. पक्षाची निर्मातीच मुळात पुरोगामी विचारावर आधारित होती. पक्ष स्थापेत पुढाकार घेणारे राष्ट्रीय नेते शरद पवार, तारिक अन्वर, पी. ए. सांगमा हे सर्व नेते काँग्रेसी विचार सरणीचा प्रभाव असणारे

होते. त्यामुळे या विचारसरणीतूनच राष्ट्रवादी काँग्रेस पक्षाची वाटचाल व्हावी या उद्देशाने राष्ट्रवादी काँग्रेस पक्षाची भूमिका ठरवण्यात आली. या विचारसरणीच्या माध्यमातून राष्ट्रवादी काँग्रेस पक्षाला जनाधार मिळण्यास मदत झाली असल्याचे दिसून येते.

२. राष्ट्रवादी काँग्रेस पक्षाची राजकीय वाटचाल :

राष्ट्रवादी काँग्रेस पक्षाच्या स्थापनेनंतर अल्पावधीतच हा पक्ष महाराष्ट्राच्या सत्तेत सहभागी झाला. पक्ष स्थापनेनंतर १९९९ साली महाराष्ट्रात विधानसभेच्या निवडणूका घेण्यात आल्या. निवडणुकीनंतर महाराष्ट्रात कोणत्याही पक्षाला बहुमत मिळाले नाही. त्रिशुंक आवस्थेमुळे महाराष्ट्राच्या राजकारणात मोठा पेच निर्माण झाला. तत्पुर्वी महाराष्ट्राच्या सत्तेवर असलेल्या शिवसेना-भाजप युतीला सत्तास्थापने इतके संख्याबळ उपलब्ध झाले नाही. त्यामुळे महाराष्ट्रात सत्तासंघर्ष सुरू झाला. आशा वेळी काँग्रेस पक्षाच्या विरोधात निवडणूक लढवुनही त्यासोबत अघाडी करणे ही काळाच्या दृष्टिने आवश्यक बाब बनली. या कारणास्तव काँग्रेस व राष्ट्रवादी काँग्रेस पक्षाची आघाडी झाली. आशा प्रकारे काँग्रेस व राष्ट्रवादी काँग्रेस पक्षाचे आघाडी सरकार

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### प्रस्तावणा:

स्वातंत्र्य प्राप्तीनंतर भारतीय सविधानांच्या माध्यमातून स्त्रीयांना पुरुषांच्या बरोबरीने अधिकार प्रदान करण्यात आले. या द्वारे स्त्रीयांचा सामाजिक, राजकिय, आर्थिक दर्जा सुधारणे अपेक्षित होते. परंतु भारतीय समाजात पुरुषप्रधान संस्कृतीचे वर्चस्व असल्यामुळे स्त्रीयांना अशा सर्वच क्षेत्रात पुरुष अवलंबित्व स्विकारण्यास भाग पाडण्यात येत असल्याचे दिसून येते. राजकिय दृष्टिकोणातुन विचार केला असता पुरुष प्रधान संस्कृतीने स्त्रीयांना राजकारणात संधी उपलब्ध करून देताना संकुचीत पणा बाळगला जातो. पंचायत राज संस्थांच्या राजकारणात आज महिलांना अरक्षण प्रदान करण्यात आलेले आहे. हे आरक्षण-७३ व्या घटना दुरुस्ती नुसार प्रदान करण्यात आले आहे. तत्पूर्वी पंचयतराज संस्था मध्ये स्त्री वर्गास अप्पल प्रतिनिधीत्व प्राप्त होत आसे. परंतु ७३ व्या घटना दुरुस्ती नंतर ३३ टक्के स्त्रीयांना पंचयातराज संस्था मध्ये प्रतिनिधीत्व प्राप्त झाले. आज हे महिला आरक्षण ५० टक्क्या पर्यंत वाढविण्यात आले आहे. म्हणजेच ५० टक्के स्त्रीया पंचायतराज मध्ये राजकिय नेतृत्व करित आहेत. ज्या ग्रामिण विकासाच्या उद्देशाने पंचायतराज संस्थेची निर्मिती करण्यात आली त्या पंचायतराज संस्था मधुन स्त्रीयांना प्रतिनिधीत्वा पासुन दुर ठेवणे कितपत योग्य आहे. हि परिस्थिती ओळखुन महिलांचा राजकारणात सहभाग वाढविण्याच्या दृष्टिने अरक्षण वाढवीणे अपरिहार्य ठरले. ग्रामिण विकास साधने हा उद्देश समोर असताना महिला वर्ग हा ग्रामिण विकासाचा अविभाज्य घटक आहे. महिला वर्गाचा विकास झाला नाही तर ग्रामिण विकासाचे उद्दीष्ट अपुर्ण राहिल. या दृष्टिकोणातुन प्रस्तुत शोध निबंधा द्वारे प्रकाश टाकण्यात आला आहे.

### शोध निबंधाचे उद्दीष्टे :

१. पंचायत राज संस्थांचा आढावा घेणे.
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### प्रस्तावणा:

महाराष्ट्राच्या राजकारणातील कोणतीही निवडणूक असो सर्वाधिक चर्चा होते ती बीड जिल्हयाची. म्हणजेच बीड जिल्हयाचे राजकारण सर्वाधिक चर्चेचा विषय ठरत असते. बीड जिल्हयातील कोणत्याही निवडणूकीत अटीतटीचा सामना होऊन या ठिकाणचे राजकारण तापत असते. यावरून महाराष्ट्राच्या राजकारणात बीड जिल्हयाच्या राजकारणाचे महत्व स्पष्ट होते. बीड जिल्हयातील राजकारणात प्रामुख्याने चार राजकीय पक्षांचा सहभाग असतो. परंतु त्यातही राष्ट्रवादी काँग्रेस पक्ष आणि भारतीय जनता पक्ष यांचेच जिल्हयातील राजकारणावर वर्चस्व निर्माण झालेले दिसून येते. बीड जिल्हा हा अधिकांश ग्रामीण भाग असणारा जिल्हा म्हणून ओळखला जातो. येथील ग्रामीण राजकारणावर पकड मजबुत करण्याच्या उद्देशाने राजकीयपक्ष कार्य करीत असतात. जिल्हयात ग्रामीण विकासाच्या उद्देशाने पंचायतराज संस्थेची स्थापना करण्यात आली आहे. बीड जिल्हयात एकुण अकरा तालुके असून प्रत्येक तालुक्याच्या ठिकाणी ग्रामीण विकासासाठी पंचायत समित्या कार्यरत आहेत. यात बीड, अंबाजोगाई, परळी, केज, गेवराई, पाटोदा, आष्टी, माजलगाव, शिरूर कासार आणि वडवणी या तालुक्यांचा समावेश आहे. या सर्व तालुक्यातील राजकारणाचे केंद्र बिंदु म्हणून पंचायत समित्याकडे पाहिले जाते. या पंचायत समित्यावर ज्या पक्षाचे वर्चस्व असते राजकारणाची दिशा त्यावर ठरत असते. या दृष्टिकोनातून राजकीय पक्ष पंचायत समित्यावर वर्चस्व प्रस्थापीत करण्यासाठी धडपडत असतात. बीड जिल्हयातील अशा प्रकारे राजकीय परिस्थिती असून त्याचा अढावा घेण्याच्या उद्देशाने हा शोध निबंध प्रस्तुत करण्यात आला आहे.

### शोधनिबंधाचे उद्देश :-

1. बीड जिल्हयातील राजकीय परिस्थितीचा अढावा घेणे.
2. बीड जिल्हयातील पंचायत समित्यांचा राजकीय अभ्यास करणे.
3. बीड जिल्हयातील पंचायत समिती निवडणूक 2017 चे विश्लेषण करणे.

बीड जिल्हयात एकुण आकरा पंचायत समित्या असून त्याचा राजकीय अढावा पुढिलप्रमाणे घेण्यात आलेला आहे.

1. **बीड पंचायत समिती :-** जिल्हयातील बीड पंचायत समिती ही सर्वात मोठी पंचायत समिती म्हणून ओळखली जाते. यात पंचायत समितीच्या गणांची संख्या 16 असून जिल्हा परिषदेचे

गट 08 आहेत. म्हणजेच बिड पंचायत समितीची सदस्या संख्या 16 इतकी आहे.

2. **गेवराई पंचायत समिती :-** गेवराई तालुकेच्या ग्रामीण विकासासाठी गेवराई पंचायत समिती कार्यरत आहे. ही पंचायत समिती देखील जिल्हयातील मोठी पंचायत समिती असून या पंचायत समितीची सदस्या संख्या 18 इतकी आहे.
3. **माजलगाव पंचायत समिती :-** माजलगाव पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 06 असून या पंचायत समितीची सदस्या संख्या 12 इतकी आहे.
4. **वडवणी पंचायत समिती :-** जिल्हयातील वडवणी पंचायत समिती ही सर्वात लहान पंचायत समिती म्हणून ओळखली जाते. यात पंचायत समितीच्या गणांची संख्या 04 असून जिल्हा परिषदेचे गट 02 आहेत. म्हणजेच वडवणी पंचायत समितीची सदस्या संख्या केवळ 04 इतकी आहे.
5. **शिरूर कासार पंचायत समिती :-** शिरूर कासार पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 04 असून या पंचायत समितीची सदस्या संख्या 08 इतकी आहे.
6. **पाटोदा पंचायत समिती :-** पाटोदा पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 03 असून या पंचायत समितीची सदस्या संख्या 06 इतकी आहे.
7. **आष्टी पंचायत समिती :-** आष्टी पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 07 असून या पंचायत समितीची सदस्या संख्या 14 इतकी आहे.
8. **धारूर पंचायत समिती :-** धारूर पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 03 असून या पंचायत समितीची सदस्या संख्या 06 इतकी आहे.
9. **केज पंचायत समिती :-** केज पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 06 असून या पंचायत समितीची सदस्या संख्या 12 इतकी आहे.
10. **परळी वै. पंचायत समिती :-** परळी वै. पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 06 असून या पंचायत समितीची सदस्या संख्या 12 इतकी आहे.
11. **अंबाजोगाई पंचायत समिती :-** अंबाजोगाई पंचायत समिती अंतर्गत जिल्हा परिषदेच्या गटांची संख्या 06 असून या पंचायत समितीची सदस्या संख्या 12 इतकी आहे.

बीड जिल्हा अंतर्गत पंचायत समित्यांच्या 2017 साली झालेल्या निवडणूकीत विविध राजकीय पक्षांनी सहभाग नोंदवला. त्यापैकी राष्ट्रवादी काँग्रेस पक्ष आणि भाजप या पक्षांनी या निवडणूकीत



## HUMAN COMPUTER SHAKUNTALA DEVI AND HER CONTRIBUTION IN MATHEMATICS

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### ABSTRACT

*The aim of this article is to exhibit the talents of an extra-ordinary Indian mathematician Shakuntala Devi and her contribution in mathematics. The mathematician Shakuntala Devi is well known for her quickest and fastest calculations and hence confers upon the name 'Human Computer'. Many countries have invited Shakuntala Devi to demonstrate her extraordinary talent. She won many awards in her seventy-four years lifespan*

*Today she is acclaimed as an accomplished mathematician.*

### INTRODUCTION

Shakuntala Devi was born on 4<sup>th</sup> November 1939 in Bangalore. She was an extraordinary Indian mathematician and calculating prodigy. By age six to eight she demonstrated her calculation and memorization abilities in various states. Shakuntala Devi was not only a mathematician but also she was a number juggler. She is well known for her quickest and fastest calculations and hence confers upon the name human computer. She had amazing computing capabilities and had beaten pre modern computers in number games. Shakuntala Devi has got fame when big IT companies like Infosys started including her mathematical problems in their interviewing steps.

### PERFORMANCE

Shakuntala Devi travelled the world demonstrating her arithmetic talents. Shakuntala Devi gave her performances in England, Hong-Kong, Japan, Sri Lanka, Italy, Canada, Russia, France, Spain, Indonesia, Malaysia etc

Shakuntala Devi performed her first major show at Mysore University. She displayed her mathematical prowess by solving Arithmetical problems, mental maths questions.

Shakuntala Devi asked for date and birth year of members of audience and within one or two seconds she pinpointed the day of the week on which they were born.

In one of her performances Devi astounded Famous magician Ricky-Jay by easily extracting roots of nine and ten digit numbers.

She would look at the number on a blackboard preferred as 900342865. Then finding the

brokenness of 900,342,865 and rattle of the exact answer. In her demonstration Devi calculated the cube root of 616298775 and seventh root of 170859375 within few seconds.

In 1977 at southern Methodist university in Dallas Devi calculated the 23<sup>rd</sup> root of 201-digit number in 50 seconds where the most powerful Computer at that time took exactly 62 seconds and received a standing ovation from an audience of erudite mathematicians.

On June 18, 1980 at Imperial college London. She demonstrated the multiplication of two 13 digit numbers.

76863369, 774870\*2,465, 099,745,779 and correctly answered as 18947,668,177.995.426, 462,773,730 in 20 seconds. This event was recorded in the 1982 Guinness book of records.

Once she was on Europe tour during an interview on BBC, she was given a complicated mathematical calculation which she solved within seconds but her answer was right, the interviewer and his team of mathematics experts re-examined their calculations for several minutes and finally they were wrong and Devi was correct. This incident spread like wild fire, across the world and Devi got the name 'Human Computer'.

### BEST WORK

Some of the best known of Shakuntala Devi are there which are very useful to all mathematical lovers.

- 1) Figuring: The Joy of Numbers
- 2) Puzzles to Puzzle you- This is a book as one of the best reads for people who want to excel in the field of mathematics and master the secrets of the subject.
- 3) Book of Numbers

18-19



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## Hydrological Status Of Selected Waterbodies Relation To Water Pollution

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### Abstract -

In the present investigation the Dadegon water reservoir were monitored in (July 2016 to June 2017) show high positive correlations among different factors such as Temperature, Transparency, pH, Dissolved oxygen (DO), Free Carbon dioxide, Hardness, Calcium, Magnesium, Chlorides, Turbidity, Total Nitrates, Sulphate were monthly analysis over the period of Twelve months suggest that the water is not more polluted.

**Key words:** Physico-chemical parameter, Dadegon Water bodies.

### Introduction:

The Dadegon Water bodies are an Irrigation project with an earthen dam on river Kadi near village Dadegon Tal. Ashti. The River is a tributary of Bhimariver in Krishna basin. It irrigate about 340 hector land in Ashti Tahasil at Beed District and also provide drinking water near villages. The considerable Limnological investigations are carried out on manmade impoundment. In India workers like Sharma Rekha (1990), Pandey et al. (1993), Sexena M.M. (1982) Shreenivasan (1974) Krishnamurti (1965) have done some hydro biological work a shallow water bodies in south India. A few like David et al (1969) have worked on the large brackish water lakes and reservoir. Shreenivasan (1962-1974) reported a detailed account on the productivity of tropical waters of Tamilnadu. In recent studies on hydrobiology of the fresh water lentic habitats about its physico-chemical characteristics and their productivity is well studied by Trivedy P.K. Goel (1988) Patilet. al (2002) Lendhe et al (2004) Ramakrishna (2002). Sakhare V.B et al (2003), Chavan and Mohekar (200) The limnology suggests complete knowledge of fresh water area including its Physicochemical and biological aspects (Knight 1970). While pollution is a change in the environment, which become gradually worse (Prakash and Rawat 1979) and acting as the important limiting factor (Odum 1971). **Materials and Method:** Five sampling stations were selected and Water samples were collected at every monthly interval from sampling stations in black plastic cans of 5 liters Capacity. The parameters such as Temperature,  $P^H$ , Transparency OD and free  $CO_2$  of water sample were analyzed at on the sites, while remaining parameters were analyzed in the laboratory by using standard methods given by different agencies and scientists for the examinations of the water, sewage and industrial wastes (APHA-1985), Trivedy and Goel (1984). IAABA-Hyderabad (1998).

### Results and Discussion:

The water samples from four sampling stations, were collected as described in the Material and Methods and analyzed various Physico-Chemical parameters such as Total Hardness, Transparency, Turbidity, Total Dissolved Solid, Conductivity, Chlorides, Dissolved Oxygen, Biochemical Oxygen Demand and Free  $CO_2$ . The results are shown in table 1.

Present investigation ambient temperature of water reservoir ranged between  $15.5^{\circ}C$  to  $32.30^{\circ}C$ . The minimum water temperature was recorded in the month of January and maximum to May. The water temperature during winter months ranged between  $15.5^{\circ}C$  to  $22.00^{\circ}C$  as against the summer temperature  $27.50^{\circ}C$  to  $32.30^{\circ}C$  Temperature exhibited significant negative correlation with DO and free  $CO_2$  and significant positive correlation with silicate and phosphate content of water.

**pH:** The pH of water body was not constant throughout the year, ranged in 7.5 to 8.8 (Table No.1). The pH of the dam waterbodies was less alkaline throughout year and exhibited positive correlation with TDS, Turbidity, and negative correlation with Transparency, Free  $CO_2$  Conductivity and also Total



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## To avoid the fungal diseases of Brinjal , different leaf extract has been used to control the pathogen

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### ABSTRACT

In present study the *pathogenic* fungus was isolated from infected plant parts and deification based on morphological and cultural characters. The efficacy of different plant extracts such as *Adhatoda vasica*, *Aloe Vera*, *Andrographis paniculate*, *Azima tetracantha* and *Cadala India* etc were tested to control brinjal fungal disease. Different concentration of plant extract viewed in the study. All the plant extract showed significant reduction in the growth of fungal plant. Aong the different extracts *Adhatoda vasica*, *Jetropha curcas L*, *Sapindus emarginatus*, *Acalypha indica*, *Cissus quadraularis* was found most effective. Application of plant extract which are easily available for controlling plant diseases are non-pollutive, cost effective, non-hazardous not disturb ecological balance.

### INTRODUCTION

Brinjal is given as an important vegetable crop in all over the world. The plant is affected by different diseases which cause significant reduction in yield. There are many methods which are presently being used to control various plant pathogens including such as physical, chemical, biological, cultural or effective & efficient management of crop disease is generally achieved by the use of synthetic pesticides. Kiran etal; (2006). The recurrent and discriminate use of fungicides have posed a serious threat to human health and to the existing human eco geographical conditions as borne of than have already been proved to be either mutagenic, carcinogenic or tetratogenic . Keeping a view the drawback of chemical management of the plant disease, the use of plant extract is important in the management of plant diseases. The research were made to evaluate locally available plant extract.

### MATERIAL & METHODS

#### 1) Identification of infected plant :

The plants for identification were collected from the different fields in Ashti Taluka region. The collected plant material such as leaf, fruit and root were brought in the laboratory for identification of different fungal diseases.

#### 2) Collection of infected plant parts :

The infected plant material of brinjal were collected in the Polythene bags and brought in the laboratory for further study.

#### 3) Isolation of plant pathogenic fungi from infected plant:

The sample collected through roots and plants of brinjal. Roots and plant parts were collected from infected brinjal Parts for present study showing characteristic symptoms of

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## महिला सबलीकरणाच्या समस्या : आव्हाने आणि उपाय



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## लिंगभाव असमानता आणि बांधकाम क्षेत्रातील स्त्रियांच्या समस्या

प्रा. भोसले एस.

ई गांधी महाविद्यालय कडा

प्रस्तावना :

भारत हा एक कृषिप्रधान देश असून देशातील ५८ टक्के लोकांचा उदरनिर्वाह शेती व शेतीवर आधारित व्यावसायावर अवलंबून आहे. शेतीबरोबरच शहरी व ग्रामीण भागातून लहान मोठ्या व्यवसायातून मजुरी, भाजीपाला विकणे, भंगार जमा करणे, हॉटेल मजूर, घरकाम करणे, साफसफाई करणे, वर्तमानपत्र विकणे, व्यापार करणे, बांधकाम व्यवसायात काम करणे इ. अनेक प्रकारची कामे करून आपली उपजीविका भागवतात.

भारतात २०११ च्या जनगणनेनुसार एकूण कामगार संख्या ४८.१७ कोटी असून त्यामध्ये ३३.१८ कोटी पुरुष कामगार तर १४.९८ कोटी महिला कामगार दिसून येतात. हि कामगार संख्या संघटित आणि असंघटित दोन्ही क्षेत्रातील आहे तसेच २०११-२०१२ मध्ये भारतात एकूण ४.९८ कोटी पुरुष आणि महिला बांधकाम कामगार असल्याची आढळून येते. म्हणजेच भारतात इतर व्यवसाय बरोबरच बांधकाम क्षेत्रातून हि मोठ्या प्रमाणावर रोजगार उपलब्ध होताना दिसून येतो. मात्र बांधकाम क्षेत्रातील बहुतांशी कामगार हे असंघटित आहेत.

भारतात बांधकाम उद्योग हा एक महत्वाचा उद्योग असून या उद्योगात अशिक्षित, अकुशल व कुशल कामगार, गरीब, बेकार इ. लोकांना अगदी सहज रोजगार उपलब्ध होतो. सार्वजनिक आणि खाजगी दोन्ही क्षेत्रातील बांधकामावर भारतात करोडो कामगार आपली उपजीविका भागवतात. बांधकाम क्षेत्रात पुरुष कामगाराबरोबरच बालकामगार आणि महीला कामगारानाही मोठ्या प्रमाणात रोजगार उपलब्ध होत आहे.

**बांधकाम उद्योगातील महिला कामगार:-**

बांधकाम क्षेत्रात मोठ्या प्रमाणात रोजगार उपलब्ध होत असला तरी या क्षेत्रात महिला आणि पुरुष कामगारांचे प्रमाण सारखे नाही बांधकाम क्षेत्रात पुरुष कामगार हे कुशल कामाबरोबरच कुशल स्वरूपाचे काम करतात. मात्र महिला कामगार फक्त अकुशल स्वरूपाचे काम करत असल्यामुळे पुरुष कामगारांच्या तुलनेने महिला बांधकाम कामगारांचे प्रमाण कमी आहे.

भारतात २००४-२००५ साली एकूण महिला कामगारांपैकी १.८९ टक्के महिला बांधकाम क्षेत्रात काम करत होत्या तर एकूण पुरुष कामगारांपैकी ६.५९ टक्के पुरुष बांधकाम क्षेत्रात काम करताना दिसून येतात. सन २००९-२०१० साली एकूण महिला कामगारांपैकी ५.११ टक्के महिला बांधकाम क्षेत्रात काम करत होत्या तर एकूण पुरुष कामगारांपैकी ११.३३ टक्के पुरुष बांधकाम क्षेत्रात काम करत होते म्हणजेच बांधकाम क्षेत्रात महिला कामगारापेक्षा पुरुष कामगारांचे प्रमाण जास्त आहे.

**बांधकाम क्षेत्रातील महिला बांधकाम कामगारांच्या समस्या :-**

बांधकाम क्षेत्रात कामगारांना अगदी सहज रोजगार उपलब्ध होत असला तरी या क्षेत्रात समस्यांचे प्रमाणही जास्त आहे. बांधकाम क्षेत्राचा समावेश असंघटित क्षेत्रात होत असल्यामुळे येथील कामगारांना अनेक समस्यांना सामोरे जावे लागते. पुरुष कामगाराबरोबरच महिला आणि बालकामगारानाही अनेक समस्या बांधकाम क्षेत्रात जाणवतात मात्र पुरुष कामगारापेक्षा महिला बांधकाम कामगारांना जास्त समस्यांना सामोरे जावे लागते.

**1) दुय्यम दर्जाचे काम:-**

बांधकाम उद्योगात प्रामुख्याने कुशल आणि अकुशल दोन्ही स्वरूपाचे कामे कामगारांना करावी लागतात. त्यामध्ये वीट बांधकाम, फारशी काम, प्लास्टर करणे, लाईट काम, नळ काम इ. कुशल स्वरूपाचे कामे हे पुरुष कामगार करताना तर मातीकाम, वाळू विटा सिमेंट दगड इ. साहित्य वाहून नेणे, मिस्रीच्या हाताखाली साहित्य पुरवणे, बांधकामावर पाणी मारणे, साफसफाई करणे इ. कामे मोठ्या प्रमाणावर महिला करताना दिसून येतात. हि कामे काही प्रमाणात पुरुष कामगार व बालकामगारही करतात परंतु त्यांचे प्रमाण महिलांच्या तुलनेत कमी असते म्हणजे बांधकाम उद्योगात कुशल कामे हि पुरुषाकडे व अकुशल स्वरूपाचे कामे ही महिला कामगाराकडे आलेली दिसून येतात.

**२) महिलांना करावे लागणारे अतिश्रम :-**

बांधकाम क्षेत्रात सर्वच कामगारांना मोठ्या प्रमाणात कष्ट करावे लागतात परंतु पुरुषांच्या तुलनेत महिलांना जास्त कष्ट करावे लागतात. महिलांना बांधकामावरील कामाबरोबरच घरकामही करावे लागते. बांधकामाच्या ठिकाणही महिलांना कष्टाचे काम करावे लागते अवजड वस्तू उचलणे, वस्तू वाहून नेणे, दोन तीन मजल्यावर वस्तू वाहून नेणे, खोद काम करणे इ. कामे करावी लागतात. एवढे कष्ट करूनही महिलांना घरी स्वयंपाक करणे, मुलाचा सांभाळ, वृधाची सेवा इ. स्वरूपाची कामे करावी लागतात. अशा दुहेरी अतिश्रमांमुळे महिलांची शारीरिक परिस्थिती खालावते

**३) पुरुष कामगारांच्या तुलनेत महिला कामगारांना कमी वेतन:-**

बांधकाम क्षेत्रात अशिक्षित, कुशल-अकुशल बेकार लोकांना अगदी सहज रोजगार उपलब्ध होत असला तरी बांधकाम क्षेत्रात कामगारांना करावे लागणारे कष्ट आणि त्यांना मिळणारा मोबदला यांचे प्रमाण विषम आहे. बांधकाम क्षेत्रात कामगारांना ८ ते 10 तास अतिश्रमाचे काम करावे लागते परंतु त्यांना मिळणारा मोबदला अतिशय कमी असतो त्यामध्येही पुरुष कामगारांच्या तुलनेत महिला कामगारांना मिळणारा मोबदला

## SOCIAL NETWORKING IN LIBRARY

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**Abstract:** - *Social Networking just began from late 21th Century & growing up rapidly up to date. It verified as a medium of communication with one to another for sharing their experiences & information regarding interest & also helpful to build up long time relationship between individual and group in the field and its services. It may be quietly help to promote the service of Library and Information Centre to develop the proficiency about technology of professional and other side like user.*

**Keywords:** Web2.0, Library 2.0, Social Network, Social Software, Digital Library 2.0, Social Library, Online Community, Mass friending.

### 1. Introduction

Information and Commutation Technology (ICTs) has ushered in a histrionic change in the realm of information communication in the recent time. New change that has been crept into the field of information technology following the impact of emerging technologies and global economy has revolutionized the process of reformation among organizations and their operational set up. As organizations worldwide thrive on modern technologies, the application of web 2.0 domain in the field of Library information and

communication has no exception. The web 2.0 domain has been introduced as an experimental field to be accepted and implemented for rendering virtual digital library services to patron. Social Software is quite lucrative before librarian 2.0 to accept, analyze and apply this new booming technology for the maximum benefit of the user 2.0. Professional competency needs to be developed among library professionals to be readily equipped with these social networking tools such as RSS, Wiki, Blogger, flicker, Library Think, Elf and so on. With the introduction of this domain, the credibility and value of librarians will

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## Money Madness in Fitzgerald's *The Great Gatsby*: A Critical Analysis

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### Abstract

The 1920s in America, known as the "Roaring Twenties", was a time of celebration after a devastating war. It was a period of time in America characterised by prosperity and optimism. There was a general feeling of discontinuity associated with modernity and a break with traditions.

New technologies, like automobiles, movies and radios, spread the idea of modernity to a large part of the population. There were also new ideas and theories that clashed with old traditions or religion.

Keywords: Roaring Twenties, old money, new money, flapper, American Dream.

### Discussion

The 1920's was a time of great economic prosperity and many people became rich and wealthy. Some people inherited "old money" and some obtained "new money". However, there was the other side of prosperity and many people also suffered the nightmare of being poor. In the novel *The Great Gatsby*, Jay Gatsby is portrayed as a wealthy character who lives in a mansion. However, Nick Carraway, the protagonist of the novel and next door neighbour of Jay Gatsby, is an average man who does not have the fortunes that Gatsby has. Nick Carraway is part of the middle class in society while Gatsby is in the upper class of society.

Along with large sums of money, whether old or new, came lots spending, amusement, fun, pleasure and big, fancy and elaborate parties.

In the 1920's, because of the separation of the rich and the poor, there were separate social classes and with that came conflict between the classes.

The upper class developed the Elite American Culture which gave them the view that they were superior to the others around them. They also developed a bad view of lower class people as they did not mix with them.

The upper class represented themselves with rich, opulent and luxurious surroundings. They had large mansions, fast cars and modern technology which they showed off at large, elaborate parties.

During this time, there was the emergence of the 'flapper' in American Culture. The 'flapper' was a figure that women looked to be. She was a powerful individual with sexual allure, who saw herself liberated from the old Victorian ways. She had bright red lipstick and bobbed hair. She wore fashionable clothes, smoked cigarettes and consumed alcohol. She didn't have to listen to anyone and could do what she felt like. As many women looked best fit the description, they became quite rude and snobbish. They had added their part to the Elite American Culture. By 1926, the 'flapper' became a universal figure and young women everywhere wanted to emulate her.

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डॉ. अनिल गर्जे

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मध्ययुगीन मराठी वाङ्मयाच्या इतिहासात इ.स.१२७० ते १३३२ हा यादवकाळाचा महत्त्वपूर्ण कालखंड आहे. यादव काळ हा सांस्कृतिक व वाङ्मयीन दृष्टीनेही अत्यंत महत्त्वाचा कालखंड आहे. या कालखंडात विविध साहित्यप्रकारांची निर्मिती झालेली आहे. या काळात महाराष्ट्रात एक मोठी यंत वांवास दिसून येते. संत ज्ञानेश्वर व संत नामदेवांनी अठरापगड जाती-धर्मातील संतांना एकत्र आणले. अध्यात्मिक लोकशाहीची निर्माण केली. भ्रम अमंगळ मानून उच्च-नीच, स्त्री-पुरूष, लहानथोर हे सर्व भेद नंतर वरून स्त्री-शूद्रांना भक्तीचा मार्ग मोकळा करून दिला. त्यामुळेच संत कवयित्रींची एक मोठी परंपरा महाराष्ट्रभर दिसून येते. त्यांनी आपली भक्ती अभंगांच्याद्वारे प्रकट केली. विठ्ठल हे आपले आराध्य दैवत मानले. आपण त्याचीच लेकरे आहोत अशी भावना त्यांच्या काव्यातून दिसून येते. संत मुक्ताबाई, जनाबाई, सोयराबाई, निर्मळा, राजाई, गोणाई, कान्होपात्रा यासारख्या संत कवयित्रींची संपन्न परंपरा पहावयास मिळते. नंतर पुढे बहिणाबाई आणि वेणाबाई यांच्या रूपापने ही परंपरा अधिक वृद्धीगत होत गेलेली दिसून येते.

प्रत्येक संत कवयित्रींची अभंगरचना, शैली, अभंगातील भक्ती व भावोत्कटता वेगळी आहे. समानसूत्र भक्तीचे आहे. आपल्या भक्तीच्या आविष्कारासाठीच त्यांनी अभंग रचनेचा उपयोग केला. त्यांच्या अभंगांची भाषा साधी, सरळ व सोपी असल्यामुळे ते सर्वसामान्यापर्यंत पोहोचले. त्यातील गोडवा मोठा लक्षणीय आहे. समाजाविषयीचा कळवळा व कणव त्यांच्या काव्यात आहे.

संत मुक्ताबाई :

निवृत्ती, ज्ञानदेव, सोपान आणि मुक्ताबाई या चौघा भावंडात अवघे अठरा वर्षांचे आयुष्य मुक्ताबाईला लाभले. त्यांचा पारमाक्रि, आध्यात्मिक अधिकार मोठा होता. आई-वडिलांनी देहत्याग केला त्यावेळी मुक्ताबाईचे वय अवघे चार वर्षांचे होते. डॉ. केतकी मोडक मुक्ताबाईविषयी म्हणतात, आई आणि वडिल जेव्हा या भावंडांना सोडून गेले तेव्हा निवृत्ती आणि ज्ञानेश्वर कोरात्र आणायला जात असत. सोपानदेव मुक्ताबाईला सांभाळत असत. आई वडिलांकडून पोरकी झालेली ही भावंडे, त्यांच्यावर मायेची पाखर घालण्याचे कार्य सर्वांत लहान असूनही मुक्ताबाईने केलेले आढळते. १ डॉ. केतकी मोडकांचे मत अगदी बरोबर आहे कारण मुक्ताबाईंनी संत नामदेवाचे गर्वहरण, चांगदेवासारख्या वयोवृद्ध हरयोग्यास गुरूपदेश व ताटीआड लपून बसलेल्या ज्ञानेश्वरांचे सांत्वन त्यांनी केले.

ज्ञानदेव गाथेत मुक्ताबाईंच्या नावावर ४२ अभंग आहेत. आयुष्यातील प्रत्येक प्रसंगाला त्या कणखरपणे सामोऱ्या गेल्या. त्यांची, ताटीचे अभंग रचना प्रसिध्द आहे. त्यांच्या भक्तीकाव्याविषयी डॉ. दत्तात्रय फलके म्हणतात, ममसंत मुक्ताबाईंची काव्यसंपदा भक्तीतून प्रेरित असली तरी तिच्यातील परखडपणा हा योग मार्गाचा प्रभावदर्शक आहे. मुक्ताबाईंची काव्यरचना उत्स्फूर्त, उत्कट भावातून स्फुरलेली आहे. काव्यातून तत्व प्रतिपादन सलग नसून, तत्व प्रतिपादन ही तिची स्थायी वृत्ती, प्रेरणा आढळते. तो तिला प्राप्त झालेला अधिकार आहे. मुक्ताबाईंच्या काव्यात तिच्या स्वतःच्या अधिकाराचा परखड वापर दिसून येतो. म्हणून तिची वाणी परखड आहे. अनावर बोलातून प्राप्त झालेला परखडपणा तिचे काव्यभूषण आहे. फक्त २ डॉ. फलके यांनी केलेले विधान बरोबर आहे कारण संत मुक्ताबाईंना परमार्थाची ओढ व परमेश्वर भेटीचा ध्यास होता. योगमार्ग, परार्थता, भक्तीर्गा, विरक्तता, वैराग्य, जीवनानुभूती, दृष्टनिष्ठा इत्यादी गोष्टी त्यांच्या अभंग रचनेच्या मुळाशी असलेल्या

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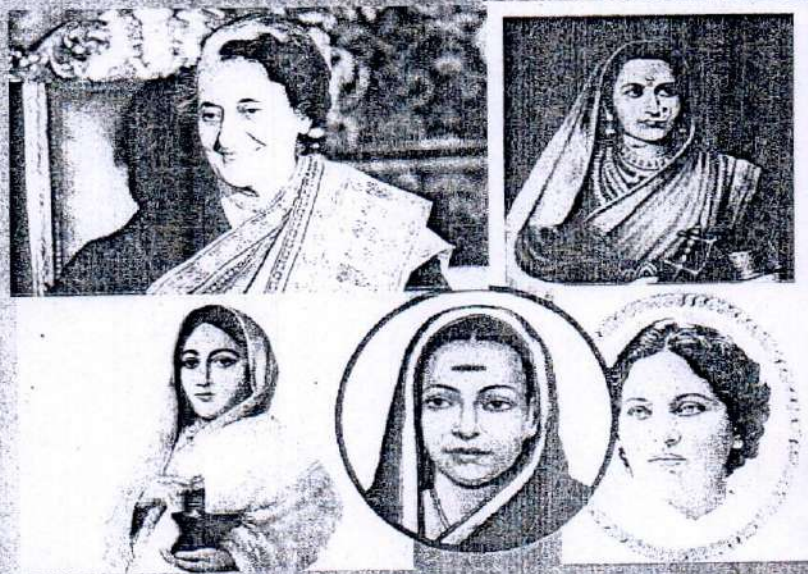
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## महिला अबलीकरणच्या समस्या : आह्वाने आणि उपाय



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## लिंगभेद असमानता आणि बांधकाम क्षेत्रातील स्त्रियांच्या समस्या

प्रा. भोसले एस.

ई गांधी महाविद्यालय कडा

प्रस्तावना :

भारत हा एक कृषिप्रधान देश असून देशातील ५८ टक्के लोकांचा उदरनिर्वाह शेती व शेतीवर आधारित व्यावसायावर अवलंबून आहे. शेतीबरोबरच शहरी व ग्रामीण भागातून लहान मोठ्या व्यवसायातून मजुरी, भाजीपाला विकणे, मंगार जमा करणे, हॉटेल मजूर, घरकाम करणे, साफसफाई करणे, वर्तमानपत्र विकणे, व्यापार करणे, बांधकाम व्यवसायात काम करणे इ. अनेक प्रकारची कामे करून आपली उपजीविका भागवतात.

भारतात २०११ च्या जनगणनेनुसार एकूण कामगार संख्या ४८.१७ कोटी असून त्यामध्ये ३३.१८ कोटी पुरुष कामगार तर १४.९८ कोटी महिला कामगार दिसून येतात. हि कामगार संख्या संघटित आणि असंघटित दोन्ही क्षेत्रातील आहे तसेच २०११-२०१२ मध्ये भारतात एकूण ४.९८ कोटी पुरुष आणि महिला बांधकाम कामगार असल्याची आढळून येते. म्हणजेच भारतात इतर व्यवसाय बरोबरच बांधकाम क्षेत्रातून हि मोठ्या प्रमाणावर रोजगार उपलब्ध होताना दिसून येतो. मात्र बांधकाम क्षेत्रातील बहुतांशी कामगार हे असंघटित आहेत.

भारतात बांधकाम उद्योग हा एक महत्त्वाचा उद्योग असून या उद्योगात अशिक्षित, अकुशल व कुशल कामगार, गरीब, बेकार इ. लोकांना अगदी सहज रोजगार उपलब्ध होतो. सार्वजनिक आणि खाजगी दोन्ही क्षेत्रातील बांधकामावर भारतात करोडो कामगार आपली उपजीविका भागवतात. बांधकाम क्षेत्रात पुरुष कामगाराबरोबरच बालकामगार आणि महिला कामगारानाही मोठ्या प्रमाणात रोजगार उपलब्ध होत आहे. बांधकाम उद्योगातील महिला कामगार:-

बांधकाम क्षेत्रात मोठ्या प्रमाणात रोजगार उपलब्ध होत असला तरी या क्षेत्रात महिला आणि पुरुष कामगारांचे प्रमाण सारखे नाही बांधकाम क्षेत्रात पुरुष कामगार हे कुशल कामगाराबरोबरच कुशल स्वरूपाचे काम करतात. मात्र महिला कामगार फक्त अकुशल स्वरूपाचे काम करत असल्यामुळे पुरुष कामगारांच्या तुलनेने महिला बांधकाम कामगारांचे प्रमाण कमी आहे.

भारतात २००४-२००५ साली एकूण महिला कामगारांपैकी १.८९ टक्के महिला बांधकाम क्षेत्रात काम करत होत्या तर एकूण पुरुष कामगारांपैकी ६.५९ टक्के पुरुष बांधकाम क्षेत्रात काम करताना दिसून येतात. सन २००९-२०१० साली एकूण महिला कामगारांपैकी ५.११ टक्के महिला बांधकाम क्षेत्रात काम करत होत्या तर एकूण पुरुष कामगारांपैकी ११.३३ टक्के पुरुष बांधकाम क्षेत्रात काम करत होते म्हणजेच बांधकाम क्षेत्रात महिला कामगारापेक्षा पुरुष कामगारांचे प्रमाण जास्त आहे.

बांधकाम क्षेत्रातील महिला बांधकाम कामगारांच्या समस्या :-

बांधकाम क्षेत्रात कामगारांना अगदी सहज रोजगार उपलब्ध होत असला तरी या क्षेत्रात समस्यांचे प्रमाणही जास्त आहे. बांधकाम क्षेत्राचा समावेश असंघटित क्षेत्रात होत असल्यामुळे येथील कामगारांना अनेक समस्यांना सामोरे जावे लागते. पुरुष कामगाराबरोबरच महिला आणि बालकामगारानाही अनेक समस्या बांधकाम क्षेत्रात जाणवतात मात्र पुरुष कामगारापेक्षा महिला बांधकाम कामगारांना जास्त समस्यांना सामोरे जावे लागते.

1) दुय्यमदर्जाचे काम:-

बांधकाम उद्योगात प्रामुख्याने कुशल आणि अकुशल दोन्ही स्वरूपाचे कामे कामगारांना करावी लागतात. त्यामध्ये वीट बांधकाम, फारशी काम, प्लास्टर करणे, लाईट काम, नळ काम इ. कुशल स्वरूपाचे कामे हे पुरुष कामगार करताना तर मातीकाम, वाळू विटा सिमेंट दगड इ. साहित्य वाहून नेणे, मिसीच्या सुताखाली साहित्य पुरवणे, बांधकामावर पाणी मारणे, साफसफाई करणे इ. कामे मोठ्या प्रमाणावर महिला करताना दिसून येतात. हि कामे काही प्रमाणात पुरुष कामगार व बालकामगारही करतात परंतु त्यांचे प्रमाण महिलांच्या तुलनेत कमी असते म्हणजे बांधकाम उद्योगात कुशल कामे हि पुरुषाकडे व अकुशल स्वरूपाचे कामे ही महिला कामगाराकडे आलेली दिसून येतात.

२) महिलांना करावे लागणारे अतिश्रम :-

बांधकाम क्षेत्रात सर्वच कामगारांना मोठ्या प्रमाणात कष्ट करावे लागतात परंतु पुरुषांच्या तुलनेत महिलांना जास्त कष्ट करावे लागतात. महिलांना बांधकामावरील कामाबरोबरच घरकामही करावे लागते. बांधकामाच्या ठिकाणही महिलांना कष्टाचे काम करावे लागते अवजड वस्तू उचलणे, वस्तू वाहून नेणे, दोन तीन मजल्यावर वस्तू वाहून नेणे, खोद काम करणे इ. कामे करावी लागतात. एवढे कष्ट करूनही महिलांना घरी स्वयंपाक करणे, मुलाचा सांभाळ, वृधाची सेवा इ. स्वरूपाची कामे करावी लागतात. अशा दुहेरी अतिश्रमांमुळे महिलांची शारीरिक परिस्थिती खालावते

३) पुरुष कामगारांच्या तुलनेत महिला कामगारांना कमी वेतन:-

बांधकाम क्षेत्रात अशिक्षित, कुशल-अकुशल बेकार लोकांना अगदी सहज रोजगार उपलब्ध होत असला तरी बांधकाम क्षेत्रात कामगारांना करावे लागणारे कष्ट आणि त्यांना मिळणारा मोबदला यांचे प्रमाण विषम आहे. बांधकाम क्षेत्रात कामगारांना ८ ते 10 तास अतिश्रमाचे काम करावे लागते परंतु त्यांना मिळणारा मोबदला अतिशय कमी असतो त्यामध्येही पुरुष कामगारांच्या तुलनेत महिला कामगारांना मिळणारा मोबदला



## Indian Perspective of Post-Colonialism: A Review.

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Colonialism is the process of settlement by European in non-European (Asian, African, South American, Australian) spaces. While migrations are as old as the presence of humankind on earth, colonization in the eighteenth and nineteenth centuries meant a violent appropriation and exploitation of native races and spaces by European powers. Colonization often destroyed native cultures, or altered them significantly, often producing new (hybrid) forms. Thus colonization cannot, in the twentieth century, be seen as an innocent 'settlement' in a new place. It must be seen as a powerful mode of exploitation based on the different in race, culture, forms of knowledge, globalizations and political systems.

Post Colonialism is an intellectual direction that exists since around the middle of the 20<sup>th</sup> century. It developed from and mainly refers to the time after colonialism. Nowadays, aspects of post-colonialism can be found not only in sciences concerning history, literature and politics, but also in approach to culture and power. However, post-colonialism can take the colonial time as well as the time after colonialism into consideration.

A good example of the cultural dimension of colonialism would be the role of the English in India. Colonial administrators such as Warren Hastings and T.B. Macaulay, academic scholars like William Jones and commentators such as James Mill first studied Indian languages (especially Sanskrit and Persian) by translating texts from these languages into English or undertaking studies of Indian law, religion, or arts. In the second stage they announced that these Indian texts and cultures were primitive, irrelevant, and completely out of date. With such knowledge systems, they argued, India could never progress. In the third moment they substituted English as the medium of instruction, as the language of knowledge itself. Arguing that English and European culture alone could ensure equality, liberty, development, and 'modernization', colonial administrators installed English.

The 'postcolonial' specifies 'a transformed historical situation and the cultural formations that have arisen in response to changed political circumstances, in the former colonial power'. The 'postcolonial' describes a whole new experiences of political freedom, new ideologies and new agendas. The sovereign nation-state now asserts its independence by preparing its own program me for economic and social development, and by generating its own, newer cultural forms where previously it had been decided and administered by the European colonial power. The problem with the term 'postcolonial' is that European colonialism becomes the determining moment of the non-European country. All cultures are placed in history as 'before European colonization' or after European colonization'.

Postcolonial writing can be defined as the textual/literary processes through which formerly colonized people assert their difference from, resistance to, and negotiation with, European colonial masters and cultures while attempting to develop similar strategies to tackle contemporary globalizing and neocolonial processes of domination by Euro-American powers. In one of the first major theorizations about 'postcolonial literature', Bill Ashcroft, Gareth Griffiths, and Helen Tiffin defined it thus:

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Criticism of Indian Culture And Philosophy in Khushwant Singh's  
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Abstract:

The present paper is an attempt on Khushwant Singh's novel *Train to Pakistan* which is about the destruction took place in 1947 when India was divided into two countries - India and Pakistan. Partition has left great effect in the hearts of several Indians at that time. The book was first published in 1956. Khushwant Singh puts the microscope on the Indian society through the character, Iqbal to criticise different evil customs. The novel begins with a reference to the Hindu Muslim riot that had torn the nation and set the fire of terrorism and communalism. The social, cultural and philosophical understanding of that period is examined through varied groups of people showing that the blame could not be placed on any particular group but all were responsible.

**Keywords:** government, exploitation, destruction, social, cultural, philosophical, unhygienic etc.

The entire novel revolves around a small village named Mano Majra, which is close to the river Sutlej. In fact, the novel was originally titled as Mano Majra. It relates to the story of the village, Mano Majra which is become a battlefield. Lala Ram Lal, a money lender by profession is the only Hindu family in the village. The money-lenders were exploiting the poor and needy people. The British government did nothing to save poor from these people. But they were the targets of dacoits. In Mano Marja, dacoity is committed in Ram Lal's house and is brutally killed. The villagers were in the dark about happenings of larger scope. Upon learning that the government was planning to transport Muslims from Mano Majra to Pakistan the next day for their safety. One Muslim said, "What have we to do with Pakistan? We were born here. So were our ancestors. We have lived amongst [Sikhs] as brothers".

Singh speaks about the unhygienic condition of the Indian people. They spit and urinate everywhere without hesitation. But the Indians keep sexual morality above everything else. Meet Singh complains that the Christian men and women go freely with other men and women. Iqbal says that Christian don't tell lies as the Indian do. The police in India are shameless and make nuisance all the time. In the name of giving common public a peace, they stand as a nightmare. Iqbal complained, "There is a police system which, maltreats him and lives on corruption and bribery". Iqbal himself become a victim of police. He is stripped to see whether he is a Muslim, and arrested for no offence. Police is unjust in the case of Jugga too because they put him behind the bar.

Unemployment is largely responsible for forcing people into a world of crimes. So, an unemployed person has no option other than stealing. When he does so, society labels him as a criminal. He is not brought back to the mainstream of the society. There is no surprise if people become Nexalites or dacoits. The Indian Judicial system is criticized. The Laws are violated by the law-makers. Hukum Chand, a Magistrate is a who gets his promotions and jobs of his





## कामकाजी स्त्रियों की समस्या

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### प्रस्तावना :

हिंदी साहित्य के क्षेत्र में महिलाओं की भूमिका अहम भूमिका रही है। सामाजिक तौर पर देखा जाए तो स्त्री वादी साहित्य उंचाई के कगार पर पहुँच गया है। समाज में हमें महिलाओं की समस्या दिखाई देती है। हम देखते हैं कि महिला परिवार संभालकर किसानों के यहाँपर मजदूरी करने के लिए जाती है। बढ़ती महंगाई की तुलना में उस महिला को जितनी मजदूरी मिलनी चाहिए वह नहीं मिलती। परिवार चलाने में पुरुषों के साथ मिलकर काम करने का प्रयास करती है। सामान्य रूप से देखा जाए तो महिला का रूप करुणा, दया, क्षमा, कोमलता का दिखाई देता है। मैथिलीशरण गुप्त ने महिला के प्रति अच्छी पंक्ती प्रस्तुत की है।

‘अबला नारी हाय ! तुम्हारी यही कहानी

आँचल में दुध और आँखों में पानी”

मैथिलीशरण गुप्त ने अपने शब्दों में नारी जीवन का वर्णन किया है। नारी को कितनी भूमिका निभानी पडती है। पुत्री, पत्नी, माता इस भूमिका को स्त्री को निभानी पडती है। जन्म से लेकर माता-पिता की सहनी पडती है। विवाह होने के बाद पति की सुननी पडती है और वृद्धावस्था में बेटों की सुननी पडती है।

स्त्री जीवन है पंछी जैसा

तीन बार कट गये पर

पिता पति बेटे के लिए

समर्पित है तीन अंक

### १. अपमान :

पुरुषों को जितने अधिकार प्राप्त हो चुके हैं उतने स्त्री को नहीं हुए। आज भी स्त्री को परदे में ढकी हुई वस्तु दिखाई देती है। पुरुषों ने गलती की तो उसे माफ किया जाता है। परंतु नारी ने गलती की तो उसे मिट्टी का बर्तन कहा जाता है। स्त्री को दुय्यम माना जाता है। काम में अगर गलती करती है तो कामकाज के ठिकाने उसका अपमान किया जाता है। उसकी मजदूरी में कटौती की जाती है। पुरुषों की तुलना में स्त्री को मजदूरी हमेशा कम पाई जाती है। सरकारी नियमों के अनुसार भी स्त्रियों की मजदूरी कम दिखाई देती है। ऐसा देखा जाए तो पुरुषों के समान ही स्त्रियों की मजदूरी होनी चाहिए। क्योंकि समान वेतन समान काम अगर है तो कामकाज जगह पर भी समान वेतन क्यों नहीं किया जाता। कानून में यह बदलाव करना जरूरी है।

### २. मर्यादा के दायरे में रखना :

मजदूर महिला जब वह घर से जल्दी निकलती है और देर समय पर घर आती है तो पति द्वारा उसकी वही समस्या बनकर रह जाती है। जब मालिक से वेतन मिलने पर पति द्वारा उसका वेतन छिन लिया जाता है नहीं तो उसे छल का सामना करना पडता है। कामकाजी



## Hydrological Status Of Selected Waterbodies Relation To Water Pollution

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### Abstract -

In the present investigation the Dadegon water reservoir were monitored in (July 2016 to June 2017) show high positive correlations among different factors such as Temperature, Transparency, pH, Dissolved oxygen (DO), Free Carbon dioxide, Hardness, Calcium, Magnesium, Chlorides, Turbidity, Total Nitrates, Sulphate were monthly analysis over the period of twelve months suggest that the water is not more polluted.

**Key words:** Physico-chemical parameter, Dadegon Water bodies.

### Introduction:

The Dadegon Water bodies are an Irrigation project with an earthen dam on river Kadi near village Dadegon Tal. Ashti. The River is a tributary of Bhamariver in Krishna basin. It irrigate about 340 hector land in Ashti Tahasil at Beed District and also provide drinking water near villages. The considerable Limnological investigations are carried out on manmade impoundment. In India workers like Sharma Rekha (1990), Pandey et al. (1993), Sexena M.M. (1982) Shreenivasan (1974) Krishnamurti (1965) have done some hydro biological work a shallow water bodies in south India. A few like David et al (1969) have worked on the large brackish water lakes and reservoir. Shreenivasan (1962-1974) reported a detailed account on the productivity of tropical waters of Tamilnadu. In recent studies on hydrobiology of the fresh water lentic habitats about its physico-chemical characteristics and their productivity is well studied by Trivedy P.K. Goel (1988) Patil et al (2002) Lendhe et al (2004) Ramakrishna (2002). Sakhare V.B et al (2003), Chavan and Mohekar (200) The limnology suggests complete knowledge of fresh water area including its Physicochemical and biological aspects (Knight 1970). While pollution is a change in the environment, which become gradually worse (Prakash and Rawat 1979) and acting as the important limiting factor (Odum 1971). **Materials and Method:** Five sampling stations were selected and water samples were collected at every monthly interval from sampling stations in black plastic cans of 5 liters Capacity. The parameters such as Temperature,  $P^H$ , Transparency OD and free  $CO_2$  of water sample were analyzed at on the sites, while remaining parameters were analyzed in the laboratory by using standard methods given by different agencies and scientists for the examinations of the water, sewage and industrial wastes (APHA-1985), Trivedy and Goel (1984). LAABA-Hyderabad (1998).

### Results and Discussion:

The water samples from four sampling stations, were collected as described in the Material and Methods and analyzed various Physico-Chemical parameters such as Total Hardness, Transparency, Turbidity, Total Dissolved Solid, Conductivity, Chlorides, Dissolved Oxygen, Biochemical Oxygen Demand and Free  $CO_2$ . The results are shown in table 1.

Present investigation ambient temperature of water reservoir ranged between  $15.5^{\circ}C$  to  $32.30^{\circ}C$ . The minimum water temperature was recorded in the month of January and maximum to May. The water temperature during winter months ranged between  $15.5^{\circ}C$  to  $22.00^{\circ}C$  as against the summer temperature  $27.50^{\circ}C$  to  $32.30^{\circ}C$ . Temperature exhibited significant negative correlation with DO and free  $CO_2$  and significant positive correlation with silicate and phosphate content of water. **pH:** The pH of water body was not constant throughout the year, ranged in 7.5 to 8.8 (Table No.1). The pH of the dam waterbodies was less alkaline throughout year and exhibited positive correlation with TDS, Turbidity, and negative correlation with Transparency, Free  $CO_2$ , Conductivity and also Total



## हिंदी साहित्य और सिनेमा

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हिंदी विभाग प्रमुख

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महाराष्ट्र

प्र.ध्व. ९४२३७५६४४४

भारत विश्व से अलग देश है। यहाँ विविध सांस्कृतिक गतिविधियों का विकास हो गया है। मिली-जुली सांस्कृतिक और सामाजिक स्थिति भारत की अमूल्य शक्ति है। विविध भाषाओं की अभिव्यक्ति हमारी संस्कृति की संवाहक रही है। विविध भाषाएँ होते हुए भी हर भारतीय, हर भाषा का सम्मान करता दृष्टिगत होता है। हिन्दी भारत की राष्ट्रभाषा है। पूर्व से लेकर पश्चिम और उत्तर से लेकर दक्षिण तक हिन्दी भाषा बोली और समझी जाती है। हिन्दी सिनेमा ने इस भाषा की व्यापकता बढ़ते हुए भारत की सीमा पार कर विश्व के कोने-कोने में पहुँचाई है। हिन्दी विश्व में लगभग १९४ देशों में बोली और पढ़ाई जा रही है।

सिनेमा और साहित्य दो अलग विधाएँ होते हुए भी दोनों का आपसी संबंध अत्यंत गहरा है। जब शुरू में कहानी पर फिल्में बनने की शुरुआत हुई तो इसका आधार साहित्य ही रहा। दादासाहब फालके ने भारत में पहली फीचर फिल्म बनाई जो भारतेन्दु हरिश्चंद्र के नाटक 'हरिश्चंद्र' पर आधारित थी।

भारतीय सिनेमा ने शती मना ली है। अब वह स्वतंत्र रूप से विकसित हो चुका है। सन १९३१ में पहला बोलनेवाला चित्र का सिनेमा का निर्माण हुआ, 'आलम आरा' इस बोलनेवाले सिनेमा के साथ ही हिन्दी भाषा में आज तक सर्वाधिक सिनेमाओं का निर्माण हो गया है।

दर्शक की चेतना को झकझोर देने की क्षमता जितनी ही किसी सिनेमा में होगी, वह सिनेमा उतना ही सफल होगा। मानव मन को परिवर्तित करने की क्षमता साहित्य और सिनेमा में होती है। सिनेमा साहित्य से अधिक प्रभावशाली, सशक्त तथा आम जनता तक सरलतासे पहुँचनेवाला माध्यम रहा है।

हिन्दी सिनेमा में पहली बार स्थापित लेखक के रूप में कथा सम्राट मुंशी प्रेमचंद का प्रवेश हुआ। सन १९३३ में हिन्दी के सर्वाधिक प्रसिद्ध साहित्यकार प्रेमचंद की कहानी पर मोहन भावसाणी के निर्देशन में 'मिल मजदूर' सिनेमा का निर्माण हुआ। इस में कहानी के मूल ढाँचे में कुछ बदलाव किया गया जो प्रेमचंदजी को पसंद न आया। भारत में फिल्म संसार की विशालता के बावजूद साहित्यिक रचनाओं पर कम फिल्में बनी हैं। 'गोदान', 'गबन', 'चित्रलेखा', 'संघर्ष', 'साहब बीबी और गुलाम', 'तीसरी कसम', 'गाइड' आदि साहित्यिक कृतियों पर सिनेमा का निर्माण हुआ। साहित्यिक कृतियों पर सबसे अधिक सिनेमा बनानेवाले सत्यजित राय निर्देशक बनने से पहले स्वयं लेखक थे। इन्होंने प्रेमचंद की दो, रविन्द्रनाथ टैगोर की दो, विभूति भूषण वन्धोपाध्याय की चार, ताराशंकर वन्धोपाध्याय की दो तथा सुनील गांगुली की दो कहानियों पर फिल्में बनाईं। इसके साथ ही स्वयं के साहित्य पर उन्होंने दस फिल्में बनाईं। साहित्य की दृष्टि से सिनेमा निर्माण के कार्य में सत्यजित राय का कार्य उल्लेखनीय रहा है।

हिन्दी साहित्यकारों का सिनेमा में अत्यंत सफल दौर सातवें दशक से दृष्टिगत होता है। जिसमें उपन्यासकार कमलेश्वर का योगदान मायने रखता है। उनकी कृति पर बनी फिल्में 'आंधी', तथा 'मौसम' अत्यधिक लोकप्रिय रही। सातवें दशक में ही हिन्दी कथा साहित्य में बदलाव आ रहा था वहीं हिन्दी भाषी

Markande M.K.

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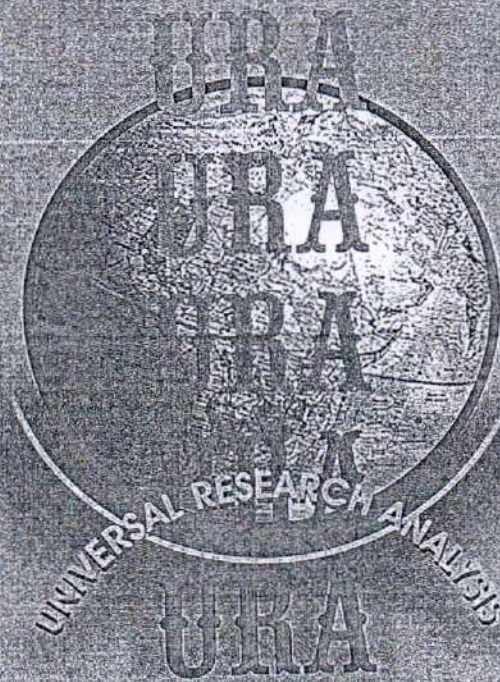
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## Modern Innovative on Human Resource Management

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### Research Paper - Commerce

#### ABSTRACT

*This paper highlights the Modern innovative impact factors on human resource management. Human resource is the most important asset for any organization and it is the source of achieving competitive advantage managing human resources . is very challenging as compared to managing technology or capital and for its effective management organization requires effective human resource management system. Human management system should be backed up by sound human resource practices. Human resource practices refer to organizational activities directed a managing pool of human resources and ensuring that the researches are employed towards the fulfillment of organizational goals. This paper has been designed to identified and existing of modern innovative factors impact on human resource management. The purpose of this paper is to identified, understanding and develop of human resource practices and to examine the unique human resource implemented by different companies.*

**Keywords:** Human resource management practices, Innovative human resource management, Innovative leadership, Technology, Mobility



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# THE ROLE OF GOVERNMENT TO PROTECT THE HUMAN RIGHTS

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## मानवी अधिकार आणि भारतीय संविधानातील तरतुदींचा राजकीय अभ्यास

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### प्रस्तावना:

मानव अधिकार ही संकल्पना अधुनिककाळात अधिक गतीने सर्व सामान्या पर्यंत पोहचली आहे. वास्तविक ही संकल्पना फार पूर्वीपासून आस्तीवात आहे. मानव अधिकार म्हणजे मानवाला जन्मजात मिळालेले अधिकार आहेत. हे अधिकार प्रत्येक मानवी जीवनास स्व अस्तित्व निर्माण करण्यासाठी, व्यक्तीमत्त्व विकास साधण्यासाठी तसेच आपले जीवन सुखकर करण्यासाठी प्रदान करण्यात येत असतात. हे अधिकार कोणाकडूनही सैध्दांतिक रित्या प्रदान करण्यात येत नसतात. तसेच ते हिरावून घेण्याचा ही कोणाला हक्क नसतो. त्यात राष्ट्र, राज्य, गट, समूह तसेच व्यक्ती अशा कोणत्याही स्वरूपात ते हक्क हिरावून घेतले जाऊ शकत नाही. या हक्काचा समावेश अबाधित हक्क अशा स्वरूपात करण्यात येतो. याच प्रमाणे आज प्रत्येक देश स्वतंत्र झाला आहे. यातिल बहुतांश देशानी लोकशाहीची प्रस्थापना केली आहे. याच प्रमाणे भारताने देखील लोकशाही गणराज्याचा स्विकार केला आहे. त्यातही कल्याणकारी राज्याची संकल्पना स्विकारण्यात भारत हा आघाडीवर असणारा देश म्हणून ओळखला जातो. कल्याणकारी राज्यात लोकांचे हित पाहिले जाते. लोककल्याणास प्राधान्य दिले जाते. प्रत्येक नागरीकांचे स्वातंत्र्य अबाधित ठेवून त्यास आर्थिक, सामाजिक, सांस्कृतिक, शैक्षणिक, राजकीय अधिकार प्रदान करण्यात येत असतात. भारताने 200 वर्ष गुलामगिरीत काढल्यामुळे व्यक्ती स्वातंत्र्याचे महत्व अधिक स्पष्ट पणे जाणले त्यामुळे प्रत्येक व्यक्तीस काही मुलभूत हक्क प्रदान करण्यात आले. ते अगदी मानव अधिकाराशी तंतोतंत साधर्म्य असणारे आहेत. या दृष्टिकोणातून मानव अधिकार विषयक संविधानातील तरतुदींचा अभ्यास प्रस्तुत शोधनिबंधात करण्यात आला आहे.

शोधनिबंधाचे उद्दिष्ट :

1. मानव अधिकारांची संकल्पना समजून घेणे.
2. भारतीय संविधानातील मुलभूत हक्कांचा आढावा घेणे.
3. मानव अधिकार विषयक संवैधानिक तरतुदींचा अभ्यास करणे.

वरिल उद्दिष्टानुरूप सर्व प्रथम मानव अधिकारांची संकल्पना समजून घेणे क्रमप्राप्त ठरते.

**मानव अधिकाराची संकल्पना :-** प्रत्येक व्यक्तीला जिवन जगण्यासाठी काही साधनांची आवश्यकता असते. त्या सोबतच त्यास व्यक्तीमत्त्व विकासाची गरज असते. व्यक्तीमत्त्व विकासासाठी तसेच अत्यावश्यक साधने प्राप्त करुण घेण्यासाठी ज्या अधिकाराची गरज असते. त्यास मानव अधिकार असे संबोधले जाते. हे अधिकार जन्मजात किंवा नैसर्गिक रित्या मानवाला प्राप्त झालेले असतात. हे अधिकार कोणत्याही रुढी परंपरा, राज्य, राजा, संसद किंवा इतर संवैधानिक संस्थेकडून प्रदान करण्यात येत नसतात. तसेच ते त्यांच्या कडून हिरावूनही घेतले जाऊ शकत नाही. या दृष्टिकोणातून भारतीय संविधानाने प्रत्येक नागरीकास मुलभूत अधिकार प्रदान केले आहे. या अधिकारांच्या व्याख्या काही विचारवंतानी केल्या आहेत. त्या पुढील प्रमाणे आहेत.

1. **बेन्थम :** कायद्याने मान्य केलेली, स्विकृती दिलेली व्यक्तीची मागणी म्हणजे अधिकार होय. या अनुशंगाने जगातील प्रत्येक व्यक्तीला ती मानव आहे या एकाच कारणास्तव ज्या अधिकारांची प्राप्ती होणे गरजेचे असते त्या अधिकारांना मानवी अधिकार असे म्हणतात.
2. **डवार्किन :** मानव अधिकार हे मानवाला प्राप्त झालेले असे अधिकार आहे की त्यांची सर्वजनीक हितासाठी देखील राज्याकडून उल्लंघन होवू शकत नाही. आणि राष्ट्रिय कायद्याशिवाय देखील ते उपभोगता येऊ शकतात.
3. **सन 1993 चा मानव अधिकार संरक्षण कायदा :** या कायद्यातिल मानव अधिकाराचा अर्थ अशा प्रकारे स्पष्ट केला आहे की मानव अधिकार म्हणजे व्यक्तीचे स्वातंत्र्य, जिवन आणि समतेशी निघडीत असे मुलभूत अधिकार ही ज्यांच्या संरक्षणाची हामी राज्य घटनेने दिली आहे.

**मानव अधिकार विषयक भारतीय राज्यघटनेतील तरतुदी :** भारतीय राज्यघटनेतील तरतुदी नुसार प्रत्येक नागरीकाला स्वातंत्र्य, समता, आर्थिक स्वातंत्र्य, सामाजिक स्वायत्तता प्रदान करण्यात आली आहे. या प्रमाणेच प्रत्येक नागरीकाला आपले जीवन जगण्यासाठी ज्या आवश्यक बाबी आहेत त्या त्यांना मुलभूत हक्कांच्या स्वरूपात प्रदान करण्यात आल्या आहेत. त्याचा आढावा पुढील प्रमाणे घेण्यात आला आहे.

1. **समतेचा मानव अधिकार :** भारतीय संविधानातील तरतुदी नुसार कलम 14 ते 18 या मधिल नमुद केलेल्या हक्कांना समतेचा मुलभूत अधिकार असे संबोधले जाते. यात प्रामुख्याने कायद्यापुढे समानता, कायद्याने समान संरक्षण, धर्म, वंश, जात, लिंग, जन्मस्थान अशा कोणत्याही प्रकारच्या कारणांमुळे व्यक्ती - व्यक्ती मध्ये भेद भाव केला जाणार नाही. अशा प्रकारचा मुलभूत हक्क प्रदान करण्यात आला आहे. कलम 16 नुसार राज्याच्या अखत्यारीतील कोणत्याही संधीसाठी धर्म, जात, लिंग, कुळ तसेच निवास या कारणावरून भेद भाव केला जाणार नसल्याची हामी या हक्काद्वारे देण्यात आली आहे. या बरोबरच अस्पष्टता नष्ट करण्यात आली असून अस्पष्टता पाळणे कायद्याने गुन्हा ठरवीण्यात आला आहे.
2. **स्वातंत्र्याचा मानव अधिकार :** भारतीय राज्यघटनेत कलम 19 ते 22 या मधील तरतुदी नुसार स्वातंत्र्याचे अधिकार प्रत्येक व्यक्तीला प्रदान करण्यात आले आहे. यात प्रामुख्याने भाषण आणि अभिव्यक्ती स्वातंत्र्य, शांततेने एकत्रीत जमन्याचा अधिकार, संघटना स्थापण्याचा अधिकार, सर्वराज्यात मुक्त पणे संचार करण्याचा अधिकार तसेच कोणत्याही राज्य अथवा भागात राहण्याचा अधिकार या अधिकारांचा प्रामुख्याने उल्लेख करता येईल. या सोबतच एखाद्या व्यक्तीला अटक झाल्यास त्याच्या अटकेची कारणे देण्यात यावीत आणि त्या व्यक्तीला स्वताःचा बचाव करण्याचा आणि वकिला कडून सल्ला घेण्याचा अधिकार बहाल करण्यात आला आहे. प्रत्येक नागरीकाला कोणताही पेशा करण्याचा अधिकार कलम 20 नुसार देण्यात आला आहे. एकाच गुन्हासाठी एका पेक्षा अधिक वेळा खटला भरण्यात येणार नसल्याची हामी या अधिकारा द्वारे देण्यात आली आहे.
3. **पिळवणुकी विरुद्धचा अधिकार :** भारतीय राज्य घटनेतील कलम 23 आणि 24 अन्वये शोषनापासून मुक्त जीवन जगण्यासाठीचा अधिकार प्रत्येक नागरीकांना बहाल करण्यात आला आहे. त्यात प्रामुख्याने मानवी व्यापार, मानसांची वेटबिगारी आणि अन्य मजुरीच्या कारणावरून सक्ती

## Status of Rural Development in India

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### Introduction:

India is a second largest country in the world in term of population, that huge population creates a challenge to provide various facilities to the communities in the rural area. The country faces so many challenges after independence; the major challenge is to develop rural area of the country. The lot of experimentation of rural development from community development approach to integrated development and more recent is an inclusive rural development is a integral part of socio-economic development. The main objectives of rural development are to enrichment of the quality of human life in rural area of the country. Before the country attained independence and after independence so many programmers are initiated by the nationalist, thinkers, social reformers and governments. Well known among them were the Gurgaon Experiment of F.L. Brayne (1920), The Marthandam Experiment of Spencer Hatch (1921), The Srinikethan Experiment of poet Rabindranath Tagore (1920), The Sevagram Experiment of Mahatma Gandhi (1933), The Firkha Development Scheme (1946), and The Etawah Pilot Project of Albert Mayer (1948)<sup>1</sup>.

The concept of rural development was born in the context of agriculture and it's remained for a long time conterminous with agriculture development in India. Since the seventies the concept of rural development has undergone a change and has become more comprehensive. The concept of rural development as enunciated by the World Bank marks such a change. The World Bank defines "Rural development as a strategy designed to improve the economic and social life of a specific group of people"<sup>2</sup>. There are so many programmes are initiated by government of India to develop the rural area of country. These programmes are Community Development Programme(1952), National Extension Service(1953), Panchayat Raj (1959), High Yielding Variety Programme (1960), Indira Awas Yojana (1995), Pradhan Mantri Gram sadak Yojana (2000), Mahatma Gandhi National Rural Employment Guarantee Act (2005), Aajeevika Skills (2009), Water shade Development(Revised 2001), Hariyali(2003), National Horticulture Mission (2005), Support to State Extension Programmes For Extension reforms (2005), Rashtriya Krishi Vikas Yojana (2007), National Food Security Misssion (2007), Mahila Kisan Sashaktikaran Pariyojana (2009)<sup>3</sup> Sabki Yojana Sabka Vikas, Gram Swaraj Abhiyan, Mission Antodaya, District Development Co-Ordination and Monitoring Committee(DISHA), Pradhan Mantri Awas Yojana, Deendayal Antyodaya Yojana, National Rural Livelihood Mission, National Social Assistance Programme, Shyama Prasad Mukherji Rurban Mission and Saansad Adarsh Gram Yojana<sup>4</sup>.

### India's Position in the World:

The position of India in the world of various fields is shown in the below table.

| Sr. No. | Indicator                      | Year | Value                          | Rank |
|---------|--------------------------------|------|--------------------------------|------|
| 1       | Human Development Index        | 2015 | 0.624                          | 131  |
| 2       | Gender Development index       | 2015 | 0.819                          | -    |
| 3       | Multidimensional Poverty Index | 2012 | 0.282                          | -    |
| 4       | Gender Inequality Index        | 2015 | 0.530                          | 125  |
| 5       | GDP growth Rate                | 2016 | 7.6%                           | 7    |
| 6       | Total Area                     |      | 32,87,364km <sup>2</sup>       | 7    |
| 7       | Population                     | 2011 | 1251 Million                   | 2    |
| 8       | Population Density             | 2011 | 382 people per km <sup>2</sup> | 31   |
| 9       | Literacy Rate                  | 2011 |                                | 168  |

Above table reflects the human development index, gender development index, Multidimensional Poverty Index, Gender Inequality Index, GDP growth Rate, Population Density and Literacy Rate is not good to compare other country in the world<sup>5</sup>.

### Outlay on Major Schemes:

The Government of India runs so many schemes to develop the rural area of the country, every year financial provision of these schemes, in the below table 2015-2016 to 2017-2018 shows the major schemes budget provision.





## Assessment of Antagonistic Activity of *Trichoderma* on Seed Borne Pathogens of (*Cajanus cajan* L.) Millsp. 110

**S.T. Ingale, A.R. Kolte and S.S. Patale**

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**Abstract:**

The present study reveals that the antagonistic potential of some fungi isolated from the pigeon pea seeds which were screened against *Trichoderma viride* and *T. harzianum*. *Trichoderma* isolated from soil and fruit waste which collected from local market. It showed inhibitory effect on some common post-harvest pathogen of pigeon pea. They are namely *Aspergillus fumigatus*, *A. flavus*, *A. niger*, *A. terreus*, *Alternaria* sp., *Fusarium oxysporum*, *Curvularia* sp., *Drechslera* sp., *Penicillium* sp., *Cladosporium* sp. etc. both tested *Trichoderma* sp., *Trichoderma harzianum* showed maximum inhibition on pathogen *Aspergillus terreus* (76.66) and *Fusarium oxysporum* (74.22) percent. All over *Trichoderma harzianum* found the maximum inhibitory effect on seed borne pathogens of pigeon pea.

**Key words:** *Trichoderma viride*, *T. harzianum* Seed borne pathogens, Biological control

**Introduction:**

Pigeon pea (*Cajanus cajan* L.) Millsp. is an annual crop. After harvesting it also affects by many endophytic or pathogenic fungal pathogens. The present study focused on seed borne pathogen of pigeon pea i.e. *Alternaria* sp., *Curvularia* sp., *Drechslera* sp., *Aspergillus terreus*, *Aspergillus niger* and *Fusarium* sp. *A. flavus*, *A. fumigatus*, *Cladosporium* sp. *Penicillium* sp. etc. these pathogens are effects on quality content of seed and reduce the productivity of crops. To control these pathogen use chemical and biological method everywhere. In biological method *Trichoderma* has giving the best results on controlling this pathogen. A number of microorganisms, which effectively control postharvest pathogens, have been identified for post-harvest control (Wilson and Wisniewski, 1989). Biological control of plant pathogens by micro-organisms has been considered a more natural and environmentally acceptable alternative to the existing chemical treatment methods (Baker and Paulitz, 1996). *Trichoderma* sp. has proved to be useful in the control of phyto-pathogens affecting different crops (Benitez T. et al 2004), (Soytong K. et al. 2005). *Trichoderma* spp. are now the most common fungal biological control agents that have been comprehensively researched and deployed throughout the world. Several fungal cell wall degrading enzymes, amongst them chitinase and glucanase, which seem to play an important role in the antagonistic action of *Trichoderma* against a wide range of fungal plant pathogens (Kucuk and Kivanc, 2008). *Trichoderma* spp. have been identified as most common fungal antagonistic. Several strains of *Trichoderma* have been found to be effective as bio-control agent of various soils and seed borne plant pathogenic fungi

**Material and methods:**

**Isolation of pathogenic fungi:**

The pathogenic fungi namely *Alternaria* sp., *Curvularia* sp., *Drechslera* sp., *Fusarium* sp., *Aspergillus terreus*, *A. niger*, *A. flavus*, *A. fumigatus*, *Cladosporium* sp. *Penicillium* sp. are isolated from seeds of pigeon pea and it collect on different locality. Seeds are sterilized by the using 1N HgCl<sub>2</sub> for one minute and cleaned with help of distilled water. Seeds are put on Potato Dextrose Agar plate and fourth day after that separates the each fungal colony and making pure culture and observed under microscope, on the basis of their colony color, shape, size, conidia and mycelium and identified by using manual of The Illustration of Fungi (Mukadamet. al., 2006)

**Duel Culture Method**

Antagonism of *Trichoderma viride* on post-harvest pathogen was studied by duel culture technique (Rama BhadraRaju et al., 2000). On potato dextrose agar plate seven days old culture of pathogen and *Trichoderma viride* were placed simultaneously on the periphery of petridish. The petridishes containing PDA medium inoculated with the tested pathogen alone served as control. All the plates were inoculated at room temperature and measurement taken after five day. At the end of incubation period radial growth was measured. The percentage inhibition growth of tested pathogen in presence of *Trichoderma viride* was



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## Contribution of Biological Research for Sustainable Development

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## Antagonistic Activity of *Trichoderma* sp. against *Stemphylium* blight and Purple blotch of Garlic (*Allium sativum* L.)

A.R Kolte, S.T Ingale and S.S Patale

S.K. Gandhi Arts, Amolok Science and P.H Gandhi Commerce College Kada.  
Dist- Beed.

### Abstract

Garlic is a good source of vitamins, carbohydrates, fibers, protein, moisture and minerals. It is one of the important commercial vegetable crops cultivated in India. The crop is attacked by various diseases which result in deteriorating the quality and also yield losses and export potential of the producer. In the present study, *in vitro* study was conducted for evaluating some *Trichoderma* Sp. for the management of Purple blotch and *Stemphylium* blight of garlic. *Trichoderma viride* and *Trichoderma harzianum* tested against *Alternaria porri* and *Stemphylium vesicarium*. *Trichoderma viride* showed maximum inhibition against *Alternaria porri* (72.44%) and *Stemphylium vesicarium* (75.33%).

**Keywords:** Garlic, *Trichoderma*, Pathogenic fungi, Biological control.

### Introduction

Garlic (*Allium sativum* L.) is an herbaceous plant belongs to family Alliaceae grown for its edible bulbs and leaves. Garlic is most important bulb crop use e for spice and vegetable worldwide. It is used as a flavoring agent, food and medicine. It is the second most widely cultivated vegetable next to the onion. As per the FAO currently in India the production of garlic is 12.50 lakh tons from an area of 2.47 lakh hectares with productivity of 5.09 tons/ha. The garlic is grown in the states of Haryana, Madhya Pradesh, Uttarakhand, Jammu & Kashmir and Maharashtra. Madhya Pradesh is the leading state in garlic production in area with 60,000 ha. The productivity of garlic in India is low as compared to other countries because various fungal, bacterial and viral pathogens which causes various diseases.

There are number of fungal pathogens that attack on garlic plant throughout their development. Various fungi are reported on garlic plant and stored bulbs (Rath and Mohanty). Most of the diseases reported on onion (*Allium cepa* L.) are common on garlic (Miller and Lacy 1996). *Stemphylium* leaf blight and *Alternaria* leaf blight are the major foliar disease of garlic. It is heavily attacked by *Stemphylium vesicarium* (Wallr. E Sommons.), and *Alternaria porri* causes *Stemphylium* blight and Purple blotch respectively. As per the NHRDF survey *Stemphylium* blight was more severe in the winter/summer than in the rainy season with 1.3-100 per cent incidence (Gupta *et al.*, 1994) and sometimes may even cause 100 per cent crop losses (Singh *et al.*, 1992). *Stemphylium* blight was first recorded on garlic in India by Rao & Pavgi in 1975. Bisht and Agarwal (1993) reported the susceptibility of purple blotch (*Alternaria porri*) in garlic. *Stemphylium* leaf blight disease of onion caused by *S. vesicarium* and its perfect state *Pleospora allii* was reported for the first time in the world by Su (1936).

### Material and Method

#### Isolation of Pathogen

Infected leaves were brought into the laboratory and cut into small pieces by sterilized blade. Then surface sterilized with 0.1% mercuric chloride for 30 seconds. The pieces washed with sterilized distilled water thrice. The pieces were transferred to solid potato dextrose agar medium (PDA) by sterile forceps. Inoculated plates kept at  $27 \pm 2^{\circ}$  C. Pathogens were identified and isolated as *Alternaria porri* and *Stemphylium vesicarium* (Wallr.E Sommons.) The pathogens maintained on PDA slants for further study.

#### Dual culture Method

Dual culture method was used to determine the effect of *Trichoderma* on mycelial growth of pathogens. The dual culture of targeted pathogens and *T. harzianum* and *T. viride* studied on PDA medium. 20 ml of PDA medium was poured in 9 cm diameter plates and allowed to solidify. 6mm diameter disc of mycelium cut from the margin of 6 days old culture of each *Trichoderma* sp. were placed at the periphery of each plate. Then the disc of 6mm diameter of mycelium cut from the growing edge of 7 days old culture of targeted pathogens were placed opposite to the mycelial disc of *Trichoderma* sp. on each plates. Monoculture plates of both served as control. Three replicates were maintained for each treatment and incubated at  $28 \pm 2^{\circ}$  C for 7 days. The radial growth of all fungi measured, when *Trichoderma* sp. in control plates show complete

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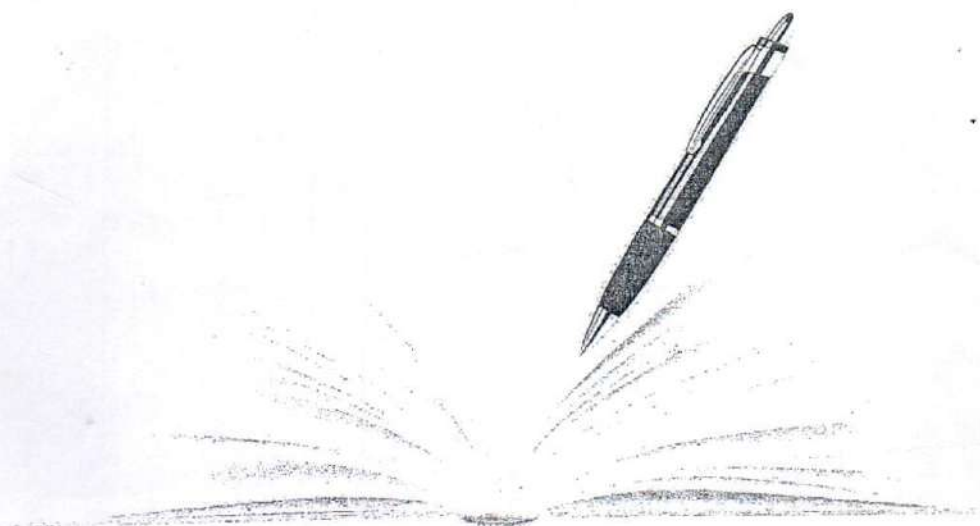
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SWATIDHAN PUBLICATIONS

## Redefining Children and Women as Heroes in Deborah Ellis' Trilogy

Mr. Narendra T. Gawali

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**Abstract** Children's books in the twentieth century and after are nourished by such concepts of violence and war related themes. The present trilogy here focuses on the female hero, which is less frequent than the male. These books tell the story of the lives of children, particularly young girls living in the war zones of Afghanistan.

**Keywords:** Feminine, Child Hero, Maturity, Authenticity, Violence, War

### Introduction:

Children's books in the twentieth century and after are nourished by such concepts of violence and war related themes. Other themes are also notable in demonstrating violence and war such as those concerning children who were evacuated during World War II (Nina Bowden's *Home of War*), boys surviving in bombed cities (Robert West All's *The Machine-Gunners*), *The Pearl Harbor attack*. Although violence has been deliberately attached to the realm of children's literature as far back as fairy tales and folk tales which were delivered in oral traditions, the depiction of war in many novels in the twentieth century can be said to have undergone a transformation into a consideration of violence in a deeper perspective.

The present trilogy here focuses on the female hero, which is still less frequent than the male. Two eleven year old girls--Parvana and Shauzia--meet in bombed-out Kabul's marketplace. It's there and they are disguised as boys. Each works at whatever she can --Shauzia delivering tea to the merchants, Parvana reading and writing letters for others. In the weeks ahead they work together digging up human bones for profit and selling cigarettes and candy from trays they work together to purchase. War, bombs, and repression have thrust each from her home into the outside world threatening to any with dissident political opinions and to all women for showing their faces or simply being in public. They are the sole breadwinners for their families. Startled by each other without long hair and in boys' clothing, Shauzia and Parvana quickly form an alliance. Marked by fear, determination, camaraderie and dreams of meeting atop the Eiffel Tower in twenty years, the girls' time together is short-lived but its effects are deep and far-reaching. With their friendship as foreground in its first novel, then backdrop in the following two, Deborah Ellis' Breadwinner Trilogy chronicles the effects of war that force these two down separate paths from the marketplace in 2000 to separate refugee camps about a year later. First told from Parvana's viewpoint then Shauzia's, the trilogy makes vivid the physical and psychological burdens borne by children who, even with adults nearby, must take on responsibilities far beyond their years. Parvana's family has lost the oldest son to a land mine explosion home to bombs. They migrate from place to ever more crowded place. Shauzia's circumstances mirror Parvana's. She says: "When Parvana's father is inexplicably released from prison, he decides that Parvana and he will walk north to locate the rest of the family. Mrs. Parvana decides to join her sister at a refugee camp in Pakistan. And, Shauzia, desperate to have a life of her own and against all cultural mores, decides to leave her family to join a group of nomads in the mountains." () Parvana's Journey, the second in the trilogy, is the story of children adrift in the countryside. It opens with Parvana at her father's funeral. After weeks of walking alongside him to find the rest of their family, his health gives way, leaving

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UGC Approved  
No 40705**Relevance Of Alternaria Spores Over Green Gram Field**

I.G. Sayyed

Dept of Botany S.K. Gandhi College Kada, Tq. Ashti Dist. Beed (M.S.)

[www.rjournals.co.in](http://www.rjournals.co.in)**ABSTRACT**

The present paper deals with airborne concentration of *Alternaria* spores over a green gram field for one kharif season i.e. season from 5<sup>th</sup> June to 28<sup>th</sup> August 2007 using continuous Volumetric Tilak Air Sampler concentration of airborne *Alternaria* spores was assessed and the role of the Metrological Parameters over the spore concentration were discussed. The spore concentration was maximum (5726/m<sup>3</sup>) in the month of August 2007 and minimum (4242/m<sup>3</sup>) in June 2007. Metrological parameters such as Rainfall, Relative humidity, Wind velocity and Temperature showed significant effect on liberation of spores of *Alternaria* in the air spora composition qualitatively and quantitatively.

Key Words: Fungal spores, Green Gram field, Air Sampler, Air borne microbes.

**INTRODUCTION:**

Aerobiology is an interdisciplinary science which deals with the study of biological components like pollen grains fungal spores, hyphae fragments, viruses, algae, lichens, plant seeds and other propagules minute insects and insects' parts etc. in the atmosphere. The role of fungi in causing diseases to crop plants, man, domestic animals, in bringing about deterioration of food grain in storage, valuable monuments has been subject of great interest for long time. Standing vegetation has a great influence on air spora of any place and it change in weather. Aerobiological survey conducted in various parts of India revealed the richness of air spora. Green gram (*Phaseolus aureus* Roth.) is one of the most important pulses crop in Marathwada region. Pulses are being grown in India since ancient time. It is believed that Green Gram is native of India and Central Asia. Green gram is protein rich staple food. It contains about 2.5% proteins. As considering the survey of this crop that since last few years green gram is suffer with different types of pathogenic disease like Fungi, bacterial, viruses.

In India green gram is affected by various fungal diseases such as leaf spot caused by *Alternaria tenuissima*, *Cercospora conescens*, leaf web blight caused by *Rhizoctonia solani*, Powdery Mildew caused by *Erysiphe polygoni*, Dry root caused by *Macrophomina phaseolina*, Rust caused by *Uromyces phaseoli*, Anthracnose caused by *Glomerella lindemuthiana*. Seed and seedling root caused by *Rhizoctonia solani*, etc. Due to this disease plant yield and poor quality of pods and seeds. This decreases product and valuation. It has been reported that other legume crop diseases. G. Rangaswami (1966).

It was with the aim to find out the important airborne pathogens, their distribution and seasonal variation in the concentration these investigations were undertaken, the prediction of airborne fungal disease could be attempted. If well in advance information of air spora of this crop is made timely available. In view of the above fact using by continuous Volumetric Tilak Air Sampler carried out an aero mycological survey over green gram field for kharif season. From 5<sup>th</sup> June to 28 August 2007.

**MATERIAL AND METHODS:**

In the present investigation an exploration of airborne spores of *Alternaria* (Tilak and Kulkarni 1970) was undertaken over the fields of green gram field for kharif season Tilak Air Sampler was installed at a constant height of 1 Meter above the ground level at Kada Tal Ashti Dist Beed (M.S.) for one kharif season i.e. from 5<sup>th</sup> June to 28<sup>th</sup> Aug 2007. The air was sampled at the rate of 5 litres/minutes which left traces of deposition over cellophane tape, affixed on the outer surface of drum. The slides were prepared every after eight days. Before the scanning, the slides were marked with a ball pen point pen in the six equal parts, each part, indicating the spore catch of two hours of sampling period. Area of 9600 sq. micron of the total area of the trace obtained was scanned under 10Xx45X eye piece objective combination of binocular research microscope. The transformation of spore was done which was based on visual characteristics of spore such as size, shapes. The metrological data was recorded during period of investigation.

**RESULT AND DISCUSSION:**

During the period of present investigation, spores of *Alternaria* contributed as 9.68% which total concentration of 15302/m<sup>3</sup> of air. Spores of *Alternaria* occurred continuously throughout the period of investigation spores eventually parasitic or saprophytic were collected on plant material, dead stem and leaves of *Phaseolus mungo*, *Dodonia*. The maximum monthly mean concentration (5726/m<sup>3</sup>) was recorded in the month of August 2007 and minimum (4242/m<sup>3</sup>) of air) in June 2007. Mane (1978) of





## Polycheate *Namalycastis Fauvelias* Antifouling Compounds

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### Abstract:

The antifouling activity of bioactive compounds from marine Polycheate *Namaly castisfauveli* studied. Larvae of *Balanus amphitrite* (Cyprids) were used to monitor the settlement inhibition and the extent to which inhibition was due to toxicity. The crude extract of Polycheate *Namalycastisfauveli* showed significant inhibition over the settlement. *Namalycastisfauveli* extract has slightly inhibited larval settlement with EC50 value 12mg/ml. The high but variable levels of antifouling activity in combination with less amount of toxicity showed the potential of these metabolites in environmentally-friendly antifouling preparations. The settlement inhibitors from Polycheate *Namalycastisfauveli* could provide useful insight in to the mechanisms to control the larval settlement

### INTRODUCTION

The marine industry and aquaculture development is facing serious problems that are posted by biofouling. In the marine environment, natural and artificial surfaces immersed in seawater are colonized by biofoulers including micro-foulers such as marine bacteria, algae, and protozoa, and macro-foulers such as barnacles, bryozoans, and tubeworms. Dobretsovet *et al.*, (2011) noticed that biofoulers accumulating on the ship hulls increase drag and surface corrosion, thereby severely diminishing ships' maneuverability and carrying capacity. Chambers *et al.*, (2006) stated apart from this biofouling causes huge material and economic costs in maintenance of mariculture, naval vessels and seawater pipelines. Yebra and Johansen (2004) observed Tributyl tin (TBT) and copper have been added to marine paints as antifouling compounds in order to control biofouling and broad-spectrum metal biocides. Although very effective, these biocides are often extremely toxic to a wide range of non-target organisms. Konstantinou and Albanis (2004) identify novel effective nontoxic compound having potent antimicro and macro fouling properties. These biogenic compounds could also be used effectively for future development of antifouling paints.

Naturally, marine environments harbor highly diverse microbial communities possess functionally undesirable and unexplored potentials producing a variety of chemical deterrents for defense purposes. Paul and Puglisi (2004) recognized marine natural products are promising source of novel antifouling agents. Qian P Y *et al.*, (2007) observed many compounds with strong antifouling activity have been isolated from marine sponges, corals, and algae in the past few decades. To understand larval barnacle settlement, is the main objective of this investigation with the practical goal of developing non-toxic antifouling agents by the extract from Polycheate *Lumbrinerishetropoda*. An attempt has been made to investigate the antifouling potential of marine Polycheates interaction against the settlement of cyprid larvae of *B. Amphitrite* is focused in the present study. Some marine organisms such as corals, algae, sponges, and ascidians have been shown to produce antifouling substances which in nature maintain them free from undesirable encrusting organisms Harder *et al.* 2003. The biochemical mechanisms that sponges have developed as a chemical defense for the growth inhibition of epiphytic micro and macro organisms might comprise a potential alternative for the prevention of biofouling. In this regard, sessile, soft bodied marine organisms maintaining a clean surface were identified as possible sources of natural product antifoulants (NPAs). Sponges, with their rich chemical defense mechanisms are one of the most studied organisms for the isolation of NPAs (Thakur and Anil 2000). Sponges and Octocorals contain a wealth of secondary metabolites (Tilviet *et al.*, 2004).

Natural products and their synthetic analogs exhibiting anaesthetic, repellent and settlement inhibition properties, but non-toxic to the non-target organisms, are preferred as potential antifouling agents. Possible antifouling properties of the compounds isolated from the sponge was first recognized by Bakuset *et al.* (1983). Further studies in this direction have revealed tremendous antifouling potential of some of the bioactive metabolites inherent in the sponges (Chambers *et al.* 2006). Notable among them is polymeric alkylpyridinium salts (Poly-APS), a non-toxic NPA from the sponge *Renierasarii* (Turk *et al.*, 2007). In the present study, an attempt has been made to investigate the antifouling potential of marine polycheates *Namalycastisfauveli* interaction against the settlement of cyprid larvae of *B. amphitrite*

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**Review zooplankton Diversity From water Reservoir Of Selected Project Tal, Ashti, Dist. Beed (M.S) India.**

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Smt. Shanabai Kantilal Gandhi Art's, Amolak Science, and Panalal Hiralal Commerce college kada, Tal, Ashti, Dist. Beed (M.S)

**Abstract:**

The present role of human environmental preservation and human health is important factors. Animals of fresh waters are extremely diverse are the indicators of water pollution and include representatives of nearly all phyla. The zooplankton are animals suspended in water with limitations of locomotion migrations they are usually more weight than water, and regularly in motions to lower depths. Zooplanktons are grouped in to four major animal groups. Protozoa, rotifers, and two subclasses of the Crustacea, the cladocerans and copepods. The present investigations have been carried out on Suleman Davilabodies (19°066 N, 75°042 E) Tal, Ashti, Dist. Beed (M.S) India. At Balaghathe ranges locally called Garbhgri ranges (Gazette of India 1884, 1976) where near famous God temple Machindranath is of the famous one located western part of Ashti

**Key Words:** Diversity, Zooplanktons, Suleman Davila water bodies.

**Introduction:**

Water is the most important biotic factor concourse in all three forms of the matters in the water cycle. About 71% of water surface covered with water. Its surface to an average depth of 380 meter over 99% of this immense hydrosphere is deposited in ocean depressions but only 2.7% of the total water is fresh water of which 1% is ice free water found in the rivers, tributaries, rivulets, streams, lakes, lakes, canals, tanks, ponds etc. It has been estimated that only 0.00192% of the total water on earth is available for human consumption. (Trivedy, 1998). The major habitats in fresh water include the lotic bodies (Rivers and streams), lentic bodies (Ponds and lakes) ground water zones and of ecotonal water bodies where aquatic habitats meet. (E.g. wet lands, marshes and estuaries) (Palmer et. al. 1997)

Interaction between zooplankton and phytoplankton are accentual topic in plankton ecology. Zooplanktons are primary consumers of phytoplankton's and provide the main food item to fishes and can be used as indicator of the trophic phase of water body (Mathew 1975, Verma and Datta Munshi 1987). Zooplanktons play integral role in transferring energy to the consumers, hence they form the next higher trophic level in the energy flow after phytoplankton.

The zooplankton diversity in reservoirs is controlled by several physico-chemical factors of water. The pattern of algal distribution and its density is the main biological factor affecting the diversity of the zooplanktons. Temperature, dissolved oxygen (DO) and organic matter are the important factors, which control the growth of zooplanktons (Hanazato and Yasuno 1985, Bhati and Rana 1987 and Takamura et. al 1989).

**Study area: -**

The present study carried out water bodies presents Welturi from Ashti tehsil at Balaghathe ranges locally called Garbhgri ranges (Gazette of India 1884, 1976) where near famous God temple Machindranath is of the famous one located western part of Ashti (19.066 N, 75.042 E). The water reservoir was constructed during the year of 1976. It is the only ultimate source of water in and near by villagers for drinking as well as domestic uses although drought conditions. **Material and method:** The water samples were collected in the early morning. One hundred liters of water was flited through a blotting silk plankton net number 25 with diameter of 25cm and length 50cm. Filtered water samples collected and in 50ml capacity of bottles and preserved in 4 percent formalin solution. The samples were observed and identified under research microscope (zooplanktons were counted by counting device Sedgewick Rafter Cell) by suitable text keys given by Pennak(1946), Tonapi(1980), Sehgal(1983), Trivedy (1984) Kodarkar(1998) identified Zooplanktons were identified **Observations and Result:** Many protozoans feed on bacteria-sized particles and thereby utilize a size class of bacteria and detritus generally not utilized by large zooplankton, most rotifers are sessile they form major parts of the zooplankton. The present investigations the zooplanktons observed and recorded is categorized in to three major groups i.e. four genera belonging to rotifer, 5 genera belonging to Cladocera and 2 genera from Copepods were observed. (Table - 1) The study of diversity of

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## Effect of Mercuric Chloride on Catalase and Xanthine Oxidase Activity of Different Tissues of Fresh Water Crab *Barytelphusa Guerini*

Jadhav S. S.

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### ABSTRACT

The fresh water crab, *Barytelphusa guerini* is a key-species in Marathwada region having good nutritional value and the crab is constantly exposed to heavy metal pesticides, which are used extensively to control agricultural pests. Pesticides of heavy metal salts are common pollutants of freshwater ecosystems where they induce adverse effects on the aquatic biota. Acute toxicity tests were conducted against the pesticides mercuric chloride. Higher and lower sublethal concentration of mercuric chloride were found to be 1.55 and 1.2 ppm respectively for 96 h. The activity pattern of catalase enzyme measured in the present study indicates Muscle > Hepatopancreas > Gills. The reduction in catalase activity, due to an increased peroxidation as a result of toxicity. The activity pattern of Xanthine oxidase measured in the present study indicates that there is an enhancement in its activity in mercuric chloride treated crab, and increased in its activity is observed through experimental span, with maximum activity in Muscle > Hepatopancreas > Gills.

**Key words:** Mercuric chloride, *Barytelphusa guerini*, Godavari River, sublethal concentrations.

### INTRODUCTION


The interaction of toxic material with living matter generally disturbs enzyme catalyzed reactions. Any kind of disturbance in the activity of animal during chemical toxicities will be reflected through changes in the activity pattern of enzymes. Therefore the enzyme studies would be useful and form a type of meaningful biochemical indices of toxicant action. A number of reports available on metal induced enzymological alterations in several animals Kondekar, (1998); Booth *et al.*, (1998). Free radicals can be defined as molecules or molecular fragments with an unpaired electron in their outer orbit. The free radicals in cells, therefore, are no more biological curiosities but occur in the oxidoreductions essential of usable energy Kehrer, (1993); Byungpal, (1994). Catalase is an antioxidative enzyme. Antioxidative plays the role of blocking the process of free radical production and oxidative stress, Byungpal, (1994); Halliwell *et al.*, (1995). Catalase is a manganese containing enzyme functions to rapidly dismutate  $H_2O_2$  to water and oxygen. In the present study an attempt has been made to study changes in antioxidative enzyme in different tissues hepatopancreas, gills and muscle of fresh water crab, *Barytelphusa guerini* after exposure to mercuric chloride.

The chemical reactivity of free radicals is usually high. Free radicals are capable of damaging chemical constituents of the membranes resulting in deleterious biological effects (Mason, 1979). The free radicals in cells, therefore, are no more biological curiosities but occur in the oxidoreductions essential of usable energy (Kehrer, 1993). One potential source of oxygen free radicals is the enzyme xanthine oxidase. It is the most free radical producing enzyme, which generates  $O_2$  during the reduction of oxygen to  $H_2O_2$  (Jaitovitch *et al.*, 2000). In the present study an attempt has been made to study changes in oxidative enzyme in different tissues hepatopancreas, gills and muscle of the fresh water crab, *Barytelphusa guerini* after exposure to mercuric chloride.

### Material and Methods

The freshwater crabs, *Barytelphusa guerini* were collected from outskirts of Dharmabad, Godavari river region. They were acclimatized to laboratory conditions under normal day/night of 11 L : 13 D illumination at  $27 \pm 1^\circ C$  for about one week in plastic troughs [18" diameter] containing sufficient tap water so that crabs are submerged. Before experimentation intermoult [stage C3] male crabs, Diwan, 1973 of approximately equal carapace width [45 to 50 mm] and body weight [50 to 55 gm] were sorted. Crabs were divided in 2 groups each group carry 10 crabs to study the effect of Lead nitrate on the bioaccumulation constituents and 1 control group of 10 crabs in normal tap water to compare the experimental results.

The crabs were exposed to sublethal concentration of Lead nitrate. Higher and lower sublethal concentration of Lead nitrate were found to be 1.55 and 1.2 ppm respectively for 96 h. to analyze the bioaccumulation constituents. After their respective exposure period, the tissues like, hepatopancreas, gills and muscles were dissected out and wet tissue was weighed from both the control and experimental crabs were weighed (250mg) and digested in concentrated nitric acid and perchloric acid in the ratio of 3:1. The mixture was evaporated to near dryness and then resuspended in 5ml of 50%  $HNO_3$  and was filtered in a

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## Effect of Mercuric Chloride on Catalase and Xanthine oxidase Activity of Different Tissues of the Earthworm *Perionyx Excavatus*

Jadhav S. S. and Vaidya V. V.

Dept. of Zoology, S.K. Gandhi Arts, Amolak Science College, Kada, tq. Ashti, Dist. Beed. (M.S)

### ABSTRACT:

Toxic substance produces impairment in structural and functional organization of tissues. Toxicants may also act as a physical poison and may disrupt the integrity of membrane structure and its associated enzymes, without which the vital processes fail to, produce adequately. In the present study a megascolecid worm *Perionyx excavates* having approximately equal size (10cm long) and weight (3gm) were exposed for 5 days separately to lower (60mg/kg) and higher (150mg/kg) sublethal concentration of mercuric chloride. A correlative change in the activities of the enzyme catalase and xanthine oxidase estimated in the skin, intestine, and nephridia of *Perionyx excavates*. The activity pattern of catalase and xanthine oxidase measured in the present study indicates that there is an enhancement in its activity in mercuric chloride treated earthworm, and increased in its activity is observed through experimental span, with maximum activity in nephridia, followed by skin and intestine.

**KEYWORDS:** Megascolecid, nephridia, catalase, xanthine oxidase activity, mercuric chloride.

### INTRODUCTION

The interaction of toxic material with living matter generally disturbs enzyme catalyze reactions. Any kind of disturbance in the activity of animal during chemical toxicities will be reflected through changes in the activity pattern of enzymes. Therefore the enzyme studies would be useful and form a type of meaningful biochemical indices of toxicant action. A number of reports available on metal induced enzymological alternations in several animals Kondekar, (1998); Booth *et al.*, (1998) Free radicals can define as molecules or molecular fragments with an unpaired electron in their outer orbit. The free radicals in cells, therefore, are no more biological curiosities but occur in the oxido-reductions essential of usable energy Kehrer, (1993); Byungpal, (1994). Catalases are anti oxidative enzymes. Anti oxidative plays the role of blocking the process of free radical production and oxidative stress, Byungpal, (1994); Halliwell *et al.*, (1995). Catalase is magnese containing enzyme functions to rapidly dismutase  $H_2O_2$  to water and oxygen. In the present study an attempt an attempt has been made to study changes in anti oxidative enzyme in different tissues skin, intestine and nephridia of earthworm *Perionyx excavates* after exposure to mercuric chloride.

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### MATERIAL AND METHODS:

The earthworms *Perionyx excavates* were collected from an upland non-irrigated field, which had no record of input of agrochemicals. They were maintained in their habitat soil for 10 days with adequate provision of food (10% organic matter, cow dung + leaf litter), moisture (20%) and temperature ( $25^\circ C$ ). Earthworms having approximately equal size (10cm in length) and weight (3gm) were exposed for 5 days separately to higher and lower sub lethal concentrations of mercuric chloride in soil. The study was carried out in plastic culture pots under laboratory conditions following the protocol of, Panda and Sahu (2002). The pesticide was chosen on the basis of its extensive use in this area.



## Effect of Mercuric Chloride on Catalase and Xanthine oxidase Activity of Different Tissues of the Earthworm *PerionyxExcavatus*

Jadhav S. S. and Vaidya V. V.

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### ABSTRACT:

Toxic substance produces impairment in structural and functional organization of tissues. Toxicants may also act as a physical poison and may disrupt the integrity of membrane structure and its associated enzymes, without which the vital processes fail to, produce adequately. In the present study a megascolecoid worm *Perionyx excavates* having approximately equal size (10cm long) and weight (3gm) were exposed for 5 days separately to lower (60mg/kg) and higher (150mg/kg) sublethal concentration of mercuric chloride. A correlative change in the activities of the enzyme catalase and xanthine oxidase estimated in the skin, intestine, and nephridia of *Perionyx excavates*. The activity pattern of catalase and xanthine oxidase measured in the present study indicates that there is an enhancement in its activity in mercuric chloride treated earthworm, and increased in its activity is observed through experimental span, with maximum activity in nephridia, followed by skin and intestine.

**KEYWORDS:** Megascolecoid, nephridia, catalase, xanthine oxidase activity, mercuric chloride.

### INTRODUCTION

The interaction of toxic material with living matter generally disturbs enzyme catalyze reactions. Any kind of disturbance in the activity of animal during chemical toxicities will be reflected through changes in the activity pattern of enzymes. Therefore the enzyme studies would be useful and form a type of meaningful biochemical indices of toxicant action. A number of reports available on metal induced enzymological alternations in several animals Kondekar,(1998); Booth *et.al.*,(1998) Free radicals can define as molecules or molecular fragments with an unpaired electron in their outer orbit. The free radicals in cells, therefore, are no more biological curiosities but occur in the oxido-reductions essential of usable energy Kehrer, (1993); Byungpal,(1994). Catalases are anti oxidative enzymes. Anti oxidative plays the role of blocking the process of free radical production and oxidative stress, Byungpal, (1994); Halliwell *et al.*,(1995). Catalase is magnese containing enzyme functions to rapidly dismutase  $H_2O_2$  to water and oxygen. In the present study an attempt an attempt has been made to study changes in anti oxidative enzyme in different tissues skin, intestine and nephridia of earthworm *Perionyx excavates* after exposure to mercuric chloride.

The chemical reactivity of free radicals is usually high. Free radicals are capable of damaging chemical constituents of the membranes resulting in deleterious biological effects (Mason, 1979). The free radicals in cells, therefore, are no more biological curiosities but occur in the oxido-reductions essential of usable energy (Kehrer, 1993). One potential source of oxygen free radicals is the enzyme xanthine oxidase. It is the most free radicals producing enzyme, which generates  $O_2$  during the reduction of oxygen to  $H_2O_2$  (Jaitovitch *et.al.*, 2000). In the present study an attempt an attempt has been made to study changes in oxidative enzyme in different tissues skin, intestine and nephridia of earthworm *Perionyx excavates* after exposure to zinc sulphate.

### MATERIAL AND METHODS:

The earthworms *Perionyx excavates* were collected from an upland non-irrigated field, which had no record of input of agrochemicals. They were maintained in their habitat soil for 10 days with adequate provision of food (10% organic matter, cow dung + leaf litter), moisture (20%) and temperature ( $25^{\circ}C$ ). Earthworms having approximately equal size (10cm in length) and weight (3gm) were exposed for 5 days separately to higher and lower sub lethal concentrations of mercuric chloride in soil. The study was carried out in plastic culture pots under laboratory conditions following the protocol of, Panda and Sahu (2002). The pesticide was chosen on the basis of its extensive use in this area.

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ग्रामीण साहित्य : एक चिंतन

अतिथी संपादक

डॉ. आर. जे. टेमकर

प्राचार्य,

दादा पाटील राजळे कला, वाणिज्य व विज्ञान महाविद्यालय,  
आदिनाथनगर, पाथर्डी, जि. अहमदनगर

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डॉ. सुभाष देशमुख

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मुख्य संपादक

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## १९६० नंतरच्या मराठी ग्रामीण कवितेचा विकास

डॉ. अनिल गर्जे  
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१९६० नंतरच्या दशकात ग्रामीण कविता अधिक विकास पावलेली दिसते. याचे मुख्य कारण म्हणजे शेतकऱ्यांची मुले शिकली-सवरली. या नवशिक्षित तरुण मंडळीने आपल्याला आलेला जीवनानुभव मोठ्या संवेदनशिलतेने काव्यातून मांडला. ग्रामजीवन जगलेल्या, भोगलेल्या कवींनी शेतकऱ्यांचे जीवन, तेथील निसर्ग, कृषीजीवन आणि जीवनसंघर्ष गांभीर्यपूर्वक त्यांच्या काव्यातून व्यक्त झालेला आहे. वास्तवाची धार त्यांच्या काव्यात आहे. शेतकरी जीवनाचा आविष्कार करताना प्रत्येक कवी शेतकऱ्यांच्या कष्टांचा, हालअपेष्टांचा, दुःख-दैन्याचा पाढा वाचल्याशिवाय राहत नाही. कारण शेती व्यवसायाची नाळ ही दुःख-कष्टांशीच जोडलेली आहे, हालअपेष्टा जणू त्यांच्या पाचवीलाच पुजलेल्या आहेत; म्हणून बहुतेक सर्व साठोत्तरी कवींनी शेतकऱ्यांच्या कष्टांची, हालअपेष्टांची दुःख गाथाच आपल्या कवितेतून मांडली आहे. हे सारे शेतकरी काबाडाचे धनी आहेत. शेतकरी, त्याचे कष्ट, कृषीजीवन, गावगाडा, रुढी, परंपरा, कौटुंबिक कलह, वाटण्या, बांधावरची भांडणं. शेतमजूर, मालकशाही, सावकार या सर्वच घटकांना प्रत्येक कवीने काव्यातून शब्दांकित करण्याचा प्रयत्न केला आहे. त्यांची कविता भावनेपेक्षा भूमिका मांडते. अवघ्या बळीराजाला ज्या व्यवस्थेने नागविले त्यांच्या विषयीचा प्रचंड राग व संतापही प्रत्येक कवींच्या काव्यातून व्यक्त होतो. सर्वच कवींनी शेतकऱ्यांच्या काबाडकष्टांना, हालअपेष्टा व दुःखाला वाचा फोडली आहे. शेतकरी, शेतमजूर व ग्रामीण स्त्री त्यांचे दुःख, दारिद्र्य, अगतिकता, फरपट साठोत्तरी कवींच्या काव्यात गाभास्थानी आहे.

साठोत्तरी काळता ग्रामीण भागातील कवींनी ग्रामीण कविता मोठ्या ताकदीने व उमेदीने लिहिली आहे. श्रीकांत देशमुख, इंद्रजित भालेराव, केशव देशमुख, शंकर वाडेवाले, भास्कर बडे, महेश मोरे, उत्तम बावस्कर, ललित अधाने, कैलास दौंड, अशोक कौतिक कोळी, जगदीश कदम, रमेश चिळे, श्रीराम गव्हाणे केशव खटींग, शशिकांत शिंदे, उत्तम बावस्कर, गजानन जाधव, प्रमोद माने, शिवाजी हुसे, संजय बोरुडे, जयराम खेडेकर, सुरेश शिंदे, अनिल पाटील, संतोष पवार, मदन इंगळे, नारायण सुमंत, प्रकाश होळकर इत्यादी कवींनी साठोत्तरी मराठी ग्रामीण कवितेच्या काव्यप्रांतात नवपहाट उगविली. याविषयी कानडजे एस.एम.म्हणतात, "साठोत्तरी कवींनी शेतकरी जीवनाचे भावोत्कट आणि भव्योदात्त दर्शन कवितेतून घडविले. शेतकऱ्याचे काबाडकष्ट, त्याचे दुःख, त्याचे शोषण आणि प्राक्तन, त्याला बदलत्या परिस्थितीत येऊ लागलेले आत्मभान आणि त्यातून घडणारी त्याची विद्रोही मानसिकता ही आशयसूत्रे काव्यात आढळतात."<sup>१</sup> कानडजे म्हणतात ते अगदीच बरोबर आहे, कारण आजच्या पिढीतील कवीला वरील सर्व गोष्टींची जाणीव झाली आहे. तो शेतकऱ्यांच्या दुःखाला अगदी नेमकेपणाने कवितेतून मांडतो आहे. या संदर्भात प्रसिध्द ग्रामीण साहित्यिक द.ता.भोसले म्हणतात, "ग्रामीण जनजीवन कवितेतून व्यक्त करणाऱ्या कवींची केवळ संख्या अधिक नाही, तर कवितेचा दर्जाही मोठा आहे. त्या कवितेची आवाहन क्षमताही मोठी आहे. जीवनदर्शनाचे एक अटळ रूप म्हणून ती अवतरते. अपार करुणा, अमोघ सहानुभूती आणि कलात्मक सहकंपना यांच्या संयोगातून निर्माण झालेल्या उत्कट भावानुभूतीचा तो गगनभर पसरणारा कलावंत मनाचा आक्रोश आहे."<sup>२</sup> आजचा ग्रामीण कवी

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### मराठी साहित्यातील मानसशास्त्रीय संशोधन

संशोधक  
डॉ. आनंद माधवराव वाघ  
सहयोगी प्राध्यापक,  
आजीवन शिक्षण व विस्तार सेवा विभाग,  
डॉ.बा.आं.मराठवाडा विद्यापीठ, औरंगाबाद.  
चेल. : ९४२१३४०९१५

मार्गदर्शक  
प्रा.डॉ. अनिल गर्जे  
प्रमुख, मराठी विभाग,  
एस.के.गांधी महाविद्यालय, कडा  
सरीक्षशरपळश्र१९७१५सारळश्र.ले

एकोणिसाव्या शतकाच्या उत्तरार्धात मानसशास्त्रामध्ये काही महत्त्वाचे शोध लागले. त्यांपैकी महत्त्वाचा शोध म्हणजे फ्राईडच्या मनोऽवगाहन शास्त्राचा (Psycho-analysis) होय. "शास्त्रीय वाङ्मयामध्ये 'मनोऽवगाहन' हा पारिभाषिक शब्द मानसशास्त्रात फ्राईडने निर्माण केलेल्या विशिष्ट पंथाला उद्देशून वापरला जातो. येथे 'मनोऽवगाहनशास्त्र' हा शब्द याच पारिभाषिक अर्थाने वापरला आहे."<sup>१</sup> १८८० च्या सुमारास 'हिस्टेरिया' (Hysteria) या रोगावर इलाज शोधताना व्हिएन्ना येथील डॉक्टर ब्रायर व फ्राईड यांना मनोऽवगाहन शास्त्राचा शोध लागला. विस्मरण पावलेल्या पूर्वीच्या तीव्र भावना, आठवणी यांचा हिस्टेरिया झालेल्या रोग्याला अनुभव करून दिल्यास रोगी बरा होतो असा शोध या दोघांनी लावला. फ्राईड व ब्रायर यांनी १८९५ साली 'Studies in Hysteria' नावाचे मनोऽवगाहनाविषयी पहिले पुस्तक प्रसिध्द केले.

१९०२ पासून अँडलर आणि युंग हे शास्त्रज्ञ फ्राईडला येऊन मिळाले. त्यांनी एकत्र येऊन 'सायको-अँनेलिटिकल काँग्रेस' (Psycho-analytical congress) व 'सायको अँनेलिटिकल असोसिएशन' (Psycho-analytical Association) या संस्था स्थापन केल्या तेव्हापासून मनोविश्लेषणशास्त्राची खूप वाढ झाली. पुढे अँडलर व युंग यांचा फ्राईडशी मतभेद झाला आणि त्यांनी पुढे आपापले निराळे पंथ स्थापन केले."<sup>२</sup>

फ्राईडचा महत्त्वाचा शोध म्हणजे बोध (नेणीवयुक्त) मनाचा होय. फ्राईडने मनाचे तीन भाग केले आहे. (१) बोध (Conscious) (२) उपबोध (Pre-conscious) (३) अबोध (Unconscious), यालाच नेणीव असे म्हणतात. फ्राईडने असे म्हटले आहे की, "ज्या गोष्टीची मनाला प्रत्यक्ष जाणीव होत असते, त्या गोष्टी 'जाणिवे' च्या कप्प्यात (The conscious) असतात; विसर पडल्यामुळे ज्याची मनाला प्रत्यक्ष जाणीव होत नाही; पण त्या गोष्टी थोड्याफार प्रयत्नाने मनास आठवतात त्या 'सुप्त जाणिवेत' (The pre-conscious) असतात. ज्या गोष्टीची जाणीव तर नसतेच; शिवाय कितीही प्रयत्न केला तरी ज्या विसरलेल्या गोष्टी जाणिवेत आणता येत नाहीत त्या नेणीव (The unconscious) या तिसऱ्या कप्प्यात असतात."<sup>३</sup> या तीन भागांनुसार मनाचे कार्य चालते.

अबोध मनाला 'अंतर्मन' किंवा 'असंज्ञ' असेही शब्द वापरले जातात. ना.ग.जोशी यांनी असे म्हटले आहे की, "फ्राईडने मानसिक व्यक्तित्वाची शरीररचना (Anatomy of the mental personality-New Introductory Lectures, p.p. 100-101) समजावून देताना ज्या तिहेरी अंतःप्रवाहाची चर्चा केलेली आहे त्यास 'संज्ञ' (Conscious), 'संज्ञापूर्व' (Pre-conscious) व 'असंज्ञ' (Unconscious) या मानसिक व्यापारांचे विश्लेषण केले आहे."<sup>४</sup> ते पुढीलप्रमाणे मांडले आहे.

फ्राईडने आपल्या 'दहश एसे रपव हिंश श्रव' या ग्रंथात मनोव्यापार कसे चालतात ते सांगितलेले आहे. "बाह्यजगताचे ज्ञान शिकविणाऱ्या, भोवतालच्या परिस्थितीची वागणूक शिकविणाऱ्या मनाच्या भागाला फ्राईडने

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विद्येविना मति गेली, मतीविना नीति गेली  
नीतिविना गति गेली, गतिविना वित्त गेले  
वित्तविना शूद्र खचले, इतके अनर्थ एका अविद्येने केले

-महात्मा ज्योतीराव फुले

❖ विद्यावार्ता या आंतरविद्याशाखीय बहुभाषिक त्रैमासिकात व्यक्त झालेल्या मतांशी मालक, प्रकाशक, मुद्रक, संपादक सहमत असतीलच असे नाही. न्यायक्षेत्र:बीड



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## संजय पवार यांच्या साहित्यातील महानगरीय जाणिवा

श्री. मिसाळ अप्पासाहेब शहादेव  
संशोधक विद्यार्थी, भाषा व संशोधन विभाग,

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प्रमुख, मराठी विभाग,

एस.के.गांधी महाविद्यालय कडा डॉ.बा.आं.म.वि.औरंगाबाद

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१९६० नंतर एकूणच मराठी साहित्याला नवे धुमारे फुटले. वेगळे भान, वेगळ्या संवेदना, वेगळ्या जाणिवा साहित्यातून व्यक्त झाल्या. साठोत्तरी काळात मराठी साहित्याच्या रुपरंगात अंतर्बाह्य स्वरूपाचे मूलभूत बदल होऊ लागले. या प्रक्रियेचाच एक भाग म्हणून महानगरीय जाणिवांच्या विस्तारलेल्या कक्षा मराठी साहित्यात प्रकट होऊ लागल्या. जागतिकीकरण, खाजगीकरण आणि उदारीकरणामुळे प्रत्येक क्षेत्रात मोठे बदल घडून आले. देशाचा चेहरा मोहरा बदलला. आधुनिकीकरणाच्या नव्या प्रक्रियेतून, औद्योगिकीकरणाच्यातून महानगरे आकाराला आली. ग्रामीण आणि निमशहरी जीवनापेक्षा वेगळे समाजजीवन, वेगळी संस्कृती महानगरात उदयास आली. पाश्चात्य जगातील प्रभामुळे वैज्ञानिक प्रगती, औद्योगिक क्रांती, बहुराष्ट्रीय कंपन्या यामुळे महानगरांचा मोठ्या प्रमाणात विस्तार झाला. मुंबई, कलकत्ता, मद्रास, दिल्ली आणि बेंगलोर ही महानगरे बेसुमार वाढली. हमखास रोजगार मिळवून देणारे मुंबई हे शहर असल्यामुळे तेथे माणसांची मोठ्या प्रमाणात गर्दी वाढली. ग्रामीण भागातील पारंपरिक व्यवसाय भांडवलशाहीमुळे बुडाल्याने उपजिविकेसाठी व रोजगारासाठी मुंबई शहरात लोकांची प्रचंड गर्दी वाढली. खेड्यातून आलेली कष्टकरी, शेतमजूर, पोटाची स्वतःचे गाव सोडून आलेले लोक तसेच परप्रांतीय, नैसर्गिक आपत्तीचे बळी ठरलेले निर्वासित लोक यामुळे महानगरीय जीवनाची व्यामिश्रता अधिक वाढली. परिणामी हे मोठे आव्हान मराठी साहित्यापुढे निर्माण झाले. जयंत पवार यांनी हे महानगरीय वास्तव आपल्या

कथा, एकांकिका आणि नाटकातून पकडले. मुंबई हे एकमेव महानगर त्यांच्या साहित्याच्या केंद्रभागी आहे.

जयंत पवार यांनी प्रामुख्याने कथा, नाटक आणि एकांकिका असे साहित्य प्रकार हाताळले. फिनिक्सच्या राखेतून उठला मोर, वरणभात लोन्चा नि कोन नाय कोन्चा हे दोन कथा खूप गाजले. त्यानंतर काय डॅजर रा सुटलाय (२०११), टेंगशेच्या स्वप्नात ट्रेन (२०१५), अधांतर (१९९९), ही तीन नाटके आणि निनाद (२०१८), पडसार (२०१८), नाद (२०१८) या तीन एकांकिका असे त्यांचे मोजकेच परंतु त्यातून त्यांनी महानगरीय वास्तव मोठ्या ताकदीने मांडले आहे. महानगरीय जाणिवांच्या प्रस्फोटाचे ते द्योतक आहे. मुंबई महानगराची व्यामिश्रता त्यांच्या साहित्यातून प्रतिबिंबित झाली आहे. महानगरीय जाणिवा अत्यंत तरल शब्दात मांडल्या आहेत. महानगरीय जाणिवांचा समर्थ आविष्कार त्यांच्या साहित्यातून प्रकट झाला आहे. वरणभात लोन्चा नि कोन नाय कोन्चा हा कथासंग्रह २०१५ साली प्रकाशित झाला. या कथासंग्रहाला साहित्य अकादमी पुरस्कार प्राप्त झाला आहे. या कथा संग्रहाविषयी हरिश्चंद्र थोरात म्हणतात, तुमची 'वरणभात लोन्चा' ही कथा अप्रतिम आहे. एक नष्ट होऊ घातलेले जग तुम्ही ताकदीने जिवंत केले आहे. मराठी मधल्या उत्तम कथा एकत्र करायच्या ठरवल्या तर त्यात या कथेचा समावेश खात्रीने करावा लागेल. जगण्याविषयीच्या प्रगल्भ भानापासून कथेच्या नेमक्या शिल्पापर्यंत, बम आणि डिग्या यांच्या चित्रणापासून कथेशी असलेल्या निवेदकाच्या संबन्धापर्यंत सान्या गोष्टी तुम्ही सूक्ष्म जाणीवपूर्वकतेने हाताळल्या आहेत. या सान्या तपशिलांबरोबर कथनविषयाच्या संदर्भातली तुमची आत्मीयता आणि संवेदनशीलता सतत जाणवत राहते. समकालीन कथेमध्ये ती अपवादात्मक आहे.' हरिश्चंद्र थोरात यांचे मत अगदीच योग्य वाटते कारण जयंत पवार यांनी महानगरातील दुःख, दैन्य, दारिद्र्य, वैफल्यग्रस्तता, नैराश्यता, बकालपणा आणि सामाजिक, आर्थिक, राजकीय आणि सांस्कृतिक विषमता यावर प्रकाश टाकला आहे.

फिनिक्सच्या राखेतून उठला मोर हा कथासंग्रह जुलै २०१० साली प्रकाशित झाला. आजपर्यंत एकूण चार आवृत्त्या या कथासंग्रहाच्या निघालेल्या आहेत. या कथासंग्रहाविषयी निखिलेश चित्रे म्हणतात, पवारांची कथा ही महानगरी संवेदनेची कथा आहे. ऐंशीच्या दशकानंतर मुक्त अर्थव्यवस्थेमुळे झपाट्यानं पसरलेली जागतिकीकरणाची लाट महानगरांवर थेट आदळली आणि मग गावा-खेड्यापर्यंत पोहचली. त्यामुळे जागतिकीकरण

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**Recommendation Made by  
Marathwada Development Board and  
Annual Report - 1994-95**

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### Introduction :

Marathwada's development backlog is increasing day by day, especially in the field of irrigation, education, employment, health care industry agriculture railway. Today the backlog of development in Marathwada has gone up to Two and a half million corers. Marathwada Vinaat Joined Maharashtra 58-year period was over. Yet Marathwada has not Developed.

Matters related to the development of Marathwada special in depth scientific advisory Board was formed in October 1994.

### Objective:

Human Development Report 2000 P. No- 131. According to the districts of Maharashtra backward districts of Marathwada are backward and Human Development Index of this district is below the human development index is 0.58 Marathwada is shown below all the districts

According to the backwardness of the district, their names are as follows.

| Sr. No. | Name of the District | Human Dev. Index |
|---------|----------------------|------------------|
| 1.      | Jalna                | 0.27%            |
| 2.      | Nanded               | 0.37%            |
| 3.      | Osmanabad            | 0.38%            |
| 4.      | Parbhani             | 0.43%            |

|    |            |       |
|----|------------|-------|
| 5. | Hingoli    | 0.43% |
| 6. | Beed       | 0.47% |
| 7. | Latur      | 0.47% |
| 8. | Aurangabad | 0.57% |

### Research Method:

In the, Information on Primary and Secondary level has been collected in this a special study has been done for the caste and agricultural labors of all communities. The farmer is in all communities. 21 June 2003 According to the news of the Times of India, Through the Government of India to Provide special financial assistance to the countryside 1997, Based on the appropriate director of social and economic development of the Sharma commit. The district has selected 100 extreme poverty districts

According to report of Sharma committee, the eight districts of Marathwada have been included in the highest poverty district.

### Scope and extent of Research:

i) Marathwada Krishna valley:- The Government has agreed to share the Marathwada Justice Portion of 231 a. for Krishna valley Marathwada Scientific Development Board has continuously pursued the government for the work of Krishna valley in Marathwada. In 2000 the state cabinet ordered the start Development Project in the in a year, the actual implementation of the work of the project was not started.

For normal irrigation water is required of 3000 M<sup>3</sup>/ Ha of which the following are the most significant basin basing

| Sr. No. | Valley Name     | Water Available M <sup>3</sup> / Ha |
|---------|-----------------|-------------------------------------|
| 1.      | Manjra Valley   | 1113                                |
| 2.      | Dhadhana Valley | 1345                                |

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## THE ROLE OF GOVERNMENT TO PROTECT THE HUMAN RIGHTS

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## मानव अधिकार आणि महिला संरक्षण विषयक तरतुदींचा राजकीय अभ्यास

प्रा. डॉ. गोंदकर तुकाराम दत्तात्रय

एस.के. गांधी महाविद्यालय, कडाता. आष्टी जि. बीड

### प्रस्तावणाः

मानवी समाजात दोन प्रमुख घटक आहेत. त्यात महिला आणि पुरुष आशा दोन घटकांचा समावेश आहे. त्यापैकी प्राचिन काळापासून महिला घटकास दुय्यम स्वरूपाचा दर्जा दिला जातो. मध्ययुगीन कालखंडात महिलांची स्थिती अत्यंत दैनिय स्वरूपाची झाली होती. त्यांना मानव अधिकार प्राप्त आहेत किंवा नाही अशा स्वरूपाची स्थिती त्यांच्या समोर उद्भवली होती. एकीकडे असे म्हटले जाते की मानव अधिकार हे मानवास जन्मजात प्राप्त होत असतात. परंतु मानवी समाजातील एक प्रमुख घटक असलेल्या महिलांना मात्र या अधिकारांपासून जाणिव पुर्वक दुर ठेवण्यात आल्याचे चित्र निर्माण झाले होते. परंतु स्वातंत्र्य प्राप्तीनंतर महिलांना पुरुषांच्या बरोबरीने समान दर्जा बहाल करण्यात आला. राजकीय दृष्टिकोणातून विचार केला असता, भारतीय संविधानाद्वारे महिलांना पुरुषांच्या बरोबरीने मतदानाचा अधिकार प्राप्त करून देण्यात आला. भारतीय राज्यघटनेने द्वारे उदघोषित मुलभूत हक्कांद्वारे समानतेचा अधिकार व्यक्त करण्यात आला. ज्यात स्त्री - पुरुष समानता असेल असे स्पष्ट करण्यात आले. या तरतुदी द्वारे महिला वर्गाची स्थिती सुधारेल अशी अपेक्षा होती. परंतु आजची महिलांची स्थिती पाहता त्यांना आजही अनेक समस्यांना सामोरे जावे लागत आहे. त्यांच्या वर होणाऱ्या हिंसाचार तसेच स्त्री भ्रूनहत्या, बालविवाह, अत्याचार, बलात्कार, हुंडाबळी अशा समस्यांना त्या बळी ठरत आहेत. यातून त्यांना प्रदान करण्यात आलेली मानव अधिकार तसेच या अधिकारांचे या समस्यांच्या माध्यमातून होणारे उल्लंघन व्यक्त करण्याच्या उद्देशाने प्रस्तुत शोधनिबंधाची दिशा ठरविण्यात आलेली आहे.

### शोधनिबंधाचे उद्दिष्ट :

1. मानवी हक्कांच्या व्याख्यांच्या माध्यमातून मानवी हक्कांची संकल्पना स्पष्ट करणे.
2. मानवी हक्कांचा अढावा घेणे.
3. मानवी हक्क आणि महिला संरक्षण विषयक तरतुदींचा अभ्यास करणे.

**मानवी हक्कांची संकल्पना :-** मानवी समाजातील स्त्री असो अथवा पुरुष दोन्ही प्रकारच्या मानवी घटकांना मानव अधिकार जन्मजात प्राप्त झालेले असतात. मानवाच्या जन्मानंतर त्याला आपले जीवन व्यतित करण्यासाठी काही साधनांची गरज असते. त्या प्रमाणेच त्यास व्यक्तीमत्व विकासाची देखील आवश्यकता असते. अशा घटकांसाठी त्यास आवश्यक असणारे मानव अधिकार त्याच्या जन्मासोबतच त्यास प्राप्त होत असतात. मानव अधिकाराच्या व्याख्या करण्याचा प्रयत्न अनेक विचारवंतानी केला आहे.

1. **मॅकफरलेन :** मानव अधिकार हे असे नैसर्गीक अधिकार आहेत जे प्रत्येक स्त्री आणि पुरुषाला समान प्राप्त झाले आहेत.
2. **हेरॉल्ड लास्की :** ज्या परिस्थितीच्या हक्काशिवाय व्यक्तीला आपली सर्वांगीन प्रगती साध्य करता येत नाही त्या परिस्थितीच्या घटकांना मानवी अधिकार असे म्हणतात.
3. **डवार्किन :-** मानवी हक्क हे मानवाला प्राप्त झालेले असे हक्क आहेत की ज्यांचे सार्वजनिक हितासाठी देखील राज्यांकडून उल्लंघन होऊ शकत नाही आणि राष्ट्रीय कायद्याशिवाय देखील ते उपभोगाता येऊ शकतात.
4. **मॉरिस क्राॅटसन :** मानव अधिकार हे स्वातंत्र्यचे सर्वांचे आणि पवित्र अधिकार असून त्यांचे उल्लंघन राज्याला करता येणार नाही.

वरिल व्याख्या वरून स्पष्ट होते की मानव अधिकार हे नैसर्गीक स्वरूपाचे अधिकार असून ते मानवी जीवनास जन्मा सोबतच प्राप्त होत असतात. मानव अधिकार मानवास स्त्री असो अथवा पुरुष व्यक्तीला संमानपुर्वक जगण्यासाठी अपरिहार्य ठरत असतात.

**महिला संरक्षण विषयक मानवी हक्क :** महिलांना आज पुरुषांच्या बरोबरीने समाजात स्थान दिले जाते. भारतीय राज्यघटनेने महिलांना पुरुषांच्या बरोबरीने अधिकार दिले आहे. परंतु त्यांच्या समोरील समस्या कमी होताना दिसून येत नाहीत. भारताला स्वातंत्र्य मिळुण आज 70 वर्ष होवून गेली तरी महिला वर्ग दुर्बल वंचीत आणि दुय्यम दर्जाचे जीवन जगत आहेत या कारणासाठी महिलांना मानवी हक्काची जाणिव करून देणे अवश्यक आहे.

**मानवी हक्क आणि स्त्रीया :** प्राचिन काळापासून महिलांना समाजात दुय्यम स्वरूपाचा दर्जा देण्यात येतो. त्यास मध्ययुगीन कालखंडात फारच उतरती कळा लागलेली दिसून येते. या कालखंडात महिलांना शिक्षणाचा अधिकार नाकारण्यात आला त्यामुळे त्यांच्या समस्यांवर भरच पडली या काळात बहुपत्नीत्वाची प्रथा निर्माण झाली. दासी प्रथेत वाढ झाली अशा प्रकारे महिलांवर अन्याय अत्याचार करणाऱ्या प्रथा वाढतच गेल्या स्वातंत्र्य प्राप्ती पर्यंत हिच स्थिती कायम होती. स्वातंत्र्य प्राप्ती नंतर महिलांना देण्यात आलेल्या अधिकारांमुळे त्यांची स्थिती सुधारेल हि आपेक्षा आजची स्थिती पाहता फोल ठरली असल्याचे दिसून येते. आज अनेक कायदे आहेत ज्यामुळे महिलांना संरक्षण प्राप्त झाले आहे. परंतु त्यांच्यात कायद्याविषयक जागृतीच्या आभावामुळे त्या अशा समस्यांना आजही बळी पडत आहेत. त्यांची स्थिती सुधारण्यासाठी त्यांना कायदेविषयक जाणिव निर्माण करून देणे गरजेचे आहे. या दृष्टिकोणातून खालील मानव अधिकार आणि कायदेविषयक तरतुदींचा उहापोह करण्यात आला आहे.

1. **समानतेचा अधिकार :** भारतीय संविधानातील मुलभूत हक्कात समानतेचा अधिकार प्रामुख्याने समाविष्ट करण्यात आला आहे. या अधिकारानुसार कायद्यापुढे सर्व समान आहेत. धर्म, जात, वंश या सोबतच लिंगानुसार देखील कोणताही भेदभाव केला जाणार नाही याची शाश्वती भारतीय संविधानाने प्रदान केली आहे. या विषयीचे तरतुद महिलांना मानवी हक्कांची जाणिव करून देते. या तरतुदी द्वारे भारतातील पुरुष आणि महिला समान आहेत असे स्पष्ट करण्यात आले आहे.
2. **स्वातंत्र्याचा अधिकार :** भारतातील महिला असो अथवा पुरुष सर्वांना समान स्वातंत्र्य आहे. भारताच्या सर्व घटक राज्य अथवा विभागात फिरण्याचे संचार स्वातंत्र्य या बरोबरच भाषण स्वातंत्र्य, अभिव्यक्ती स्वातंत्र्य अशा सर्व प्रकारचे स्वातंत्र्य पुरुषां प्रमाणेच महिलांना देखील देण्यात

### मराठवाडा आणि दुष्काळ' - एक अर्थमंधन

प्रा.डॉ. अशोक कौरडे  
अर्थशास्त्र विभाग प्रमुख  
एस.के. गांधी कॉलेज, कडा  
ता.आष्टी जि. बीड  
प्रस्तावना :

भारतासारख्या कृषीप्रधान देशात शेतक-यांच्या आत्महत्या हा अधिक चिंतेची बाब आहे. स्वातंत्र्य प्राप्तीनंतर १७ सप्टेंबर १९४८ रोजी हैद्राबाद प्रांतातील निजामाची राजवट संपुष्टात आली, आदोलने उभारली गेली. त्यासाठी संयुक्त महाराष्ट्रात संयुक्त महाराष्ट्र चळवळ उभी राहिली. या अंदोलनाच्या तीव्रतेमुळे १ मे १९६० रोजी मुंबईसह मराठवाडा व विदर्भ मिळून मराठी भाषीकाचे स्वतंत्र महाराष्ट्र राज्य अस्तित्वात आले, मराठवाडयाचे भौगोलीक क्षेत्रफळ ६४.६० लाख हेक्टर आहे. मराठवाडयात, बीड, जालना, उस्मानाबाद, परभणी, नांदेड, हिंगोली व लातूर या आठ जिल्हयांचा समावेश होतो. यामध्ये औरंगाबाद, बीड, व नांदेड या जिल्हयांचे क्षेत्रफळ १० लाख हेक्टर पेक्षा जास्त आहे. तर हिंगोली जिल्हयाचे क्षेत्रफळ ५ लाखा पेक्षा कमी आहे. मराठवाडयात सरासरी ७७४ मी.मी. पाऊस पडतो त्यापैकी नांदेड : ८७४ मि.मी. तर लातूर : ४५५ ते ७५५ मि.मी. पाऊस पडतो. या वर्षांतर मराठवाडयात भिषण दुष्काळ सदृष्य स्थिती आहे.

मराठवाडयातील दुष्काळ :

स्वातंत्र्यपूर्व काळापासून निजाम राजवटीचा भाग असणारा मराठवाडा हा विभाग १७ सप्टेंबर १९४८ रोजी स्वतंत्र झाला. मराठवाडा हा विभाग निजाम या संस्थानिकाच्या राजवटी नियंत्रणात असल्याने ब्रिटीश काळापासून मागासलेला आहे त्यामुळे औदयोगिक विकास झालेला नाही, नंतरच्या काळामध्ये औरंगाबाद आणि जालना परीसरत औदयोगिकरण झालेले दिसते. महाराष्ट्राचा विचार केल्यास मराठवाडयातील सन २००१ च्या जनगणनेनुसार २१.९ टक्के लोकसंख्येचे प्रमाण दिसून येते.

विभागातर्गत औरंगाबाद या जिल्हयाचे सर्वाधिक लोक ३७.२५ टक्के शहरामध्ये राहतात. तर सर्वात कमी परभणी जिल्हयाचे १५.६० टक्के आहे. मराठवाडा नागरीकरणात कमी राहण्याचे कारण म्हणजे येथील औदयोगिकरण अत्यल्प आहे.

मराठवाडयातील शेतकरी आणि आत्महत्या :

| अ.क्र. | जिल्हे     | शेतक-यांची संख्या (लाखात) | आत्महत्या केलेल्या शेतक-यांची संख्या सन २०१४ | २१ शेतकरी |
|--------|------------|---------------------------|--|-----------|
| १      | औरंगाबाद   | ६.१३                      | ४२   | ६.२१      |
| २      | जालना      | ५.४६                      | २२   | ४.००      |
| ३      | परभणी      | ४.३६                      | ४९   | १.११      |
| ४      | हिंगोली    | २.९९                      | २९   | १.००      |
| ५      | नांदेड     | ७.८                       | १०६  | १.३३      |
| ६      | बीड        | ७.८५                      | १२३  | १.५०      |
| ७      | लातूर      | ४.५४                      | ३४   | ७.४५      |
| ८      | उस्मानाबाद | ३.९४                      | ५५   | १.३३      |
|        | एकुण       | ४२.८७                     | ४६०  | १०.००     |

महाराष्ट्रात मराठवाडयातील शेतक-यांच्या आत्महत्येचे प्रमाण मोठे आहे. याचे प्रमुख कारण म्हणजे मराठवाडयातील शेतकरी मोठ्या प्रमाणात कर्जबाजारी आहे, नापीक शेती, सिंचनाच्या सुविधांचा अभाव, नैसर्गिक तसेच सामाजिक कारणामुळे आर्थिक स्रोत नसल्याने आत्महत्येचे प्रमाण मोठे आहे, मराठवाडयात सर्वात जास्त बीड जिल्हयातील शेतकरी आत्महत्या करत आहेत असे निदर्शनास येते. नांदेड, उस्मानाबाद, परभणी मधील शेतकरी मोठ्या प्रमाणात आर्थिक अडचणीत सापडलेले आहेत.

मराठवाडयातील दुष्काळाचे कृषी क्षेत्रावरील परिणाम :

भारतीय अर्थशास्त्रज्ञ प्रा. अमर्त्य सेन यांच्या मते भारतात इंग्रजांच्या राजवटीत जे दुष्काळ पडले ते रोखण्यासाठी इंग्रजांनी विशेष प्रयत्न केले नाहीत. इंग्रजांच्या राजवटीत भारतात लोकशाही अस्तित्वात नसल्यामुळे हे दुष्काळ पडले असे त्यांचे मत आहे, नैसर्गिक आपत्तीच्या वारंवारितेत अलिकडच्या काळात वाढ झाल्याची दिसून येते, दुष्काळाची सर्वाधिक झळ पोहचते ती

## आर्थिक विकासातील कार्ल मार्क्स यांचे योगदान

संशोधक विद्यार्थिनी  
सौ.पाऊलबुध्दे अनुराधा रामभाऊ

मार्गदर्शक  
प्रा. डॉ. अशोक कोरडे  
एस.के.गांधीमहाविद्यालय  
औरंगाबाद.कडा, जि. बीड.

प्रस्तावना:-  
आर्थिक विकासाच्या संदर्भात काही संकल्पना मांडल्या आहेत.त्यामध्ये अँडम स्मिथ, डेविड रिकार्डो, माल्थस, शुम्पीटर, या सनातनवादी अर्थतज्ञांनी आपले विचार मांडलेले आहेत. कार्ल मार्क्सने आर्थिक विकासाबाबत सुसंगत आणि सलग असा सिध्दान्त मांडलेला नाही. परंतु त्याने विरोधविकासधिष्ठित भौतिकवाद, इतिहासाची भौतिकवादी मीमांसा, अतिरिक्त मुल्यसिध्दान्त, भांडवलशाहीचा विनाश इत्यादीसंबंधीचा विचार मांडले आहेत. त्यावरून कार्ल मार्क्सचे आर्थिक विकासासंबंधीचे विवेचन समजते.  
कार्ल मार्क्सने हेगेलची विरोधातून विकास ही विचारसरणी मान्य केली. परंतु प्रथम भौतिक सृष्टीत बदल होतात आणि त्यानुसार कल्पनासृष्टीत बदल होतात असे प्रतिपादन केले. त्याच्या मते संघर्षातून विकास होऊन एक नवा टप्पा अस्तित्वात येतो. विशिष्ट काळानंतर पुन्हा संघर्ष होऊन विकासाचा नवीन टप्पा नटला जातो. अशा प्रकारे मार्क्सच्या मते विरोधातून विकास होतो.

संशोधनाची उद्दिष्ट्ये:-

- १)कार्ल मार्क्स या अर्थतज्ञांच्या जीवन वृत्तांत अभ्यासणे.
- २)कार्ल मार्क्स यांच्या आर्थिक आणि राजकीय विचारांचा अभ्यास करणे.

३)कार्ल मार्क्स यांची भांडवलशाही अर्थव्यवस्थेतील आर्थिक विकासाची प्रक्रिया अभ्यासणे.

कार्ल मार्क्स जीवन वृत्तांत :-

(जन्म:-१८१८-मृत्यू १८८३)

कार्ल मार्क्स हे एक जर्मन अर्थशास्त्रज्ञ व तत्वज्ञ होते. त्यांनी अनेक विषयावर लिखाण केले. पण त्यांचे वर्गसंघर्षावरिल लिखाण हे जास्त प्रसिद्ध आहे. फ्रेडरिक एन्जेल्स प्रमाणे मार्क्सने देखील तत्कालीन

राजकीय लढ्यांमध्ये भाग घेतला. कार्ल मार्क्स यांनी 'दास कॉपिटल' या ग्रंथाचा पहिला खंड इ.स १८६७ मध्ये प्रसिद्ध केला. कार्ल मार्क्स यांच्या विचारांची लोकप्रियता सोव्हियत रशियाच्या विघटनानंतर कमी झाली असली तरी ते विचार शिक्षण क्षेत्र राजकीय क्षेत्र काँग्रेस लढा यामध्ये अजूनही लोकप्रिय अजूनही आदर्श मानले जातात. ते वर्ग संघर्षाचे प्रणेते होते.

कार्ल मार्क्स यांचा सामाजिक चळवळीवरिल प्रभाव अतुलनीय आहे. मार्क्स स्वतः एक उत्कृष्ट अर्थशास्त्रज्ञ व तत्वज्ञ असल्याने जर्मनीतील जेना विद्यापिठांमध्ये कायदा आणि तत्वज्ञानाचे शिक्षण घेतल्यानंतर मार्क्स यांनी पत्रकार म्हणून काम सुरू केले. मार्क्स यांनी इ.स १८४८ रोजी कम्युनिस्ट विचारसरणीचा पाया घातला. फ्रेडरिक एन्जेल्स यांच्या सहकार्याने लिहिलेल्या कम्युनिस्ट मॅनिफेस्टोत यांनी कामगार मजूर वर्गाने क्रांती करून कम्युनिस्ट समाज स्थापन करावा असा विचार मांडला. मार्क्स यांनी स्वतः समाजवादावर त्यांच्या विचारांमुळे त्यांना पॅरिस, ब्रसेल्स आणि लंडन येथे हद्दपार करण्यात आले.

कार्ल मार्क्सची विचारप्रणाली:-

कार्ल मार्क्सच्या शास्त्रीय समाजवादात द्वंद्वत्मक भौतिकवाद, ऐतिहासिक भौतिकवाद, अतिरिक्त मुल्य सिध्दान्त, वर्गसंघर्ष राज्यविहीन व वर्गविहीन समाज या सा-यांचा समावेश होतो. उत्पादन व्यवहार, उत्पादनशक्ती, उत्पादनसंबंध त्यातील अंतविरोध खाजगी मालकी शासनव्यवस्था, विचारसरणी क्रांती इ.

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# सामाजिक संशोधन आणि समाज शास्त्र एक दृष्टीक्षेप

पाऊलबुध्दे अनुराधा रामभाऊ

डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापिठ, औरंगाबाद.

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## प्रस्तावना:

सामाजिक विज्ञान आणि सामाजिक कार्यामधील प्रमाणात्मक संशोधनाचे महत्त्व विशेषतः अलिकडच्या वर्षात आंतरराष्ट्रीय आणि ब्रिटिश दोन्ही संदर्भांमध्ये ठळक केले गेले आहे. युके मधील मतदानाचा मत असा आहे की सामाजिक कार्य संशोधनात परिमाणजन्य काम हा खराब संबंध आहे. आणि यामुळे अनेक पुढाकार घेतात तथापि शारलँडच्या युके कार्यामध्ये सर्वसाधारण मतदानाचे प्रतिनिधित्व करणारे शैक्षणिक मुलाखतीचा समावेश आहे. आमच्याकडे त्याच्या अचूकतेचे थोडे स्वतंत्र उपाय आहेत. मापनयोग्य निष्कर्षाचा विकास करण्याच्या सामाजिक कार्यामधील परिणामी संशोधनाच्या शैक्षणिक प्रभावावर लक्ष केंद्रित करणारे हे पेपर प्रथमच आहे. १० वर्षांच्या कालावधीत हे तीन प्रमुख ब्रिटिश आधारित जेनेरिक जर्नल्सवर केंद्रित आहे. जे १४९० मुळ लेखाचे संकलन करते प्रभाव तीन निर्देशांद्वारे मोजला जातो. सामाजिक संशोधनाचे खराब संबंध म्हणून प्रमाणित कार्याच्या प्राप्त मतप्रणालीच्या विरुद्ध निष्कर्ष दर्शवितात.

वैज्ञानिक पद्धतीचा अवलंब करून नैसर्गिक शास्त्रात संशोधन केले जाते. त्याचप्रमाणे वैज्ञानिक पद्धतीद्वारे सामाजिक घटनांच्या संदर्भात संशोधन करण्यात येते अशा संशोधनाला सामाजिक संशोधन म्हटले जाते. विज्ञान किंवा शास्त्र आणि वैज्ञानिक पद्धती ही निरपेक्ष असते. या पद्धतीचा अवलंब करून कोणत्याही ज्ञान शाखेत संशोधन केले. वैज्ञानिक पद्धतीचा वापर करून अनेक समाजशास्त्रज्ञानी सामाजिक घटनांचे अध्ययन केले आहे. समाजशास्त्र, अर्थशास्त्र, राज्यशास्त्र, मानसशास्त्र, इत्यादी सर्वच सामाजिक शास्त्रांमध्ये वैज्ञानिक पद्धतीद्वारे संशोधन केले जाते. त्यामुळे या सामाजिक विषयांना शास्त्राचा दर्जा प्राप्त झाला आहे. शास्त्राचे मुख्यतः नैसर्गिक शास्त्रे आणि सामाजिक शास्त्रे असे दोन प्रकार पडले जातात. या दोन्ही शास्त्रात वैज्ञानिक पद्धतीचा अवलंब केला जातो. वैज्ञानिक पद्धतीच्या आधारे सामाजिक घटनांच्या संबंधात नवीन ज्ञान प्राप्त करणे आणि जुन्या ज्ञानाचे परीक्षण केले जाते. त्यास सामाजिक संशोधन असे म्हणतात. अशा सामाजिक संशोधन पद्धतीचा अभ्यास या संशोधन पेपर मध्ये करण्यात आलेला आहे.

## अभ्यास पद्धती :

प्रस्तुत अभ्यास हा पुर्णपणे द्वितीय साधन सामुग्रीवर आधारित असून या अभ्यासासाठी संशोधन शास्त्र पद्धती संबंधीत संदर्भ पुस्तके दैनंदिन वर्तमानपत्रे, मासिके, संदर्भग्रंथ व अंतर्जाल माहितीचा आधार घेण्यात आलेल्या आहेत.

## संशोधनाची उद्दिष्टे:

- १) सामाजिक संशोधन पद्धतीचा अभ्यास करणे.
- २) सामाजिक संशोधन पद्धतीच्या प्रकारांचा अभ्यास करणे.
- ३) सामाजिक संशोधनाचे महत्त्व आणि उपयोगिता यांचा अभ्यास करणे.

## अर्थ आणि व्याख्या:

संशोधन पद्धती म्हणजे तथ्य व तत्त्वे शोधण्यासाठी करण्यात येणारी चिकित्सा किंवा परिश्रम किंवा एखादी गोष्ट



## INFLUENCE OF CADMIUM SUBSTITUTION ON DIELECTRIC PROPERTIES OF NI-Cu FERRITES

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*Abstract: The Cd<sup>2+</sup> ions substituted samples of mixed nickel- copper ferrites having the compositional combination Ni<sub>0.5</sub>Cu<sub>0.5-x</sub>Cd<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> (x = 0.0, 0.1, 0.3, 0.5) have been synthesized using AR grade oxides by standard solid state reaction technique. The formation of single phase cubic spinel structure of all the samples under investigation have been carried out using X-ray diffraction technique at room temperature. Using LCR-Q meter the dielectric constant ( $\epsilon'$ ), dielectric loss ( $\epsilon''$ ), dielectric loss tangent ( $\tan\delta$ ) was measured as a function of frequency. The frequency dependence of dielectric parameters measurements was carried out within the range 100 Hz to 1 MHz. The values of dielectric parameters ( $\epsilon'$ ,  $\epsilon''$  and  $\tan\delta$ ) are much higher at lower frequencies but decreases with increase in frequency. At very high frequencies, its values become so small that it becomes independent of frequency. The decrease in dielectric parameters with increase of frequency may be due to the fact that beyond a certain frequency of the external electric field, the electronic exchange between ferrous and ferric ions cannot follow the alternating field. It is observed that dielectric constant ( $\epsilon'$ ), dielectric loss ( $\epsilon''$ ) and dielectric loss tangent ( $\tan\delta$ ) appreciably increases with cadmium concentration x but decreases with increases in frequency.*

*Keywords: Mixed spinel ferrites, XRD, dielectric properties.*

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## STRUCTURAL, MAGNETIC AND INITIAL PERMEABILITY PROPERTIES OF $Ni_{0.33}Zn_{0.63}Fe_2O_4$ SPINEL FERRITE

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**Abstract:** Spinel ferrite having composition  $Ni_{0.33}Zn_{0.63}Fe_2O_4$  was prepared by ceramic method and characterized by X-ray diffraction technique. The magnetic and initial permeability properties were investigated by standard method. X-ray diffraction pattern analysis confirms the formation of single phase cubic spinel structure. The saturation magnetization, coercivity and remanence magnetization properties obtained in the present work are suitable for multilayer chip inductors applications (MLCI). Temperature dependence of initial permeability show decreasing trend.

**Keywords:** Ni-Zn ferrite, Initial permeability, magnetic properties.

### 1 Introduction

Polycrystalline ferrite consisting of iron oxide and metal oxide has a wide range of applications in the field of electronics, computer, and telecommunications. Ferrites are commercially important class of magnetic materials due to their combined electrical and magnetic properties. These properties of ferrite changes with respect to type and amount of dopant, synthesis methods, sintering time and temperature, synthesis parameters and distribution of cations over the available sites [1-4]. However, the

properties of the ferrite materials prepared by ceramic techniques are exhibits good electrical and magnetic properties which are useful in many industrial and biomedical applications [5].

In the family of ferrites, spinel ferrites are important from research and academic point of view. Spinel ferrites are recognized by the formula  $AB_2O_4$ , where A stands for divalent cation such as Ni, Zn, Cd, Cu, Co, Mn etc and B stands for trivalent Fe ions. The structure of spinel ferrite is cubic and consists of two interstitial sites namely tetrahedral (A) and

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## १९९० नंतरचे मराठी साहित्यातील बदलते संदर्भ

प्रा. डी.बी. हारकर

मराठी विभाग प्रमुख, गांधी महा.कडा

१९९० पासून एकूणच भारतीय समाज जीवनात मोठी स्थित्यंतरे घडून येत आहेत.साहित्य आणि समाज यांचे परस्पर संबंध अत्यंत व्यामिश्र असतात.साहित्यातील विविध घटक हे येनकेन प्रकारे समाजव्यवस्थांशी जोडलेले असतात.त्यांना सामाजिक संदर्भ असतो. साहित्यकृतीचा निर्माता हा समाजाचा एक घटक असतो. त्याच्या व्यक्तिमत्वाचे भरण पोषण, त्याच्या साहित्यकृतीची निर्मिती ही सामाजिक सांस्कृतिक पर्यावरणात होत असते.त्यामुळे साहित्यकृतीचा ही लेखकाची जशी निर्मिती असते, तशी ती त्या त्या काळाची समाजाची देखील असते.लेखकाच्या काळातील प्रत्यक्ष समाजजीवनातील स्थितीगती साहित्यातून प्रकटत असते. त्यामुळे सामाजिक जीवनातील अनेक प्रश्नांचा उलगडा आपल्याला साहित्यातून होत असतो. त्या प्रश्नांचे उत्तर शोधण्याची पध्दती साहित्याबाहेर शोधता येते या अनुषंगाने ग्रामीण समाज आणि मराठी साहित्य यांचे अनुबंध आपल्याला शोधता येतात.

१९९० च्या दरम्यान लिहिणाऱ्या ग्रामिण साहित्यिकांच्या ग्रामजाणिवा प्रगल्भ वाटतात. त्यांना चांगले 'समाजभान' आल्याचे जाणवते. त्यांनी ग्रामजीवनाचे जगण्याचे प्रश्न नीट समजावून घेतले होते.शेतावरील अस्मानी सुलतानी सेकटे, शेतावरील अस्मानी-सुलतानी संकटे शेतकरी संघटनेमुळे 'हायलाईट' झालेली शेती मालाच्या बाजारभावाचा प्रश्न शेतमजुरांचे,दलित व स्त्रिया यांचे आर्थिक, सामाजिक शोषण, खेडी व शहरे यांत पडणारे भौतिक - बौद्धिक अंतर हे सारे त्यांना चांगले कळत होते. त्यामुळे त्यांच्या अगोदरच्या दोन्ही पिढ्यांच्या तुलनेत १९९० च्या साहित्याने ग्रामिण जीवनाला अर्थपूर्ण आफाट देण्याचा प्रयत्न केलेला दिसून येतो. या काळातील साहित्यिकांनी ग्रामजीवन केवळ प्रतिबिंबित केले अशातला भाग नाही, तर त्या जीवनातील प्रश्नांच्या मुळाशी जाण्याचा,शोषणाचा अन्वयार्थ लावण्याचा साहित्याद्वारे प्रयत्न केला. आज 'Local Village' मुळा पासून कोलमडून पडत आहे. शेतकऱ्यांच्या आत्महत्या, त्यामागची शशासकीय धोरणे, वीज,पाणी, आरोग्य, शिक्षण,जमीन, कॉर्पोरेट जग, व्यापारी सावकार पुढरी राजकारण, धर्मकारण हे आणि यांसारखे वास्तव नव्वदच्या दशकांतर निर्माण झाले. अशा बाबींसहित अधिक व्यामिश्र,गुंतागुंतीचे,बहूपेडी वास्तव १९९० नंतरच्या ग्रामीण साहित्यिकांसमोर आहे. हे साहित्यिक आपापल्या परीने ग्राम वास्तवाच्या मुळाशी जाऊन ते आविकृत करण्याचा प्रयत्न करित आहेत.

१९९० नंतरच्या ग्रामीण साहित्यिकांनी एक आशादायक चित्र निर्माण केले आहे. आसाराम लोमटेंची 'ईडा पिडा टळो', आलोक अशोक कौतिक कोळी यांचे 'कूड व पाडा', कृष्णा खोत यांची 'गावठाण रौंदाळा', रमेश इंगळे 'निशाणी डावा अंगठा', भीमराव वाधचौरै यांची 'गराडा', सदानंद देशमुख यांची 'बारोमास', भास्कर बडे यांचा 'चिंकाळा', अर्जून व्हरकर यांचे 'तुंबण', 'कावळ्याची सुगी', प्रकाश मोगले, विजय जावळे, विलास सिंदगीकर, प्रभाकर शेळके, कैलास आदींचे सातत्याने कमी अधिक प्रमाणात सुरु असलेले कथालेखन यांद्वारे हे लेखक बदलते ग्राम वास्तव कवेत घेऊ पाहत आहेत. त्यांच्या लेखनाला मर्यादा असल्या तरी.वास्तवाला भिडणाऱ्याच्या मुळाशी जाण्याची त्यांची तयारी आहे. मात्र गतिशील वास्तवाच्या झपाटयासमारे त्यांची दमछाक होत आहे.

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## ३१. भारतातील शेतकऱ्यांच्या आत्महत्या - कारणे व उपाय

सौ. पाऊलबुध्दे अनुराधा रामभाऊ

संशोधक विद्यार्थिनी, डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद.

प्रा. डॉ. अशोक कोरडे

अर्थशास्त्र विभाग प्रमुख, एस. के. गांधी महाविद्यालय, कडा, जि. बीड.

### गोषवारा

भारतीय अर्थव्यवस्था कृषी क्षेत्रावर अवलंबून आहे. म्हणजे शेती ही भारतीय अर्थव्यवस्थेचा कणा समजला जातो. शेती हा भारतात मुख्य व्यवसाय आहे. भारतात आजही 66 टक्के लोक शेती प्रमुख व्यवसाय म्हणून करतात. शेतकरी हा सर्व जगाचा पोषिदा समजला जातो. तरिदेखील या देशातील शेती आणि शेतकरी आज संकटात आहे शेतकऱ्यांने उत्पादीत केलेल्या उत्पादनाला योग्य हनी भाव मिळत नाही आणि उत्पादन खर्च भरमसाठ वाढत आहे. ही बाब अत्यंत गंभीर, चिंता आणि चिंतन करायला लावणारी आहे. या समस्येजन्व परिस्थितीमुळे शेतकऱ्यांच्या आत्महत्येचे प्रमाण वाढत आहेत.

### प्रस्तावना

भारतीय अर्थव्यवस्थेच्या मागील सहा दशकाच्या वाटचालीचा विचार केला असता. अन्नधान्य टंचाई, दुष्काळ, गरिबी, दारिद्र्य, यांचा दाहक अनुभव देशाने पचवला. डॉ. नॉर्मन बोरलॉग यांनी हरितक्रांतीचा पाया घातला होता. त्यानंतर सन 1991 पासून भारताने जागतिकीकरणाला सुरुवात केल्यापासून शेतकऱ्यांच्या आत्महत्या ही एक सगंभीर समस्या उदभवली आहे. पूर्वी आपल्याकडे उत्तम शेती, मध्यम व्यापार आणि कनिष्ठ नोकरी अशी म्हण होती. परंतु भारतातील शेती व्यवसाय आजच्या काळात अत्यंत नाजूक व संकटग्रस्त अवस्थेतून जात आहे. विदर्भ, मराठवाडा तसेच उत्तम महाराष्ट्रात दुष्काळ, नापिक व कर्जबाजारी झाल्याने पिचलेला शेतकरी आपले आयुष्य संपवत आहे.

### उद्दिष्टे

1. महाराष्ट्रातील शेतकऱ्यांच्या आत्महत्येची वस्तुस्थिती अभ्यासणे.
2. शेतकऱ्यांच्या आत्महत्याच्या कारणांचा अभ्यास करणे.
3. शेतकऱ्यांच्या आत्महत्या रोखण्यासाठी विविध उपाययोजना सुचवणे.

### संशोधन पद्धती


प्रस्तूत शोध निबंधामध्ये विश्लेषणात्मक संशोधन पद्धतीचा उपयोग केलेला असून शोध निबंधातील विवेचन दुय्यम सामग्रीवर अवलंबून आहे. यासाठी विविध ग्रंथ, पुस्तके, मासिके, अहवाल, व वृत्तपत्रे, वेबसाईड इत्यादींचा वापर केला आहे.

### महाराष्ट्रातील शेतकऱ्यांच्या आत्महत्येची वस्तुस्थिती

| वर्ष | महाराष्ट्र | मध्य प्रदेश | कर्नाटक |
|------|------------|-------------|---------|
| 2014 | 1991       | 826         | 122     |
| 015  | 3228       | 1290        | 1478    |

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## The Fourier transforms infrared (FTIR) spectroscopy study of $x(\text{CoMn}_{0.2}\text{Zn}_{0.2}\text{Fe}_{1.6}\text{O}_4) + (1-x) \text{BaTiO}_3$ Magnetolectric Composites

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**ABSTRACT:**

Magneto electric composites with composition  $x\text{CoMn}_{0.2}\text{Zn}_{0.2}\text{Fe}_{1.6}\text{O}_4 + (1-x) \text{BaTiO}_3$  were prepared by were prepared by standard double sintering ceramic method using composition  $x=0.0, 0.25, 0.50, 0.75, 1.00$ . Presence of two phases in the composites was confirmed using X-ray diffraction. The results of XRD pattern shows cubic spinel structure for ferrite phase and tetragonal perovskite structure for ferroelectric phase. The lattice constant(s) for Mn-Zn substituted ferrite and ferroelectric phase are in good agreement with the reported data .The Fourier transform infrared (FTIR) spectroscopy technique has been used for the structural characterization of composites. FTIR spectroscopy exploits the fact that molecules absorb specific frequencies that are characteristic of their structure.

**KEYWORDS:** Ferrite, ferroelectric composite, The Fourier transform infrared (FTIR) spectroscopy, magnetolectric composites.

**1. INTRODUCTION**

The magnetolectric (ME) effect is a coupled two-field effect in which an electric field (E) induces a magnetization and a magnetic field (H) induces an electric polarization [1, 2]. It is well known that this ME effect in the composites is a product property deriving from the coupling between the piezoelectric effect in the ferroelectric phase and the magnetostrictive effect in the ferromagnetic phase. Magnetolectric composites are used as sensors, isolators, phase shifters, modulators, wave-guides, transducers etc. Materials showing ME conversion can also be used as thin film wave-guides in integral optics and fiber communication technology [3].

In this paper, ME composites  $x\text{CoMn}_{0.2}\text{Zn}_{0.2}\text{Fe}_{1.6}\text{O}_4 + (1-x) \text{BaTiO}_3$  where  $x=0.0, 0.25, 0.50, 0.75, 1.00$  were synthesized by conventional mixed-oxide processing. The phase structure, microstructure characteristic of the ceramic composites was studied systemically.

**2. EXPERIMENTAL PROCEDURE**

**2.1. PREPARATION**

The  $(x\text{CoMn}_{0.2}\text{Zn}_{0.2}\text{Fe}_{1.6}\text{O}_4 + (1-x)\text{BaTiO}_3)$  where  $x=0.0, 0.25, 0.50, 0.75, 1.00$  composite materials were prepared by the standard ceramic method. The ferrite phase  $\text{CoMn}_{0.2}\text{Zn}_{0.2}\text{Fe}_{1.6}\text{O}_4$  was prepared by using  $\text{CO}, \text{MnO}_2, \text{ZnO}$  and  $\text{Fe}_2\text{O}_3$  in molar proportion as starting materials and their mixture was presintered at  $1100^\circ\text{C}$  for 10h. The polycrystalline  $\text{BaTiO}_3$  was prepared by using AR grade  $\text{BaCO}_3$  and  $\text{TiO}_2$  as starting materials in the molar proportions and presintered at  $1000^\circ\text{C}$  for 8h.

**2.2 PREPARATION OF ME COMPOSITES.**

ME composites were prepared by mixing ferrite and ferroelectric phases using formula  $(\text{CoMn}_{0.2}\text{Zn}_{0.2}\text{Fe}_{1.6}\text{O}_4) + (1-x) (\text{BaTiO}_3)$  where  $x=0.00, 0.25, 0.50, 0.75, 1.00$  respectively. The mixture of composite was thoroughly ground for 2-3 hr and pelletized using hydraulic press by applying suitable pressure of 6 ton/inch<sup>2</sup>. Polyvinyl alcohol in small amount was used as a binder to make the cylindrical pellets of approximately 10mm diameter 3mm thickness. The pellets of composites were sintered at high temperature of  $1150^\circ\text{C}$  for 10 hr in a programmable muffle furnace and finally cooled slowly to room temperature. The crystal structures of composites and their constituent phases were determined by XRD technique using Philips X-ray diffractometer (Model PW-3710) using  $\text{CuK}\alpha$  radiations ( $\lambda=1.5418\text{\AA}$ ). Infrared absorption spectroscopy is an important and non-destructive characterizing tool, which provides qualitative information regarding structural details of crystalline materials. A Fourier transformation is a mathematical operation, whence a infrared spectrum can be calculated. Identified materials of the FTIR library are necessary to analyze the FTIR spectral pattern[4]. The KBr pellets of samples were prepared by mixing (1.5-2.00) mg of samples, finely grounded, with 200 mg KBr. Fourier transform infrared(FTIR) spectroscopy(PerkinElmer spectrum 100) technique is used which is based on Michelson's interferometer. Infrared light is guided through an interferometer and then passed through the sample. A moving mirror inside the apparatus alters the distribution of infrared light that passes through the interferometer. The signal directly recorded, called an "interferogram", represents light output as a function of mirror position. The sample's spectrum is always compared to a reference. FTIR spectrum also supports the structural evolution of the samples, as observed from the XRD spectrum.

**3. RESULTS AND DISCUSSION**

INVESTIGATION OF CRYSTAL STRUCTURE AND D.C. ELECTRICAL RESISTIVITY OF  $\text{In}^{3+}$  SUBSTITUTED YTTRIUM IRON GARNETVidhate R. G.<sup>1</sup>, Kavade R. B.<sup>2</sup>, Bhandari J. M.<sup>3</sup>, Katke K. H.<sup>4</sup>, and Jadhav K. M.<sup>5</sup>Head<sup>1</sup> and Assistant Professor<sup>2</sup>, Anandrao Dhonde Alias Babaji Mahavidyalaya, Kada, Beed<sup>3</sup>Head Department of Physics, Bhagwan Mahavidyalaya, Ashti, Beed<sup>4</sup>Bhandari J.M.<sup>3</sup>, Head Dept. of Physics, Gandhi College Kada, Beed<sup>5</sup>Senior Prof. Department of physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

## ABSTRACT

$\text{In}^{3+}$  substituted yttrium iron garnet (YIG) samples, with a nominal composition of  $\text{Y}_3\text{In}_x\text{Fe}_{5-x}\text{O}_{12}$  with  $x = 0.0, 0.2$  and  $0.4$  were prepared by a solid-state reaction method. The samples were characterized by X-ray diffraction technique. The X-ray diffraction studies of compositions revealed the formation of single phase cubic structure with lattice constant ranging from 12.37 to 12.43 Å.

The FTIR spectra of typical samples are taken in the range of 500-4000 $\text{cm}^{-1}$ . IR spectra show typical absorption bands indicating the garnet nature of samples. The D.C. electrical resistivity  $\rho_{dc}$  was measured in the temperature range 300-725 K. The electrical measurements were carried out by means of two probe method; it is found that resistivity decreases with increase in temperature.

Keyword: Electrical study, Indium, IR Spectra, XRD, Yttrium iron garnet.

## INTRODUCTION

Mixed metal oxides with iron (III) oxides as their main component are known as ferrites. Historically ferrites represent an important category of materials, which are in great demands due to their numerous applications in many fields. The electrical and magnetic properties of ferrites are strongly dependent on their chemical composition and their method of preparation [8, 10]. It is important to optimize the electrical and magnetic properties of ferrites, for desired applications. Due to their interesting properties scientists, researchers and engineers are still interested in designing the various types of ferrites material substituted with different cations with different valencies and prepared by different techniques.

In the various types of ferrites rare earth garnet especially yttrium iron garnet (YIG) is of great importance for scientist and technologist because of their applications in microwave communication devices such as circulators, oscillators, gyrators and phase shifters because of its small ferromagnetic resonance line-width, high electrical resistivity and low dielectric loss in microwave regions in many fields [10]. Yttrium iron garnet (YIG) is microwave ferrite, which in polycrystalline form has specific characteristics. The magnetic and crystallographic properties of the magnetic iron garnet have been studied by many workers [1-5]. Substituted iron garnets have found extensive use in wide band non reciprocal microwave devices [11].

## EXPERIMENTAL

samples of  $\text{In}^{3+}$  substituted  $\text{Y}_3\text{In}_x\text{Fe}_{5-x}\text{O}_{12}$  garnets with  $x = 0.0, 0.2$  and  $0.4$  were prepared by well known double sintering ceramic method in which a molar ratio of analytical  $\text{Y}_2\text{O}_3$ ,  $\text{Fe}_2\text{O}_3$  and  $\text{In}_2\text{O}_3$  (all 99.99% pure AR grade chemicals, Mumbai) were mixed thoroughly in stoichiometric proportions and then ground to very fine powder by using agate mortar for about 3 hr. These mixtures in powder form were pre-sintered in a Indfur Programmable muffle furnace at 1200 °C for 24 hr and cooled to room temperature slowly at the rate of 2 °C/min. The samples were reground and re-fired at 1350 °C for 30 hr and slowly cooled to room temperature at the rate of 2 °C/min., and then reground for 1 hr. The fine powdered sample was pelletized under the pressure 5 ton/inch<sup>2</sup>.

The electrical measurements were carried out by means of two probe method. The samples in the form of discs were polished well to have smooth parallel surfaces, and then these surfaces were coated with silver paste as a contact material for the electrical measurements. The temperature was measured by using chromel-alumel thermocouple in contact with the surface of the samples. The d.c. electrical resistivity  $\rho_{dc}$  was measured in the temperature range 300-725 K.

## RESULT AND DISCUSSION

Mixed garnet ferrites system under investigation has been structurally investigated by X-ray diffraction technique. The typical XRD pattern shows the reflections namely (321), (400), (420), (422), (431), (521), (611), (444), (640), (642), (800), (842). No extra peaks other than cubic structure have been observed in the XRD pattern. The Bragg peaks are sharp and intense. The lattice parameters are calculated using XRD data and are



STRUCTURAL AND ELASTIC PROPERTIES OF CADMIUM SUBSTITUTED Ni-Cu FERRITES

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ABSTRACT

The samples of cadmium substituted Ni-Cu mixed ferrites having the composition  $Ni_{0.5}Cu_{0.5-x}Cd_xFe_2O_4$  ( $x = 0.0$  to  $0.4$  in the step of  $0.2$ ) have been synthesized by standard solid state reaction technique using AR grade oxides. The X-ray diffraction and Infrared spectroscopic analysis confirms the formation of single phase cubic spinel structure of ferrite phase. The lattice constant was found to increase with increase in cadmium content and was due to the large ionic radius of cadmium. The structural parameters such as lattice constant, X-ray density, cation distribution, ionic site radii, oxygen positional parameter, theoretical lattice constant, bond length, jump length of tetrahedral (A) site as well as octahedral [B] site, tetrahedral edge length, shared and unshared octahedral edge length was estimated. The estimated cation distribution of ferrite was verified by comparing the observed and theoretical lattice parameters. The elastic parameter of ferrites such as young's modulus, rigidity modulus and bulk modulus was estimated by using IR technique.

Keywords: Elastic properties, Structural Properties, X-ray diffraction.

1. INTRODUCTION

The mixed nickel copper ferrites are technologically important materials as it possess high saturation magnetization, high resistivity, high stability and low loss energy over a wide range of frequency [1, 2]. In fact, cadmium substituted Ni-Cu mixed ferrite are the subject of intensive investigations in the field of fundamental and applied research due to their wide applications in electronic industry. The physical properties of spinel ferrites depend on the type, amount of dopant and distribution of cations over the tetrahedral (A) and octahedral [B] sites [3, 4]. In electronic materials the elastic module are of much importance because they shows the nature of binding force in polycrystalline materials and also helps to understand the thermal properties of these materials.


2. EXPERIMENTAL

The ferrite with composition  $Ni_{0.5}Cu_{0.5-x}Cd_xFe_2O_4$  ( $x = 0.0, 0.2, 0.4$ ) were synthesized by standard double sintering ceramic method.[5,6,7] Grinding using agate mortar (4 h) was carried out for each sample. The samples were pre-sintered at 1293 K for 12 h. The sintered powder is again reground and sintered at 1353 K for 14 h. Then the powder of samples compressed into pellets of 10 mm diameter using a hydraulic press with pressure  $6 \text{ ton/inch}^2$  and sintered at 1273K for 12 h. The samples were furnace cooled to room temperature. The prepared samples were characterized by X-ray powder diffractometer in the  $2\theta$  range  $20^\circ-80^\circ$  at room temperature to confirm single phase spinel structure. The infrared spectra of a prepared sample were recorded at room temperature within the range  $200 \text{ cm}^{-1}$  to  $800 \text{ cm}^{-1}$  on the infrared spectrometer (Model 783, Perkin-Elmer)

3. RESULTS AND DISCUSSION

The peaks appeared in the XRD pattern (fig.1) of the ferrites are identified. However, the non appearance of extra peaks reveals the formation of single phase cubic spinel structure of ferrite. The increase of observed lattice parameter 'a' and X-ray density 'ρ' with increase of the cadmium content was due to the difference in ionic radii and atomic weight of the component ions in the ferrite system [8]. The distribution of cations in the tetrahedral (A) and octahedral [B] sites can be expressed as [9],  $(Cd_xCu_yFe_{1-x-y})^A[Ni_{0.5}Cu_{0.5-x-y}Fe_{1+x+y}]^B O_4 \cdot 2$  The theoretical lattice parameter of ferrite samples estimated using the relation [10] were listed in table 1. The good agreement between experimentally estimated and theoretical lattice parameters confirms the assumed cation distribution of the ferrites.

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## Optical Properties Of L-Threonine Zinc Acetate Nlo Crystal

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### ABSTRACT:

The present work focused on the linear optical properties of the L-Threonine Zinc Acetate (LTZA) crystal. The transmittance data has been used to determine the optical band gap of grown crystal. The optical band gap was found to be 5.1 eV. Theoretical calculations were carried out to evaluate the linear optical constants like refractive index, reflectance, extinction coefficient and optical conductivity.

**Keywords:** Growth from solution, Optical properties, L-Threonine, UV-Visible, Zinc Acetate.

### 1. Introduction

The fast data transfer over a long distance is one of the most important applications of NLO materials. In recent years, photorefractive materials and NLO materials have been developed for the applications such as optical frequency conversion, electro-optical modulation, dynamic holography, optical writing and optical guiding of laser beam. Researchers are always in the search of new NLO materials for various applications.

The effect of amino acids on the growth and properties of different material crystals have been reported for NLO applications [1-5]. The aliphatic amino acids valine and leucine contain two prochiral methyl groups, while threonine has two chiral centres. By using L-threonine as dopant, enhancement in nonlinear and ferroelectric properties was reported [6]. Synthesis, growth and different characterizations of L-Threonine Zinc Acetate (LTZA) NLO single crystal was reported [7, 8]. However there is no report available in the literature on linear optical properties of LTZA crystal. In the present work the optical properties were examined to explore the different optical applications.

### 2. Synthesis

The starting material L-threonine and zinc acetate dihydrate were dissolved in molar ratio 1:1 in deionized water. The homogeneity of the solution was obtained by the constant stirring of six hours. The purity of the salts was obtained by subjecting the homogenous solution to repeated crystallisation. After filtration the solution is kept for evaporation at non disturbed place, the good quality seed crystals were harvested in 45 days.

### 3. Result and Discussion

#### 3.1 UV-Visible Study

The LTZA seed crystal of 2 mm thickness was subjected to UV-visible study using the Shimadzu UV-2450 spectrophotometer to assess the optical transparency within the range of 200 to 900 nm and transmittance spectrum is shown in Fig. 1.

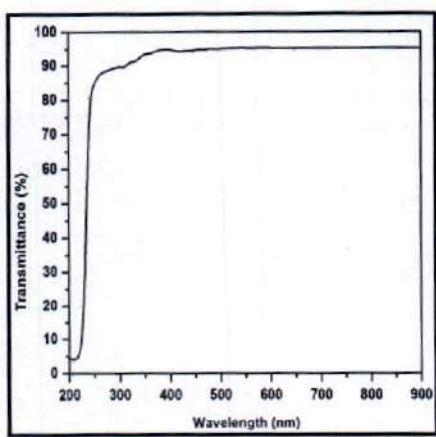


Fig.1. UV Transmittance Spectrum

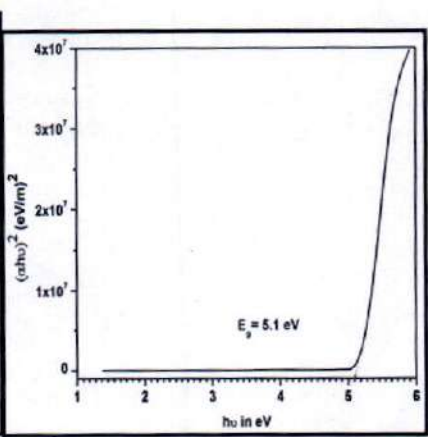


Fig.2. (ahv)<sup>2</sup> vs. hv (eV)

**STUDIES ON LINEAR OPTICAL PROPERTIES OF ADP-KDP MIXED CRYSTAL FOR ELECTRO-OPTIC APPLICATIONS**

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**ABSTRACT**

*In present work ADP-KDP mixed crystal (90:10) has been grown by slow evaporation solution growth technique. The UV-visible study confirms the wide optical transmittance window for electro-optic applications. The transmittance data has been used to evaluate the optical band gap of grown crystal. The optical band gap was found to be 4.95 eV. Theoretical calculations were carried out to determine the linear optical constants like refractive index, reflectance, extinction coefficient, optical conductivity, electrical conductivity, real and imaginary part of dielectric constant.*

*Keywords: ADP, Growth from solution, KDP, Optical properties, UV-Visible.*

**1. INTRODUCTION**

KDP (Potassium dihydrogen phosphate) is well known hydrogen bonded ferroelectric and ADP (Ammonium dihydrogen phosphate) is also known for its antiferroelectric behavior. The mixing of ADP and KDP leads to significant change in the properties of crystal [1]. ADP and KDP are non linear optical (NLO) crystals with lower impurity which has been used as optical modulator, frequency converter, optical switching, optical data storage, telecommunication accessories [2-4]. Mixing of ADP and KDP is being carried out for many years by several researchers [1, 5]. However there is no report available in the literature on linear optical properties of ADP-KDP mixed crystal. In the present work we have grown ADP and KDP (AKDP) mixed crystal in the ratio (90:10) by slow evaporation solution growth method, characterized by UV Visible spectral analysis and its detailed optical parameters were reported for electro-optic applications.

**2. EXPERIMENTAL PROCEDURE**

The AR grade ADP and KDP salt was dissolved separately in deionized water with constant stirring to achieve supersaturated solutions. The supersaturated solutions of ADP and KDP was taken in the ratio 90:10 and allowed to stir at constant speed to achieve homogeneity throughout the volume. The prepared solution was filtered by Whatman filter paper and kept for slow evaporation in a constant temperature bath of accuracy  $\pm 0.01$  °C at temperature 45°C. The transparent seed crystals were harvested within 10-12 days.

**3. RESULT AND DISCUSSION**

**3.1 UV-Visible Study**

The AKDP grown seed crystal of 2 mm thickness was subjected to UV-visible study using the Shimadzu UV-2450 spectrophotometer to assess the optical transparency within the range of 200 to 900 nm and recorded transmittance spectrum is shown in Fig.1. The grown AKDP crystal exhibits high transmittance above 75% in entire visible region. The lower cutoff wavelength is found to be 220 nm indicating the wide optical transmission window favorable for second harmonic generation [6].

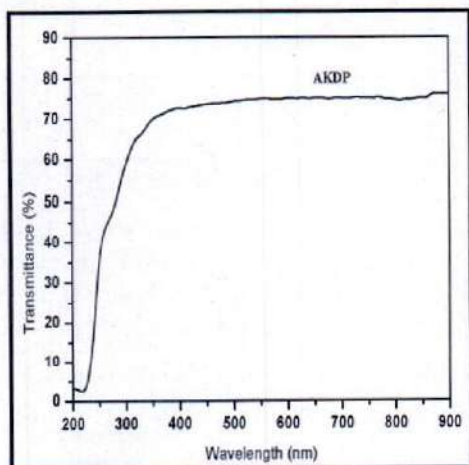


Fig-1: UV Transmittance Spectrum

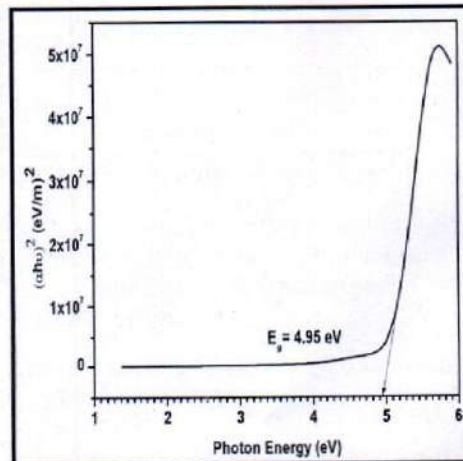



Fig-2:  $(\alpha h\nu)^2$  vs.  $h\nu$  (eV)

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## Study Of Bis Thiourea Zinc Sulphate Doped Potassium Dihydrogen Phosphate Crystal

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### Abstract

Bis thiourea zinc sulphate doped KDP crystals were grown by slow evaporation method at room temperature. The FT-IR spectral analysis is used to determine different functional groups. The UV-visible study confirms the wide optical transmittance for doped crystal imperative for optoelectronics applications. The transmittance data has been used to evaluate the optical band gap, refractive index and reflectance. The optical band gap of Bis thiourea zinc sulphate doped KDP crystal is found to be 4.06 eV.

**Keywords:** Slow evaporation method; Non linear optical; FT-IR; Refractive index; Reflectance.

### 1. Introduction

In the past decades demand of the high non linear optical (NLO) crystal of the organic, inorganic and semi-organic materials for their utilization in the field of photonics, optical data processing, optical switching devices and laser frequency conversion devices [1]. The organometallic crystals have attracted due to superior properties in view of optical, dielectric and mechanical [2]. The large dipole moments, ability to form metal ligands through hydrogen bonding are effectively works to improve optical properties and acts as matrix modifier. The transparency of the crystal is important factor to enhance the optical properties achieved by the co-ordination of thiourea with inorganic materials. The well known NLO thiourea based organometallic crystals reported in literature are zinc thiourea sulphate (ZTS), potassium thiourea bromide (PTB), bis-thiourea cadmium acetate (BTCA), copper thiourea chloride (CTC), bis-thiourea zinc acetate (BTZA), zinc thiourea chloride (ZTC), bis-thiourea cadmium chloride (BTCC) and may more [3-4]. The Potassium dihydrogen phosphate (KDP) is fundamental material in the field of nonlinear optical systems. The different doping made into KDP crystal to improve different properties and also various techniques are introduced to grow NLO crystals [5].


In literature, the attempts were made to grow thiourea metal complex mixed KDP crystals, P. Kumaresan et al have reported the effect of copper thiourea complex on [6], we have also grown Thiourea Nickel Nitrate (TNN) and Zinc Thiourea Chloride (ZTC) doped in KDP for its effective applications [7,8]. And, hence in the present investigation; we have grown Bis-Thiourea Zinc Sulphate doped KDP crystal and characterized for structural and optical properties.

### 2. Experimental procedure

Thiourea and zinc sulphate were dissolved in the deionized water in the molar ratio 2:1 and solution is well stirred. After six hours the prepared mixture was filtered by no.1 whatman filter paper and kept for evaporation. The purity of Bis thiourea zinc sulphate (BTZS) salt was achieved by successive recrystallization method. The high purity KDP salt was dissolved in double distilled deionized water until the supersaturation was achieved. The measured quantity of 0.1 mole % BTZS was slowly added to the supersaturated solution of KDP. The solution was allowed to agitate for 6 hrs on magnetic stirrer to acquire the homogeneous doping. This doped solution was filtered and kept for slow evaporation at room temperature. The well phased, good quality transparent seeds were harvested within 10-12 days. The photograph of 0.1 mole% BTZS doped KDP crystal is shown in Fig. 1.

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## Thiourea Metal Complex crystal for AR coating in solar thermal devices

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### Abstract

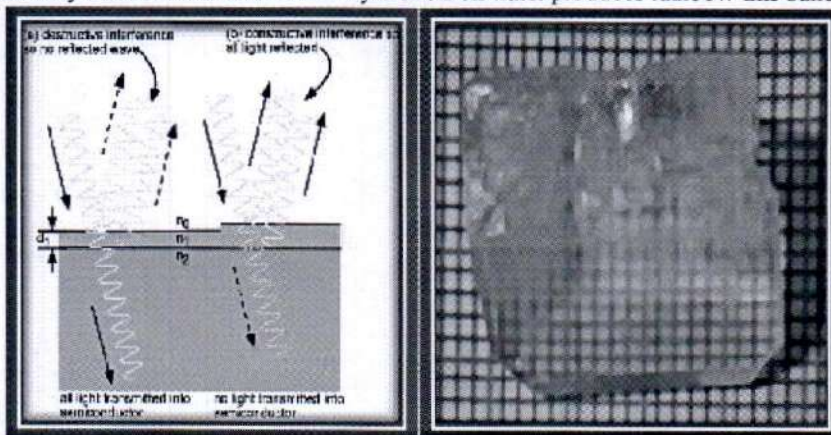
The thiourea metal complex (TMC) NLO crystals with index of refraction near 1 are used for antireflection coating on solar cells to enhance the efficiency by reducing the reflection. The said crystals are also useful for coatings on camera lenses and on some components used for optical experiments with lasers. Present communication concentrates on the synthesis, crystal growth and application of Thiourea zinc sulphate (ZTS) crystal doped with 1 M % Ammonium dihydrogen phosphate (ADP) crystal for antireflection coating. Superior quality non-linear optical crystals of ZTS + ADP were grown from aqueous solution by slow evaporation method in a constant temperature bath at 35°C. UV-visible spectral analysis ascertained in the range of 200–900 nm affirmed the 80% transmittance. Linear optical property refractive index determined by using transmittance data, required for antireflection coating.

**Keywords:** Crystal growth, refractive index, S-R method

### 1. Introduction

Thiourea metal complex (TMC) crystals have been very rapidly developed due to their appealing features such as large optical transparency, high nonlinear response, huge laser damage threshold, high thermal stability and improved mechanical properties. These qualities advocate TMC crystals suitable for applications in electro-optic modulation, optical data storage devices, high-tech NLO and telecommunication devices [1-4]. Zinc Thiourea sulphate (ZTS) is a nonlinear optical material (NLO) which has combined property of high optical nonlinearity and chemical flexibility of organics along with physical ruggedness of inorganic. ZTS is a material with non-centrosymmetric orthorhombic crystal system. It exhibits a low angular sensitivity, high laser damage threshold, wide optical transparency, and exceptionally wide acceptance angle for second harmonic generation (SHG), SHG efficiency 1.2 times of KDP [5-12].

Approximately 4% incident light from uncoated glass substrate gets reflected at each interface, resulting in total transmission of only 92% of the incident light. The throughput Antireflection coating (AR) on each surface will increase the throughput of the system and minimizes the hazards caused by reflections traveling backwards through the system (ghost images). Anti-reflection coatings are more important for the systems containing many transmitting optical elements. Also, many low-light systems incorporate AR coated optics to allow for efficient use of light [13, 14]. Solar Cell anti-reflection coatings are same as those used on optical equipments such as camera lenses. Such coating has a thin layer of dielectric material, with a specially designed value of thickness. Hence the interference effects in the coating cause the reflection of wave from the top surface of anti-reflection coating which is to be out of phase with the wave reflected from the semiconductor surfaces. Obtained two out-of-phase reflected waves form destructive interference with one another, resulting in zero net reflected energy. In addition to anti-reflection coatings, interference effects are also commonly encountered when a thin layer of oil on water produces rainbow-like bands of color [15, 16].



**ENHANCEMENT IN OPTICAL PROPERTIES OF NICKEL THIOUREA NITRATE DOPING IN POTASSIUM DIHYDROGEN PHOSPHATE (KDP)**

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**ABSTRACT**

*In present investigation pure and Bis Thiourea Nickel Nitrate doped KDP crystals were grown by slow solution evaporation method at room temperature. The incorporation of Bis Thiourea Nickel Nitrate in KDP has been qualitatively analyzed by Fourier transform infrared analysis. The second harmonic generation (SHG) efficiency of doped KDP crystal was tested by Kurtz-Perry powder technique and was found to be 1.65 times that of KDP material. The optical transparency of the grown crystal was examined in the range of 200-900 nm using UV-visible studies. The transmittance data was used to determine the optical conductivity, refractive index and extinction coefficient of grown crystal for possible nonlinear optical (NLO) applications.*

*Keywords: 1 Slow evaporation method, 2 Nonlinear optical, 3 Optical studies, SHG efficiency.*

**1. INTRODUCTION**

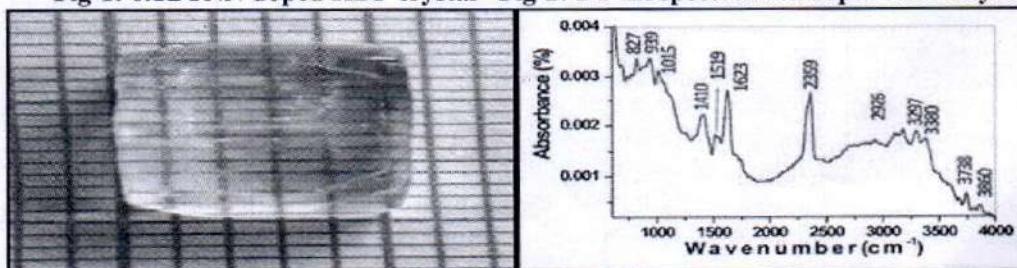
The Nonlinear optical (NLO) crystals have wide applications in the field of optical storage communications and optical computing system. Also, NLO materials exhibits excellent electro optical and non-linear optical properties, is used in several applications as the frequency conversion and electro-optical modulation [1-2]. The Potassium dihydrogen phosphate (KDP) is reference system for nonlinear optic device applications. The attempts have been made to uplift the properties of KDP crystal either by doping various impurities or by growing crystal using specific crystal growth technique [3-4]. Thiourea molecules play an important role in the growth of nonlinear optical crystals. The thiourea molecule is an interesting inorganic matrix modifier due to its large dipole moment and ability to form extensive network hydrogen bonds. The metal complexes have high optical nonlinearity excellent transmittance in UV Visible region, good thermal and mechanical stability, so attracted by many researchers [5-6].

In literature, there is least work on thiourea metal complex mixed KDP crystals, P. Kumaresan et al have reported the effect of copper thiourea complex on KDP in view of structural, optical and thermal behavior [7], hence in the present investigation; the attention is focused on the influence of thiourea metal complex, Thiourea Nickel Nitrate (TNN) on optical, spectral properties of KDP for its improved NLO applications.

**2. EXPERIMENTAL PROCEDURE**


Thiourea and Nickel Nitrate were dissolved in the deionized water in the molar ratio 2:1and solution is well stirred. After six hours the prepared mixture was filtered by no.1 whatman filter paper and kept for evaporation [8]. The purity of BTNN salt was achieved by successive recrystallization method. The high purity KDP salt was dissolved in double distilled deionized water until the supersaturation was achieved. The measured quantity of 0.1 mole% BTNN was slowly added to the supersaturated solution of KDP. The solution was allowed to agitate for 6 hrs on magnetic stirrer to acquire the homogeneous doping. This doped solution was filtered and kept for slow evaporation at room temperature. The well phased, good quality transparent seeds were harvested within 12-14 days. The photograph of 0.1 mole% BTNN doped KDP crystal of dimension 15×6×3 mm<sup>3</sup> is shown in Fig. 1.

**Fig-1: 0.1BTNN doped KDP crystal Fig-2: FT-IR spectrum of doped KDP crystal**



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## “Influence Of Cadmium substitution On Dielectric Behavior Of Mixed Ni-Cu Ferrites”

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### Abstract:

The samples of Cd<sup>2+</sup> ions substituted mixed nickel-copper ferrites having the generic formula Ni<sub>0.5</sub>Cu<sub>0.5-x</sub>Cd<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> (x = 0.0, 0.1, 0.3, 0.5) have been synthesized using AR grade oxides by standard solid state reaction method. The formation of mono phase cubic spinel structure of all the samples under investigation have been carried out using X-ray diffraction technique at room temperature. Using LCR-Q meter the dielectric constant (ε'), dielectric loss (ε''), dielectric loss tangent (tan δ) was measured as a function of frequency. The frequency dependence of dielectric parameters measurements was carried out within the range 100 Hz to 1 MHz. The values of dielectric parameters (ε', ε'' and tan δ) are much higher at lower frequencies but decreases with increase in frequency. At very high frequencies, its values become so small that it becomes independent of frequency. The decrease in dielectric parameters with increase of frequency may be due to the fact that beyond a certain frequency of the external electric field, the electronic exchange between ferrous and ferric ions cannot follow the alternating field. It is observed that dielectric constant (ε'), dielectric loss (ε'') and dielectric loss tangent (tan δ) appreciably increases with cadmium concentration x but decreases with increases in frequency.

**Keywords:** Mixed spinel ferrites, XRD, dielectric properties.

### 1. INTRODUCTION:

Ferrites are ferrimagnetic materials with good magnetic, dielectric properties and a large number of technological applications in satellite communication, memory device, computer, components, filter components, antenna rods, transformer core etc, because of their excellent electrical and magnetic properties [1]. The high electrical resistivity, low eddy current and dielectric losses, moderate saturation magnetization, easy and low cost of preparation, high Curie temperature and high permeability are the remarkable characteristics of a ferrite material which makes them useful in variety of applications. The properties of ferrite depends on magnetic interaction, cation distribution in the two sub lattice, method of preparation, preparative parameters, type and amount of dopant [2-4]. The dielectric properties of ferrites are dependent upon several factors including the method of preparation, chemical composition and grain structure. Among the spinel ferrites, nickel ferrite is having special attraction because of their useful properties such as inverse spinel nature, high saturation magnetization and Curie temperature, high electrical resistivity and chemically most stable. In the literature very few studies on cadmium substituted nickel-copper ferrite are reported. Here, we report our results on dielectric studies of Ni<sub>0.5</sub>Cu<sub>0.5-x</sub>Cd<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> for x = 0.0, 0.1, 0.3, 0.5 samples.

### 2. EXPERIMENTAL:

The polycrystalline samples of Ni<sub>0.5</sub>Cu<sub>0.5-x</sub>Cd<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> (x = 0.0, 0.1, 0.3, 0.5) were prepared using the standard ceramic technique [5]. A.R. grade oxides of corresponding ions (NiO, CuO, CdO and Fe<sub>2</sub>O<sub>3</sub>) were mixed in stoichiometric proportion. Grinding using agate mortar (4 h) was carried out for each sample. The samples were pre-sintered at 1293 K for 12 h. The sintered powder is again reground and sintered at 1353 K for 14 h. Then the powder of samples compressed into pellets of 10 mm diameter using a hydraulic press with pressure 6 ton/inch<sup>2</sup> and sintered at 1273K for 12 h. The samples were furnace cooled to room temperature. The prepared samples were characterized by X-ray powder diffractometer in the 2θ range 20° - 80° at room temperature to confirm single phase spinel structure. Dielectric constant (ε'), dielectric loss (ε'') and loss tangent (tan δ) as a function of frequency at room temperature were measured by LCR Meter. For dielectric measurements the pellets were coated with silver paste for good ohmic contact.

### 3. RESULTS AND DISCUSSION:

#### 3.1 XRD (X-Ray Diffraction):

The XRD patterns of mixed spinel ferrites system Ni<sub>0.5</sub>Cu<sub>0.5-x</sub>Cd<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> (x = 0.0, 0.1, 0.3, 0.5) under investigation shows that the samples have single phase cubic spinel structure. The figure 1 shows typical XRD pattern for x = 0.2. The Bragg's peaks are sharp and intense. Lattice constant calculated using XRD data increases with increase in cadmium content 'x'. The variation in the lattice constant with cadmium substitution can be explained on the basis of

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## Study of Structural and Magnetic Properties of Ni-Zn Ferrite Nanoparticle

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**Abstract:**

The present work deals with structural and magnetic properties of  $Ni_{0.37}Zn_{0.63}Fe_2O_4$  powder. The conventional ceramic method was used to synthesize present investigated sample. The powder sample was characterized by X-ray diffraction (XRD) technique to study its structural properties. The cubic spinel monophasic was revealed by XRD patterns. The structural parameters such as lattice constant, X-ray density as well as the bulk density and porosity were obtained from XRD data. The magnetic properties were investigated using pulse field hysteresis loop technique.

**Keywords:** Ni-Zn ferrite, Ceramic; XRD; M-H loop; Saturation.

**Introduction:**

Polycrystalline ferrite materials have a wide range of applications in the field of electronics, computer, and telecommunications. Ferrites are commercially important magnetic materials due to their combined structural, electrical, dielectric and magnetic properties. These properties of ferrite changes with respect to the type and amount of dopant, synthesis methods, sintering time and temperature, synthesis parameters and distribution of cations over the available sites [1-4]. In the recent years, researchers were attracted toward wet chemical methods like sol-gel, precursor method and others have gained tremendous importance as they produce particles in nano-size dimensions. The structural, morphological and magnetic properties of spinel ferrite are influenced strongly by the nano-sized particles. The properties exhibited by nanoparticles are different than that of bulk materials. However, the properties of the ferrite materials prepared by ceramic technique are exhibited good electrical and magnetic properties which are useful in many industrial and biomedical applications [5].

In the literature, nickel ferrite and substituted nickel ferrite have been studied by number of researchers [6-8]. The structural, magnetic, electric and dielectric properties of nickel - zinc ferrite have been studied to know the effect of observed modification.

**Experimental**

The  $Ni_{0.37}Zn_{0.63}Fe_2O_4$  powder sample was synthesized by using a conventional ceramic method using starting material NiO, ZnO and  $Fe_2O_3$  were of highly chemically pure A.R. grade (99.99 %). Stoichiometric proportions of these starting materials (Oxides) were accurately weighed and mixed thoroughly. Then first pre-sintering of powder was carried out at 1225 K for 12 hr. The sintered powder is again reground and sintered at 1375 K for 12 hr. The mixture was ground using agate mortar pestle to obtain a very fine homogeneous powder. The prepared  $Ni_{0.37}Zn_{0.63}Fe_2O_4$  powder sample were characterized by XRD to obtain structural properties. The magnetic properties were measured by pulse field hysteresis loop technique at room temperature.

**Results and Discussion**


**X-ray diffraction**

The room temperature X-ray diffraction (XRD) patterns of prepared  $Ni_{0.37}Zn_{0.63}Fe_2O_4$  spinel ferrite sample under investigation are represented in Fig. 1. The X-ray diffractions pattern showed intense, clear, and sharp peaks which are indexed using Bragg's law. The Miller indices (220), (311), (222), (400), (422), (511), (440) and (533) belong to spinel ferrite was observed in the X-ray diffraction pattern, in which (311) is the high-intensity plane.



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## “Study Of Xrd And Electrical Properties Of Indium ( $In^{3+}$ ) Substituted Yttrium Iron Garnet.”

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### Abstract

The yttrium iron garnet series having the general formula  $Y_3In_xFe_{5-x}O_{12}$  ( $x = 0.0$ , and  $0.2$ ) were synthesized by using double sintering solid state reaction method. The samples were characterized by X-ray diffraction technique (XRD). The X-ray diffraction studies of compositions revealed the formation of single phase cubic structure with lattice constant ranging from  $12.37$  to  $12.40 \text{ \AA}$  to  $x = 0.0$  and  $0.2$ . The dielectric properties were investigated using LCR-Q meter (hp HEWLETT) in the frequency range  $100 \text{ Hz}$  to  $1 \text{ MHz}$ . The dielectric constant ( $\epsilon'$ ), dielectric loss ( $\epsilon''$ ) and dielectric loss tangent ( $\tan \delta$ ) were measured as a function of frequency by using LCR-Q meter. The frequency dependence of dielectric measurements was carried out for both the samples. The D. C. electrical resistivity ( $\rho$ ) measurements for above given samples of  $Y_3In_xFe_{5-x}O_{12}$  garnet system were carried out in the temperature range of  $300-725 \text{ K}$ . From plots it is observed that, D.C. electrical resistivity decreases with increase in temperature.

**Keyword:** Garnet, YIG, XRD, dielectric and d. c. resistivity.

### Introduction:

Ferrite is an important category of materials, which are in great demands due to their numerous applications in many fields. The electrical and magnetic properties of ferrites are strongly dependent on their chemical composition and their method of preparation [1, 2]. It is important to optimize the electrical and magnetic properties of ferrites, for desired applications. Due to their interesting properties scientists, researchers and engineers are still interested in designing the various types of ferrites material substituted with different cations with different valences and prepared by different techniques.

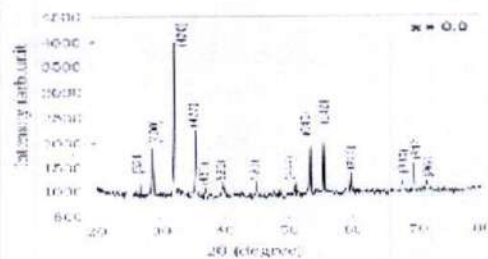
Among the various types of ferrites rare earth garnet especially yttrium iron garnet (YIG) is of great importance for scientist and technologist because of their applications in microwave communication devices such as circulators, gyrators and phase shifters because of its small ferromagnetic resonance line-width, high electrical resistivity and low dielectric loss in microwave regions in many fields [3]. Yttrium iron garnet (YIG) is microwave ferrite, which in polycrystalline form has specific characteristics. The magnetic and crystallographic properties of the magnetic iron garnet have been studied by many workers [4-7]. Substituted iron garnets have found extensive use in wide band non reciprocal microwave devices [8].

### Experimental:

The samples of  $In^{3+}$  substituted  $Y_3In_xFe_{5-x}O_{12}$  garnets with  $x = 0.0$  and  $0.2$  were prepared by well known double sintering ceramic method in which a molar ratio of analytical  $Y_2O_3$ ,  $Fe_2O_3$  and  $In_2O_3$  (all 99.99% pure AR grade chemicals, Mumbai) were mixed thoroughly in stoichiometric proportions and then ground to very fine powder by using agate mortar for about 3 hr. These mixtures in powder form were pre-sintered in a Indfur Programmable muffle furnace at  $1200^\circ\text{C}$  for 24 h and cooled to room temperature slowly at the rate of  $2^\circ\text{C}/\text{min}$ . The samples were reground and re-fired at  $1350^\circ\text{C}$  for 30 h and slowly cooled to room temperature at the rate of  $2^\circ\text{C}/\text{min}$ ., and then reground for 1 h. The fine powdered sample was pelletized under the pressure  $5 \text{ ton}/\text{inch}^2$ .

### Results and Discussion:

Mixed garnet ferrites system under investigation has been structurally investigated by X-ray diffraction technique. The XRD patterns for  $x = 0.0$  and  $0.2$  samples as shown in figure 1.



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## म.गांधीजींची ग्रामस्वराज्याची संकल्पना आणि सद्यस्थिती : एक चिंतनात्मक अध्ययन

प्रा.डॉ.चंद्रशेखर काशीनाथ तळेकर

एस.के.गांधी महाविद्यालय, कडा, ता.आष्टी, जि. बीड.

स्वयंपूर्ण, स्वावलंबी ग्राम ही संकल्पना प्रथमतः म.गांधीजींनी मांडली. प्रत्येक खेडे आत्मनिर्भर असावे असे त्यांचे ठाम मत होते. खेड्यांची रचना व्यवस्थाबद्ध असावी. अन्न व वस्त्राबाबत स्वयंपूर्णता, आर्थिक स्वयंपूर्णता, निसर्गरम्यता, पर्यावरणाचे संवर्धन, स्वच्छता, खेड्यात धर्मशाळा, शाळा, नाट्यगृहे, दवाखाना, स्वच्छ पाण्याची व्यवस्था, समाजमंदिर असावे. कृषीव्यवसाय प्रगत असावा. मुलांसाठी व गुरांसाठी सुविधा असाव्यात, अन्नधान्याचे एकदा उत्पादन घेतल्यानंतर उरलेल्या जमिनीवर नगदी पिके घ्यावी. मूलभूत शिक्षण सक्तीचे असावे. सर्व व्यवहार सहकारी तत्त्वानुसार व्हावेत, जाती व्यवस्था नष्ट व्हावी, गावाचा कारभार निवडून आलेल्या पाच सदस्यांच्या ग्रामपंचायतीद्वारे चालविला जावा. ग्राम पंचायतीला कायदे करण्याचे, त्यांची अंमलबजावणी करण्याचे, न्यायालयीन अधिकार असावेत, उत्पादन स्थानिक बाजारपेठेतच उपलब्ध व्हावेत. त्यांच्या ग्रामस्वराज्याच्या विचारांमध्ये त्यांनी ही मांडणी केली आहे.

अशाप्रकारचे आदर्श खेडे निर्माण करण्यावर भर देण्यात यावा असे त्यांचे मत होते. या दृष्टिकोनातून स्वातंत्र्यप्राप्तीनंतर ग्रामीण विकासाबाबतचे कार्य होणे गरजेचे होते. परंतु स्वातंत्र्यप्राप्तीनंतर मात्र शहरे झपाट्याने वाढली. गावे ओस पडत चालली आहेत. याचा विचार होणे गरजेचे आहे. या दृष्टिकोनातून सद्यस्थितीत गांधीजींच्या ग्रामस्वराज्याच्या विचारांची प्रासंगिकता स्पष्ट करण्याच्या उद्देशाने हा शोधनिबंध प्रस्तुत करण्यात आला आहे.

शोधनिबंधाचे उद्देश -

- ग्राम विकासाची सद्यस्थिती जाणून घेणे.
- गांधीजींची ग्राम स्वराज्याची संकल्पना स्पष्ट करणे.
- सद्यस्थितीत म.गांधीजींच्या ग्रामविकास विषयक विचारांची प्रासंगिकता स्पष्ट करणे.
- म.गांधीजींची ग्रामस्वराज्याची संकल्पना व ग्रामविकास विषयक विचार -

म.गांधीजींनी आदर्श ग्राम संकल्पना मांडली. त्यात त्यांनी ग्रामीण भागाचा त्यातील वास्तव्य करणाऱ्या लोकांच्या विकासाबाबत स्पष्ट आणि परखडपणे मत मांडले. त्यांच्या मते ग्रामीण भागातील समस्यांचा समूह नावनाट करणे गरजेचे आहे.

खेडेगावाची समस्यातून मुक्तता करणे व ग्रामजीवनात नवचैतन्य निर्माण करणे हे गांधीजींना ग्रामस्वराज्यात अपेक्षित होते. ग्राम स्वराज्यात लोकांच्या हिताचा विचार यात केला आहे. खेडेगावाच्या समग्र विकासाचा विचार मांडतांना अनेक गोष्टींबाबत तपशीलवार व क्रांतदर्शी विचार त्यांनी व्यक्त केले होते. त्यांच्या मते ग्रामीण अर्थव्यवस्था अशी असावी जेणे करून प्रत्येक

माणसाला अन्न, वस्त्र, निवारा या प्राथमिक गजा पूर्ण करता येतील. प्राथमिक गरजांची उत्पादन साधने सर्व सामान्य माणसाच्या हातात असावीत. हवा, पाणी असे सर्वांसाठी असते तशी उत्पादन साधने सर्वांसाठी आवश्यक आहेत. स्थानिक संसाधनांचा उपयोग करून खेडेगावाचा विकास करण्यात यावा असे गांधीजींना वाटत होते. आज खेडी बकाल झालेली आहेत. सततच्या अवर्षणामुळे शेतीमधून अपेक्षित उत्पन्न मिळत नाही. आम्हाला खऱ्या अर्थाने ग्रामीण विकास करावयाचा असेल तर एखाद्याला आपले संपूर्ण आयुष्य वेचावे लागेल. खरे प्रजातंत्र आणि ग्रामीण जीवन यांच्याबद्दल प्रेम असणारा कोणीही एका गावी जाऊन तेथे स्थायिक होऊ शकतो व गावालाच सर्वस्व मानून तो या विकासकामात मग्न राहू शकतो तो गावात जाताच गावचा भंगी, चौकीदार, सफाई कामगार, वैश्य आणि शिक्षक बनेल. खेड्यासाठी मन लावून काम करेल व त्याचा परिणाम गावावर व गावकऱ्यांवरच निश्चितच चांगला झालेला दिसून येईल. गांधीजी यंत्र विरोधी नव्हते फक्त त्याचा वापर मर्यादित असावा असे त्यांचे मत होते. माणसांना बेरोजगार बनविणाऱ्या यंत्राला गांधीजींचा विरोध होता. यंत्र जर माणसांच्या हिताचे असेल तर गांधीजींनी त्याचे स्वागत केले आहे. दुःखी जनतेच्या प्रेमापोटी शोधलेले यंत्र गांधीजींना हवे होते. खादी तयार करण्यासाठी लागणाऱ्या चरख्याचे आधुनिकीकरण करणाऱ्याला गांधीजींनी पारितोषिक देण्याचे जाहीर केले होते. माणसांना कामात मदत करतील अशी यंत्रे गांधीजींना हवी होती.

या दृष्टिकोनातून त्यांनी ग्रामीण भागात लघु उद्योग, कुटीरोद्योगास चालना देण्याचे धोरण अवलंबविण्यास सुचविले.

स्वदेशीच्या स्वीकाराचा आग्रह - म.गांधीजींनी जाणीवपूर्वक स्वदेशीच्या स्वीकाराचा आग्रह धरला. त्यांच्या मते स्वदेशीच्या स्वीकारामुळे एक आदर्श समाजव्यवस्था प्रस्थापित होऊ शकते. स्वदेशीची व्याख्या गांधीजींनी केलेली आहे. व्यापक अर्थाने विचार केल्यास ही व्याख्या जीवनाच्या सर्व अंगाना लागू पडणारी आहे. आपण आर्थिक आणि औद्योगिक क्षेत्रात स्वदेशीच्या मंत्रापासून दूर गेल्यानेच या देशात दारिद्र्य आणि गरिबी निर्माण झाली आहे. जीवनाच्या कोणत्याही क्षेत्रात सरकारने हस्तक्षेप करू नये, असे गांधीजींचे मत होते. आदर्श समाजव्यवस्थेपर्यंत पोहचण्यासाठी सतत प्रयत्नांची नितांत आवश्यकता आहे. थोडक्यात स्वदेशीची संकल्पना ही ग्रामस्वराज्याशी सुसंगत ठरणारी आहे. त्याचप्रमाणे सत्य, अहिंसा तत्त्वाची ही संकल्पना सुसंगत ठरणारी आहे. स्वदेशी म्हणजे संपत्तीचे समान वाटप होय. तसेच स्वदेशीमुळे शेतीला पुरक धंदा मिळतो आणि गरिबीचा प्रश्न सोडविण्यास मदत होते. म्हणजेच सर्वच प्रश्न सोडविणारी एक कामधेनू आहे असे गांधीजींनी स्वदेशी संकल्पनेतून विचार व्यक्त केला.

## To Study the effect of fungi on seed germination of Brinjal by using *Trichoderma* species.

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**ABSTRACT:** Present study was aimed to determine the fungi on germination of seed of Brinjal and their bio control by using Antagonistic activity of *Trichoderma* species. The efficiency of Bio-control means in controlling seed borne fungal diseases by using one *Trichoderma* species. Three different hybrid varieties of Brinjal and one wild varieties of Brinjal sown in pot expt. In Botany Garden. The seed were purchased in various company i.e Ankur, Panchganga, Arnav and Wild variety. The seed Germination in Ankur is 70% Panchganga 80% germination and Arnav 90% germination were seen as compare to wild variety.

**Key Words:**

### INTRODUCTION :

Egg - plant (*Solanum melogena*) is an important of the popular vegetable crop worldwide. It is affected by several diseases, which do not control the plants to grow and yield to the best of genetic potential. Various disease management methods have been implemented to combat and eradicate pathogenic fungi. These include cultural, regulatory, physical, chemical and biological methods. In that situation Bio- control offers a good choice to grows to control the disease avoid the pollution Biological control of plant disease is suggested as an alternative to chemical control (Cook, 1977) and is considered as a cost effective and an environmental ecofriendly techniques. Humas an organic rich soil of valley is flavored to flourish the bioagents easily can control the diseases. Infact domestic antagonistic are most virulent strains to the pathogens (Dohroo, 2001) because of their persistent capability under soil and local climate conditions. Some fungi, bacteria and actinomycetes have been identified and used as antagonistic microbes against these pathogens including members of genus pythium (Rakesh kumar etal 2010). The most commonly using biological control agents include three fungi. *Gliocladium virens* for the control of seedling diseases of ornamental and bedding plants, *Trichoderma harzianum* for the control of several plant pathogenic fungi and *T. polysporum* for the control of wood decay and germination of seeds (Khare and singh, 2010)

### MATERIAL AND METHOD :

The practical work is done in the laboratory as well as in pot culture in botanic garden three hybrid varieties of seed and one wild varieties taken for the study of seed borne fungi on seed germination of Brinjal, Ankur, Panchganga and Arnav and wild variety of each of 100 seeds were sown in pot. The seed are treated with *Trichoderma* Species. The germination percentage of seed Panchganga is more than that of others. The seed health test is done by standard method (ISTA, 2001). The seed borne fungal pathogen associated with seeds was observed by steribinocular microscope by the key of Mathur and Kongsdal (1994). BAU - Biofungicide (*Trichoderma* based preparation Hossain 2011) was collected from diseases resistance laboratory.

The germination percentage of hybrid varieties is more than that of wild variety by using the *Trichoderma spp* to control the pathogen of diseases. The height of stem, length of leaf treated plants is large than of control plants. Thus it is reported that least but similar prevalence of the fungi was recorded in the varieties tested.

### RESULT AND DISCUSSION :

The plant length improved with the increased in the dose of fungus bio control agents such as *Trichoderma viride* and *Trichoderma harzianum*. The plant height was observed in pot NO 1 with 2 gm inoculums of bio control agents *Trichoderma viride* and *Trichoderma harzianum*. It was followed by plants treated with 2.0 gm 1.5gm and 1.0 gm of inoculum as compared to untreated which shows lowest plant growth. The decrease in infection may also be due to release of toxic compounds and substances from the fungal agents which are inhibit to pathogenic fungi. Bhat, etal (2003), reported that bio control agent

## ANTAGONISTIC POTENTIAL OF *TRICHODERMA* SP. AGAINST FUNGAL PATHOGENS OF PULSES

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**Key words** : Antagonistic activity, *Trichoderma* sp., Biological control, Postharvest Pathogens.

Biological control of plant pathogens by micro-organisms has been considered as more natural and eco-friendly alternative to the use of chemicals. (Baker and Paulitz, 1996). Some of the species of *Trichoderma* have been found to be useful in the control of phyto-pathogens (Benitez et al. 2004; Soyong et al. 2005). *Trichoderma* spp. are most common fungal biological control agents. Several Fungal cell wall degrading enzymes, especially chitinase and glucanase play an important role in antagonistic action of *Trichoderma* against fungal plant pathogens (Kucuk and Kivanc, 2008). Attempts have been made during present investigation to assess antagonistic properties of *Trichoderma* sp.

The seed samples were collected following Neergaard (1977) from either field or market. Seed born fungi were isolated by agar plate method (ISTA, 1966; DeTempe, 1970; Agrawal, 1981).

Antagonism of *Trichoderma viride* on several post-harvest pathogens was determined by duel culture method (Raju et al., 2000). The inhibition in the growth of pathogen was calculated as :  $100 \times [C T] / C$ , where C : growth of *Trichoderma viride*, and T: growth of pathogen (Edington, et al, 1971).

The results obtained have been presented in Table 1. *Trichoderma viride* showed highest inhibition in the growth of *Aspergillus terreus*, followed by *Fusarium oxysporum*, *Pythium* sp., *Alternaria tenuissima*, *Aspergillus fumigates*, *F.*

*oxysporum* f. sp. *udum*, *Curvularia* sp., *Drechslera* sp., *F. oxysporum* f. sp. *cicero*, *F. Roseum* and *Macrophomina phaseolina*.

### References:

- Agarwal, V. K. (1981). G.B.Pant University of Agri and Tech. Patnagar (Nainital) Uttar Pradesh Res. Bull 108:85.
- Baker, R. and Paulitz, T. C. (1996). Theoretical basis for microbial interactions leading to biological control of soil borne plant pathogens In: "Principles and Practice of Managing Soil borne Plant Pathogens". Hall, R. (Ed.). The American Phytopathology Soc. St. Paul, MN. Pp. 50-79.
- Benitez T., Rincon, A. M., Limon M. C. and Codon A. C. (2004). *International Microbiology* 7 : 249.
- Edington L. V., Khew K. L., Barron G. (1971). *Phytopathology*, 61: 42.
- International Seed Testing Association. (1966). *Seed Sci. Technol.* 4: 3.
- Kucuk, C. and Kivanc, M. (2008). *J. Agri. Technol.* 4: 49.
- Raju, Rama Bhadra, M. and Krishna Murthy, K. V. M. (2000). *Indian J. Plant Prot.* 28: 197
- Soyong K. Srinon W., Ratanacherdchai K., Kanokmedhakul S., Kanokmedhakul K., (2005). *J. Agric. Technol.*, 1 : 33
- Tempo, J. (1970). *Proc. Inst. Seed Test. Assoc.*, 35: 250.

## ANTIFUNGAL ACTIVITY OF SOME LEAF EXTRACTS AGAINST *STEMPHYLIUM* BLIGHT AND PURPLE BLOTCH OF GARLIC (*ALLIUM SATIVUM* L.)

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### ABSTRACT

Plant extracts were evaluated for management of Purple blotch and *Stemphylium* blight of garlic. Extracts of *Azadirachta indica*, *Datura stramonium*, *Moringa oleifera*, *Annona squamosa* and *Ocimum sanctum* leaves were tested against *Alternaria porri* and *Stemphylium vesicarium*. *Azadirachta indica* showed maximum inhibition against *Alternaria porri* (71.21%) and *Stemphylium vesicarium* (70.06%) followed by *Ocimum sanctum* (68.23 % against *Alternaria porri* and 56.12 % against *Stemphylium vesicarium*

**Keywords:** Garlic, Pathogenic fungi, leaf extract.

### Introduction

Number of fungal pathogens attack garlic plant and cause diseases, among which *Stemphylium* and *Alternaria* leaf blight are major foliar disease. *Stemphylium vesicarium* (Wallr. E Sommons.), and *Alternaria porri* causes *Stemphylium* blight and Purple blotch respectively.

*Stemphylium* blight was first recorded on garlic in India by Rao and Pavgi in (1975). The incidence of *Stemphylium* blight is severe in the winter/summer than in rainy season (Gupta *et al.*, 1994), and sometimes it may cause 100 per cent yield losses (Singh *et al.*, 1992). On the other hand, Bisht and Agarwal (1993) reported susceptibility of purple blotch caused by *Alternaria porri* in garlic.

Extracts of many plants show antifungal properties against plant pathogenic fungi (Cowan, 1999; Buwa *et al.*; 2006; Varma and Dubey, 1999). Present study was undertaken to evaluate antifungal activity of *Azadirachta indica*, *Datura stramonium*, *Moringa oleifera*, *Annona squamosa* and *Ocimum sanctum* against the pathogenic fungi, *Stemphylium vesicarium* and *Alternaria porri*.

### Material and Methods

Disease infected leaves were brought into the laboratory, cut into small pieces, surface sterilized with 0.1% mercuric chloride for 30 seconds and then washed again with sterilized distilled water, thrice. The pieces were transferred on solid potato dextrose agar medium (PDA) in Petri-plate with the help of sterile forceps. The pathogen inoculated plates were kept at  $27 \pm 2^\circ\text{C}$  till profuse fungal growth. Pathogens were identified and isolated as *Alternaria porri* and *Stemphylium vesicarium* and maintained on PDA slants for further study.

Fresh leaves (50 gm) of *Azadirachta indica*, *Datura stramonium*, *Moringa oleifera*, *Annona squamosa* and *Ocimum sanctum* was macerated in grinder with 50 ml sterile distilled water for 10 min. The macerate was first filtered through double-layered muslin cloth, and then centrifuged at 4000 g for 30 min. The supernatant was filtered through Whatman filter paper and sterilized at  $120^\circ\text{C}$  for 30 min. The extract was preserved in a brown bottle at  $5^\circ\text{C}$  until further use (Satish *et al.*, 1999), which served as 100 % concentration of crude leaf extract.

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Ajanta Prakashan



## Mrinal Sen the Pioneer of the Middle Class Psyche

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Mrinal Sen, Indian filmmaker who used a range of aesthetic style to explore the social realities of his homeland. Middle class morality is examined in three of Sen's most famous films. *Ek din pratidin*, (And Quiet Rolls the Dawn) which portrays a family in despair over a missing daughter, *Ek din Achanak* (Suddenly, One day), which portrays a professor goes missing and never returns back and *Kharij* (The Case is closed, 1982), concerning a family whose son has died from carbon monoxide poisoning in their home. His interest in films started when he stumbled upon a book on film aesthetics. Mrinal Sen became a part of the milieu he had created in his films. He moved with the crowd, but was, perhaps, a lonely traveller in his journey towards discovering the meaning and potency of cinema.

**Key Words:** Middle class, morality, film, social realities.

Mrinal Sen was born on May 14, 1923, in the town of Faridpur, now in Bangladesh. After completing his high school there, he left home to Calcutta for studying physics. Mrinal Sen earned his reputation as one of India's leading alternative film devotees decades ago. He continued to make cinema which is hailed as sensitive and thought provoking, winning kudos nationally and internationally whenever serious cinema is discussed and shown. Judged by national and international acclaim, Mrinal Sen would easily rank among the leading film-makers of India. His first film was released in 1955 and the last in 2002, with his creativity peaking in the 1960s and early 1980s. He made 28 feature films, including one for children, to his credit, of which 24 are in Bengali, one each in Odia (*Matira Manisha*) and Telugu (*Oka Oori Katha*) and three in Hindi (*Bhuvan Shome*, *Ek Adhuri Kahani*, *Mrigaya*, *Genesis* and *Ek Din Pratidin*), a 13-episode Hindi teleserial (*Kabhi Door Kabhi Paas*), and four documentaries. His creative output has few parallels. His national recognition—Dadasaheb Phalke Award, Padma Bhushan, nominated membership of Rajya Sabha, Honorary DLitt by four universities, four national awards for best feature film, four national awards for best direction, three for best alternative film in Bengali, and other awards can only be matched by his recognition at the

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# BIOINFOLET

PLATE - 1

Some traditional Genotypes of Sorghum



Sahu sorghum

Shankh sorghum



Pala sorghum

Dahi sorghum

PLATE - 2

Some traditional Genotypes of Sorghum



Maha sorghum

Shankh sorghum



Pandi sorghum

Pandi sorghum

**UGC-CARE APPROVED JOURNAL, INDEXED IN WEB OF SCIENCE (WOS) SCIENCE CITATION INDEX EXPANDED.**



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## FUNGAL PATHOGENS ON ONION (*ALLIUM CEPA* L.) AND GARLIC (*ALLIUM SATIVUM* L.) BULBS AT KADA

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### ABSTRACT

Fungi were isolated from infected samples of onion and garlic bulbs and identified. Those included *Aspergillus niger*, *A. flavus*, *Alternaria porri*, *Fusarium oxysporium*, *Botrytis alli*, *Penicillium sp.*, *Macrophomina phaseolina*, *Cladosporium alli*, *Rhizopus stolonifer* and *Chaetomium sp.* All of them were pathogenic. *Trichoderma sp.* was observed to as microbial agent against the pathogens of onion and garlic.

**Key words :** *Trichoderma sp.*, bio-control agent, onion, garlic, pathogens.

### Introduction

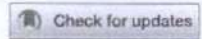
Onion (*Allium cepa* L.) and Garlic (*Allium sativum* L.) are affected by number of fungal pathogens in fields as well as during storages (FAO, 2012) . Present study was undertaken on isolation and identification of pathogenic fungi associated with onion and garlic. Attempts were also made to control these pathogenic fungi using *Trichoderma* as bio-control agent.

### Material and Methods

Infected leaves and bulbs of onion and garlic were brought into the laboratory and cut into small pieces. Those were then surface sterilized with 0.1% mercuric chloride for 30 seconds, washed with sterilized distilled water and aseptically transferred onto Potato dextrose agar medium (PDA). The plates were then kept at 27 °C. pathogens such as *Aspergillus niger*, *A. flavus*, *Alternaria porri*,

*Fusarium oxysporium*, *Botrytis alli*, *Penicillium sp.*, *Macrophomina phaseolina*, *Cladosporium alli*, *Rhizopus stolonifer* and *Chaetomium sp.* were identified and isolated. The isolated pathogens were maintained on PDA slants for further study.

Biocontrol efficiency of *Trichoderma viride* and *T. harzianum*. on the pathogens was studied by duel culture technique (Rama et al., 2000). On potato dextrose agar medium seven days old culture of pathogen and *Trichoderma viride* as well as *T. harzianum* were placed simultaneously on the periphery of petridish. The petridishes containing pathogen alone served as control. All plates were inoculated at room temperature and measurements of colony diameter were taken after six days. The per cent inhibition in the growth of pathogen, in presence of *Trichoderma viride* and *T. harzianum* was calculated by using the formula  $[(C-T)/(C)] \times (100)$ , where C : growth in control, and T: growth in treatment (Edington et al., 1971).



# Crystal Growth, Spectral, Optical and Thermal Studies of Thiourea Ammonium Acetate Doped Potassium Dihydrogen Phosphate Crystal for NLO Applications

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### ABSTRACT

The non-linear optical single crystal of thiourea ammonium acetate doped potassium dihydrogen phosphate was grown by slow evaporation solution technique of size  $19 \times 11 \times 4 \text{ mm}^3$ . The crystallographic unit cell parameters of grown crystal were determined by single crystal X-ray diffraction study. The optical study revealed that the doped KDP crystal has high transmittance, low cut off wavelength and high optical band gap. The enhanced second harmonic generation efficiency of doped KDP crystal was determined by employing Kurtz-Perry powder technique. The third order non-linear absorption coefficient ( $\beta$ ), non-linear refractive index ( $n_2$ ) and susceptibility [ $\chi^{(3)}$ ] were calculated using Z-scan technique. The laser damage threshold of grown crystal has been determined. The thermal properties of the grown crystal were carried out by thermogravimetric and differential thermal analysis.

### ARTICLE HISTORY

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### KEYWORDS

Crystal growth; NLO material; Z-scan; laser damage threshold; thermal studies

## 1. Introduction

The nonlinear optical single crystal plays important role in the different applications of optical technologies like communication, switching, laser, optical storage etc. The nonlinear optical material possesses fascinating properties like a low optical loss, enhanced optical parameters and high laser damage threshold; dissipate thermal and mechanical stability with lower dielectrics [1-3]. In last decade new methods were introduced to grow novel materials in the different frequency spectrum with enhanced parameters for high technical optical applications [2,4,5]. The semi-organic materials are attracted by many researchers due to their high optical nonlinearity and chemical flexibility. The thiourea metal complexes show enhanced second order and third order nonlinear properties with higher optical, dielectric, thermal and mechanical properties [6,7]. The thiourea and urea forms inclusion compounds with variety of the salts and organic compounds having host-guest relationship which forms a stable compound. In this

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