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बंजारा समाजाच्या व्यावसायिक जीवनाचा ऐतिहासिक मागोवा

दिपक कोलू वळवी

अण्णासाहेब वर्तक महाविद्यालय, वसई(प.),पालघर

प्रस्तावना :

बंजारा या जमातीचे अस्तित्व भारतात प्राचीन काळापासून आहे बैलाच्या पाठीवरुन मालाने भरलेल्या गोण्य लादून ते सर्व भारतभर पोहचवणारी व व्यापार करणारी अशी एकमेव प्राचीन जमात म्हणजे बंजारा जमात होय .भारतात विविध भागात या जमातीस बंजारी ,ब्रिजारी ,लंबाडी ,लमाणी ,सुकाली किंवा सुगाली इत्यादी नावांनी ओळखले जाते .बंजारा ही मूळची राजस्थानातील जमात असावी व तेथून ती सर्व भारतभर पसरली असावी यासंबंधीचे अनेक पुरावे सापडतात .ही जमात आर्यपूर्व काळात भारतामध्ये प्रगत असे नागरी जीवन जगत होती .सिंधू संस्कृती ,ऋग्वेद व हिंदू संस्कृती या प्रसिद्ध ग्रंथाचे लेखक प्र.रा.देशमुख यांनी आपल्या या बहुमोल ग्रंथातून बंजारा जमात ही आर्यपूर्व सिंधू संस्कृती मध्ये असणारी 'अही' ही जमात होती हे अनेक संदर्भ साधनांच्या आधारे सिद्ध करण्याचा प्रयत्न केलेला दिसतो.

बंजारा समाजाच्या सामान्यपरिस्थितीविषयी पी .बी.रामपुरे यांच्या मतानुसार "भारतातील बंजारा समाजाचा इतिहासप्राचीन तसेच गौरवशाली आहे .राजस्थानातील साहसी व पराक्रमी वीरांचे ते वंशज आहेत .ते राजस्थानातून आले आणि संपूर्ण भारतात पसरले .प्राचीन काळापासून बंजारा हा भटका समाज आहे. ज्यांचा प्रमुख व्यवसाय व्यापार आहे .एका ठिकाणातून बैलाच्या पाठीवर सामान लादुन तो दुसऱ्या ठिकाणी पोहचविणे आणि त्या ठिकाणी आवश्यक वस्तूंची खरेदी-विक्री करून आपल्या परीवारासोबत फिरत राहणे. ही बंजारा समाजाची विशेषता आहे .मध्ययुगीन काळात मोगलांच्या फौजासाठी रसदपुरवठा करण्याची जबाबदारी बंजारा समाजाच्या खांद्यावर होती .मोगलांचा अस्त

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Comparative Study on Composition and Adulteration of Milk Sold at Thane

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ABSTRACT

The study was conducted to evaluate physiochemical quality of milk samples and adulteration in milk sold in Thane City during the year 2017. Ten loose buffalo milk samples were collected from selected dairy shop of Thane City. The samples were analyzed for fat, solid-non-fat (SNF), protein, acidity, specific gravity, PH, neutralizers and adulterants. Our analysis showed that the milk samples analyzed were free from adulterants like detergent, sugar, starch, salt, hydrogen peroxide, urea, ammonia, nitrates. Acidity ranges from 0.117 to 0.146%, fat from 2.7 to 6.0%, Protein from 2.46 to 2.90%, SNF from 7.11 to 9.37%, Specific gravity from 1.023 to 1.032. The statistical analysis showed that the fat, protein, SNF of these samples were significantly different.
Keywords: buffalo Milk, physical and chemical examination, Adulterants, Comparison.

I. INTRODUCTION

Milk is an almost ideal food. It has high nutritive value. It supplies body-building proteins, bone-forming minerals and health-giving vitamins and furnishes energy giving lactose and milk fat. Besides supplying certain essential fatty acids, it contains the above nutrients in an easily digestible and assimilable form. (1) Milk is good source of calcium, phosphorus and fat-soluble vitamins (A, D, E and K). (2) All these properties make milk an important food for pregnant mothers, growing children, adults and patients.

On average milk is made up of 87.4% water and 12.6% milk solids (3.7% fat, 8.9% milk solid non-fat). The milk solid non-fat contains protein (3.4%), lactose (4.8%) and minerals (0.7%). (3)

Adulteration of milk is one the most serious issue, which not only causes major economic losses for the processing industry, but also a major health risk for the consumers. Milk dealers may either dilute the milk or extract valuable component and there after add cheap substances to maintain its compositional parameters. Some of the chemicals, adulterants and malpractices result in public health concern and malnutrition. (4)

Keeping in view the above facts, the present study was conducted to achieve the following objectives.

i) To determine the chemical composition of the loose buffalo's milk available in the market of Thane city.
ii) To detect various adulterants in market milk.
iii) To check the hygienic status of market milk.

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SOME RESULTS ON A-RADICALS

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Abstract

In this paper we introduce and study the notion of A-radicals of semirings. Also we characterize A-radicals and normal radicals of semirings and we prove that every A-radical is a normal radical.

1. Introduction

In [7], D. M. Olson and T. L. Jenkins defined radical class in semiring. In this article we introduce the notion of A-radicals of semirings and characterize them. We have shown that every A-radical is a normal radical and obtained some characterizations of normal radicals and A-radicals.

2. Preliminaries

Definition 2.1. A nonempty set R is said to form a semiring with respect to two binary compositions, addition (+) and multiplication (·) defined on it, if the following conditions are satisfied.

(1) $(R, +)$ is a commutative semigroup with zero,

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Back

STATUS OF SEA WATER QUALITY OF COAST OF SHREEWARDHAN DIST. RAIGAD, (M.S.), INDIA

Nilesh S. Chavan and Rahul N. Jadhav

Abstract

The study was conducted to get an idea about the water quality by measuring the physicochemical parameters of water from some coastal villages of Shreewardhan Taluka. Three Stations were selected for the present study. Temperature, pH, hardness, turbidity, Dissolved Oxygen, Electrical Conductivity, Total Dissolved Solids, Alkalinity, Acidity, Nitrite, Nitrate and Sulphate of the water samples were measured using pH meter, conductivity meter, spectrophotometer and turbidity meter as well as using titrations. Result showed that all the physico-chemical parameters of water at all the three Stations are in permissible range and there exists strong Positive and Strong Negative linear correlation between the parameters during the three seasons. However there is no remarkable pollution level at these three stations.

Marine bacterial extracellular polysaccharides: A review

Article *in* Journal of Coastal Life Medicine · January 2017

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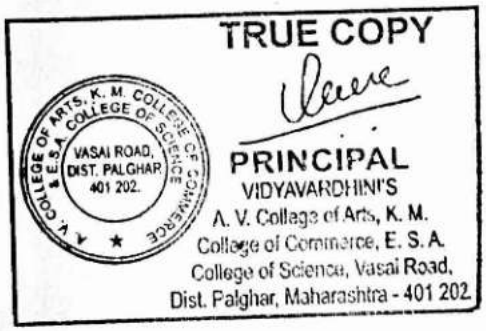

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Bioremediation of Heavy Metal (Copper) Using Indigenous Bacteria (*Staphylococcus sps.*) Isolated from Mithi River.

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ABSTRACT

Mithi River is one of the polluted rivers in Mumbai. It is most vulnerable to pollution from discharge of sewage through municipal outlets as well as improper outlets through slums and further by untreated discharge of industrial effluents, containing heavy metals. The isolation and narrowing down of copper resistant bacteria were carried out from samples collected from different locations on the river. It was screened for resistance at different concentrations of Copper, i.e. 50ppm, 100ppm, 500 ppm and 1000ppm. The resistant bacteria revealed that it belonged to the *staphylococcus* genus. Bioremediation studies were carried for a period of 120 hours in the medium. The decrease in metal was analysed at 24 hours and 120 hours. There was considerable removal of copper from the medium, proving the capacity of *Staphylococcus. sps.* to bioremediate.

Introduction

Heavy metal pollution has been a common consequence of industrialization. Heavy metals are usually a part of the untreated effluents discharged from industries, small scale factories, illegal processing units etc. into the nearest waterbody. These heavy metals interfere with the natural processes occurring in the waterbody, often leading to accumulation of it in the organisms and aquatic environment. Metals when consumed can have toxic effects. Some of the metals like arsenic, copper, iron, nickel, etc. are useful to the body in low concentration but are toxic at high concentration (Suranjana *et.al.*, 2009). Many methods have been incorporated to reduce the toxicity of metals. Some conventional methods to remediate sites contaminated with heavy metals are excavation and solidification/ stabilization which are suitable in controlling contamination but not permanently remove heavy metals (Bahi *et. al.*, 2012). Unconventional methods like using microorganisms to study their natural mechanisms which help in reducing the toxicity of harmful effluents has been explored. Bioremediation is the "use of living organisms (primarily microorganisms) for removal of a pollutant from the biosphere" (Samal and Kotiyal, 2013). Bioremediation is an effective process to reduce environmental pollution due to heavy metals (Ghosh and Saha, 2012). Microbial communities respond to heavy metals depending upon the concentration and availability of heavy metals and is also a complex process which is controlled by factors such as, the type of metal, the nature of the medium, and microbial species (Goblenz *et.al.*,1994). Copper is commonly present in various industrial effluents (Ho *et. al.*, 2002). Many studies revealed that marine life is damaged due to high copper concentration in water (Saha *et.al.*, 2008) including humans (Dursun, 2006).

In the light of the adverse effects of copper, the objective of the study was taken up, to check for the bioremediation capacity of active *staphylococcus sps.* indigenous to the river in bringing down the level of copper in an aqueous medium and understand that life exists in the river and is in a continual process of remediation.

Materials and Methods

Study Area

Mithi River, emerges from the pristine hilly areas, strengthened by discharges from Tulsi, Vihar and Powai lakes as it flows down. It meanders through Filterpada, Bamandayapada, Marol, Sakinaka, L&T Junction, JVLR, Bail Bazaar, Chattrapati Shivaji International Airport, BKC and finally the Mahim bay completing its journey into the Arabian Sea. On its course, it traverses through highly populated industrial and residential areas.

Preparation of bacterial culture

Three sets of 100 ml nutrient broth medium devoid of any metals was prepared. Sterilization was carried out by autoclaving the medium and necessary glasswares. The medium was inoculated with 24-48-hour pure culture previously isolated and identified.

Screening for metal tolerance

The experimental bacteria were exposed to varying concentrations of copper using the chemical salt - Copper sulphate. The concentrations ranged from 50ppm-1000ppm. Two percent nutrient agar plates were prepared in aseptic conditions and were allowed to solidify was overnight. Approximately 0.1 ml of bacterial culture was smeared with the help of a sterile spreader. A sterile cork borer (8mm bore size), was used to create a cavity in the agar plate which was divided into four quadrants. Using 1ml pipetting tips approximately 100 µl of the metal solution of different concentration were added in the different quadrants. It was allowed to diffuse for 1 hour and then incubated at 37°C for 24hours-48hours. After 24hours all the plates were observed for the presence and absence of zones of inhibition.

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Survey of Marine Molluscan diversity along the coasts of Shreewardhan (M.S.)

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ABSTRACT

The preliminary survey of marine molluscs at 5 coasts of Shreewardhan namely Shreewardhan coast, Shekhadi coast, Dive Agar coast, Sarva coast and Harihareshwar coast were carried out. The occurrence of 65 species belonging to 52 genera, 35 families, 8 orders and 3 classes was noted. The Class- Gastropoda was diverse and represented by 3 orders, 24 families, 32 genera and 42 species. Class- Scaphopoda was represented by single order, family, genus and species whereas Class- Bivalvia was represented by 4orders, 10 families, 19 genera and 22 species of molluscs. Among these 65% of the species are gastropods, 34% are bivalvia and only 1% is Scaphopoda were noted. The present survey indicates that Sarva coast and Shekhadi coast are diversity rich followed by Shreewardhan coast, Harihareshwar coast and Dive Agar coast as far as molluscan diversity is concerned.

Introduction

Sea shells play an important role in geological as well as biological processes (Soni and Thakur,2015). Molluscs constitute one of the largest Phyla in the animal kingdom having more than 1, 20,000 living species (Sharon *et. al.*, 2013; Apte, 1998). Molluscs are grouped into sedentary filter feeder (Class-Bivalvia), Slugs (Class- Gastropoda), Predators (Class- Cephalopoda), and Burrowers (Class- Scaphopoda). Some molluscs are edible and are important food source, some produce pearls.

The existence of first mollusc was noticed in Cambrian period about 500million years ago (Apte, 1998). The morphology and shell pattern differs from species to species (Harasewych and Moretzsohn 2010). Molluscs generally occur in three oceanic zones .viz, benthic, pelagic and littoral. The maximum number of species occurs in the littoral zone. Very few are benthic or pelagic. The littoral zone is again subdivided into various zones such as the, supra littoral (strip of beach above the high tidemark), meso littoral zone (intertidal zone), infra littoral zone (slope of beach which always remains submerged under water), and circle littoral zone (lowest level down to which green algae survive).

Each species has a specific pattern of distribution. Depending upon the various habitats where shells occur can be classified as sandy beaches, rocky shores, mud-flats, mangroves and coral reefs.

Abbott *et. al.*, (1962, 1976) conducted molluscan shell study. David (2013) observed the molluscan diversity in pre and post monsoon season. Apte, (1988,1992,1993,2014), studied molluscan diversity from Mumbai and from other coast of India. Vanmali and Jadhav (2015) studied diversity of mollusc from Palghar. Melvil and Abercrombie, (1892) conducted study of marine gastropods of Bombay. Similarly Syba. *et. al.*, (1984) studied Indian marine molluscs.

Area of Research

Shrivardhan is located in Raigad District of State of Maharashtra. Coordinates 18°02′00″N 73°01′00″E/ 18.0333°N 73.0167°E / 18.0333; 73.0167.

It is Hot in summer. Shrivardhan summer highest day temperature is in between 29°C- 39°C. Average temperatures of January is 24 ° C , February is 26 ° C , March is 29 ° C , April is 29 ° C , May is 30 ° C . Wind Speed is 15 km/h, Wind Direction is NW, Humidity is 60-65. The average tide height is in between 3.0-4.5 m.

Satellite image of Study area of Shreewardhan coast.

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RESEARCH ARTICLE

Efficacy study of some antiseptics and disinfectants

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Raut Gargi, Pimpliskar Mukesh R, Vanmali HS and Jadhav Rahul (2017) Efficacy Study of some Antiseptics and Disinfectants; *International J. of Life Sciences*, 5 (4): 593-598.

ABSTRACT

Antiseptics and Disinfectants are widely used in hospitals and other health care centers to control the growth of microbes on both living tissues and inanimate objects. Different pathogens responded different antiseptics and disinfectants. The phenol coefficient was also done to check comparative account with antiseptic and disinfectant with reference to time of killing the pathogens. Antibacterial effects of the antiseptics and disinfectants were also concentration dependent.

Keywords: Efficacy, Antiseptic, disinfectants, bacterial contamination, infection.

INTRODUCTION

Day by day importance of sanitation and thereby use of antiseptics and disinfectants increased in routine life of mankind. Antiseptics and disinfectants are used extensively in hospitals and other health care centers to control the growth of microbes on both living tissues and inanimate objects. They are essential parts of infection control practices and aid in the prevention of nosocomial infections (Larson and Morton, 1991). But a common problem is the selection of disinfectants and antiseptics because different pathogens vary in their response to different antiseptics or disinfectants (Russell, 1996).

Over the last few years alcohol-based hand disinfectants have become widely available within health care, providing an alternative means of achieving good hand de-contamination. In the hospital setting their advantage over soap and water is that they can be applied in transit to the next patient or task and therefore may help improve compliance with hand decontamination. Within the community setting they provide a suitable alternative to hand washing, particularly where there may be inadequate hand washing facilities (Pratt *et al.*, 2001). It is well known that hand hygiene is a crucial factor in the control of health care-acquired infections (HCAIs) (Boyce and Pittet, 2002). This is because hands may readily become contaminated with transient micro-organisms during the delivery of health care. Transient flora such as *Staphylococcus aureus* are microorganisms colonizing the superficial outer layers of the skin, and may be readily removed by hand washing (NDAC, 2005). Equally, where hand hygiene is

Original Research Article

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Progress in Bioscience And Bioengineering

Antagonistic activity of marine bacterial isolates on common human pathogenic bacteria

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Abstract: Antagonistic activity of marine bacteria against common human pathogens was studied. Marine animal surface bacterial flora was isolated from selected animal *Scoliodon sarrakwah* (Shark), Mandeli (Golden anchovies) *Colia dussumerii*, Promfret (Silver) *Pampus argenteus* and prawns *Penaeus indicus* collected from local fishermen. The sample bacteria were isolated by serial dilution followed by spread plate method using Zobell's marine agar (ZMA). About 11 bacterial isolates were selected and screened for antimicrobial activity through agar well diffusion assay. Among 11 isolates, 7 isolates exerted an inhibitory effect against human pathogenic organisms (*E. coli, S. aureus, Klebsiella* and *Candida sp.*). The isolates were then investigated for antibiotic production by cross species signal transfer mediated induction, 2 isolates (Sh-2 and PJR-3) exhibited enhanced activity against human pathogenic organisms (*E. coli*, *S. aureus* and *Candida sp.*). These 2 isolates were characterized phenotypically by morphological techniques (which revealed the strains as gram-positive and gram negative respectively) and physiologically by conventional tests.

Keywords:
Marine bacteria; antagonistic activity; cross-species induction

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Introduction

The sea is an immense and practically unexploited source of new potentially useful biologically active substances. Given the fact that the oceans cover more than 70 % of the earth's surface, the oceans are a promising source of novel pharmacologically active compounds. Marine microorganisms such as bacteria and fungi have been reported to produce antibacterial, antifungal, antiviral and antitumor substances[1]. Since the late 1980s, more than 50,000 bioactive natural products have been discovered from marine microorganisms. Among these compounds more than 8,000 had bactericidal activity[2]. Compared with terrestrial organisms, the secondarymetabolites produced by marine organisms have more novel and unique structures owing to the complex living diversity of species, and the bioactivities are much stronger[3]. Marine microorganisms encompass a complex and diverse assemblage of microscopic life forms and occur throughout the oceans including environments of extreme pressure, salinity and temperature. Marine microorganisms have developed unique metabolic and physiological capabilities that not only ensure survival in a great variety of extreme habitats but also offer the potential for the production of metabolites, which would not be observed; from terrestrial microorganisms[3]. Previous studies have also suggested that marine bacteria can be used to combat epizootics in aquaculture systems[1]. Antibiotics have been defined as substances

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Research Article

ANTIMICROBIAL, ANTIOXIDANT AND HEMOLYTIC ACTIVITIES OF BLUMEA LACERA

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Phytochemical analysis, antimicrobial and RBC haemolysis, antioxidant activity, *Blumea lacera*

ABSTRACT

The present study focuses on the phytochemical analysis, antioxidant activity, RBC haemolysis and antimicrobial activity of *Blumea lacera* leaf. The phytochemical screening of aqueous and methanolic leaf extracts revealed the presence of various secondary metabolites such as alkaloids, phenolic compounds, tannins, flavonoids, glycosides and saponins. The study revealed that the leaf extracts of *Blumea lacera* showed antibacterial activity against various organisms and also showed significant RBC haemolysis activity. The study shows that the methanolic extracts significant antioxidant activities in a concentration dependant manner. The plant contains potential antibacterial components that may be useful for evolution of pharmaceutical for the therapy of ailments.

INTRODUCTION

Many secondary metabolites of plant chemicals are derived biosynthetically from plant primary metabolites. The secondary metabolites can be classified into several groups on the basis of their chemical classes. Medicinal plants are responsible for their efficacy, was often used to identify plants for treating diseases (Parekh and Chanda, 2007). Plants contain many active compounds such as alkaloids, steroids, tannins, glycosides, volatile oils, fixed oils, resins, phenols and flavonoids which are deposited in their specific parts such as leaves, flowers, bark, seeds, fruits, root, etc (Kumar *et.al.*,2006).

Medicinal plants are rich in wide variety of secondary metabolites such as terpenoids, alkaloids, tannins, flavonoids, etc, which have antimicrobial properties. The plant *Blumea lacera* belongs to family Asteraceae. It is commonly called as Janglimulli, Kakaronda, Siyalmutra, and Susksampatra is a camphoraceous smelling, tall stem, corymbosely branched herb. It is a perennial plant, with obovate, deeply serrated leaves and yellow groundsel-like flowers, the whole plant being thickly clothed with long silky hairs. It is found growing wildly in wastelands, roadside areas and also found in drying ponds along drains and river margins. *Blumea* is described by Ayurveda experts as hot, pungent and bitter; antipyretic; good for bronchitis, diseases of the blood, fevers, thirst and burning sensations. The root kept in the mouth is said to cure disease of the mouth. In the Konkan region of India, the plant is used to drive away fleas and other insects. *Blumea lacera* is used in folk medicine for the treatment of cough, bronchitis, and dysentery, wound healing (Salisu *et.al.*, 2015).

Haemolytic activity of any compounds is an indicator of general cytotoxicity towards normal healthy cells. Usually, saponins (a group of phytochemical) present in the plants showed haemolytic activity by creating changes in the erythrocyte membrane. In vitro haemolytic assay by spectroscopic method provides an easy and effective method for the quantitative measurement of hemolysis. This method provides the evaluation of the effect of different concentrations of biomolecules on the human erythrocytes (Bhaskara Rao *et.al.*, 2011). In this study, *Blumea lacera* was screened for the haemolytic activity.

Antioxidant assay, the purple chromogenic radical 2,2-diphenyl-1-picrylhydrazyl (DPPH) is reduced by antioxidant/reducing compounds in the sample to the corresponding pale yellow hydrazine. This involves the odd electron of nitrogen atom in DPPH getting reduced by receiving a hydrogen atom from antioxidants. The procedure involves measurement of decrease in absorbance of DPPH at

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"Studies on Linear Regression of Nematode Population in Relation with Soil Abiotic Factors Associated with Mulberry, *Morus alba* L. from Sillod, Aurangabad (M.S), India."

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Abstract: Mulberry is an important plant in the economy because silk production depends on the nutritive quality of the leaves. Mulberry, *Morus alba* L. was selected to studies on linear regression of nematode population in relation with soil abiotic factors. The soil samples were collected from the Mulberry garden from Sillod, Aurangabad. The population was investigated at 10-15 cm depths. The result shows that, there is variation in nematode count and it is due to the effect of temperature, soil moisture and pH during the study.

Keywords: *Morus alba* L., Soil moisture, Temperature, pH, linear regression, Nematode population.

Introduction:

Mulberry (*Morus alba* L.), the sole food plant of silkworm (*Bombyx mori* L.), is cultivated both in tropical and temperate countries of the world. India is the second largest country in the world having 3.42 lakh hectares under mulberry cultivation (Govindaiah and Sharma, 1994). The major constraint in the cultivation of mulberry and production of quality mulberry leaves is the attack of the pests and diseases including plant parasitic nematodes. The plant parasitic nematodes have wide range of host plants and cause economic damage to many agricultural crops. Several plants in parasitic nematodes species belonging to different genera have been encountered in the rhizosphere soil of mulberry gardens. Mulberry being a perennial crop, the nematode readily perpetuate and spread entire root system to cause rottening and decaying of roots. The root knot nematode, Dagger nematode and Spiral nematode which cause significant losses in mulberry production (Ramkrishnan et al., 2003).

The main climatic factors to exert an influence on the development of nematodes are temperature and humidity. Furthermore, these conditions are themselves interrelated and hence any ecological action is perforce heterogeneous. The other three soil factors which have been selected in the present scheme of work are soil temperature, moisture and pH. Temperature and moisture have direct bearing in controlling the activity and metabolism of animal community as well as that of nematodes also. pH has little direct impact upon the higher and lower animals but for soil borne microorganisms, hardly we can neglect their impacts. So altogether these three soil parameters, namely soil temperature, moisture and pH were considered to assess their impact upon the soil nematodes. Soil temperature is one of the major environmental factors, affecting the physiology of plant parasitic nematodes, infesting various crops of national importance. Different nematode activities like hatching, reproduction, movement, development, etc. require different temperature range. Temperature range may vary with the type/species of host plant, and nematodes of different age, stage and degrees of starvation may behave differently. Further, various populations within the same species may need different temperature requirements. There are several phases of the effect of temperature requirements. (Sohlenius 1968, 1973, 1985; Anderson and Coleman 1982 and Rossner and Nagel 1984).

The statistical analysis of population of plant and soil nematodes started in the last decades of this century. The interspecific correlation and regression analysis of population densities of *Tylenchorhynchus spp. Rotylenchus reniformis* and *Hoplolaimus indicus* were studied by Gaur and Haque (1986). Saeed and Ashrafi (1971) studied the fluctuation of nematode population in banana and tried to correlate them with environmental factors. The population density of nematode varies considerable due to several factors like availability of host plant, soil type, soil moisture, soil temperature, rainfall and many other extrinsic factors (Norton, 1979).

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22. English: Essential, but not at the Cost of Mother Languages

Dongre Shriram Trimbak
Research Scholar (Ph.D.), Dept. of English, University of Mumbai.

Abstract:

The Linguists all over the world have expressed a serious concern over the endangerment of the indigenous languages caused due to the growing dominance of the English language at global level. In today's world of globalisation nobody can dare to deny the significance of the English language as a medium of communication. However, its use in India as a medium of instruction especially at school level is proving harmful for the sustainment of the native languages. This paper attempts to identify and examine the problems, caused due to the use of non-native language as the medium of instruction in Indian schools. It also suggests how the state governments can make and implement effective language policies in schools so that with the adoption of English, the mother languages are also promoted and a healthy connection between the local and the global world is established.

Key Words: English language, indigenous languages, medium of instruction, death of the language, language policy, globalisation

Despite the huge amount of fees that the English Medium schools charge, there is a rapid upsurge of these schools in Maharashtra not only in the urban part of the state but in the remote part too. At the same time, the Government of Maharashtra has resolved to close down almost 1300 hundred government schools that have total attendance of less than ten students each. In this number most of the schools are Marathi Medium schools. The time has come when the vernacular medium schools are being shut and the private English Medium schools have become rampant in the state of Maharashtra. The same is true about the other states of the country. Why is this happening?

The parents are more inclined to enrol their children in English Medium schools than the vernacular medium. It has become the general mentality of the parents that as the child learns English well all through her/his schooling, the job prospects of the child will increase. Besides

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2. Fury of Human Pains in the Novels of J. M. Coetzee: A Critical Analysis

Mr. Vijayanand Pandurang Bansode
A. V. College of Arts, Vasai (W), Dist. Palghar.

J. M. Coetzee is well known novelist who has given larger scope for human pain in his novels. He tries to highlight different heterogeneous aspect of the South Africa. Pain, miseries, problems, difficulties etc are the universal things of human life. Apartheid and post apartheid regime of South Africa destroyed fundamental principles of human life. Black Africans have been marginalised despite of their motherland. In different capacity Coetzee made prismatic analysis of social, economic, and politically orders of the society. Man is not only a social but also civilised animal in today's context. But dominant forces intentionally keep aside the people of the subordinate strata from civilisation and main source development to create their monopoly. The process of civilisation brought out upheaval in the social structure of the society. Ruling class enjoys undue advantage from established order, at the same time ordinary or subordinate people have forcibly compelled to enjoy undue disadvantages from the established order. In the context of South Africa white Africans dominant over black Africans in apartheid regime, they adopted different means to propagate their dominance. In this research paper the fury of human pain will be analysed in reference to J. M. Coetzee's novels, *'Dusklands'*, *'Waiting for Barbarian' and 'Age of Iron'*.

'Waiting for the Barbarian', is important novel which explains human pain. Narrator is a man known as the Magistrate. He is the chief administrator of a small town. The town has been remaining in constant fear that barbarians intending to attack. When the novel begins, colonel Joll, a representative of the Third Bureau arrives to investigate rumours. When the Colonel left the town, Magistrate keeps a barbarian girl who is partly blind and maimed by his iron regime. The Magistrate started sensual relation with her. Later on, he takes away that girl and left her parent's house. He returned back in the town and observed that unknown person superseded his position. Magistrate was imprisoned and prosecuted by authority; it was unexpected and shocking for him. Colonel Joll's Army failed to handle the barbarians uprising, civilians started to migrate towards safer place. Army of the empire has been defeated by arrow and bows of

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8.

Colonial Violence In The Novels Of J.M. Coetzee: A Critical Analysis.

Mr. Vijayanand Pandurang Bansode
A. V. College of Arts, Vasai (W), Dist. Palghar 401202

J M Coetzee is well known and outstanding writer in current context of the world especially in South Africa. He is the man having resourceful capacities to highlight heterogeneous issues of the African society. South Africa has various contradictions in context of human history. Great civilisation is the output of the comprehensive and coherent rules of the society, it results balanced and peaceful social set up. Faulty laws and regulations push the society towards anarchy results in chaos in social, political, cultural, ethical and economic system. Present research paper tries to highlight colonial violence led by apartheid regime of South Africa.

Civilised society is the output of the democratic and comprehensive rules offered to the citizens of the state. Discrepancy in institutional rules offered to the citizens to the country irrespective of gender, race, caste, creed etc. cause chaotic order to the every outlook of the society. Present research tries to correlate the all the things in systematic, manner to evaluate the social, political and economic violence.

The colonial powers adopted various policies to unleash economic, political and social performances to establish their dominance. They manipulate substantial natural and human resources. Colonial power and its legacy brought out tremendous changes in indigenous culture of the South Africa. The effects of colonialism, in fact, destroyed Africa's traditional lifestyles and culture. Violence in South Africa has many surfaces. Political violence is the utmost form of collective violence which has executive powers to propagate their propaganda to establish supremacy. They used numerous mechanisms to sustain their power clasp with them. J. M. Coetzee's novels reflect the broad perspectives of the colonial violence.

In broader sense violence can be classified in to different types, physical, sexual, psychological, and environmental. Present research paper highlights the colonial violence in novels '*Dusklands*', and '*Waiting for Barbarians*'.

- <u>**Physical violence:**</u>

Physical violence is prevalent form of punishment adopted by the ruling power. It has been used profusely to terrorise the people. It is one of the visible forms of torture which creates dismay among the people, with the trepidation no individual attempts to go against established power. J.M. Coetzee's '*Dusklands*' is the finest example which reflects different dimensions of violence, desensitization, cruelty and complicity. Indulging violence for the dominance is unconstructive way to put forward advanced civilisation. It is being considered human being is inherently dominant and violent but civilized rules of the society controlled it. In reference to that Ramirez J Martin says: "All this litany of misery, reflecting a wide range of violence, is contributing to a spirit of ungovernability and anarchy which will not easily be overcome. What a daunting future of the New South Africa! But, even if the immediate future of the new South Africa is likely to herald much hardship, there are positive grounds for optimism; it is in this we have got together. It is our aim to find positive alternative which may help to ameliorate the described of violence" (01)

'*Dusklands*' is debut novel of J. M. Coetzee published in 1974. It is the collection of two small novellas sharing common meaning violence and complicity. '*The Vietnam Project*' and '*The Narrative Of Jacobus Coetzee*'. J. M. Coetzee has baffled many of his readers by juxtaposing two apparently discrete narratives.

The narrator of the novella, '*The Vietnam Project*' was involved to prepare a report on Vietnamese War. Nature of working was so hectic and risky; he was completely dissociated from his personal life resulted loss of family and social life. His wife mentally alienated from him. there was not strong bondage between them. Their relation was empty of love, trust, affection, warmness etc. All these are important things for the healthy married relation but unfortunately both lack vice versa.

As a report maker had have to go many references like texts, pictures, secret documents etc. He shows the pictures how the American Military led peaceful region towards destructions. He has terrible pictures of Vietnam War One of the pictured collected by narrator for the purpose of the report making. It was about Vietnamese imprisoned in the cage. American called them, either 'Bad man' or 'communist'. America considers sole staunch worshiper of democracy wherever in the world anti-American government and communist regimes either attempted to make in favour or tried to topple. There are other several reasons behind their misadventures. Thousands of Vietnamese people had put in the jail by American military some of them confined in the cage like birds. J.M Coetzee intentionally used these images to explicate darker side of the war.

Eugene Dawn supervisor who does not know the ground reality of the project still he has been put in charge of 'New Life Project', that is the most disgusting. His boss pressurizes him and prolonged pressure brings devastation in his personal, social and married life. No authority is ready to understand his sincere feelings in contrary gets inhumane scolding from the boss.

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11. A Sense of Alienation in Globalised Australia: A Critical Study of J.M. Coetzee's '*Slow Man*'

Mr. Vijayanand P. Bansode
Associate Professor in English, Aanasheb Vartak College, Vasai West, Dist: Palghar.

Abstract

J.M. Coetzee's '*Slow Man*' is an investigative analysis of the self-conscious mind. It puts the upfront various bitter reality of globalized Australia. Many people of European descent migrated over there for better livelihoods but migration does not bring out expected changes. There are many who migrated from the war-torn nation and searching for peace and prosperity in the soil of Australia. This research paper further discovers the insecurity among the migrants over cultural identity, ethnicity, nationality, etc. A sense of alienation prevails in their behaviour and further, it investigates the struggle of the migrant communities to show their contribution in the domain of nation-building. Migration is the inseparable phenomenon of human civilization it will remain as long as the world exists. It argues population of aborigines have been decreasing constantly. This research paper goes further to understand the fabric of Rainbow Australia where all people have been living altogether irrespective of race, culture, region, language, etc. Paul is the protagonist who lost his leg during the accident and it made tremendous changes in his daily routines. A struggle for survival and identity goes together.

Key Words: (Globolised Australia, a sense of alienation, Rainbow Australia, international migration)

Introduction

'Slow man' is a work of Coetzee's preoccupation, investigation, self-conscious analysis of sensitive mind which incorporates many global themes. The protagonist of the novel, Paul Rayment went through an accident at Magill Road and lost his one leg. Sudden happenings make tremendous upheaval in his life and his routines of life absolutely disturbed. He is unable to fulfil his daily chores on his own account. He employs a married Croatian woman called Marijana Jokic to care for him. His life entered into a complicated turmoil when he falls in love with her. European origin of both becomes for a cause of affiliation between them. A sense of identity has been tested on the soil of Australia. All the characters are migrants, have migrated from across

Original Paper | Published: 30 March 2017

Quantification and Characterization of Mannan Oligosaccharide Producing Yeasts isolated from Various Food Products

Shobha Gupta, Zarine P. Bhathena, Sarvendra Kumar, Prem Prakash Srivastava & Sanjay Balkrishna Jadhao

Proceedings of the National Academy of Sciences, India Section B: Biological Sciences **88**, 1237–1247 (2018)

Abstract

In the present investigation, an attempt has been made to screen and identify the isolates of yeast rich in mannan oligosaccharide (MOS) from different food sources collected from local market of Mumbai, India. Out of the forty-eight varied yeast strains obtained using selective and growth media, eighteen isolates were shortlisted on the basis of their MOS yield. The MOS yield obtained from *Wickerhamomyces anomalus* strain isolated from home-made dahi was even higher (33%) than that obtained from the

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बंजारा समाजाच्या व्यावसायिक जीवनाचा ऐतिहासिक मागोवा

दिपक कोलू वळवी

अण्णासाहेब वर्तक महाविद्यालय, वसई(प.),पालघर

प्रस्तावना :

बंजारा या जमातीचे अस्तित्व भारतात प्राचीन काळापासून आहे बैलाच्या पाठीवरुन मालाने भरलेल्या गोण्य लादून ते सर्व भारतभर पोहचवणारी व व्यापार करणारी अशी एकमेव प्राचीन जमात म्हणजे बंजारा जमात होय .भारतात विविध भागात या जमातीस बंजारी ,ब्रिजारी ,लंबाडी ,लमाणी ,सुकाली किंवा सुगाली इत्यादी नावांनी ओळखले जाते .बंजारा ही मूळची राजस्थानातील जमात असावी व तेथून ती सर्व भारतभर पसरली असावी यासंबंधीचे अनेक पुरावे सापडतात .ही जमात आर्यपूर्व काळात भारतामध्ये प्रगत असे नागरी जीवन जगत होती .सिंधू संस्कृती ,ऋग्वेद व हिंदू संस्कृती या प्रसिद्ध ग्रंथाचे लेखक प्र.रा.देशमुख यांनी आपल्या या बहुमोल ग्रंथातून बंजारा जमात ही आर्यपूर्व सिंधू संस्कृती मध्ये असणारी 'अही' ही जमात होती हे अनेक संदर्भ साधनांच्या आधारे सिद्ध करण्याचा प्रयत्न केलेला दिसतो.

बंजारा समाजाच्या सामान्यपरिस्थितीविषयी पी .बी.रामपुरे यांच्या मतानुसार "भारतातील बंजारा समाजाचा इतिहासप्राचीन तसेच गौरवशाली आहे .राजस्थानातील साहसी व पराक्रमी वीरांचे ते वंशज आहेत .ते राजस्थानातून आले आणि संपूर्ण भारतात पसरले .प्राचीन काळापासून बंजारा हा भटका समाज आहे. ज्यांचा प्रमुख व्यवसाय व्यापार आहे .एका ठिकाणाहून बैलाच्या पाठीवर सामान लादुन तो दुसऱ्या ठिकाणी पोहचविणे आणि त्या ठिकाणी आवश्यक वस्तूंची खरेदी-विक्री करून आपल्या परीवारासोबत फिरत राहणे. ही बंजारा समाजाची विशेषता आहे .मध्ययुगीन काळात मोगलांच्या फौजासाठी रसदपुरवठा करण्याची जबाबदारी बंजारा समाजाच्या खांद्यावर होती मोगलांचा अस्त

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२. स्वयंसहाय्यता बचत गट महिला सबलीकरणाचे एक प्रभावी साधन

[illegible] किशोरकुमार [illegible]
[illegible], अण्णासाहेब [illegible] महाविद्यालय, वसई रोड (प). जि. पालघर

प्रस्तावना:

सर्व [illegible] मुळे महिलांचे शोषण होत आहे. स्त्रियांच्या सामाजिक दुय्यम स्थानामुळे अनेक [illegible] प्रथा पूर्वीपासून समाजात चालत आलेली आहे. सध्या मात्र [illegible] समाजात परिवर्तन घडून येत आहे विविध क्षेत्रात रोजगाराच्या [illegible] समाजामध्ये [illegible] स्त्री–पुरुष समानता आणि स्त्री [illegible] आर्थिक व राजकीय अशा विविध क्षेत्रातील महिलांचे [illegible] प्रयत्न केले आहेत [illegible] परिणाम म्हणून [illegible] दिसून येतात [illegible] दिसतात

[illegible] दिला [illegible] पाहिले गेलेल्या काळात कल्याणकारी [illegible] कल्याणकारी व विकासवादी या दोन्ही दृष्टीकोनातून [illegible] महिला सबलीकरणाविषयी नवीन धोरण स्वीकारले या [illegible] कायदा व न्याय तसेच राजकीय क्षेत्रात राखीव जागा हे महिला सबलीकरण [illegible]

समाजातील [illegible] दुर्बल [illegible] आशा किरण म्हणून स्वयसहाय्यता बचत गटाकडे पाहिले जाते. देशातील कोट्यावधी महिलांच्या आर्थिक तसेच समग्र भवितव्याला आकार देण्याचे काम बचत गटाच्या रुपाने सुरु आहे. बचतगट म्हणजे महिला सक्षमीकरणाची दिशा असे सूत्र मान्य होत आहे. याबाबत बांगलादेशाचे नाव [illegible] आहे त्या देशात स्वयसहाय्यता बचत गट डॉ.महमद युनूस यांनी स्वयसहाय्यता बचत गटाची प्रथम सुरुवात केली.

भारतामध्ये स्वयसहाय्यता बचत गटाची चळवळ म्हैसूर रिसेटलमेंट [illegible] एजन्सी (मायराडा) या संस्थेने सुरु केली त्यांनी Credit Management Group निर्माण [illegible] च्या दशकात नाबार्डने स्वयसहाय्यता बचत गटाचे मॉडेल स्वीकारून [illegible] सुरुवात [illegible]

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ScienceDirect

Estuarine, Coastal and Shelf Science
Volume 208, 31 August 2018, Pages 118-130

Virulence gene and antibiogram profile as markers of pathogenic *Escherichia coli* in tropical beaches of North Western India: Implications for water quality and human health

Aayushi Maloo [1], Abhay B. Fulke [1] ✉, Komal Khade, Awkash Sharma, Soniya Sukumaran

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https://doi.org/10.1016/j.ecss.2018.04.038

Highlights

- Coastal waters of selected Mumbai beaches were found to be contaminated with fecal matter confirmed by detection of heavy loads of *Escherichia coli*.
- Presence of virulence genes specific to EHEC, EPEC, ETEC and STEC pathotypes in *E. coli* indicated health risk to public exposed to contaminated water during recreational activities.
- Higher Antibiotic resistance indices indicated high risk source of contamination.
- Effective measures (e.g. Proper sanitation, efficient disposal facility and wastewater treatment) should be undertaken.

Abstract

The purpose of the present study was to investigate the presence of pathogenic *Escherichia coli* in anthropogenically marred tropical beaches of Mumbai, India. Out of 200 presumptive *E. coli*, (n = 125) isolates were analysed for presence of virulence genes specific to diarrheagenic pathotypes using a molecular approach. Fifty four percent of the isolates screened possessed at least one virulence gene. The presence of stx1, stx2, eaeA and hlyA genes was detected in 9%, 13%, 20% and 8% of isolates respectively, LT1 and ST1 genes was detected in 9% and 11% of isolates respectively. Also, Versova had higher prevalence of EPEC pathotype, Juhu and Girgaon had higher prevalence of EHEC and ETEC pathotypes, Dadar and Mahim had higher prevalence of ETEC pathotype. 100% of the isolates were Multiple Antibiotic Resistant with higher MAR indices stipulating an important human health concern due to a risk of developing water borne disease associated with exposure to contaminated waters.

Graphical abstract

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Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Common fixed point in Metric space

Dr. Abhilasha S. Magar

AIM- Some fixed point theorem we shall prove A fixed point for continuous densifying mapping. We have also referenced some important results given in reference.

Keywords- Some fixed points theorems for mapping and γ on metric space on X and we can say about it which are not necessarily continuous and also satisfy a condition of the type-

Min { $(d(\gamma_x, \gamma_y))^2$, $d(x,y)$, $d(\gamma_x, \gamma_y)$, $(d(\gamma, \gamma_y))^2$ } – Min [$d(x, \gamma_x)\, d(y, \gamma_y)$, $d(x, \gamma_y)$, $d(y, \gamma_x)$] $\leq \eta\, d(x, \gamma_x)$. $d(y, \gamma_y)$

$\forall$ all $x,y \in X$ and for some $\eta \in (0, 1)$.

Now we are required to introduce some notion for densifying mapping.

To assume,

Let (x, d) be a metric space and γ be a mapping of X into itself. So we say about γ, it is called densifying, if for every bounded subset B of X with $\rho(B) > 0$, we can write

$\rho\{\gamma(B)\} < \rho(B)$

and here we can say ρ is the measure of non-compactness of B

Now we have to prove theorem given below,

<u>Theorem-</u> Let γ be a continuous densifying mapping of a bounded complete metric space (x, d) into itself.

If for every x, y in X, we can say $x \neq y$, $x \neq \gamma_x$, $y \neq \gamma_y$, so that

Min {[$(d(\gamma_x, \gamma_y))^2$, $d(x,y)$, $d(\gamma_x, \gamma_y)$, $(d(y, \gamma_y))^2$] – Min [$d(x, \gamma_x)$, $d(y, \gamma_y)$, $d(x, \gamma_y)$, $d(y, \gamma_x)$] } < (a $d(x, \gamma_x)$, $d(y, \gamma_y)$ + b $d(x, \gamma_y)$, $d(y, \gamma_x)$ + c $d(xy)$, $d(\gamma_x, \gamma_y)$ ----- 1

where a, b, c are numbers and we can a+c = 1, then γhas a fixed point.

Let x_0 be the point of X and we can consider the sequence

x_0 , $x_1 = \gamma(x_0)$ ……. , $x_{n+1} = \gamma(x_n)$ ……….

Now we can take

$\beta = \{ x_0, x_1, \ldots\ldots\ldots, x_n, \ldots\ldots \}$

Then $\lambda(\beta) \subset \beta$ we can say by continuity of λ we have $\lambda(\overline{\beta}) \subset \overline{(\lambda\beta)} \subset \overline{\beta}$

Hence, $\overline{\beta}$ is invariant under T and is bounded.

Now can suppose,

$\rho(\beta)$ is positive or $\rho(\beta) > 0$

since, we have

$\beta = \lambda(\beta) \cup \{x_0\}$ we can also say we have

$\rho(\beta) = \text{Max}\{ \alpha(T(A)), \rho(x_0) \}$

$= \alpha(T(A))$

We know that the mapping λ is densifying so $\rho(\beta) = 0$ ……..(*)

Accordingly, we can say β is pre compact.

Since x is complete matrix space, $\overline{\beta}$ is compact.

So, we can say by hypothesis $d(x, \gamma_x)$ is continuous on the compact subset $\overline{\lambda}$

Hence, $d(x, \gamma_x)$ has a minimum.

Point n in $\emptyset\beta$. To prove that n or γ_n is a fixed point.

Now we can go by reverse. Suppose $n \neq \gamma_n$ and $\gamma_n \neq \gamma^2_n$ then we have

Min [$d(\gamma_n, \gamma^2_n)^2$, $d(n, \gamma_n)\, d(\gamma_n, \gamma^2_n)$, $(d(\gamma_n, \gamma^2_n))^2$] – Min [$d(n, \gamma_n)\, d(\gamma_n, \gamma^2_n)$, $d(n, \gamma^2_n)\, d(\gamma_n, \gamma_n)$] < a$d(n, \gamma_n)\, d(\gamma_n, \gamma^2_n)$ + b$d(n, \gamma^2_n)\, d(\gamma_n, \gamma_n)$ + c$d(n, \gamma_n)$ $d(\gamma_n, \gamma^2_n)$.

Ecology, Environment and Conservation Paper

Vol 24, Feb. Suppl. Issue 2018; Page No.(264-271)

Back

STATUS OF SEA WATER QUALITY OF COAST OF SHREEWARDHAN DIST. RAIGAD, (M.S.), INDIA

Nilesh S. Chavan and Rahul N. Jadhav

Abstract

The study was conducted to get an idea about the water quality by measuring the physicochemical parameters of water from some coastal villages of Shreewardhan Taluka. Three Stations were selected for the present study. Temperature, pH, hardness, turbidity, Dissolved Oxygen, Electrical Conductivity, Total Dissolved Solids, Alkalinity, Acidity, Nitrite, Nitrate and Sulphate of the water samples were measured using pH meter, conductivity meter, spectrophotometer and turbidity meter as well as using titrations. Result showed that all the physico-chemical parameters of water at all the three Stations are in permissible range and there exists strong Positive and Strong Negative linear correlation between the parameters during the three seasons. However there is no remarkable pollution level at these three stations.

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Research Article

ESSENTIAL OILS OF AZADIRACHTA INDICA AND VITEX NEGUNDO LEAVES EVALUATION FOR PHYTOCHEMICAL ANALYSIS, ANTIOXIDANT ACTIVITY AND ANTIMICROBIAL ACTIVITY

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MAPs, DPPH, Essential oils, antioxidant, secondory metabolites, Vitex negundo

ABSTRACT

A wide range of medicinal and aromatic plants (MAPs) have been explored for their essential oils in the past few decades. Essential oils are complex volatile compounds, synthesized naturally in different plant parts during the process of secondary metabolism. They have great potential in the field of biomedicine as they effectively destroy several bacterial, fungal and viral pathogens. The presence of different types of aldehydes, phenolics, terpenes and other antimicrobial compounds means that the essential oils are effective as antioxidants as well as against a diverse range of pathogens. The goals of the study were to determine and compare the phytochemical screening, antioxidant and antimicrobial activities of the essential oils of *Azadirachta indica* and *Vitex negundo*. The phytochemical screening of the two plants showed presence of alkaloids, carbohydrates, glycosides, phenolic and tannin compounds, flavonoids, saponins, lipids and terpenoids. About the antioxidant potential, *Azadirachta indica* showed a higher ability to scavenge free radicals as compared to *Vitex negundo*, which was investigated by 2, 2- diphenyl- 1-pierylhydrazyl (DPPH) radical scavenging assay. Regarding the antimicrobial activity, *Vitex negundo* showed a better ability to inhibit the growth of pathogenic micro-organisms as compared to *Azadirachta indica*, which was investigated by the Agar diffusion method (Kirby-Bauer method, Bauer et. al.; 1966).

INTRODUCTION

Essential oils are volatile, natural, complex compounds characterized by a strong odour and are formed by aromatic plants as secondary metabolites. They are usually obtained by steam or hydro-distillation first developed in the middle ages by Arabs. Known for their antiseptic, i.e. bactericidal, viricidal and fungicidal, and medicinal properties and their fragrance, they are used in embalmment, preservation of foods and as antimicrobial, analgesic, sedative, anti-inflammatory, spasmolytic and locally anesthetic remedies. Up to the present day, these characteristics have not changed much except that more is now known about some of their mechanisms of action, particularly at the antimicrobial level.

In nature, essential oils play an important role in the protection of plants as antibacterial, antiviral, antifungal, insecticides and also against herbivores by reducing their appetite for such plants. They may also attract some insects to favour the dispersion of pollens and seeds, or repel undesirable others [1].

Essential oils are extracted from various aromatic plants generally localized in temperate to warm countries like Mediterranean and tropical countries where they represent an important part of traditional pharmacopoeia. They are liquid, volatile, limpid and rarely coloured, lipid soluble and soluble in organic solvents with a generally lower density than that of water. They can be synthesized by all plant organs, i.e. buds, flowers, leaves, stems, fruits, roots, wood or bark, and are stored in secretory cells, cavities, canals, epidermis cells or glandular trichomes.

Essential oils can be prepared from various plant sources by specific processes like steam distillation, hydro distillation, enzymatic hydrolysis, enfleurage, maceration, expression, solvent extraction and fluid extraction. Most of the

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CONTRCEPTIVE EFFICACY OF ETHANOLIC EXTRACT OF *Lygodium flexuosum* ON MALE WISTAR RAT.

*** Nangare V. G. and Dr. Jadhav R. N.**

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Key words:, *Lygodium flexuosum* ethanolic, antifertility, contraceptive

Abstract:- Men also can contribute in the family planning the way women does. Research for the evolution of safe, acceptable, cheap, effective and reversible antifertility agent of plant origin is progressing worldwide. The present investigation deals with contraceptive efficacy of *Lygodium flexuosum* with its ethanolic extracts on the Wistar rat against control.

The investigation involves the treatment of sexually matured male Wistar rat with ethanolic extracts of *Lygodium flexuosum* at the dose regimen of 50mg/kg of animal for 60 days. The comparative results revealed that weights in gonads and assessory reproductive organs were found to be decreased with decrease in protein content of tissues and serum along with decrease in the value of adrenal ascorbic acid in adrenals. The treated group showed reduction in the serum cholesterol and increase in testicular and adrenal cholesterol. The total sperm count was also found to be much reduced in the treated group in comparison with control group. No adverse effects were observed on general body weight and on hematological parameters. Marginal variations were observed in cholesterol and protein content in vital organs but were within normal range. Histological structure of gonad and accessory reproductive organs provides concrete proof towards more antifertility effect in treated group. Normal histology was observed in all the vital organs studied.

Introduction:-

The promising studies on various plants and their parts have been conducted by various researchers for antifertility. The reason behind selecting plant *Lygodium flexuosum* is its ethnobotanical value. There are many compounds have been noted in the plant like drayocrassal, tectoquinone, kaempferol and stigmasterol (Achari *et al;* 1986). The tribal communities are using this plants since long on gonorrhea, spermatorrhea, wound healing, headache, migration, pain killer eczema (Dhiman 1998, Vasudeva 1999, Gogoi 2002, Hota and Padhi 2003). *Lygodium flexuosum* is Malaysian native species of pteridophyte shows presence of antifertility constituent. (Gaitonde and Mahajan 1980).

Though the ethnobotanical uses of *Lygodium flexuosum* have been studied well investigations on contraceptive efficacy have not been revealed in detail. So the present investigation contribute the antifertility efficacy of the same.

Materials n methods:-

Sexually matured Wistar male rat aged between 8 to 10 weeks and approximately 250 to 300 gms body weight were selected for experiment and orally fed with dose regime 50mg/kg animal body weight
Animals were divided into two groups
Group I.....Control.
Group II.....plant extract treated (Test)
Total tissue and serum protein was carried out by Lowry's method.
Total serum and tissue cholesterol was carried out by Wybenga Pillegi method.
Adrenal ascorbic acid was estimated by 2,4 DNPH (2,4-dinitrophenylhydrazine) method.
Total RBCs and WBCs were carried out by Lynch *et. al.* method.
Haemoglobin was done by Sahlis Haemocytometer.

Ecology, Environment and Conservation Paper

Vol 25, Issue 3 2019; Page No.(1272-1276)

ISOLATION AND SCREENING OF HEAVY METAL TOLERANT BACTERIA

Shruti Handa and Rahul Jadhav

Abstract

Vihar lake and Powai lake located in Mumbai are the two lakes known to supply water to Mumbai. Vihar lake is pristine and situated amidst the hills while the Powai lake has become a victim to pollution through sewage discharges and solid waste dumping on its banks. Approximately twenty bacterial isolates were exposed to lower concentrations (10 ppm, 20 ppm and 30 ppm) of heavy metals (Cu, Cd, Cr, Pb and Ni). Amongst these seven bacterial isolates were found to have considerable capabilities to tolerate the heavy metals. They were further exposed to 50 ppm and 100ppm concentration of the heavy metal salts. Isolate ISL2 was found to tolerate all the heavy metal salts used at 50 ppm but did not show the same tolerance at 100ppm. Isolates ISL3, ISL4, ISL5, ISL6 and ISL7 although did not show tolerance to all the metals but they did show tolerance to few metals at 100 ppm.

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Research Paper

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DFT study of L-alanine's Crystal, Molecule and Three Linear Molecules for Optoelectronic Behavior

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***Abstract*—** L-alanine requires more insight in terms of the optoelectronic properties as the organic devices. For that an electronic structure of the L-alanine using the density of state (DOS) and band structure have been calculated by the density functional theory (DFT) using the plane wave method. The unit cell crystal, single molecule and hydrogen bonding approach were investigated first in this work using GGA-PAW. The molecular orbitals were also examined using BL3YP functional for the hydrogen bonding between the amine and the carboxylic groups and found the bandgap energy comparable to the GGA-PAW case. The indirect band gap was obtained in the band-structure calculation. The effect of three linear molecules in x, y and z direction in a crystal was investigated and the significant variations found in DOS in all three cases of L-alanine. The present study predicted the longer length wire or tube structures are most useful as the outcome to make the good organic optoelectronic material.

Keywords*—*L-alanine, Density of states, DFT, Energy bandgap, optoelectronics behavior

I. INTRODUCTION

An amino acid has special features like molecular chirality, absence of strongly conjugated bonds and Zwitter ionic nature to use to manufacture unique devices [1]. L-alanine (CH_3CHNH_2COOH) is a type amino acid occurred in orthorhombic crystal structure solid with space group $P2_12_12_1$ (19). The structure was originally derived by Bernal in 1931 [2]. It possesses high electro-optic parameters, good thermal and mechanical stability of the crystals [3] and reported the Nonlinear optical (NLO) property [4–6]. Such NLO materials have been attracting due to their chemical flexibility, high Non-linearity, high mechanical and thermal stability and good transmittance [7]. An experimental bandgap for the L-alanine was reported 4.74 eV for the lattice parameters a, b, c, α, β and γ are 6.028Å, 5.804Å, 12.317Å, 90°, 90°, and 90° respectively [8]. The same structure has been reported by Harry Simpson et.al. in 1966 [9]. The lattice parameters (6.036(3)Å, 12.342(5)Å, 5.788(3)Å, 90°, 90°, 90°) Neutron diffraction, [10] also agreed with XRD. In more condensed state lower to 23K, it has reported a reduction in cell parameters [6]. Single crystal at 293 K with different high pressure information is also available [11]. The theoretical work started with high pressure at standard temperature have been lacking in our literature survey. Recently, the works on the organic devices are booming and L-alanine also has great importance in various areas, especially in an optoelectronics devices and sensors which requires energy bandgap and related properties. The main objective of this paper is the study of the three linear molecules in three different positions according to the placement in a crystal with optoelectronic behavioral concerned. The plane wave DFT method was performed with good PPs, best convergence criteria and proper cutoff which are explained in the methodology section. In the present study, the selection of the crystal system for relaxation has done first and then finding their optical energy band gap by analyzing density of state (DOS) have been done. This is given in the results and discussion section with the inspection of a unit cell structure, a single molecule and the connection of carboxyl and an amine group of two molecules in term of DOS.

II. METHODOLOGY

An MPI parallelization runs for four core processors with a single thread. The plain-wave method (PWSCF) was used for probing the system first for scf and then nscf. The Quantum espresso packages [12] was used as a main tool for the DFT calculation (with Davidson algorithm) for the ground state L-alanine in this work. The GGA-PBE exchange functional correlation pseudo-potentials (PP) was selected with Projector augmented-wave method [13] for the DFT calculation in UPF format. For this purpose, 2s,2p for C, 1s for H, 2s,2p for O and 2s for N outer orbitals were considered in PP and renormalized using gamma-point specific algorithms. The PP files were obtained as C.pbe-n-kjpaw_psl.1.0.0.UPF, H.pbe-kjpaw_psl.1.0.0.UPF, O.pbe-n-

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ROLE OF ICT AND ITS IMPACT ON EDUCATION PILLARS

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ABSTRACT
The objective of this article is reached up to the main role of ICT and Teachers entire education system. The Study belongs to Teachers - Students attitude, behavior and Psychological constructs relevant to understanding and predicting the infusion of technology into teaching-learning in education.

This Article highlights various impacts of ICT on Education in the current era and also elaborate on the role of teachers with innovative practices in education.

Keywords: Information Communication Technology, Colleges SSR, Teachers Students, Millennium Development Goal, Royal Society, United Nation Organization,Environment.

MEANING
Information Communication Technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communication.

The integration of telecommunication (telephone lines and wireless signals), Computers as well as necessary enterprise software, middleware, storage and audio-visual system which enable users to access, store, transmit and manipulate information.

INTRODUCTION
ICT can contribute to universal access to education, equity in education, the delivery of quality learning and teaching, Teachers professional development and more efficient education management, governance and administration.

UNESCO takes a holistic and comprehensive approach to promote ICT in education. Access, inclusion and quality are among the main challenges they can address.

According to the Resolution 56/183 (on 21st Dec 2001, The United Nation General Assembly) related the summit to the "United Nation Millennium Declaration" Goal of implementing ICT to achieve "Millennium Development Goals.

LITERATURE REVIEW
Prof.Supriya Dhunwani, 2013
ICT plays role in education with the help of a laptop, personal computers, smart phones (mobile, Tablet) familiar with teacher and students. With the help of above things both teachers and students sharing information. ICT has used in the various phase of the learning cycle viz.

The admission phase, the learning phase, the evaluation phase and finally the certification phase.

The Royal Society's Report
Upuntil 2012, the use of ICT in many schools in the UK is highly unsatisfactory.

There was a shortage of teachers who are not able to teach beyond basic digital literacy. There was a lack of continuing professional development for teachers of computing.

Michal Klichowski, Caterina Patricio
The Human brain rather dislikes ICT tools. Intensive use of ICT tools negatively affects the information processing capacity and reorganizes the human brain in a negative way, the consequence of which can be for example the development of chronic pain.

Media multi-tasking has a particularly negative impact on the human brain, what is more, the cognitive neuroscience perspective shows that ICT tools can bean attractive learning tool only for a narrow group of people who are cognitively playful.

NEED FOR THE STUDY
Information &communication technology in education is a core part of teaching, Learning and evaluation.

The entire educational system is following the structure of ICT in daily work. All are affecting positively as well as negatively

International Journal of Grid and Distributed Computing

Evaluation Of Contraceptive Efficacy Of Ethanolic Extract Of Lygodium Flexuosum On Male Wistar Rat.

Nangare Vishal, Jadhav Rahul and Ansari Gulista

Abstract

Lygodium flexuosum has been used in the various traditional and modern medicines as it has many ethnobotanical aspects. The present investigation deals with contraceptive efficacy of Lygodium flexuosum with its ethanolic extract on the male Wistar rat against control. The investigation involves the oral administration of sexually matured fertile male Wistar rat with an ethanolic extract of Lygodium flexuosum at the dose regimen of 100mg/kg b. wt. /rat for 60 days as an experimental group whereas control group has received vehicle only wherein both the groups has 6 animals each. Hematological indices and serum biochemical investigations were also performed to assess the toxic effects if any caused in rats due to the treatment. Proteins, cholesterol, glycogen, adrenal ascorbic acid, sialic acid and fructose levels were analyzed in rats. Rats were castrated for the histopathological investigations where tissues were fixed in the Bouin's fixative, dehydrated, sectioned and stained with hematoxylin and eosin. Treatment of Lygodium flexuosum in an experimental group have showed significant reduction in the weight of the testes

Study of Uric Acid and Lipid Profile in Type 2 Diabetes Mellitus Cases in Western Coastal Region of Vasai–Virar City Municipal Corporation, District - Palghar, Maharashtra, India

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DOI:
https://doi.org/10.18311/jer/2019/26220

Keywords: Blood Glucose, Serum Uric Acid, Type 2 DM, Western Coastal Region

ABSTRACT *A population in the Western Coastal Region of Vasai-Virar City Municipal Corporation (VVCMC), Maharashtra, India, abounds with non- vegetarians. This study was conducted to analyze if non- vegetarian diet has the same effect on lipid profile and uric acid (UA) levels of T2DM patients of this locality as reported in internationally published data. Lipid profiles, blood sugar levels and UA in the normal controls were within the normal range. In the T2DM patients the values of cholesterol, HDL, LDL and UA were in normal range whereas the blood sugar and serum triglyceride levels were found to be elevated. The uric acid levels were lower in T2DM patients as compared to normal controls though it was in*

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REVIEW OF RESEARCH

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"LEPIDOPTERAN INSECT PESTS ASSOCIATED WITH THE MULBERRY GARDEN FROM AURANGABAD (M.S), INDIA"

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ABSTRACT

The present work deserves special attention primarily because of its ecological approach to sericulture and entomological perspective to Lepidopteraninsect pests. Even though the primary responsibility of an agricultural entomologist is to device means to eliminate insects designated crop pests and to protect those designated economically important. Hence a survey was conducted in mulberry garden to survey the ecological diversity of the Lepidopteran insect pests. The taxonomic diversity of the Lepidopteraninsect pests communities was worked out in the mulberry garden from Aurangabad (M.S), India. In present work during study period some important Lepidopteranpests of mulberry are described with respect to distribution, occurrence and type of damage and symptoms.

KEYWORDS — *Lepidopteran insect pests, mulberry garden.*

INTRODUCTION:

The modern sericulture technology not only paid rich dividends by increasing silk production but also drastically disturbed natural seri-ecosystem. The pest population of silkworm and its host plants has increased and frequently there is outbreak of new pest. It causes extensive damage to silk host plants, which resulted in the deterioration of quality and quantity of leaves of silk host plants and ultimately fluctuation in cocoon production[1]. The increase in the productivity of silk per unit area can be achieved by following suitable production technology combined with management of pests and diseases of mulberry. About 300 insect and non- insect species of pests are known to occur on mulberry [2]. The major insect orders known to be the pest of mulberry in order of largest number of species attacks the mulberry are Lepidoptera, Hemiptera, Coleoptera, Thysanoptera, Orthoptera and Isoptera besides the acarids and molluscan [3].

Mulberry, *Morus alba* L. has become a popular agricultural crop for silkworm rearing in India. It is affected by a number of sucking pests such as scale insects, leafhoppers, mealy bugs, thrips and whitefly. The perennial nature of mulberry combined with monocultural practices, harbours several pests throughout the year with seasonal variations [4]. The production of appreciable quantity of quality mulberry leaf is often hampered by insect pests belonging to large number of insect orders. Apart from insect pests, predators, parasitoids, naturals and detrivores also survive on mulberry plant. Studies on diversity are the preliminary

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Hemiptera: Distribution, Occurrence, Type Of Damage And Symptoms On Mulberry (Morus Alba L.)"

Avhad Sunil. B and *Hiware Chandrashekhar. J

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*Department of Zoology,Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S), India
Email: drsunilavhad@gmail.com

ABSTRACT:

Mulberry (Morus spp.) leaf is the onlynatural food for the silkworm, Bombyx moriL. It is a perennial, evergreen, luxuriant cropcultivated in all types of soils, both under rainfed and irrigated conditions. So far, over 300 insect andnon-insect species of pests are known to infestmulberry in varying intensities during differentstages of the crop and seasons.The present investigation shows taxonomical study on 9 species Hemipteran insect pests namely *Aonidiella qurantii*, *Dysdercus singulatus*, *Empoasca flavescens*,*Maconellicoccus hirsutus*, *Nezara viridula* L.,*Oxyrachis tarandus* and *Tessaratoma javanica*,*Erthesina acuminata* Dallas, 1851 and *Hotea curculionoides*of mulberry garden from various sites in Aurangabad district, Maharashtra, India. In present work during study period some important Hemipteran pests of mulberry are described with respect to distribution, occurrence and type of damage and symptoms.

KEYWORD: Taxonomy, Distribution, Damage and symptoms.

INTRODUCTION:

Mulberry, *Morus alba* L., is the sole food plant of the silkworm, *Bombyx mori* L. For better growth, development and subsequent silk production, the quality of mulberry leaf plays an important role. However, the process of mulberry leaf production is often hampered due to interference by several insect pests. Among them, Hemipteran pests are the important, which cause severe qualitative and quantitative damage. Mulberry leaf is a major ecosystem component in sericulture since the quality and quantity of leaf produced per unit area have a direct bearing on cocoon harvest and quality of silk (Yogananda Murthy *et al.*, 2013). In India, most states have taken up sericulture as an important agro-industry with excellent results. The production of appreciable quantity and quality mulberry leaf is often hampered by insect pests belonging to large number of insect orders. The crop is prone to depredation of diverse organisms, because of

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Optimization of Culture Media and Conditions Enhances Mannan Oligosaccharides Production of *Wickerhamomyces anomalus SZ1* Strain

Shobha Gupta* and Zarine P. Bhathena

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Keywords

Wickerhamomycesa nomalus, Mannan oligosaccharides, one factor at a time (OFAT) method, Media optimization

Article Info

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ABSTRACT

A potential non-Saccharomyces yeast species, identified as *Wickerhamomyces anomalus SZ1* strain (Gupta, *et al.*, 2018), which gave even higher (33%) mannan oligosaccharides (MOS) than that obtained from the traditionally used *Saccharomyces cerevisiae* strain were selected for optimization of suitable media study for maximum yield of MOS by the one factor at a time (OFAT) method. Mannose was found to the best carbon source for optimum production of MOS, which significantly enhanced the yield by 1.2 folds of MOS at 2% mannose concentration as in place of dextrose in YEPD media. Higher concentration of Mannose cannot significantly ($p<0.05$) enhance the MOS production further. 2% peptone and 1% yeast extract in combination were found to be the best nitrogen source. An initial pH 6.0, temperature 32^{0}C and shaking condition at 180 rpm for a period of 96 hours were found significantly favour the MOS production. the result revealing that 5% ($1.05x10^8$cfu/mL) is the optimum inoculum size to attain the maximum MOS yield (701.13±23.23 mg/L at 96 hours incubation) that was 2.0 fold higher than that to incubated at 24 hours and 1.2 fold higher to that 1% ($2.1x10^7$cfu/mL) inoculum density but economically yield was insignificant with period of 72 (656.67±23.12 mg/L) to 96 (701.13±23.23 mg/L) hours incubation. It was concluded that *W. anomalus SZ1* strain can be grown on optimized media up to 72 hours and used as an alternative of *S. cerevisiae* yeast for commercial mass scale MOS production for human food and animal feed industries in future.

Introduction

Mannan oligosaccharides, a polymer of mannose sugar is a yeast derived natural sugar complex that is used as food grade growth promoters in modern livestock and poultry production and possesses marked immunological properties over the traditionally used antibiotic based growth promoters without posing any adverse effects ((Baurhoo *et al.*, 2009; Yang *et al.*, 2008). Most of its health-promoting properties is present within the yeast cell wall (together with glucan, chitin, and protein) with its properties varying with the fraction of polysaccharides extracted, its degree of polymerization which in most cases depends on the strain type, and its growth conditions

Published: 13 December 2019

Comparative efficacy of mannan-oligosaccharides from two yeast species fed alone or in combination with probiotic *Bacillus subtilis* ATCC 6633 to Catla (*Catla catla*) juveniles

Shobha Gupta ✉, Z. P. Bhathena, Sarvendra Kumar, P.M Nuzaiba, P. P. Srivastava, Subodh Gupta & Sanjay Balkrishna Jadhao

Aquaculture International **28**, 691–710 (2020)

Abstract

Saccharomyces cerevisiae is the most commonly used source for mannan-oligosaccharides (MOS) in the animal feed industry. Recently, we proposed *Wickerhamomyces anomalus* SZ1 isolated and characterized from home-made curd that yield 33% higher MOS than *S. cerevisiae* as an alternative to the latter (Gupta et al. 2018). This report details the results of a 60-day performance feeding trial in Catla (*Catla catla*)

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Women Education in India: An Investigation

Manohar Baburao Bhagirath

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Abstract:

Women's education in India plays a very significant role to change their status and overall development in the society. Women cover approximately half population of the country. This means that if women are educated the half population of the country educated. It is the key circumstance for women to improve economic status, health and overall development. Literacy is the first step in the direction of formal education. The female acquisition rate in Asian nation (especially India) is below the male acquisition rate. This paper is an intension to capture the emerging picture analogous to women education in India. It also explores the problem faced and the possibilities ahead in finding out women empowerment through education in India.

Keywords:

Development, Economic status, Education, Empowerment, Literacy rate, Population.

Introduction:

Women are the indispensable part of nation. In India women education plays a vital aspect in the overall improvement of the country. The progress of new generation mainly depends on the education of women area. Education is one of the turning point for women empowerment because it enables them to respond to the challenges, to confront their traditional role and change their style of living. As formal agency, the government of India necessary to improve the living conditions of women at various times. In these circumstances, we want to the further development in the equality in gender, level of learning and recognition of women in every point in India. It is their basic right of all. Education isn't a privilege however a basic right.

The acquisition rate in Asian nation (especially India) has improved loads over the last one decade. Percentage of literate women in the country was just 8.86 % in 1951.

Census Year	Literacy rate (%)
1951	8.86

Studies in Indian Place Names
(UGC Care Journal)

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Use of ICT in Library for Sustainable Development

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ABSTRACT
In the context of national progress and development, information and communication technology (ICT) has remained inspirational. In this paper, with the help of Information and Communication Technology (ICT), it has attempted to explore the important role of provision of services in the library and inform the development of sustainable development in the country. With a very simple literature review method, the paper sought to review relevant literature on ICT resources and ICT-based services in libraries, the benefits of ICT, and the role of libraries in sustainable development in the country.

Keywords: Education, Information and Communication Technology (ICT), Libraries, Sustainable Development.

INTRODUCTION

Information and communication technologies include computer, computer systems, hardware, software, computer languages, and basic data that can be accessed directly and simply by knowing what you need. Hence Information and communication technology plays a very important role in human development. Change is the key to success in modern times. With the help of information and technology, the nature of the library has changed. Over the years, ICT has provided people with a much larger collection of new communication capabilities. ICT is an arrangement that enables the assortment, analysis, convert and circulation of information. Libraries provide access to data and knowledge that support information research and are critical to achieving development goals. The advent of ICT has really helped the library services, because many libraries are now using their ICT capabilities to reach library users. Countries with useful libraries and information centers can gain access to information that enables sustainable development. This paper seeks to emphasize the importance of ICT in libraries, the use of ICT in libraries for sustainable development.

WHAT IS ICT IN LIBRARY SCIENCE?

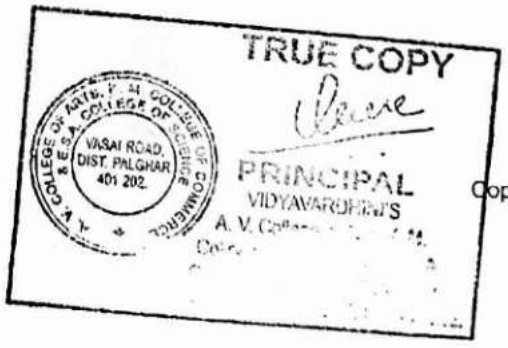
Information and Communication Technology (ICT) helps facilitate the description, storage and dissemination of information. Library and information science experts are using ICT to solve information problems.

In 1983, the American Library Association defined Information Communication Technology (ICT) as the use of computers and other technologies for information, communication, archiving, retrieval and dissemination.

WHY ICT IN LIBRARIES?

The following are the reasons why ICT is essential for the library.

- Accuracy
- Speed
- Storage
- Easy use
- Retrieve Information
- Reliability
- Dissemination of information.



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Correlation and Regression Analysis in Real Life

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ABSTRACT
Correlation is a statistical part that express the extent to which two or increasingly variables vary together. The term "correlation" refers to a unstipulated connection or relationship between quantities. In other words, it's a solution to how things are related. The study of how variables are associated with them is said to be correlation analysis. Whereas Regression is a statistical way that struggle to uncover the undertone between variables. Regression describes how an self-sustaining variable is numerically related to the dependent variable. In scrutinizingly any business, it is useful to put out one value in terms of its relation with others. In this research paper, we will squint at how correlation and regression are used in everyday life. Also we introduced and explain the correlation and regression with the daily real life examples along with the definitions.

Keywords: Analysis, Correlation, daily life, quantity, Regression, statistical.

INTRODUCTION
Correlation is a statistical technique that can indicate whether pairs of variables are related.For example, hair and shampoo are related; The longer your hair grows, the increasingly shampoo you will need. The relationship isn't perfect. . People of the same height vary in weight, and you can hands think of two people you know where the shorter one is healthy than the taller one.

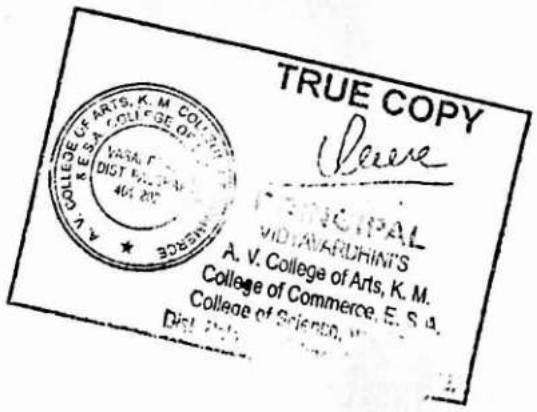
Regression is a statistical method that tries to uncover the association between variables. There are assumptions that must be met surpassing running a regression and it's very important to understand how to properly interpret a regression equation. Regression moreover is used for predicting an outcome from a predictor variable. Simple linear regression is a statistical method that allows you to summarize and study the relationship between two continuous variables.

Correlation and regression are widely used to determine the strength of cooperation between two variables.

Lastly, the purpose of statistical data observation is to go from one-way and uncertain observation to complex, surprising phenomena. It is important to take a close look at the statistical facts of mathematical theory and make decisions after guiding observations.

WHAT IS A SCATTER DIAGRAM?
The scatter diagram is the simplest method of studying the correlation between two variables, in which the values for each variable's pairs are plotted on the graph as a point to get the same number of observations. The scatter diagram graphs pairs of numerical data, with one variable on each axis, to squint for a relationship between them. If the variables are correlated, the points will fall with in a line or curve.

The position of each dot on the horizontal and vertical turning indicates values for an individual data point. Scatter plots are used to observe relationships between variables.



International Journal of Grid and Distributed Computing

Determination of physical and chemical parameters, adulteration and hygienic status of raw milk in Thane

Vandana T. Bendale, R. P. Chavan

Abstract

The present study was conducted to evaluate physiochemical parameters of raw milk samples sold in Thane city. Fifty samples of loose buffalo milk were collected from ten selected dairy shop of Thane. Samples were tested separately for fat, solid-non-fat, protein, acidity and specific gravity. Statistical analysis revealed significant variation for fat among different milk samples while other parameters found as per recommended standards. A simple variance analysis (ANOVA) was performed. The result of variance analysis confirmed that there was significant difference between the mean values for parameters of collected milk samples ($p<0.05$). The analysis concluded that only two samples were adulterated with traces of glucose while other 48 milk samples analyzed were free from adulterants like urea, starch, glucose, sugar, salt and nitrates

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Swift Heavy Ion induced interface mixing in a Te/Cd/Te trilayer thin film system

Smita Survase [a] ✉, I Sulania [b], H Narayan [c], P Dhangda [a], M.Thakurdesai [a]

Show more

https://doi.org/10.1016/j.matpr.2019.02.175

Abstract

In the present study Swift Heavy Ion (SHI) induced mixing has been investigated at Te/Cd/Te interfaces using 100 MeV ^{58}Ni, ^{107}Ag and ^{197}Au ion beams at a fluence of 5×10^{12} ions/cm^2. The films were then characterized by using X-Ray Diffraction (XRD), Atomic Force Microscopy (AFM) and UV-Vis spectroscopy. X-ray diffraction (XRD) study reveals the formation of CdTe phase in irradiated samples. The observed ion beam mixing is attributed to the inter-diffusion of atomic species across the interface during transient melt phase. The XRD results show that the average grain size is 28 nm, 20nm and 16nm for the films irradiated with ^{58}Ni, ^{107}Ag and ^{197}Au ion beams at a fluence of 3×10^{12} ions cm^{-2}.The crystallite size decreases with irradiation of heavier ions. Surface roughness as calculated by AFM is found to increase from 6.7 to 6.8 nm with heavier ions. The optical band gap $E_g$is determined from UV-Vis spectroscopy. The band gap increases from 1.58 eV to 1.74 eV. The increase in band gap as a function of S_α is possibly because of the decreased grain-size.

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Keywords

SHI; XRD; UV-Vis; AFM

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Slabs of Crystallographic Planes of Rutile TiO2 as a Photocatalytic Surface (../../pdf_paper_view.php?paper_id=1129&9-IJSRPAS-01609.pdf)

N. T. Tayade[1] , M. P. Tirpude[2] , P. R. Arjunwadkar[3]

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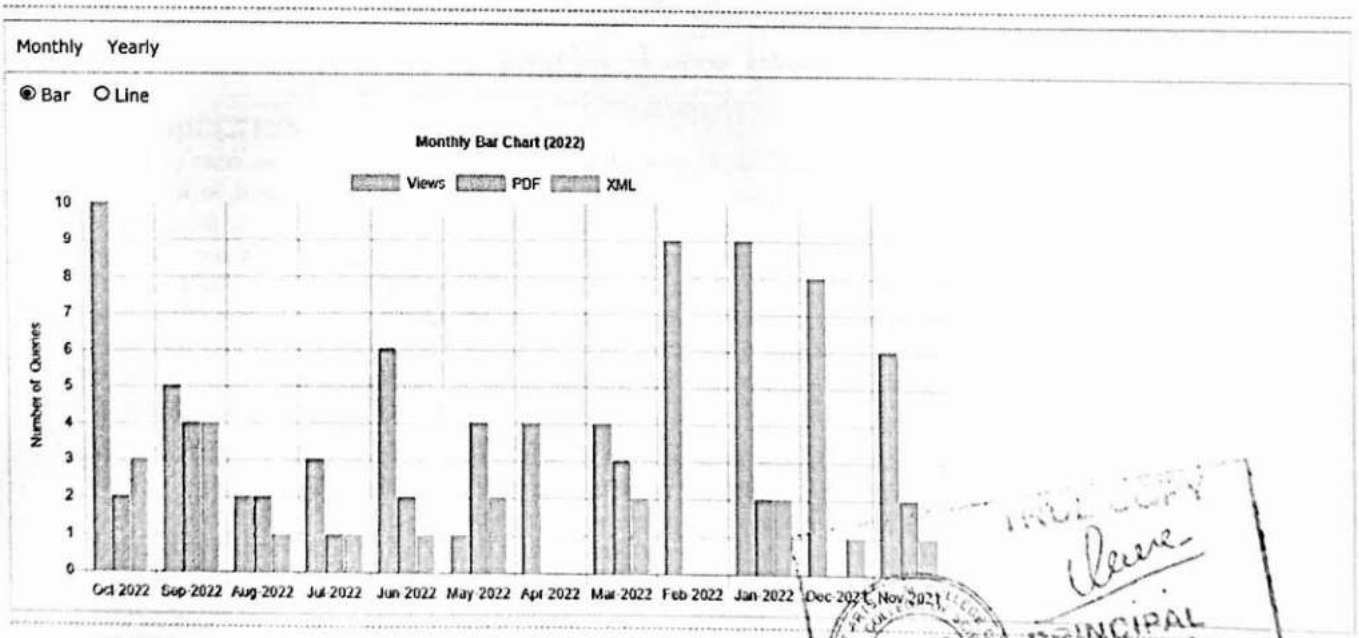

PRINCIPAL

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TOURISM INDUSTRY IN MAHARASHTRA – AN UNTAPPED AREA

Dr. Amita Koli Patkar[1] and Amrita Jadhav[2]
Assistant Professor[1], Varde College, Goregaon (west)
Assistant Professor[2], Annabhau Vartak College, Vasai

ABSTRACT

The soil of India has been always lucky to have witnessed and helped several cultures to develop and cherish. India has been a cradle for various civilizations to mature and develop in various ways. It is a true sense of "Unity in Diversity". The Indian culture teaches its followers to worship tourist as god as in the words "Atithi Devo Bhava". In India one of the eminent states that is gaining momentum is Maharashtra It is a state considered to be part of western, central, southern and south-central India. It is the second-most populous state and third-largest state by area in India. The terms Maharashtra, Maharashtri, Marathi, and Maratha may have derived from the Maharashtri Prakrit, and the word Marhatta (later used for the Marathas) is found in the Jain Maharashtri literature. Maharashtra is culturaly and historicaly rich state. Maharashtra is a state in India which also is growing as a tourist destination for various reasons like agro tourism, rural tourism, education tourism, culinary tourism and Historical tourism. The need of the hour is the state governments' will power to uplift it by some favorable policies. The tourism industry still is at nascent stage it has to go a long way. With the advent of "Digital India movement" and "Swachh Bharat abhiyan" it may touch new high. The positive aspect of growth of tourism is that it absorbs all kind of labour whether skilled or unskilled. The young India can witness a boost in employment if the right button is hit at the right time.

Keywords: Tourism, Challenges and Skilled labour

OBJECTIVE

1. To understand the Ancient places renowned in India for tourism
2. To analyse the present significance of tourism in Maharashtra
3. To cogitate the Challenges regarding the tourism in Maharashtra

INTRODUCTION

India has remained an epicenter of education in the entire South-Asian region since the ancient period. This had given major boost to education tourism at that point in time. Taxila University, Nalanda University and Vikramshila University were epitome of knowledge and most sought after destinations for not only indigenous scholars, but also foreign travellers for knowledge sharing and learning purposes. Also the historical and cultural tourism of India has been always the talk of the town. In spite of inheriting such glorious and noteworthy past of being a prominent center of educational tourism, today India is striving to project itself as an important educational destination. However, with tremendous growth potential of both tourism and education sector in India, it has a strong scope to become a crucial educational destination for the world in general and for the neighbouring countries in particular.

Maharashtra is a state in India which also is growing as a tourist destination for various reasons like agro tourism, Rural tourism, education tourism, culinary tourism and Historical tourism (Sula In Nasik, for its vineyard cultivation) Tourism industry in Maharashtra has a great potential for growth, given the availability of basic infrastructure and the variety of tourist ideas/adventures offered by various destinations. Maharashtra has a bright historical and cultural heritage, which has been untapped by the tourism industry and the government agencies. The supportive basic infrastructure availability throughout the state would provide an ideal platform for fresh investments in the development of tourism and in the process of creating many direct and indirect employment opportunities to locals in tourist destinations.

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The fixed point theorem for continuous densifying mapping

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Asst. Professor

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Mumbai Maharashtra

AIM- Some fixed point theorem we shall prove A fixed point for continuous densifying mapping. We have also referenced some important results given in reference.

Keywords- Some fixed points theorems for mapping and γon metric space on X and we can say about it which are not necessarily continuous and also satisfy a condition of the type-

$$\text{Min}\{(d(\gamma_x,\gamma_y))^2, d(x,y), d(\gamma_x,\gamma_y), (d(\gamma,\gamma_y))^2\} - \text{Min}[d(x,\gamma_x)\,d(y,\gamma_y), d(x,\gamma_y), d(y,\gamma_x)] \le \eta\, d(x,\gamma_x).d(y,\gamma_y)$$

∀ allx,y∈ X and for some η∈ (0 , 1).

Now we are required to introduce some notion for densifying mapping.

To assume,

Let (x, d) be a metric space and γ be a mapping of X into itself. So we say about γ, it is called densifying, if for every bounded subset B of X with ρ(B) > 0, we can write

$\rho\{\gamma(B)\} < \rho(B)$

and here we can say ρ is the measure of non-compactness of B

Now we have to prove theorem given below,

Theorem-Let γ be a continuous densifying mapping of a bounded complete metric space (x, d) into itself.

If for every x, y in X, we can say $x \neq y$, $x \neq \gamma_x$, $y \neq \gamma_y$, so that

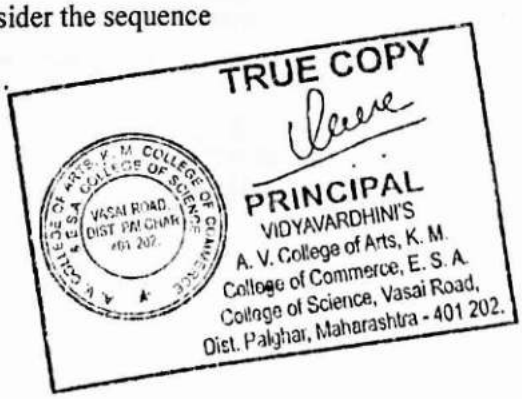
$$\text{Min}\{[(d(\gamma_x,\gamma_y))^2, d(x,y), d(\gamma_x,\gamma_y), (d(y,\gamma_y))^2] - \text{Min}[d(x,\gamma_x), d(y,\gamma_y), d(x,\gamma_y), d(y,\gamma_x)]\} < (a\,d(x,\gamma_x), d(y,\gamma_y) + b\,d(x,\gamma_y), d(y,\gamma_x) + c\,d(xy), d(\gamma_x,\gamma_y) \quad \text{----- 1}$$

where a, b, c are numbers and we can a+c = 1, then γhas a fixed point.

Let $x_0$be the point of X and we can consider the sequence

$x_0, x_1 = \gamma(x_0) \ldots\ldots, x_{n+1} = \gamma(x_n) \ldots\ldots$

Now we can take



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Vol. 48 (05), May 2019, pp. 698-706

Determination of spatio-temporal influences on the distribution of fecal indicator organisms along the north-west coast of India

Abhay B. Fulke*, Edna D'Souza, Aayushi Maloo, Anirudh Ram, Najmuddin Mulani, & Divya Majithiya
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Coastal ecosystem is susceptible to discharge of untreated sewage waste. The present study is aimed to determine water quality status prevailing along the north-west coast of India by monitoring spatial and temporal variations associated with fecal indicator organisms (FIOs) (namely, total coliforms, fecal coliforms, *Escherichia coli* and *Streptococcus fecalis*) along the five designated coastal water sites – Veraval, Hazira, Mumbai, Ratnagiri and Malvan for years (2012-14). Spatial waters illustrated that the concentration of FIOs significantly reduced away from the shoreline. Temporal-based sampling elucidates decreasing trend in fecal loads: Monsoon>post-monsoon>pre-monsoon. Based on the resemblance of water quality characteristics applied by hierarchical cluster analysis, these sites were grouped into three categories: Comparatively less polluted, moderately polluted and highly polluted. Regular trends in coastal FIOs variability, collective information about water quality and environmental factors appear useful for monitoring and management towards pollution encumbered at coastal region.

[Keywords: Water quality; Fecal indicator organisms; North-west coast; Hierarchical cluster analysis; Principal component analysis.]

Introduction

Expulsion of wastewater into the coastal areas is not infrequent particularly in the Arabian coastal region[1]. Unprecedented increase in urbanization and township along the coasts, which provide a source of food, employment, recreation and residence seems to encounter a broad nature of stressors distressing ecosystem and human health via waste disposal practices. Pollution input sowing to alterations in land use and hydrology with massive waste entering on a regular basis may lead to the introduction of an elevated level of nutrients and enteric pathogens combined with flora-faunal changes thereby altering the ecosystem. There exists a fragile balance between the needs of the coastal communities and health of the aquatic ecosystem; therefore, mandates have been implemented to address water quality problems associated with primary point and non-point sources.

Anthropogenic activities alongside land-water interface have a strong likelihood to contribute towards ecological and human health related problems. Over past decades, increasing human activities, growing coastal tourism and disposal of raw sewage into the coastal waters has been a very common practice in the Indian history[2]. While a wide variety of pathogenic indicators have been proposed, the most commonly used estimator is the bacterial abundance of fecal indicator organisms (FIOs) including TC, FC, EC and SF. The abundance of these FIOs have been documented to be associated with various respiratory pathogens, as reported in the literature[3-7]. FIOs have been presumed to origin due to the anthropogenic activity via point and non-point sources[8]. Untreated domestic sewage discharged through non-point sources is attributed to be the major cause of prevalence of multiple drug-resistant FIOs, specifically Escherichia coli in coastal waters of Mumbai, Maharashtra[9]. The proliferation and survival of FIOs will depend on the ability to tolerate wide ranges in physico-chemical parameters, such as salinity, pH, temperature, oxygen saturation, suspended solids, organic content, tide, sunlight penetration etc.[10,11]. Further, the microbial quality will vary due to the extent of inputs, dispersion of organisms as a result of hydrodynamics, rate of deposition, rate of die-offs, surface runoffs, interflow, ground water flow, outflow as a result of changing environmental conditions such as rainfall, tides etc. which consequently affects the extent of pollution[12,13]. During recent years, the coastal waters face many constraints that result in weakening and degradation of natural oceanic ecosystems. The universal problem

Radiation Effects and Defects in Solids >
Incorporating Plasma Science and Plasma Technology
Volume 176, 2021 - Issue 5-6

Articles

Effect of 100 MeV Ni ion irradiation on CdZnTe thin films

Praveen Dhangada, **Madhavi Thakurdesai**, Smita Survase, Vrunda Thakurdesai & L. Ajith DeSilva

Pages 508-516 | Received 26 Jun 2020, Accepted 02 Jan 2021, Published online: 04 Feb 2021

Download citation https://doi.org/10.1080/10420150.2021.1878518 Check for updates

Abstract

Modification of semiconductor thin films by Swift Heavy Ion (SHI) beam irradiation is a unique technique for property improvement. In the present investigation, Cadmium Zinc Telluride (CZT) thin films of thickness 100 nm are deposited on glass substrates by the thermal evaporation method. These films

ScienceDirect

Materials Today Communications

Volume 27, June 2021, 102343

Perspective of Zn_3O_3 ring cluster via density functional theory

Nishant Tayade [a, 1], Sagar M. Mane [b, 1], Manish P. Tirpude [c, 1] ✉, Jae Cheol Shin [b] ✉

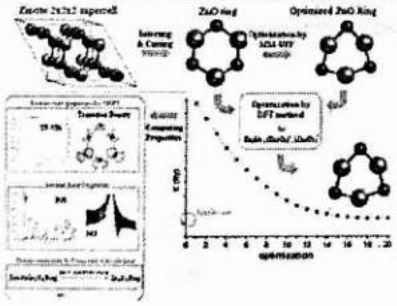
Show more

https://doi.org/10.1016/j.mtcomm.2021.102343

Abstract

ZnO is well known for its optical properties and broad application. Although it has been investigated extensively, information regarding Zn_3O_3 clusters in the form of a ring is insufficient. This paper discusses the extraction of a ZnO ring as a Zn_3O_3 cluster comprising three molecules obtained from a $2 \times 2 \times 2$ zincite supercell and its optimized normal, cationic, and anionic forms under the density functional theory framework. Its geometric and electronic structures as well as electronically excited states are investigated based on electronic spectra. Furthermore, the density of states, transition densities of molecular orbitals, highest and lowest occupied molecular orbitals, lowest unoccupied molecular orbitals, gap energies, binding energies, ionization potential, electron affinity, and quantum descriptors are investigated. Significant changes in the ultraviolet (UV)–visible absorption spectra are reported based on time-dependent density functional theory. Weak interactions by non-covalent interactions in Zn_3O_3 are investigated for the first time in this study; variations in the electrostatic potential are also discussed. The stable form ring and its formation are investigated using thermodynamic potentials U, H, and G (with additional parameters such as zero-point energy and entropy), which are obtained through frequency optimization. The rings investigated from the Zn_3O_3 cluster suggest some possibilities, such as the tuning of UV to visible light absorption.

Graphical abstract



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Chemical Physics
Volume 542, 1 February 2021, 111077

Dissociation of ZnO ring from Zn_3O_3 cluster by CASSCF

Nishant T. Tayade [a, 1], Sagar M. Mane [b, 1], Amardeep T. Shende [c], Manish P. Tirpude [d] ✉, Jae Cheol Shin [b] ✉

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https://doi.org/10.1016/j.chemphys.2020.111077

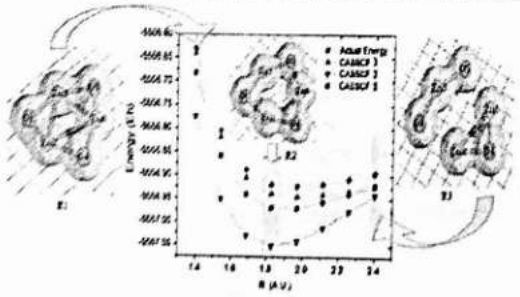
Highlights

- The study focus on a Zn_3O_3 shield-like ring cluster.
- Calculating and analyzing the first excited singlet and triplet.
- First time performed the complete active space self-consistent field (CASSCF) method.
- First time theoretically two ionic fragments have been reported.

Abstract

Dissociation of a Zn_3O_3 ring has been theoretically studied in the present work. For this, the complete active space self-consistent field (CASSCF) method with many-body perturbation simulation has been performed. Scan between two atoms from 1.4 Å to 2.5 Å was taken for analyzing active and CASSCF energies with total system energy. This work reveals the theoretical behavior in an absorption corresponding to the first excited singlet and triplet states concerning the dissociation of the ring. The excited states reporting the changes and the change in the gap between them as an effect of breaking the shield type ring.

Graphical abstract



International Conference on Research Frontiers in Sciences (ICRFS 2021) IOP Publishing
Journal of Physics: Conference Series 1913 (2021) 012007 doi:10.1088/1742-6596/1913/1/012007

Aqueous L-alanine molecular interaction from Gibb's free energy: CPCM and SMD in DFT and ultrasonic studies

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[5] Equal contributions to first author

Abstract. L-Alanine (ALA) in water spontaneously forms stable zwitterions. It is observed in a present work that the stimulation to revert can be done by ultrasonic waves. It's molecular interaction in aqueous system can be found from the Gibb's free energy. It has been examined experimentally by estimating the Gibb's free energy using the ultrasonic method for the verification of theoretical result. The theoretical work performed within the computational DFT framework for the different solvation models. This paper deals with two different solvation models, the CPCM and the SMD, which are implemented in a Density Functional Theory preferred with non-hybrid functional and analyzed interaction perspective. The weak interactions by NCI also analyzed for difference. Further, BP86 reported difference in both model. The SMD model is also tested by using B3LYP and PBEh-3 to compare **ΔG.**

Keywords. Gibb's free energy, L-Alanine, interaction, Ultrasonic method, DFT, CPCM, SMD

1. Introduction

L-Alanine (CH_3CHNH_2COOH) (ALA) is a non-essential amino acid out of basic twenty [1]. In solid state at room temperature, it possesses in orthorhombic crystal structure. It involved in human body [2-5], and used as a dietary supplement [6]. It is also used in therapeutic [7], pharmaceutical products. [8] A recent studies are being reporting number of applications in many areas [1-8]. It is non-linear optical (NLO) material [9-14]. ALA has different solubility in different solvent [15] and it is water soluble. In water it starts the formation of zwitterions due to transfer of hydrogen ion from carboxylic group (-COOH) to amine group ($-NH_2$) i.e. NH_2 becomes NH_3^+ and COOH becomes COO^-. This makes Carboxylic group negative and Amine group positive and making L-Alanine polar in aqueous so that overall resultant charges would become zero. Thermo-acoustical parameters are also found for aqueous L-Alanine [17-20]. The Zwitterions Trajectory and Dynamics of L-Alanine in a droplet of water using computer simulation method has been done by Degtyarenko*et.al.*[21]. The hydration shell properties and hydrogen bonding interaction also discussed for L-Alanine in water solution [21]. These different forms of geometries of L-Alanine molecule needed to study molecular interaction to correlate an experimental ultrasonic outcome in terms of change in Gibb's free Energy (ΔG) with DFT using better solvation schemes. The change in Gibb's free energy (ΔG) on an ionic interaction issue has been reported experimentally (ultrasonic method) and computationally. It has been compared by using the

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A NOTE ON WEEK RADICAL CLASSES

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Abstract. In this article we introduce and investigate the concept of weak radical class of semirings.

Keywords: semiring; radical class; weak radical class.

2010 AMS Subject Classification: 16Y60.

1. INTRODUCTION

In this article, we have introduced the weaker version of a radical class of semirings and established that the existing definition of the radical class of semirings is equivalent to the weaker version for additively cancellative and semisubtractive semirings. We have introduced and investigated the concept of weak radical classes for additively cancellative and semisubtractive semirings. In general addition of two k-ideals (subtractive ideals) is not a k-ideal, hence we have tried to improve some results for restricted class of semirings as given in [1].

Definition 1.1. A nonempty set R is said to form a semiring with respect to two binary operations, addition $(+)$ and multiplication $(\cdot)$ defined on it, if the following conditions are satisfied.
(1) $(R,+)$ is a commutative semigroup with zero,

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Research Article

Preliminary phytochemical and pharmacological screening of *Pogostemon benghalensis* for antioxidant and antibacterial activity

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Received: 19 March 2020 Revised: 21 August 2020 Accepted: 19 September 2020

Abstract

Background: *Pogostemon benghalensis* is an important aromatic herb. Since the ancient time plant is being used as medicines, agrochemicals and pharmaceutical by large number of tribal and rural people. Almost all parts of the plant are helpful to treat different kinds of aliments; very few of these claims have been reported and scientifically studied. **Objectives:** The present study focused on the phytochemical analysis, antioxidant activity, RBC haemolysis and antimicrobial activity. **Materials and methods:** Aqueous and methanol extracts of leaves of *P. benghalesis*, used for Phytochemical analysis revealed major components such as flavonoids, saponins, tannins, glycosides, alkaloids and phenolic compounds present in both PBE. **Results and conclusion:** Results of the study showed that *P. benghalensis* extract showed significant antioxidant and RBC haemolysis activity. Antibacterial analysis of *P. benghalensis* showed moderate to high activity against *Staphylococcus aureus, Escherichia coli, Salmonella typhi, Streptococcus pyogenes* and *Klebsiella pneumonia,* respectively. Therefore, the phytoconstituents in this plant are found to be with high medicinal value and can be explored for further studies. There seems enormous potential and scope for future research and further pharmacological investigation on *Pogostemon benghalensis.*

Keywords: *Pogostemon benghalensis,* phytochemical analysis, antimicrobial activity, antioxidant, RBC haemolysis

Introduction

Medicinal plants have been used by mankind for its therapeutic value. Impressive number of modern drugs has been isolated from natural sources which were based on the uses of the agents in traditional medicine. This plant-based, traditional medicine system continues to play an essential role in health care, with about 80% of the world's inhabitants relying mainly on traditional medicines for their primary health care. According to World Health Organization (WHO), medicinal plants would be the best source to obtain a variety of drugs (Doughari and El-mahmood, 2008).

Pogostemon benghalensis belongs to family Lamiaceae. It is worldwide in distribution. It is perennial, aromatic, pubescent, under shrub; most common in Melghat at higher elevations forming large patches in shaded valleys and along the river banks (Naise and Bhadange 2014). The oil is used as a stimulant and styptic. Since the ancient time plant is being used as medicines, agrochemicals and pharmaceutical by large number of tribal and rural people. The study of primary phytochemical analysis of aqueous, methanolic extract of this plant showed the presence of various secondary metabolites like alkaloids, tannins, carbohydrates, sterol, terpenoids, quinon and flavonoids etc. Essential oil from leaf contains few monoterpene hydrocarbons, a moderate content of sesquiterpenes and high content of aliphatic hydrocarbons.

There are about 47 species mainly used for ethanomedicine and traditional medicinal system. It's mainly used for medicinal purpose such as diuretic, sedative, digestive, antiparasitic, carminative, appetizer, anticonvulsant, anti-inflammatory, and stimulant. Lamiaceae members are well known for their medicinal properties (Chopra, 1956).

Pogostemon benghalensis was selected for the study strictly on the basis of its ethanobotanical uses confirmed from the traditional healers of study area. The present paper deals with its in vitro antibacterial, antioxidant, phytochemical and haemolysis activity.

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/ 2021 - Volume 42 [Issue 6] (https://mbimph.com/index.php/UPJOZ/issue/view/145)
/ Original Research Article

DIGESTIVE ENZYMATIC AND GROWTH STUDY OF Danio rerio FED WITH Agaricus bisporus ENRICHED DIET

TASMI ANSARI ; RAHUL JADHAV

UTTAR PRADESH JOURNAL OF ZOOLOGY, Volume 42, Issue 6, Page 20-25

Published: 29 March 2021

Abstract

The study serve the purpose to evaluate growth performance and digestive enzymatic study of the intestinal tissue of *Danio rerio* as it was measured function of quality of the test diets as the enzyme activity is affected by the proteins and energy densities. *A. bisporus* is a protein rich diet used as effective alternate to commercial diet. In the present investigation *A. bisporus* enriched diet is fed to zebra fish to study growth performance and digestive enzyme activity. A total of 80 zebra fish were divided into 4 groups. The experiment were performed in triplicates and one group is of control fed with commercial flakes .They are fed 10% of their body weight twice a day. The *A. bisporus* demonstrated that after 4th week the weight of the zebra fish significantly increased to 0.90±0.11 and the zebra fish has shown improvement in digestive enzyme activity Protease,

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ASSESSMENT OF DRY WEIGHT PROTEIN CONTENT IN FRUIT BODY AND STIPE OF Agaricus bisporus USING IT AS A FISH FEED TO ASSESS GROWTH OF Oreochromis mossambicus

TASMI ANSARI ; RAHUL JADHAV

UTTAR PRADESH JOURNAL OF ZOOLOGY, Volume 42, Issue 12, Page 31-37

Published: 1 June 2021

Abstract

The purpose of this study was to evaluate dry weight protein estimation in mushroom *Agaricus bisporus* and feeding that to *Oreochromis mossambicus* to evaluate its growth performance with respect to length and weight so as to provide a systematic basis for the effective active application of mushrooms are considered as potential source of protein.As the fruit body (the umbrella shaped body of a mushroom and stipe(Stem or stalk of mushroom supporting the cap of mushroom.) are different parts of Mushrooms has different protein content. Fruit body and stipe enriched diet was fed to *Oreochromis mossambicus* and the study reveals that protein

UTTAR PRADESH JOURNAL OF ZOOLOGY

(https://mbimph.com/index.php/UPJOZ/index)

SURVEY OF MOLLUSCS DIVERSITY IN VASAI-VIRAR BEACHES, PALGHAR DISTRICT, MAHARASHTRA, INDIA

P. R. SALVANKAR ; R. N. JADHAV

UTTAR PRADESH JOURNAL OF ZOOLOGY, Volume 42, Issue 13, Page 117-126

Published: 23 June 2021

Abstract

Biodiversity of bivalves and gastropods at Suruchi beach, Bhuigaon beach, Kalamb beach, Rajodi beach and Arnala beach was assessed in this study. These beaches have different habitat like sandy, muddy and rocky shores. Anthropogenic activities like recreational activities, boat paint and repairs, fishing activities, etc. are observed regularly at these beaches. Booming agricultural activities carried out by tribal community disturbing the original habitat at Suruchi and Rajodi beach. Emergence of new water parks and eatery corners are attracting tourist at Bhuigaon, Kalamb and Arnala beach. Bright coloured calcareous covering of these organisms are collected due to its aesthetic value for jewellery making and decorative artefacts. These soft bodied organisms are used for consumption on a large scale as source of food. As it is rich in minerals and proteins it is used for it medicinal properties. Gastropods are considered as one of the

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eISSN: 2582-8185
Cross Ref DOI: 10.30574/ijsra
Journal homepage: https://ijsra.net/

(RESEARCH ARTICLE)

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Efficacy of some medicated soaps and hand washes available in market

Pimpliskar Mukesh [1], SoumyaGounder [2] and Rahul Jadhav [2,*]

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Abstract

Background: Handwashing is underlined as the absolute most significant measure to forestall cross-transmission of small-scale life forms and consequently to forestall nosocomial contaminations. Be that as it may, under routine emergency clinic practice consistent with this measure is still unsatisfactorily low, under half in many investigations distributed in the previous 20 years. This consistent finding is stressing because ongoing investigations have demonstrated that this degree of consistency won't decrease the danger of transmission of multi- medicate safe microscopic organisms in the emergency clinics.

Results: In the present investigation effect of marketed hand washed namely Lifebuoy, Dettol and Savlon were tested on bacteria *E. coli, S.aureus, S.pyogen, Klebshiella* and, fungi *Candida albicans.* All the handwash at concentrated level found to be effective but only Dettol hand wash could give inhibitory action at 25ug/ml against *Klebshiella* while others at50ug/ml.

Conclusions: Soapex and Dettol soap had broad spectrum activity as it inhibited the growth of Gram positive (*Streptococcus pyogen*) and Gram-negative (*Escherichia coli*). Liquid handwash such as Lifebuoy,Dettol and Savlon showed broad spectrum activity on both Gram-positive and Gram negative test microorganisms.

Keywords: Hand wash; Antimicrobial activity; Nosocomial; Infection; Soaps

1. Introduction

The antimicrobial activity of any substance is described as its ability to kill bacteria or inhibit the growth of bacteria. Antimicrobial activity is important when considering the human body in regards to preventing diseases and skin infections [1]. Soaps and other cleansing agents have been around for quite a long time. For the generations, hand washing with soap and water has been considered a measure of personal hygiene. Bacteria are very diverse and present in the soil, water, sewage and human body and are of great importance about health [2].

Chemicals accept a huge occupation in ousting and wiping out minuscule creatures. Despite the way that fats and oils are a general component of chemicals yet a couple of cleaning agents are added to redesign the antibacterial activities of chemicals. Antibacterial chemicals can remove 65 to 85% of the tiny life forms from human skin [3]. Minuscule creatures are varying and present any place, for instance, in the soil, water, sewage, standing water and even in the human body. Minute creatures' that attack on the human body are basic concerning prosperity [4]. Transient infinitesimal creatures are put away on the skin surface from environmental sources and cause skin defilements. Cases of such microorganisms are *Pseudomonas aeruginosa* [5] and *Staphylococcus aureus* [6] [7]. The criticalness of hand washing is more earnest when it is identified with human administration workers because of possible cross spoiling of

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Online available at zenithresearch.org.in

STUDY OF INTENSTINAL NEMATODE PARASITES PREVALENCE IN COCKROACH, *PERIPLANETA AMERICANA* (L.) FROM AURANGABAD, (M.S), INDIA

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ABSTRACT:

The present communication deals with the prevalence of enteric parasites infection in cockroaches is regarding 49%. there's prevalence of 2 worm parasites of *Periplaneta americana* were recorded specifically *Hammerschmidtiella diesingi* is 28% and *Thelastoma periplaneticola* is 21%. Thus, with a read to complement our information on prevalence of insect parasitic nematodes of district Aurangabad, (M.S), India this work was projected.

KEY WORDS: *Periplaneta americana,* Intestinal nematode parasite, Prevalence, Aurangabad.

ACKNOWLEDGMENT:

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SHANLAX
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Studies on Population Dynamics of Pratylenchus *sp.* (Filipjev, 1936) about Soil Abiotic Factor in the Mulberry Field at Aurangabad, Maharashtra, India

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Abstract

In the present study, the monthly population fluctuation of Pratylenchus sp. (Filipjev, 1936) is ascertain about soil temperature, moisture, pH in mulberry (Morus alba L.) field with economic importance within the sericulture. The studies target is to grasp the influence and impact of those soil abiotic factors on the population of those plant-parasitic nematodes and Correlation coefficients (r) between mean population Pratylenchus spand different soil abiotic factors in Aurangabad Mulberry garden.

Keywords: Pratylenchus sp. (Filipjev, 1936), Population fluctuation, Soil abiotic factors

Introduction

Sericulture has socio-cultural implications. Studies have established scale employment generation potential and high-income generation potential of sericulture (Hanumappa, 1986). Mulberry is a plant within the economy as a result of silk production depends on the nourishing quality of the leaves, which is affected by infective agent attacks (like nematodes, fungus, virus, bacteria, insects, etc.). These pathogens are the most obstacles inflicting considerable loss in yield and nourishing price of mulberry foliage. Feeding of the infected leaves effects on the health of the silkworms adversely; therefore, the cocoon yield is quality and amount. The dearth of standard and systematic studies on the incidence of diseases and epidemics is accountable for the revenant loss in leaf yield (Powell, 1971; Sengupta et al.1990; Teotia and Sen S.K, 1994; Datta et al., 1997; Datta, 2007; Datta and Datta, 2008).

Soil borne diseases caused a significant downside for mulberry cultivation throughout nursery plantation and established gardens,

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10. The Collapse of the Native Family Values in Premchand's *The Gift of Cow* (Godaan)

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Abstract

Munshi Premchand in his literature is concerned with the native value system which is dismantling due to the growing modernization and the advent of non-native value system. This paper attempts to show how the native family values are reflected in the novel, The Gift of a Cow (Godaan). It examines both the positive and the negative aspects of the traditional family system and shows how the unitary family system is a great emotional support and at the same time is exploitative and discriminatory. It tries to prove Munshi Premchand as a humanist writer who portrays reality and brings out the flaws of the Indian society. The research paper shows how the novel senisitises the readers towards the native family values and their importance in human life.

Key Words:- Familial, value system, joint family, native, brotherhood, unity, women

Munshi Premchand (1880-1936) in his literature addresses the contemporary social, economic, political and cultural issues. His literature, fictional as well as non-fictional deals with not only the nationalist movement, Hindu-Muslim relations, peasant activism, gender and caste discrimination but also the transforming native familial and social value system.

Godaan is a widely acclaimed novel of Premchand which was translated into English by Gordon C. Roadarmel as The Gift of a Cow (Godaan)(1936). The protagonist, Hori Ram, who owns a piece of land and works as a tenant of a landlord represents the traditional Indian peasants of the pre-independence era. Along with his family, Hori slaves on the farm but lives in perennial poverty as most of the yield goes to the landlord and the moneylenders who believe in the value of exploitation and profit-making. In spite of the worries of his daughters' marriages and growing debts, Hori Ram aspires to have a cow as he believes that the animal, considered divine will bring prosperity in his life. He buys a cow from the cowherd, Bhola on credit but the cow is poisoned out of jealousy by his own brother. Later, when Hori's son, Gobar falls in love with Bhola's widowed daughter, Jhuniya, Bhola objects to the inter-caste relationship and

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"Population Abundance and Distribution of *Xiphinema sp.* Cobb, 1913 in relation to Soil abiotic factor in mulberry field at Aurangabad, Maharashtra, India."

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Abstract:

In the present study, Population abundance and distribution of *Xiphinema sp.* Cobb, 1913 in relation to Soil abiotic factors namely temperature, pH and moisture in mulberry field. Correlation coefficients (r) and regression analysis between mean population shows a trend of negative correlation between fluctuations of population abundance of *Xiphinema sp.* with soil temperature and pH. On the other hand, a directly proportional relation found between the population abundance and soil moisture with positive correlation in Aurangabad mulberry field.

Key-words:

Correlation coefficients (r), Population abundance, *Xiphinema sp.*

Introduction:

Among all the Sericultural plants, mulberry (Morus spp.) is that the popular in India. Mulberry leaf protein is that the source for the silkworm (Bombyx mori L.) to biosynthesise the silk, which is formed from proteins like fibroin and sericin. Hence, good quality leaves are essential for the assembly of quality silk. The main restriction within the cultivation of mulberry and production of quality mulberry leaves are the attack of pests and diseases including plant parasitic nematodes. The plant parasitic nematodes have a good range of host plants and cause economic damage to many agricultural crops. Few plant parasitic nematode species belonging to different genera are encountered within the rhizospheric soil of mulberry gardens. Mulberry being a perennial crop, the nematodes readily perpetuate and spread within the entire rootage causing

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17. Literature and Human Values : A Dispersed Meditation on Andre Brink's *Philida*

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Abstract

The present research paper is a brief contemplation on literature and human values. It tries to show how human being is guided by various beliefs and values. It also tries to find out values inAndre Brink's novel Philida.Researcher tries to highlights various values which are reflected in the novel. It examinesmajor characters, incidents and situations which reveal different human values.Here focus is given to the slavery and racial discrimination. This paper highlights how human values were violated during colonial time. The paper also illustrates social, cultural, moral, political, economic and racial values in literature and their importance in human life. Both positive and negative values are studied profoundly.

Keywords: discrimination, justice,slavery, morality, ethics, human being, society, culture etc.

Literature is a storehouse of human values. Literature across the world provides peoples a treasury of human values and beliefs.It is reflection ofa society. Literature both realistic and imaginary contents different values. Writers, playwrights, and poetsobserve the society and write theirexperience about the people.They sketch many characters having different socio-political background which comes with individual perspective towards the things. Every individual has his value systems. He tries to follow these values and beliefs.Values are crucial and long-lasting beliefsabout what is good or bad and desirable or undesirable. Values play pivotal role in changing behavior and attitude of persons.Values givesbroadguidelines to persons in all situations.Human values are the principles, judgments and internal beliefs that people should follow in their daily activities.Collin's dictionary defined values as,
"The moral principles and beliefs or accepted standards of a person or social group."

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Globalisation: A Threat to the Indigenous Capable Systems

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Abstract

Globalisation has its own strong points as well as drawbacks. The people all over the world have been enjoying the fruits of this global phenomenon and at the same time suffering because of its invisible adverse impact. The global exchange in the field of education, medical science, technology, space science, etc. has benefitted in the development of the nations across the world. However, the tool of globalisation has also helped in creating monopoly of the powerful nations which has led to the exploitation of the human and natural resources from the less developed countries. Consequently, it has created serious issues of the environment, health, employment, cultural identity, etc. and has destroyed the indigenous capable systems including the agricultural system, means of livelihood, linguistic varieties and the balanced and rich ecosystem. The paper attempts to analyse the adverse impact of globalisation.

Keywords: globalisation, human and natural resources, culture, language, exploitation

The online *Cambridge Dictionary* defines Globalisation as, "the increase of trade around the world, especially by large companies producing and trading goods in many different countries" and "a situation in which available goods and services, or social and cultural influences, gradually become similar in all parts of the world". Globalisation has granted the countries across the world the freedom of exchanges and interactions across the continents in economic, social, political and cultural affairs. It has established interconnections amongst nations and has created international free trade system as a part of global market for goods and services. It has made possible to disseminate new ideas through the medium of radio, TV channels, newspapers, telephone and internet. Resultantly, the events, decisions and activities in one part of the world have started creating significant consequences for the individuals and the communities in the other part of the world. One must agree that globalisation has created opportunities in the form of free trade, global mass media, exchange of advanced technology and medical facilities for the communities across the globe. However, it cannot be neglected

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६. डॉ. बाबासाहेब आंबेडकर सामाजिक क्रांतीची प्रेरणा : बहिष्कृत हितकरणी सभा

लतीका पंकज पाटील
संशोधक, इतिहास विभाग, मुंबई विद्यापीठ.

गोषवारा

भारताच्या इतिहासातील समाजप्रवर्तक म्हणून अग्रगण्य नाव म्हणजे डॉ. बाबासाहेब आंबेडकर. भारतामध्ये जातीयते विरूध्द व अस्पुश्य उद्धारासाठी ज्या क्रांत्या झाल्या त्यांच्या केंद्रस्थानी क्रांतीसूर्य म्हणून बाबासाहेबांचे नाव आहे. ते सामाजिक न्यायाचे खंदे पुरस्कर्ते होते. त्याकाळात मुंबई विभागात सामाजिक सेवा करणाऱ्या अनेक संस्था होत्या, परंतु अस्पुश्य उद्धाराचा साधा विचार सुध्दा कोणत्याही संस्थेकडून करण्यात आला नाही. बहिष्कृत वर्गाला आपले प्रश्न सोडविण्यासाठी किंवा ते जगासमोर मांडण्यासाठी सामाजिक संस्थेची गरज होती. डॉ. बाबासाहेबांनी ही गरज लक्षात घेता, इतर संस्थावर अवलंबून न राहता अस्पुश्य वर्गाची सामाजिक संघटना स्थापन केली तिचे नाव 'बहिष्कृत हितकरणी सभा' असे ठेवले.

प्रस्तुत संशोधन लेखातून बहिष्कृत हितकारणी सभेच्या स्थापनेमागची कारणे, त्याला कारणीभूत असलेली परिस्थिती, सभेचे उद्देश, कार्यपत्रीका, कार्यकारीमंडळ व तद्नंतर प्रत्यक्ष अस्पृश्य उद्धारासाठी सभेने केलेले कार्य व बाबासाहेबांचे बहूमूल्य विचार हयाचा आढावा घेतला गेला आहे.

सूचक शब्द :— बहिष्कृत हितकारणी सभा, नियमपत्रक, विनंतीपत्र, कार्यकारीमंडळ.

प्रस्तावना

डॉ. बाबासाहेब आंबेडकरांनी आपले संपूर्ण आयुष्य हे समजाकार्यासाठी वेचले होते. स्वत: अस्पृश्यतेच्या भट्टीत पोळून निघाल्यामुळे त्याच्या समस्यांशी ते परिचीत होते. सुरवातीपासून त्यांचे अस्पृश्य उद्धारक कार्य सुरू झाले होते, परंतु त्याला खरी दिशा मिळाली ती बाबासाहेब लंडनवरून आपला अभ्यासक्रम पूर्ण करून आल्यांनतर. तेव्हापासून खऱ्या अर्थाने त्यांनी सामाजिक कार्याचा विडा उचलला. क्रांती होणार चळवळी करण्या लागणार हे बाबासाहेबांना माहिती होते. परंतु बहिष्कृत वर्गाचे हित जोपासाण्यासाठी, त्यांना एकत्रीत आणण्यामाठी, त्यांच्या प्रश्नाना वाचाफोडण्यासाठी असपुश्य वर्गाची हक्काची सामाजिक संस्था असावी असे बाबासाहेबांना व त्यांच्या सहकार्याना वाटू लागले. कारण सवर्णाच्या सामाजिक संस्था अस्पृश्याचे प्रश्न पुढे आणणार नाहीत. कारण त्यांना ते प्रश्न सोडवायचे नव्हते आणि तसे करायचे असतेच तर आतापर्यंत हे कार्य अश्या संस्थाकडून झाले असते असे बाबासाहेबांचे मत होते. म्हणून स्वत:ची अशी संस्था किंवा सभा असावी जी चळवळीचं कार्य यशस्वीपणे सांभाळेल हया विचारावर विचारविनिमय करण्यासाठी बाबासाहेबाच्या अध्यक्षतेखाली दि. ९ मार्च १९२४ साली मुंबई येथे दलित समाज सेवकाची एक बैठक

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UNDER SATISFY OBJECTIVE: UNDERINSURANCE IN INDIA

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ABSTRACT

Most of people are unaware about an appropriate insurance, land up into underinsurance which means risk against losses are not insured sufficiently, and as a result people suffer from losses. This condition is dangerous for any person or nation. Because it hinder it's rebuilt or reconstruct of assets.

This paper attempts to draw attention towards the common under estimated concept of underinsurance and it will lead to brainstorming among people and nations to overcome this problem.

Keywords: General Insurance, Underinsurance, Cyber threat, risk.

INTRODUCTION

The term Underinsurance refers to inadequate insurance coverage held by a policyholder. In the event of a claim, underinsurance may result in economic losses to the policyholder, since the claim would exceed the maximum amount that can be paid out by the insurance policy. While underinsurance may result in lower premiums paid by the policyholder, the loss arising from a claim may far exceed any marginal savings in insurance premiums. Underinsurance can cause a serious financial crisis, depending on the asset that is insured and the extent of the shortfall in insurance.

OBJECTIVES OF THE STUDY

1. To study the concept of Under-insurance.

2. To analyse under-insurance in India and global perspective.

DATA COLLECTION

The research paper is purely based on secondary data. Data collected mainly from e-journal, Media Report of IRDA and online sources.

REVIEW OF LITERATURE

Tapen Sinha (2005) analysed the evolution of insurance in India. He concluded that India is fast becoming a global economic power. India is among the important emerging insurance markets in the world. The fundamental regulatory changes in the insurance sector in 1999 will be critical for future growth. Despite the restriction of 26% on foreign ownership, large foreign insurers have entered the Indian market. State-owned insurance companies still have dominant market positions. But, this would probably change over the next decade.

CS Rao (2007) reported that Insurance is a vital economic activity and there is an excellent scope for its growth in the emerging markets. The opening up of the insurance sector has raised high hopes among people both in India and abroad. The recent detarrification in the non-life domain has provided a great deal of operational freedom to the players.

UNDER SATISFY OBJECTIVE: UNDERINSURANCE IN INDIA

In India, insurance has a deep-rooted history. It finds mention in the writings of Manu (*Manusmrithi*), Yagnavalkya (*Dharmasastra*) and Kautilya (*Arthasastra*). The writings talk in terms of pooling of resources that could be re-distributed in times of calamities such as fire, floods, epidemics and famine. This was probably a mention of, what we call insurance in this modern world. Ancient Indian history has preserved the earliest traces of insurance for marine trade particularly with England.

The history of insurance dated back to the Industrial Revolution in the west and the consequent growth of sea-faring trade and commerce in the 17th century. It came to India as a legacy of British occupation. Being Developing Nation the objective of having Insurance was underutilise as far as farming is concern or manufacturing Industries are concern.

The very crucial problem face by all most all developing Nations are underinsurance, where the actual need is more in real sense .Limited knowledge and lack of awareness , being the reason for not having sufficient Insurance .

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Pharmacological Studies on *Dregea Volubilis* and *Derris Trifoliate* – The Medicinal Plants

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ABSTRACT: The present work aims to study the pharmacological studies such as physico-chemical and phytochemical screening on *Dregea volubilis* and *Derris trifoliate*. The samples were collected, washed, dried in hot air oven and were grinded to form fine powder. Both the powders were subjected to various physic-chemical tests such as ash value, water soluble ash, acid insoluble ash and loss on drying. Solvent optimization was carried out and it was found that water and organic solvent Methanol showed best extractive values. Further Methanolic extract was subjected to phytochemical screening which showed the presence of carbohydrates, alkaloid, flavonoids, tannins and phenols were present in both the plants.
Saponins were only present in *Dregea volubilis* plant powder.

KEYWORDS: *Dregea volubilis, Derris trifoliate*, physico-chemical, phytochemical, Methanol

INTRODUCTION

In modern medicine also, plants occupy a very significant place as raw material for some important drugs although synthetic drugs and antibiotics have brought about a revolution in controlling different diseases. [1] Plants used for traditional medicine contain a wide range of substances that can be used to treat chronic as well as infectious diseases.[2] The chemical compounds synthesized by plants as secondary metabolites commonly called as phytochemicals are of great interest in newer drug designing. Several of these plant derived compounds have different biological and other medicinal properties and are of increasing interest in therapeutic as well as other industrial applications.[3] The chemical constituents of the medicinal plants, particularly the secondary metabolites have pronounced pharmacological actions on animal systems and organs. Several bioactive compounds were isolated from the plant sources such as digoxin, digitoxin, morphine, reserpine, taxol, vinblastine, quercetin[2] *Derris trifiliata* (DT) of the family Fabaceae, alternatively Leguminosae is probably the only common climber that grows in mangroves, especially in Sundarban (mangrove forest) of India and Bangladesh. It is a perennial climber, or a much branched climbing evergreen shrub, reaching a length of 8 meters or less.[5] *Wattakaka volubilis* (L.f.) Stapf., (Syn. *Dregea volubilis* (L.f.) Benth. ex Hook.f., *Marsdenia volubilis* Cooke) belongs to the family Asclepiadaceae, is a tall woody climber, with densely lenticellate and pustular branches, leaves opposite, broadly ovate or suborbicular, cordate, acuminate, flowers bright yellowish-green, in lateral drooping, umbellate, cymes, follicle usually 2, lanceolate covered with brown, mealy, tomentum, turgid, c. 2cm long; seeds yellowish brown broadly ovate or broad elliptic, winged, comose.[6] Herbal medicines play an important role in the health-care system to alleviate and treat diseases. There is a great demand for medicinal plants in the herbal industry due to its health beneficiary properties with multi-dimensional chemical structures. Standardization of the medicinal plants is essential to confirm the authenticity and quality to avoid deliberate adulteration and substitution [7]

MATERIALS AND METHODS

Physcio-chemical analysis

The whole plant materials were collected from Nallasopara region, Palghar district, Maharashtra. The plant was washed and dried in hot air oven at 40°C. The plant was crushed and sieved using 0.25 micro mesh sizes and stored in air tight container. The plant was subjected to physic-chemical analysis in accordance with the Practical Pharmacognosy book by Khandelwal K.R.
The following various physico-chemical parameters were analysed

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Abstract:
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Effect of soil abiotic factors on population of *Helicotylenchus* steiner, 1945 associated with mulberry, *Morus alba* L. from Gangapur, Aurangabad (M.S), India

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Abstract

Mulberry is an important source of food for the silkworm Bombyx mori L, and it is grown in the sericulture industry all over the world. Plant parasitic nematodes have a negative impact on mulberry leaf quality and quantity. So, in the present study, the effect of soil abiotic factor changes on the population levels of *Helicotylenchus* Steiner, 1945 in Mulberry, Morus alba L. field and also analyze the Correlation coefficients (r) from Gangapur, Aurangabad District Mulberry garden.

Keywords: *Helicotylenchus*, soil abiotic factors, *Bombyx mori* L., Gangapur

Introduction

Sericulture is one of the most important agricultural industries in India, earning around Rs. 1137.44 crores in foreign currency per year in 2019-20 and employing over 9.18 million people in 2018-19. (Central silk board, 2021) [2]. Sericulture is the process of breeding silkworms for the purpose of producing silk on either mulberry or non-mulberry plants. India has surpassed China in silk production and is currently the world's second largest economy. Agriculture and agro-based sectors are crucial for emerging countries like India to improve their rural economies. Villages are looking for alternative rural industries, one of which is sericulture, due to limited land availability, low monetary returns, and agriculture being limited to one or two seasons per year. It's a small-scale agro-based business that employs a lot of women in rural areas to rear silk worms while the men work in the fields. Thanks to the innovation of new methods by research institutions in mulberry cultivation and silkworm handling among sericulturists, the industry is now performed as a significant vocation and a substantial cash crop in the region. Sericulture is a low-investment, high-output occupation that delivers both jobs and earnings. It is a recreation-oriented small-scale farming sector. The business has a lot of job-creating potential, especially in rural and semi-urban areas (Benchamin and Jolly, 1986) [1].

Mulberry is commercially essential for silk production, which is dependent on the quality and quantity of the leaves, which are prone to infection by nematodes, fungi, virus, bacteria, insects, and other pathogens. These diseases are the cause of a significant reduction in mulberry leaves production and nutritional value. The health of the silkworms is directly related to the quality of the leaves fed to them, and as a result, the cocoon yield is lowered. The recurrent loss in leaf yield is due to a lack of study on the frequency of various illnesses and epidemics (Powell, 1971; Sengupta *et al.*1990; Teotia and Sen S.K, 1994; Datta *et al.*, 1997; Datta, 2007; Datta and Datta, 2008) [18, 22, 25, 4, 6, 5]. The study focused on nematodes connected with mulberry plants, the most common of which belonged to the Hoplolaimidae family. Helicotylenchus spp., Rotylenchus sp., and Scutellonema sp. were the spiral nematode species found. The family's population behaviour in relationship to soil physicochemical factors is also taken into account. (Loukrakpam Bina and Naorem Mohilal, 2020) [16].

The invasion of pests and diseases, particularly plant parasitic nematodes, is a serious restraint in mulberry cultivation and the production of high-quality mulberry leaves. In diverse mulberry-growing countries around the world, some 42 species of nematodes belonging to 24 genera are associated with mulberry (Swamy, B. C. N. and H. C. Govindu (1965) [24]. The severity of the attack and the damage it causes is determined by the soil and climatic conditions in each place. Because nematodes live in the soil microenvironment, soil parameters such as temperature, moisture, and pH have an impact on them, even when it comes to worm population management. The impact of pH and salt content on the survival of several nematodes is studied by Jairajpuri et al. (1974) [12]. Rao and Swarup (1975) [20] reportable the factors those have an effect on the coffee population development and survivality of *Helicotylenchus dihystera*. Shukla *et al.* (1986) [23] studied the population dynamics of *Helicotylenchus* associated with soil temperature and moisture. Kamra and Sharma (2000) record the distribution

लोककवी वामनदादांच्या गीतांमधील अस्पृश्यता आणि जातियतेचे संदर्भ

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लोकशाहीर वामनदादा कर्डक यांनी आपल्या गीतांमधून संपूर्ण जगाला डॉ बाबासाहेब आंबेडकरांच्या विचारांची ओळख करून देण्याचे महत्कार्य केले आहे. वामनदादांच्या गीतांमधील समाजजाणीव विद्रोहाने झपाटलेली होती व्यवस्थेच्या नकाराची ठिणगी पेटवितानाच आत्मशोधाचा समग्र तळ त्यांनी ढवळून काढला शांत पहुडलेल्या समाजाला भानावर आणण्यासाठी, त्यांच्यात जागृततेची ज्वाला पेटविण्यासाठी अंगारशब्दांचा वापर वामनदादांनी केलेला दिसून येतो. केवळ मंचीय सादरीकरणापेक्षा अन्यायी व्यवस्थेवर, जातियतेच्या दलालांवर आणि अस्पृश्यांच्या वेदनेवर त्यांनी वास्तव भाष्य केल्यानेच त्यांची गीते अजरामर झाली आहेत. जातियता, अस्पृश्यता, गरीबी, लाचारी, हतबलता, बेरोजगारी, भ्रष्टाचार अशा एक ना अनेक ज्वलंत प्रश्नांवर वामनदादांनी गीतांच्या माध्यमातून कठोर प्रहार केले आहेत तळागाळातील सामान्यातील सामान्य माणसांना चेतविण्याचे, त्यांच्यात क्रांतीचे स्फुल्लिंग पेटविण्याचे कार्य करताना डॉ. बाबासाहेब आंबेडकरांच्या सर्वव्यापी विचारांचे बीजरोपन करण्याचे ऐतिहासिक कार्यसुद्धा त्यांनी केले आहे जातीय आणि अस्पृश्यतेच्या चटक्यांनी हजारो वर्षांपासून भाजल्या जाणाऱ्या समाजाच्या व्यथा-वेदनांना उजागर करण्याच्या त्यांच्या योगदानाचे गीतांमधील संदर्भ नक्कीच प्रेरणादायी ठरले आहेत.

वामनदादांच्या गीतांमधील अस्पृश्यता आणि जातियतेचे संदर्भ:

१५ ऑगस्ट १९२२ रोजी दुसोंडी, ता. सिन्नर, जिल्हा नाशिक येथे जन्मलेल्या वामन तबाजी कर्डक यांना लोक आपुलकीने 'दादा'सुद्धा म्हणत. वामनदादांनी आपल्या गीतरचनांच्या माध्यमातून समाजजागृतीचे मोठे कार्य केले आहे त्यांच्या ह्या अमूल्य समाजित योगदानाबद्दल प्रा. बाबा बोराडे म्हणतात की, "वामनदादांच्या रचनेत धारदारपणा आहे. दलित, पददलित, पिडीत, अन्यायी-अत्याचारी, रूढी-परंपरा आणि अंधश्रद्धा गुलामगिरी यांच्यावर प्रहार करणारी त्यांची रचना आहे वामनदादांच्या वाणीमध्ये एक प्रकारचा धारदस्तपणा आहे. अज्ञानी, अडाणी ग्रामीण जनतेला, शिकविण्याचे मोलाचे कार्य केले आहे. खऱ्या अर्थाने ते समाजव्यवस्थेने दुर्लक्षित केलेल्या या समाजाचे शिक्षकच आहेत. समाज उन्नती आणि परिवर्तनासाठी त्यांनी शिक्षकाची भूमिका निभावली आहे"[१] अस्पृश्यता आणि जातियता हा भारतीय समाजव्यवस्थेला लागलेला कोडा शाप आहे. परकीय आर्य आणि भारतीय मूळनिवासी अनार्यांच्या लढायानंतर संघर्षानंतर बाताहत झालेल्या अनार्यांनी नदी डोंगर,

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24. An Evaluation of Reforms of 1991

Dr. Gangambika C. Savagaon
Assoc. Prof.

I. Introduction

The New Economic Policy, 1991 built on the concept of liberty was first professed by J.S. Mill to enhance individual choice and for the organisation of production. The economic reforms of the govt. of India in 1991 based on the principle of liberty, however consisted of broadly two kinds of policies. One the stabilisation policy which was implemented in response to a payments crisis in 1991 as India was running a current account deficit of around $ 10 billion and the reserves were down to two weeks of imports. Second, the structural reforms which were initiated in the early 1980s but slowed down later and again vigorously continued as a package of economic reforms in 1991. The stabilisation policy of govt. was embarked upon as an inevitable strategy to come out of the crisis.

II. Rationale of New Economic Policy

It is important to understand that why the present reforms are necessary. Then only the necessary support can be adequately mobilised and sustained through the course of the reforms.

Firstly, the economy as a whole was not that bad with 5.5 percent growth rate just before the economic reforms (1980-90). But the economy slipped into a crisis in the later part of 1990 due to several factors that were not purely economic in nature. India had entered the decade of nineties with large internal and external imbalances which made the economy highly vulnerable for any kind of shocks.

Secondly, the Gulf crisis had added a serious blow to the system and country's foreign reserves dropped dramatically and the international credit ratings placed India at a very low position particularly between August 1990 and July 19991. India faced a macroeconomic crisis that required immediate attention when Prime Minister took office.

Thirdly, these structural reforms were necessary because country had failed to generate adequate rates of growth in income and per capita income which was much less than many other developing countries.

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6. Urbanisation and Infrastructure

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Abstract

Most of the commercial activities except agriculture and village trade take place in urban areas. To a large extent urban India is the engine of productivity and growth in the country. This can be seen from increasing contribution of urban sector to national income. In order to meet the ever increasing demand for urban infrastructure under rapid economic growth there is an urgent need to achieve greater efficiency and accountability in the infrastructure. With increasing demand on one hand and limited resources on the other, the creation of quality infrastructure will need infusion of private capital including foreign capital with govt. major role.

Key words: urbanization, infrastructure, economic development, finance

I. Introduction

Urbanization is positively related to economic development. It is an indicator of development. In India the process of urbanization was slow during British rule. In the year 1911 it was only 10 percent of total population was urban population which increased to 14 percent in 1940. This was in sharp contrast to the urbanization trend prevailing in Europe in those days. The average annual growth rate of Indian cities is 2.9% against world average of 2.5%. It is lower than average growth rate of African cities of 4.4%. The growing rate of major cities of India is Mumbai-2.04%, Delhi-3.19%, Madras-2.19% and Bangalore-4.14%. In 1990 India had 34 cities with a population over 750,000, third only to China (51) and the US (943). About 37% of total urban population lives in million-plus cities. The states with greater urban concentration are Maharashtra, Gujarat and Tamil Nadu. The increase in urban population and productivity due to the government policies has placed further heavy demand on all kinds of urban infrastructure and services. With continuous increase in urban population, industrialization, migration the pressure on urban infrastructure is mounting.

II. Indian Census Definition of Urban Area

In Census of India, 2001 two types of town were identified:

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स्त्रीवाद, स्त्रीवादी साहित्य : संकल्पना आणि स्वरूप

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'स्त्रीवाद' ही एक व्यापक संकल्पना आहे. स्त्रीवाद स्त्रियांच्या प्रश्नापुरताच मर्यादित विचार न करता जीवनाच्या विविध क्षेत्रातील शोषणाविरोधात आवाज उठवतो. स्त्रीवादाचा विकास हा स्त्रियांचे हक्क व त्यांच्यावरील अन्याय, अत्याचार यांना विरोध करणाऱ्या चळवळीतून झाला आहे. ती एक राजकीय विचारप्रणाली आहे. १९६० नंतर स्त्रीवादी विचारसरणीचा भारतासारख्या तिसऱ्या जगातील देशातही गांभीर्याने विचार होऊ लागला. स्त्रीवादी चळवळीचे स्वरूप स्पष्ट करताना डॉ. मंगला वरखेडे म्हणतात, "पुरुषप्रधान समाज व्यवस्थेत स्त्रियांना मिळालेल्या दुय्यम स्थानाचा प्रतिवाद करणे आणि सामाजिक, राजकीय व आर्थिक सत्तास्थानात पुरुषांच्या बरोबरीने स्थान प्राप्त होण्यासाठीची चळवळ हे स्त्रीवादी चळवळीचे स्वरूप आहे"[१] समाजव्यवस्थेत पुरुषाकडे समाजातील एक महत्त्वाचा आणि प्रतिष्ठेचा घटक म्हणून पाहिले जाते. स्त्रीची कार्यक्षेत्रे ही परंपरेने नेमून दिलेली असतात. त्या व्यतिरिक्त कोणत्याही क्षेत्रात तिने हस्तक्षेप करू नये, असा एक अलिखित नियम असतो. ती परंपरेने नमूद केलेले कार्य करत नसेल तर साम, दाम, दंड या नितीचा वापर केला जातो. 'स्त्रीवादी विचारसरणी' वरील अमानवी विचाराला नाकारते. स्त्रियांच्या जीवनातील विषमतेच्या विरोधात स्त्रीवादी विचारसरणी विधायक भूमिका मांडते. 'स्त्रीवाद' या संकल्पनेचा उदय व विकास स्त्रियांच्याय क्रियाशील चळवळीमधून झालेला दिसतो. पुरुषांनी स्त्रियांकडे अभाववादी दृष्टिकोनातून पाहिले, तिचे माणूसपण नाकारले, निसर्गाने दिलेली समता नाकारली. स्त्रीवादी विचारसरणी पुरुषी काव्याला विरोध करते. स्त्री आणि पुरुष यांच्यात भेद करणाऱ्या विषमतावादी विचारसरणीला स्त्रीवाद विरोध करतो. स्त्रीवाद ही संकल्पना थोडक्यात पुढीलप्रमाणे सांगता येईल, "अभावमूलक विचारसरणीला नकार देणे, स्त्री ही अपूर्ण मानव असल्याची समजूत नष्ट करणे आणि स्त्रीविषयक नवीन मानदंड निर्माण करणे ही स्त्रीवादाची थोडक्यात भूमिका आहे."[२] स्त्रीवाद केवळ बौद्धिक चर्चा करत नाही. समाजातील विविध घडामोडीतून स्त्रीवादाचा विकास होत आला आहे. स्त्रीवादी सिद्धांताच्या पाठीमागे अनुभवांची शिदोरी आहे. ही विचारसरणी पुस्तकी नसून त्याच सिद्धांतांचा खरे-खोटेपणा सत्याच्या पातळीवर पारखून घेतला जातो." स्त्रीच्या माणूसपणाचा विचार हे स्त्रीवादी विचारसरणीचे केंद्रस्थान आहे. स्त्री ही प्रथम माणूस, मानव म्हणून जन्माला येते. पण समाजात तिचा जन्म होतो तो समाज तिच्याकडे माणूस म्हणून न पाहता 'बाई' म्हणून पाहतो व तिला बाईच्या पारंपरिक चौकटीत बसवून तिच्यावर 'बाईपणाचा' ठसा उमटवितो. यामुळे पुढे स्त्रीला 'बाई' म्हणून वागविण्याच्या पुरुषप्रधान समाजव्यवस्थेच्या कृतीच्या विरुद्ध आवाज उठविणे व स्त्रीचे माणूस म्हणून अस्तित्व जपणे स्त्रीवादी विचारसरणी आहे."[३] थोडक्यात, पुरुषप्रधान संस्कृतीने स्त्रीचे नाकारलेले 'माणूसपण' स्त्रीला परत मिळवून देणे ही स्त्रीवादी चळवळीची भूमिका आहे. स्त्रीकडे एक 'बाई' म्हणून न्युनतावादी किंवा दुय्यम दृष्टीकोनातून न पाहता ती पुरुषासारखीच हाडामासाची एक व्यक्ती आहे. तिला भावना आहेत. तिला एक वैचारिक भूमिका आहे. या सर्व गोष्टी मान्य करण्यास स्त्रीवादी विचार प्रेरणा देतो.

स्त्रीवादी विचारसरणीचा उदय आणि विकास पाश्चिमात्य देशात झाला. स्त्रीवादाविषयीअनेक गैरसमज आहेत. या चळवळीसंबंधी उथळपणे मतं मांडली जातात. उदाहरणार्थ, पुरुषांसारखे कपडे परिधान