



2.3.1

Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences and teachers uses ICT-enabled tools including online resources for effective teaching and learning process

INDEX

Sr. No.	Name of the Document
1	EXPERIMENTAL LEARNING
1.1	Practical/Assignment and Laboratory Manual
1.2	Industrial Training
1.3	Project Work
1.4	Healthcare activities
2	PARTICIPATIVE LEARNING
2.1	Participation by Students in Seminar/Workshop/Conference and Poster Presentation.
2.2	Cultural Programmes participation
2.3	Awareness Campaign Conducted during NSS/NPW
2.4	Tree plantation drives
2.5	Industrial Visit
3	PROBLEM SOLVING METHODOLOGY
3.1	Expert talk through Seminar / Workshops
3.2	Competitive Examination
4	ICT TOOLS
4.1	Sample Power Point presentation
4.2	Use of Social-Media
4.3	Zoom Videoconferencing
4.5	Online e-resources
4.6	ICT Enabled Classrooms
4.7	Use of Software




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1. EXPERIMENTAL LEARNING

1.1. PRACTICAL/ASSIGNMENT AND LABORATORY MANUAL

1.1.1. LABORATORY RECORD
(B. PHARM)



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Laboratory Journal

Subject: Medicinal Chemistry I

Name : Bhujbal Shreya Vijay.

Class: S.Y. (2019) Roll No.: 08

Examination Seat No.:



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(Degree Course)
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This is to certify that,
Mr./Mrs./Miss. Bhujbal Shreeya Vijay
Exam Seat No. () has satisfactorily carried out the required
practicals work prescribed by university of Pune. for First / Second / Third /
Final year B Pharmacy Course in the subjected Medicinal chemistry-I
during academic year 20 21 -20 22 and this journal represents his /her work
with in the four walls of this Insitute.

Date 25 / 5 / 20 22



Subject In charge

Examiner

Principal



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Vishal Institute of Pharmaceutical Education & Research, Ale

Name: Shreya Vijay Bhujbal Class: S-4 Roll No.: 08

Examination Seat No.: _____ Year: 2021-2022

INDEX

Serial No.	Title of the Experiment	Date	Page No.	Mark	Signature of Staff
1.	Preparation of Benzimidazole from o-phenylenediamine.	8/3/22		2	
2.	To prepare Phenytoin from Benzil and Urea.	15/3/22	7	1	
3.	To synthesize phenothiazine from diphenyl amine.	22/3 5/4	12	1	
4.	To prepare Benzotriazole from o-phenylenediamine.	24/3 12/4	17	1	
5.	To synthesize 2,3 diphenyl quinoxalin from Benzil.	5/4	22	2	
6.	To synthesize Barbituric acid from diethyl malonate & urea.	12/4		2	
			27		
7.	To synthesize Benzocaine from P- amino benzoic acid.	19/4	32	1	
8.	Synthesis of Antipyrine from ethyl acetate & phenyl hydrazine	26/4	37	1	



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INDEX

Completion



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Name : _____ Class : _____ Roll No. : _____

Examination Seat No. : _____ Year : _____

INDEX

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Subject In Charge.

Head of the department




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Practical No. 1

Aim :- To prepare Benzimidazole from O-phenylenediamine.

Principle :-

The two carbon-nitrogen bonds in Benzimidazole when disconnected give O-phenylenediamine and Formic acid. Therefore, synthesis of Benzimidazole is simply affected by heating O-phenylenediamine and formic acid together.

Use :- Antitumor, antifungal, analgesics, antiviral, antihistamine, antiparasitic also used in neurology, cardiovascular diseases and ophthalmology.

Requirements :- Round bottom flask (250 ml), Buchner funnel, measuring cylinder, filter paper.

:- O phenylenediamine, NaOH (10%), Formic acid.

Procedure :-

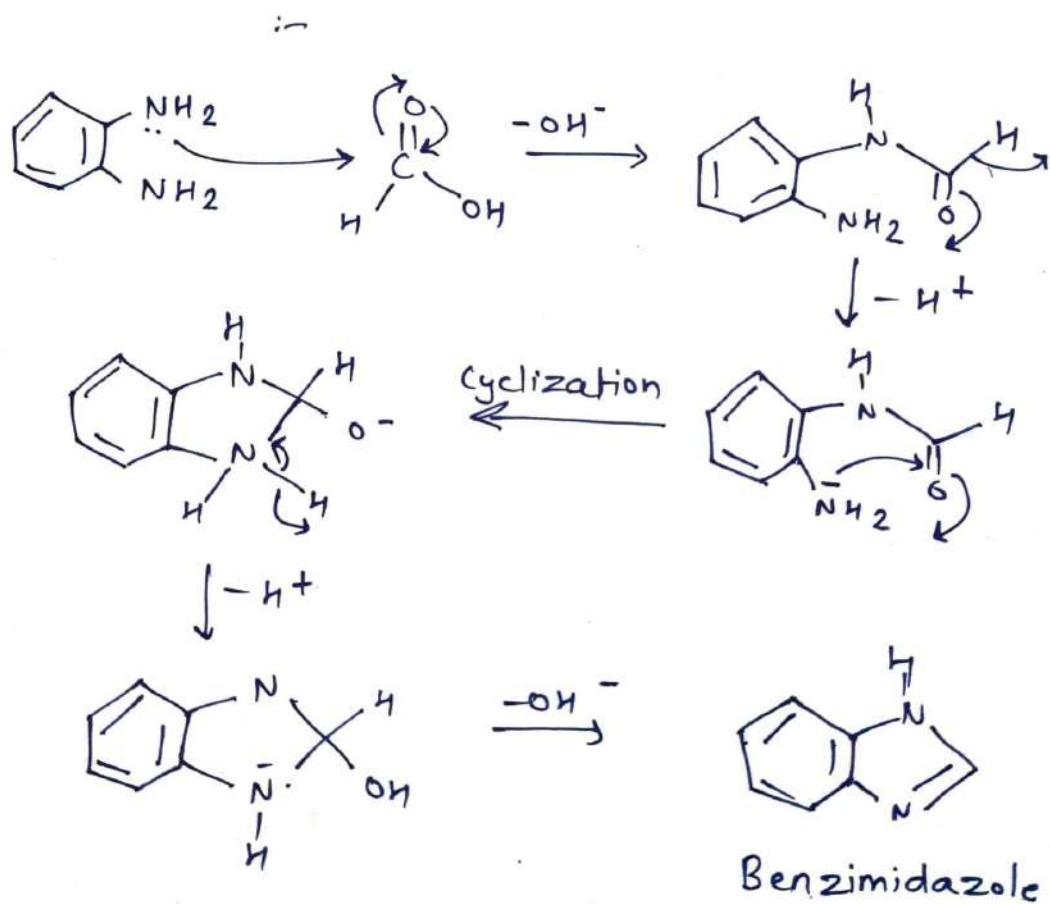
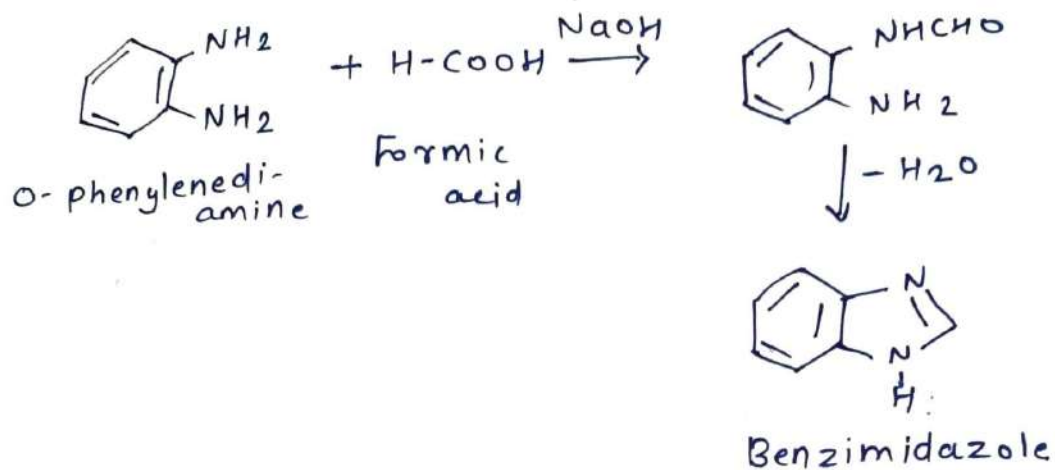
Place 2.7 gm of O-phenylenediamine in RBF of 250 ml and add 1.6 ml of 90% Formic acid. Heat the mixture at 100°C




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Reaction :-




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for 2 Hr. Cool and add 10% NaOH solution slowly with constant rate in the flask until the mixture is just alkaline to litmus. Filter off the synthesized crude Benzimidazole by using the pump, wash with cold water, drain well and wash again with 25 ml of cold water.

Theoretical yield :-

Here, limiting reagent is o-phenylenediamine; hence yield should be calculated from its amount taken.

1. Molecular formula for o-phenylenediamine
- $C_6H_8N_2$
2. Molecular formula for benzimidazole
- $C_7H_6N_2$
3. Molecular weight of o-phenylenediamine
- 108 g/mol.
4. Molecular weight of Benzimidazole
- 118 g/mol.

Procedure :-

108g of o-phenylenediamine forms 118g of Benzimidazole

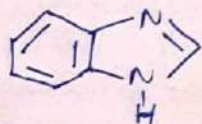
$\therefore$ 2.7 gm of o-phenylenediamine will form
x gm of Benzimidazole.




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BENZIMIDAZOLE

Structure -



Mol. formula - $C_7H_6N_2$

Theoretical yield - 2.9 gm

practical yield - 2.25 gm

% yield - 77.58% w/w

MP - $105^\circ C$

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$$\alpha = \frac{118 \times 2.7}{108}$$

$$\alpha = 2.9 \text{ gm}$$

Theoretical yield :- 2.9 gm

Practical yield :- 2.25 gm

Melting point :- 105°C

$$\% \text{ yield} = \frac{\text{Practical yield}}{\text{Theoretical yield}} \times 100$$

$$= \frac{2.25}{2.9} \times 100$$

$$= \underline{77.58 \% \text{ w/w}}$$

Result :-

The Benzimidazole was synthesized and the % yield was found to be 77.58% having melting point

Reference :-

- 1) Vogel's textbook of practical organic chemistry by Brian S. Furniss, Antony J. Hannaford, Peter W.G. Smith and Austin R. Tatchell, 5th edition 1962.
- 2) Practical organic chemistry, by Hitesh G. Raval, Sunil baldania, Dimal A. Shah, Nirav Prakashan, 301.



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(Degree Course)

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Exam Seat No. 11781) has satisfactorily carried out the required

practical work, prescribed by University of Pune, for First / Second / Third

/ Final year B. Pharmacy Course in the subject ^{Advanced Quality} Assurance Technique

*during academic year 2016 - 2017 and this journal represents his / her work with
in the four walls of this Institute.*

Date: 04/12/2016



Subject In Charge

*Examined
21/12/16*

*Dr. Jadhav S. L.
10/12/16
Examiner*

Principal



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Vishal Institute of Pharmaceutical Education & Research, AleName : Chosediya Bhakti DeepakClass : M. Pharm Roll No.: 1Examination Seat No.: 11787Year : 2016 - 2017 (1st yr)**INDEX**

Serial No.	Title of the Experiment	Date	Page No.	Grade	Signature of Staff
1.	To study simple statistical calculation of laboratory levels.	20-8-16	01-19		<u>S.K.S.</u>
2.	Physical & chemical evaluation of plastic containers as per IP	21-8-16	20-28		<u>S.K.S.</u>
3.	To examine the label of Folvite tablet as per drug & Cosmetic Act & Rule, 1945	27-8-16	29-38		<u>S.K.S.</u>
4.	To prepare a site master file documentation design	28-8-16	39-43		<u>S.K.S.</u>
5.	To prepare master production & control Record (MPCR)	3-9-16	44-53		<u>S.K.S.</u>
6.	To prepare a change control format	4-9-16	54-56		<u>S.K.S.</u>
7.	To prepare internal audit documentation for pharmaceutical manufacturing as per D & C Act & Rule, 1945	10-9-16	57-72		<u>S.K.S.</u>



S.K.S.
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INDEX

Serial No.	Title of the Experiment	Date	Page No.	Grade	Signature of Staff
8.	To design Product Recall Document.	11-9-16	73-77		<i>[Signature]</i>
9.	To prepare In-process Quality Control documentation for pharmaceutical manufacturing.	17-9-16	78-82		<i>[Signature]</i>
10.	To perform experiment & documentation of dissolution test	18-9-16	83-86		<i>[Signature]</i>
11.	To perform IPQC for tablet dosage form (CROCI-N)	24-9-16	87-94		<i>[Signature]</i>
12.	To perform IPQC for injectable preparation (Ascorbic Acid Inj.)	25-9-16	95-99		<i>[Signature]</i>
13.	To perform IPQC for ointment (Chloramphenicol Eye Ointment)	8-10-16	99-101		<i>[Signature]</i>



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INDEX

Serial No.	Title of the Experiment	Date	Page No.	Grade	Signature of Staff
14.	To perform IPGI Suspension.	15-10-16	102 105		<u>S.K.S.</u>
15.	To Formulate & Evaluate the 1:1 Diclofenac sodium gel	12-11-16	106 110		<u>S.K.S.</u>
16.	Formulation & Evaluation oral dispersible tablet of Diclofenac sodium using different conc ⁿ of Superdisintegrant by direct compression method. (Factorial design)	26-11-16	111 119		<u>S.K.S.</u>
17.	To perform material receipt, sampling, dispensing & storage documents.	27-11-16	120 131		<u>S.K.S.</u>




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INDEX

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Certified that Shri/Smt. Chandiya Bhakti Deepak (Seat No. 11787)
of M. Pham Class, has satisfactorily completed the above termwork within the four walls of this Institute.

Examiner's

Lecturer

HEAD OF THE DEPARTMENT



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Experiment No. 1

20-8-2016

Aim :

To study simple statistical calculation & laboratory levels.

Reference:

① Town w. Best, James V. Khan, Research in education 10th edition, Published by Pvt. Limited, New Delhi, Pageno 358, 368

② Bolton Sanford, Bon Charles, Pharmaceutical stats, 10th edition, 2005, Publish Replica Press, Pvt. Ltd India, Pageno: 12 to 22.

Introduction:-

① What is statistics?

Statistics is a body of mathematical techniques of process for gathering, organising analysis & interpreting numerical data.

② Statistics is a basic tool for measurement evaluation & research.

③ Statistics is used of concept rule & procedure that help us to:

- a) Organise numerical information in the form of graph & charts.
- b) Understand statistical tech. underlying decision that affect that lines.
- c) Make informed decision.



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② Data: Facts observation & information that comes from investigation.

a) Measurement data:-

Also called as Quantitative data i.e. result of using instrument measure something (Test score, height)

b) Categorical data:-

It gives is also referred as frequency or qualitative data, things that are grouped around to some common property & numbering of members of the group are recorded.

③ Variables :-

It is a property of an object or event that take an different value.

eg: College major is variable that take on science value like mathematical, computer, science, english etc.

a) Discrete variables:-

i) A variable unit is a limited number of value (eg: gender male/female), collage class (junior/senior).

ii) If a variable of various take some specifics of isolated value with care, normal & integral or countable, this variables are called as discrete variable.

iii) This value of discrete variable is usually obtained by counting process.



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eg. No. of student in class, No. of males in family.

b) Continuous Variables:

i) A variable that can take on many different value in theory any value between the lowest & highest point on the measurement scale.

ii) A variable which takes any value betⁿ certain limits or specified range is called continuous variable.

iii) The value of continuous variable is obtained by process of measurement.

eg: Height of student, weight of student.

c) Independent Variable :-

i) A variable that is manipulated measured or selected by a researcher as an condition to be an observed behaviours.

ii) In hypothetical cause & effect relationship the dependent variable is a the cause & dependent variable is outcome or effects.

eg: Concⁿ of an analyte independent variable.

d) Dependent Variable:

i) A variable that is not under experimental control i.e. the data is variable that is observed & measured in response to the independent variable.



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eg) analytical response, eg: Fluorescence intensity of UV radiation absorbance.

Qualitative Variable:

A variable based on categorical data.

Quantitative Variable:

A variable based on quantitative data.

Graph:

These are visual display used for % (percent) frequency distribution so that shape of distribution can be easily seen.

a) Bar graph:

i) A form of graph that uses bars, separated by an arbitrary amount of space to represent how often element within category occurs.

ii) The highest bar shows highest frequency of occurrence.

iii) The underlying measurement scale is discrete (nominally & ordinal scale data not continuous).

b) Histograms:

i) A form of graph with interval or ratio scale data.

ii) Unlike bar graph in a histogram touch with which of bars defined by the upper



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1.1.3. ASSIGNMENT (B. PHARM)

“Medication Adherence Monitoring Technology”

By

Mr. Meher Rushikesh Shantaram.

F.Y.M.pharm

Assignment Submitted to

Mr. Tambe S.T. (M.Pharm)

MASTER OF PHARMACY

IN

PHARMACEUTICS



Department Of Pharmaceutics

Vishal Institute of Pharmaceutical Education and Research, Ale.




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Organogel : factors and its importance

Prepared by:

Pranaya b. Indore

Roll no. 2

INTRODUCTION

The United States pharmacopoeia defines gel as "semisolid, being other suspension of small inorganic particle or large inorganic molecules interpenetrated with liquid". This is a true phase system, as an inorganic particle is not soluble but merely dispersed throughout the continuous phase¹. There are various types of gel like hydrogel bigel and xerogel. also organogel is one of the type of gel. Various definitions have followed, sometimes the same author providing descriptions ranging from the most elaborate, stating that a gel, Has a continuous structure of macroscopic dimensions that are permanent over the time-span of an experiment and is solid-like in its rheological behavior, to the more basic descriptions stating that if it looks like "Jell-O", It must be a gel.

Number of definition of organogel as follow as:

1. A simple working definition of the term „gel“ is a soft, solid or solid-like material, which contains both solid and liquid components, where the solid component (the gelator) is present as a mesh/network of aggregates, which immobilizes the liquid component. The solid network prevents the liquid from flowing, primarily via surface tension. The gel is said to be a hydrogel or an Organogel depending on the nature of the liquid component: water in hydrogel and an organic solvent in organogels³.
2. Organogel, is a non crystalline, nonglassy thermoreversible (thermoplastic) solid material and viscoelastic system, can be regarded as a semi-solid preparation which has an




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immobilized external apolar phase. The apolar phase gets immobilized within spaces of the three-dimensional networked structure formed due to the physical interactions amongst the self assembled structures of compounds regarded as gelators. Often, these systems are based on self-assembly of the structurant molecules.

Some common examples of gelators include sterol, sorbitan monostearate, lecithin and Cholesteryl anthraquinone derivatives.

The thermo-reversible property of the organogels has generated much interest for the potential use of the organogels as drug delivery system. The thermodynamic stable nature of the organogels has been attributed to the spontaneous formation of fibrous structure by virtue of which the organogels resides in a low energy state. The occurrence of the gel-to-sol transition above room-temperature indicates that external energy has to be supplied to the organogels so as to disrupt the three-dimensional structure and subsequent transformation of the gelled state to the sol state. Various Organogelbased formulations have been designed to administer the bioactive agents by different routes of administration⁵. These systems are capable of solubilizing lipophilic, hydrophilic, and amphiphilic guest molecules, including enzymes. Thermodynamic stability, thermo reversibility in nature, insensitivity to moisture, resistant to microbial contamination, spontaneous formation and viscoelastic behavior are some of remarkable features of lecithin organogels. Experimental design and statistical analysis have been widely used to develop formulation as well as in process optimization and validation⁶. So organogel as potential candidates for controlled release formulations of not only lipophilic drugs, but also hydrophilic drugs.

ADVANTAGES

- Ease of preparation.
- More stable than other types of gel.
- Enhanced the drug penetration through the skin.
- Avoid first pass metabolism.
- Organogels are moisture insensitive.
- Cost reduction due to less number of ingredients.
- Thermodynamically stable.
- Short half life drug used




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- Controlled release of drug, longer shelf life and for prolonged action used.
- Reduces frequency of drug dosing.
- They are less greasy and can be easily removed from the skin.
- Organogel can diminish the diffusion rate of drug because the drug is dissolved in polymer & transported between chains.
- Since it consists of both hydrophobic and hydrophilic components, both Liphophilic and hydrophilic drugs can be incorporated.

DISADVANTAGE

- Drugs with reasonable partition coefficient otherwise drug may not permeable through skin.
- The route is not suitable for drugs that irritate or sensitize the skin.
- In Organogel, lecithin should be in pure form otherwise no gelling will occur.
- Lecithin is most costly and it is not available in large scale.
- If impurity present then no gelling will occur.
- Require proper storage condition.
- When the gel is taken up of liquid with an increasing volume known as swelling .
- When a gel stands for some time, it often shrinks naturally, & some of its liquid is pressed out, known as syneresis.

CLASSIFICATION OF ORGANOGEL

Fig. 1 presents a flowchart compiling various accepted classifications of gels based on the nature of solvents, gelators, and intermolecular interactions.

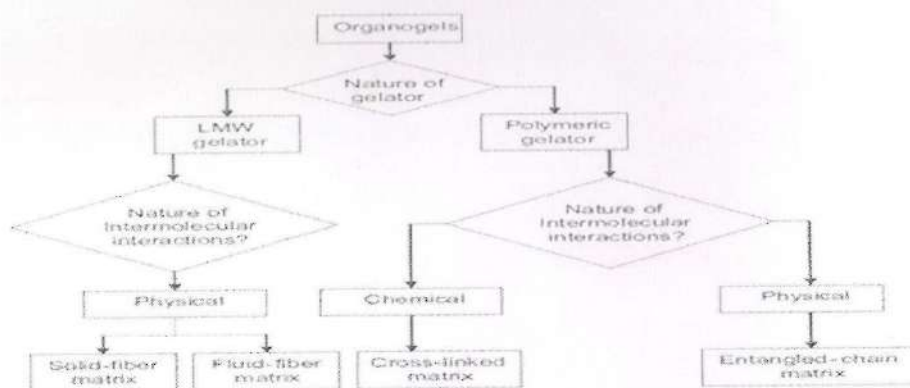
Organogels, the focus of this review, can be distinguished from hydrogels by their predominantly organic continuous phase and can then be further subdivided based on the nature of the gelling molecule: polymeric or low molecular weight (LMW) organogelators. Polymers immobilize the organic solvent by forming a network of either crosslinked or entangled chains for chemical and physical gels, respectively. The latter is possibly further stabilized by weak interchain interactions such as hydrogen bonding, vander waals forces, and π -stacking. Likewise, the self-assembly of LMW organogelators depends on physical




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interactions for the formation of aggregates sufficiently long to overlap and induce solvent gelation. Depending on the kinetic properties of aggregates, an important distinction amongst LMW organogels is made between those composed of solid (or strong) versus fluid (or weak) fiber networks. Despite the numerous trends in gelling processes as well as the impressive variety of gelators identified, it remains difficult to predict the molecular structure of a potential gelator, as well as one cannot readily foresee preferentially-gelled solvents. Today still, the discovery of gelators remains serendipitous and is usually number of scientist or investigator involved in the screening of different solvent systems potentially compatible with the gelation process. Gelation might be due to propensity towards chemical or physical inter-molecular interactions, however no generalizations are so far possible. Number of factors affect on the molecule's aggregating tendency like steric effects, rigidity, and polarity can counter the molecule's aggregating tendency. Control over the gelation process as well as the conception of new gelling molecules remain important challenges to face in the quest of new organogelator.

TYPES OF ORGANOGELOTORS



NEED OF ORGANOGELE

The organogel do not form semisolids on standing. Because an organogel may consists of macromolecules existing as twisted matted strands. The units are of bound together by strong types of vanderwaal forces so as to form crystalline amorphous regions throughout the entire system. The organogels have lower hydrations, the drug dissolving polymer and is transported between the chains. Cross linking increases hydrophilicity of gels & diminishes the diffusion rate of drug.



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1. Lecithin organogels Lecithin organogels

have emerged as one of the most potential carrier systems. The organogel matrix mainly consists of a surfactant (lecithin) as gelator molecules, a nonpolar organic solvent as external or continuous phase, and a polar agent, usually water. A lecithin organogel is formed when small amounts of water or other polar substances, such as glycerol, ethylene glycol or formamide, are added to a non-aqueous solution of lecithin. The transfer into jelly-like state has been demonstrated only for nonaqueous solutions of naturally occurring unsaturated lecithins. The latter are mainly separated from soy bean and egg yolk. Lecithin is a trivial name for 1, 2-diacyl-sn-3- phosphocholine. It belongs to a biologically essential class of substances termed phosphoglycerides or phospholipids. The Lecithin organogel play a key role in the lipid matrix of biological membranes, in the cellular metabolism, used as carriers for hydrophilic and hydrophobic drug molecules. Hydrophobic drugs are dissolved in the oil phase (lecithin + organic solvent) whereas hydrophilic molecules are dissolved in water, which is then added to an organic solution of lecithin to induce gelation. As a biocompatible surfactant so having wide applications in human and animal food, medicine, cosmetics, and manifold industrial applications. Synthetic lecithins containing residues of saturated fatty acids failed to form organogel. The gelling formation was also not observed with hydrogenated soybean lecithin. These studies indicate the importance of lecithin in the naturally occurring form, is important due to which contains unsaturated fatty acids.

2. Sorbitan monostearate organogels

Made up of combination of Sorbitan monostearate (Span 60) and sorbitan monopalmitate (Span 40) have been found to gel a number of organic solvents at low concentrations. Span 60 gels were found to be more stable than Span 40 gels and were investigated in greater depth. The thermoreversible gels are prepared by heating the gelator/liquid mixture in a water bath at 60°C (which results in dispersion of the gelator in the liquid medium) and cooling of the resulting suspension, following which the latter sets to an opaque, white, semisolid gel. Cooling results in reduced affinities between the solvent and the gelator molecules, which self-assemble into tubules. X-ray diffraction and freeze-fracture studies indicate that sorbitan monostearate molecules are arranged in inverted bilayers within the tubules. Sorbitan monostearate organogels are opaque, thermoreversible semi-solids whose microstructure consists of surfactant tubules dispersed in the organic continuous phase. Inverse toroidal vesicles are the precursors of the surfactant tubules. The gelation process was observed as an




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isotropic sol phase of sorbitan monostearate in isopropyl myristate was cooled using hot-stage light microscopy. At the gelation temperature, inverse toroidal vesicular structures were seen to grow in the organic phase. These toroids are thought to be analogous to other wellknown vesicles, liposomes and niosomes, except for their toroidal (rather than spherical).shape and their inverse nature. They are rather shortlived structures: on further cooling of the sol phase, tubules form in the organic medium: it is speculated rod-shaped segments.

3. Micro/Nano-emulsion based organogels

Microemulsions

is defined as thermodynamically stable transparent, single optically isotropic liquid system of water, oil and surfactants frequently in combination with suitable cosurfactants. Microemulsions are known to enhance the bioavailability of drugs via topical and systemic routes. Microemulsion appears to have the ability of deliver larger amount of topically applied agents into the mucosa than the traditional gel & creams. The use of a microemulsion gel as vehicle may enhance transdermal penetration by various mechanism, many molecules or solubilised in microemulsion in addition microemulsion induce a change in the thermodynamic activity of the drug they contain, modifying their partition coefficient and thus favour penetration of the stratum corneum. Furthermore, their component surfactant reduces the functional barrier of stratum corneum. Nanoemulsions are thermodynamically stable transparent (translucent) dispersions of oil and water stabilized by an interfacial film of surfactant and cosurfactant molecules having a droplet size of less than 100 nm.

4. Organogels

based on other low molecular weight gelators Scientists have investigated the transdermal delivery of piroxicam from organogels composed of glyceryl fatty acid ester gelators in pharmaceutical oils. The in vivo skin penetration of the drug, evaluated by measuring the antiinflammatory inhibition of oedema after IJPCBS 2014, 4(3), 758-773 Nigar Kadar Mujawar et al. ISSN: 2249-9504 765 treatment, was found to be superior for glyceryl fatty acid ester organogels as compared to traditional topical formulations such as liquid paraffin. Use of a long-chain glutamate based gelator has demonstrated by scientists (N-lauroylLglutamic acid di-nbutylamide) at concentrations of 2–10% to gel isostearyl alcohol and propylene glycol, yielding translucent and opaque gels, respectively. In vitro permeation studies on human skin using haloperidol, an antipsychotic drug,




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showed facilitated permeation upon incorporation of 5% limonene, a known permeation enhancer.

5. Poly (ethylene) organogels

The only two such systems have been widely tested for drug delivery applications are poly (ethylene) and P (MAAco- MMA) organogels. In a study dating back to the 1950s and involving 300 patients, Poly (ethylene) organogel (PO) patches were shown to be non-irritating and have low sensitizing properties. In a related investigation, 326 patients were treated with spectrocincontaining PO and compared with patients treated with spectrocin in petrolatum base alone. Both antibiotic ointments cleared pyoderma and secondarily infected eruptions in 3–5 days, but it was found that the PO provided a faster, more efficient release. Poly (ethylene) was also used in the formulation of 5-iodo-2'-deoxyuridine for the treatment of oral herpes simplex lesions. A 10% drug-loaded formulation showed a resolution of herpetic lesions in 3-days after treatment initiation, compared to 1–2 weeks in untreated control patients.

6. Supramolecular organogels

In the recent past, molecules of a great structural diversity, for instance from the simplest alkanes to the complex phthalocyanines, have been discovered to be gelators. Recently immense interest has been generated in studying gels derived from low molecular mass gelators (supramolecular or simply molecular gels). The motivation for this is not only to understand the fundamental aggregate structures in the gels at different length scales, but also to explore their potential for futuristic technological applications. Gels have been made sensitive to external stimuli like light and chemical entities by incorporating a spectroscopically active or a receptor unit as part of the gelator molecule. This makes them suitable for applications such as sensing and actuating. The diversity of gel structural architectures has allowed them to be utilized as templates to prepare novel inorganic superstructures for possible applications in catalysis and separation. Gels derived from liquid crystals (anisotropy gels) that can act as dynamically functional materials have been prepared, for example, for (rewritable) information recording. Supramolecular gels can be important in controlled release applications, in oil recovery, for gelling cryogenic fuels etc. They can also serve as media for a range of applications. This tutorial review highlights some of the instructive work done by various groups to develop smart and functional gels, and covers a wide spectrum of scientific interest ranging from medicine to materials science. e.g.: cyanochalcone¹⁵




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. 7. Eudragit organogels Eudragit organogels

are really mixtures of Eudragit (L or S) and polyhydric alcohols, such as glycerol, propylene glycol and liquid polyethylene glycol, containing high concentrations (30 or 40% w/w) of Eudragit. Drug-containing gels were prepared by dissolving the drug (salicylic acid, sodium salicylate, procain or ketoprofen) in propylene glycol, pouring the resulting solution into Eudragit powder (contained in a mortar), and immediately mixing with a pestle for 1min. Gel consistency and spreading is described using a penetrometer and a spreadmeter. Gel viscosities were found to increase with increasing concentrations of Eudragit and to decrease with increasing drug content. Example the release of model drugs salicylic acid, sodium salicylate and ketoprofen from Eudragit L and S organogels was investigated in vitro by the rotation disk method. Interestingly, the mechanism of salicylic acid release from Eudragit L and S organogels into a phosphate buffer were totally different. Release was due to surface erosion of the Eudragit L organogel but to diffusion through the Eudragit S gel matrix. The authors suggested that drug content in Eudragit organogels be kept low (e.g., 1.25% w/w) to maintain gel rigidity and stability.

8. In situ forming organogel

of L-alanine derivative N-lauroyl-L-alanine methyl ester (LAM) was found to gel the pharmaceutically acceptable organic solvents, soybean oil and medium-chain triglycerides. Normally the system exists in the gel state at room temperature. However, the addition of ethanol to a gelator/solvent solution inhibits gelation because the ethanol disrupts the formation of hydrogen bonds (essential for gelator self-assembly into aggregates) between the IPCBS 2014, 4(3), 758-773 Nigar Kadar Mujawar et al. ISSN: 2249-9504 766 gelator molecules. This means that a solution of LAM in an organic solvent can remain in the sol phase at room temperature when some ethanol is added to the mixture. When such a sol phase (20% LAM + 14% ethanol in soybean oil) was placed in phosphate buffered saline at 37°C it turned into a opaque gel within 2 min as the hydrophilic ethanol diffused away into the aqueous buffer, and as gelator-gelator hydrogen bonds were formed. Thus, theoretically, such a LAM/ethanol/soybean oil solution could form gels in situ following its subcutaneous injection, due to ethanol diffusion away from the formulation, into the surrounding tissues; in situ gel formation in rats was indeed investigated. The main advantage of in situ forming gels is their injectability at room temperature. Once a drug-containing gel is formed in situ, it could act as a sustained-release implant.




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CHARACTERIZATION OF ORGANOGELS

1. Physiochemical properties

2. Physiochemical properties of the organ gel

are due to its structural features. An efficient characterization methodology for any organ gel system begins with its structural elucidation. The isotopic nature and optical clarity organ gel study is feasible by various spectroscopic techniques, namely NMR and FTIR spectroscopy. FTIR spectroscopy has been found to be successful in establishing the hydrogen bonding as one of the major driving force for the self assembly of organogelator molecules in organic solvent. The knowledge of molecular packing within the organogel network has been obtained using scanning and transmission electron microscopies, dynamic and static light scattering (elastic or quasielastic light scattering technique.) small angle neutron scattering {SANS}.

2. Rheological behavior

The critical parameter such as spreadability, adhesiveness, cohesiveness and gel consistency need to be modified

3. Viscoelasticity Organogels

have been studied extensively for their rheological attributes and have been determined to be viscoelastic in nature. Scartazzini and Luisi performed the dynamic shear viscosity prepared using different types of organ gel solvent (eg. linear and cyclic alkenes, amines). The higher values obtained using linear alkenes were related to the higher state of structural organization organogels. Similarly, Schurtenberger E T found that increasing the gelator concentration leads to an increase in the viscosity and in turn the gel strength

. 4. Swelling Gels

can swell by absorbing liquid with an increase in volumes. Solvent penetrates the gel matrix, so that gel-gel interaction are replaced by gel solvent interaction. Limited swelling is usually the result of some degree of cross linking gel matrix that prevents total dissolution.) gives an insight into the nature of microstructures that form the gelling crosslinked network. The phase transition temperatures also help in optimizing the organogel composition.




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5. Water content

Water content of organ gel system is critical, as the water loss by evaporation can lead to consequent decrease in viscosity thus affecting the gel stability. Near infra red spectroscopy studies on lecithin/IPP/water organogel system by measuring the water absorption in the NIR region (1800-2200nm). In this region, water shows a strong absorption peaks at 918nm due to H-O-H stretching overtones, which are easily detectable and quantifiable.

6. Phase transition temperature

The phase behavior of organogel varies on changing temperature condition. The phase transition temperature (PTT) (i.e. sol to gel or gel to sol) gives an insight into the nature of micro structure that form gelling cross linked network. For the determination, hot stage microscopy and high sensitivity differential scanning calorimetry have been reported to be useful as accurate and sensitive techniques. PTT also reveals the micro structural homogeneity of the prepared organogel system. For example, a narrow PTT range (i.e. 3) is indicative of homogenous microstructures within the gel¹².

7. Gelation kinetics

Determined by using method like inverse method and turbidimetry method⁴

8. Viscoelasticity

Viscoelasticity is associated with the materials having both viscous and elastic properties. The organogels seems to follow Maxwell model of viscoelasticity. Organogels are the three dimensional structures which are formed due to the physical interactions amongst the gelator molecules. The organogels behaves like a solid at lower shear rates and hence shows an elastic property. As the shear stress is increased, the physical interacting points amongst the fiber structures start getting weakened until the shear stress is high enough to disrupt the interactions amongst the fiber structures, when the organogels starts flowing. This behavior may be best explained with the plastic flow behavior

9. Optical Clarity




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Depending on the composition of the organogels, the organogels may be transparent or opaque in nature. The lecithin organogels are transparent in nature while the sorbitan monostearate organogels are opaque in nature.

10. Thermo Reversibility Organogels

are heated up above a critical temperature, they lose its solid matrix like structure and start flowing. This has been attributed to the disruption in the physical interactions amongst the gelator molecules due to the increase in the thermal energy within the organogels. But on cooling, the physical interaction amongst the organogelators prevails and the organogels revert back to the more stable configuration.

11. In Vitro Drug Release

The permeation apparatus designed as described by Chowder et al. was employed to study the release profile of drug from semisolid formulation. The media used as receptor fluid. The release of drug from gel through various membranes was determined using Franz diffusion cell.

12. Safety and Skin Compatibility

Study Organogel systems i.e., gels are composed of pharmaceutically approved (non-immunogenic and biocompatible) excipients. However, the level of surfactant and organic solvents in organogels is fairly high. Therefore, it is important to consider the safety and irritancy of the formulation on prolonged use. The irritation potential of organogels has been assessed by Dreher et al, by carrying out human skin irritation study. Results indicated a very low cumulative skin irritation potential of organogels that supports the suitability of organogels as a topical vehicle for long-term applications.

USES OF ORGANOGELS

1. For Rheumatoid Arthritis Rheumatoid arthritis is a chronic disorder for which there is no known cure. Fortunately in the last few years, a shift in strategy toward the earlier institution of disease modifying drugs and the availability of new classes of medications have greatly improved the outcomes that can be expected by most patients.
2. For Osteoarthritis Eighty percent of individuals older than 65 have radiographic signs of osteoarthritis (OA), and a large percentage have




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symptoms. Given the chronic nature of the disease and the high incidence of medication side effects in the elderly, an understanding of the risks and benefits of NSAIDs in treating OA is crucial.

3. Inflammatory arthropathies.(e.g.ankylosing spondylitis, psoriatic arthritis, Reiter's syndrome)

4. Dysmenorrhoea (menstrual pain),

5. Postoperative pain, Metastatic bone pain.

6. It are also given to neonate infants whose ductus arteriosus is not closed within 24 hours of birth Headache and migraine

7. Mild-to-moderate pain due to inflammation and tissue injury

8. For Acute gout treatment

9. For Pyrexia: Antipyretics (pertaining to fever) are drugs or herbs that reduce fever. 10. For Muscle injuries

11. Clinicians faced many problems with conventional dosage form for local delivery of drug so to avoid the risk with topical preparations.

12. Topical preparations are made for the localized effects at the site of their application by virtue of drug penetration into the underlying layers of skin or mucous membrane with low concentrations of potent active drugs in the bloodstream likewise minimize side effects.

13. Helps in achievement of more constant blood levels with lower dosage of drug by continuous drug input. It is very commonly used dosage form and avoided various side effects which may be shown in other dosage form.

14. The main advantage of topical delivery is to bypass first pass metabolism and Avoidance of the risks and inconveniences of intravenous therapy and of the varied conditions of absorption, like pH changes, presence of enzymes, gastric emptying time, reduces frequency of drug dosing are other advantage of topical preparations.

15. In the treatment of skin aging Skin aging is an unavoidable aspect of human life. Premature skin aging can result from poor care, environmental pollutants, and ultraviolet radiation exposure. Some indicators of skin aging like wrinkles, lines, spots,uneven skin tone, and pigmentation. One cannot avoid aging but cosmetics and pharmaceutical approaches play an important role in that. Lecithin organogel (LO) is an effective vehicle for topical delivery of many bioactive agents used in aging treatment. Lecithin is cell component isolated from soya beans or eggs and purified to show excellent gelation in nonpolar solvents when combined with water. LO can form a heat-stable, resistant to microbial growth, visco-elastic in nature, optically transparent, and non-birefringent, micellar system. Lecithin organogel act as a penetration




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1.1.4. ASSIGNMENT (M. PHARM)

ASSIGNMENT OF QUALITY PLANNING ANALYSIS

Name - Miss Bhose Pooja Shivaji

Roll NO - 1

M-pharm First year sem II

QUALITY AUDIT

24/05



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Quality Audit -

Quality Audit is defined as a systematic and independent examination to determine whether quality activities and related results comply with planned arrangements, and whether these arrangements are implemented effectively and are suitable to achieve objectives.

Types of Quality Audit -

The quality audit system mainly classified in following different categories.

1. Internal Audit main type
2. External Audit
3. Secondary Party Audits
4. Third Party Audits
5. Process Audits
6. Product Audits
7. System Audits.

Internal Audit -

ensure that an organization is meeting its own quality standards or contractually required standards (called a first party audit).

Done by ~~author~~ auditors who work for the company. They may also be hired by the company to audit its own functions.

Auditors must be independent of the function they are auditing.



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Purpose of Internal audit -

1. To ensure that adequate quality systems are maintained.
2. To assess compliance with the C-GMP's and firm's standard operating procedure.
3. To achieve consistency between manufacturing and testing facilities.
4. To identify problems internally and correct problems prior to a FDA inspection.

External Audits:-

External auditors are separate from the company.

They may be hired by a supplier or a customer to ensure that the audited company meets their quality standards.

They may be audited by the government to verify that they meet military specifications.

External audits can be done by quality consultants specializing in the quality standards for those organizations.

Purpose of External Audits:-

1. Confidence in the partnership arrangement.
2. Ensuring that requirements are understood.
3. Reducing the risk of failure.
4. Carried out by company on its vendors.
5. No legal requirement to conduct the audit.
6. External audit have experience of GMP as well as regularly audited by their certification body.

Second party Audit -

external audits done by a company that has a contract with the audited firm is called a second party audit.



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Third Party Audits-

external quality audits done by an organization that has no contract with the company it is auditing is called a third party audit.

Process Audits-

A process audit verifies that a documented process meets quality standards. This process could be a manufacturing process or service process.

Product Audits-

A product quality audit verifies that a physical product meets design specifications and other quality measurements.

System Audits-

It is a review of how quality standards are measured and met by the company. It verifies the procedures used to measure the quality of the product, how defects are recorded, and how the company ensures that failed product is not passed.

GMP Compliance Audits-

GMP Compliance Audit is an audit or an inspection conducted by someone external to your organization with the purpose of discovering GMP deficiencies.

A GMP compliance audit will allow you to avoid delays in bringing product to market due to not passing a GMP audit.

GMP compliance audit will allow you to gain greater knowledge of the quality issues affecting your organization.

- Develop increased awareness of regulatory expectations.
- Recognize commonly seen GMP deficiencies and learn how to reduce them in your organization.



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understand the inspection process and how you can prepare for it.

Identify quality-critical areas in your own organization eg- technical agreements, training, record keeping, delegation

Receive guidance on changing legislation and increasing complexity in the manufacturing and distribution chain for medicinal products

Auditing strategies-

Audits related to the organizational strategy can be divided into two distinct categories; strategic risk audits and strategy process audits.

Strategic risk audits focus on risks that arise the result of pursuing certain strategically important organizational goals.

A strategic process audit is an assessment of the strategic management process or even of (the content of) the formulated strategy.

Preparation of Audit -

should start from the beginning of the study:

- Ensure that we have the documents to prove that study has been conducted properly.

According to ICH-GCP, Local regulation, Institution SOP.

- All party understand the protocol, procedure any concern raised by any party should be documented.

Aware of the chronology of the event, version of document



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Date :- 21/3/2018

ASSIGNMENT

QUALITY PLANNING ANALYSIS

Name :- Bhavana S. Chandediya.

Roll No. :- 2

1st Yr. M. Pharm (Sem II)
(2017-18)

42/05




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QUALITY AUDIT PROGRAM.

Principles of a Quality Audit Program:-

Five principles are essential to a successful quality audit program:-

1. An uncompromising emphasis on conclusions based on facts. Any conclusions lacking a factual base must be so labeled.
2. Audit program/report must provide sufficient detail on deficiencies to facilitate analysis and action by line managers.
3. An attitude on the part of auditors to identify opportunities for improvement. Such opportunities include highlighting good ideas used in practice that are not part of formal procedures.
4. Addressing the human relations issues discussed.
5. Competence of auditors. The basic education and experience of the auditors should be sufficient to enable them to learn in short order the technological aspects of the operations they are to audit.



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Subject Matter of Audit :—

- For simple products, the range of audits is also simple and is dominated by product audits.
- For complex products, the audit is far more complex.
- In large companies, even the division of the Subject matter is perplexing problem. For such companies, the programs of audit use one or more of the following approaches to divide up the subject matter:—

1. Organization unit.
2. Product lines.
3. Quality Systems.
4. Specific activities.

Examples of audits of tasks

Scope or Activity	Examples of Specific task audited.
Engineering document ⁿ	Use of latest issue of Specifications by operations; time req. for design changes to reach shop.
Calibration of measuring equip.	Existence of calibration procedures & degree to which calibration intervals are met.
Production & inspect ⁿ	Adequacy of certification programme for critical skills; Adequacy of programme.
Material status	Segregation of defective product.




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Structuring the audit program —:

Audits of individual tasks or systems of tasks are usually structured.

For E.g., they are designed to carry out agreed upon purposes and are conducted under agreed rules of conduct.

Reaching agreements on these rules and purposes req. collaboration among three essential participating:

- The head of the activities which are to be audited.
- The head of the auditing department(s).
- The upper management, which presides over both.

Audits are often done by full-time auditors who are skilled in both technical and human relations aspects.

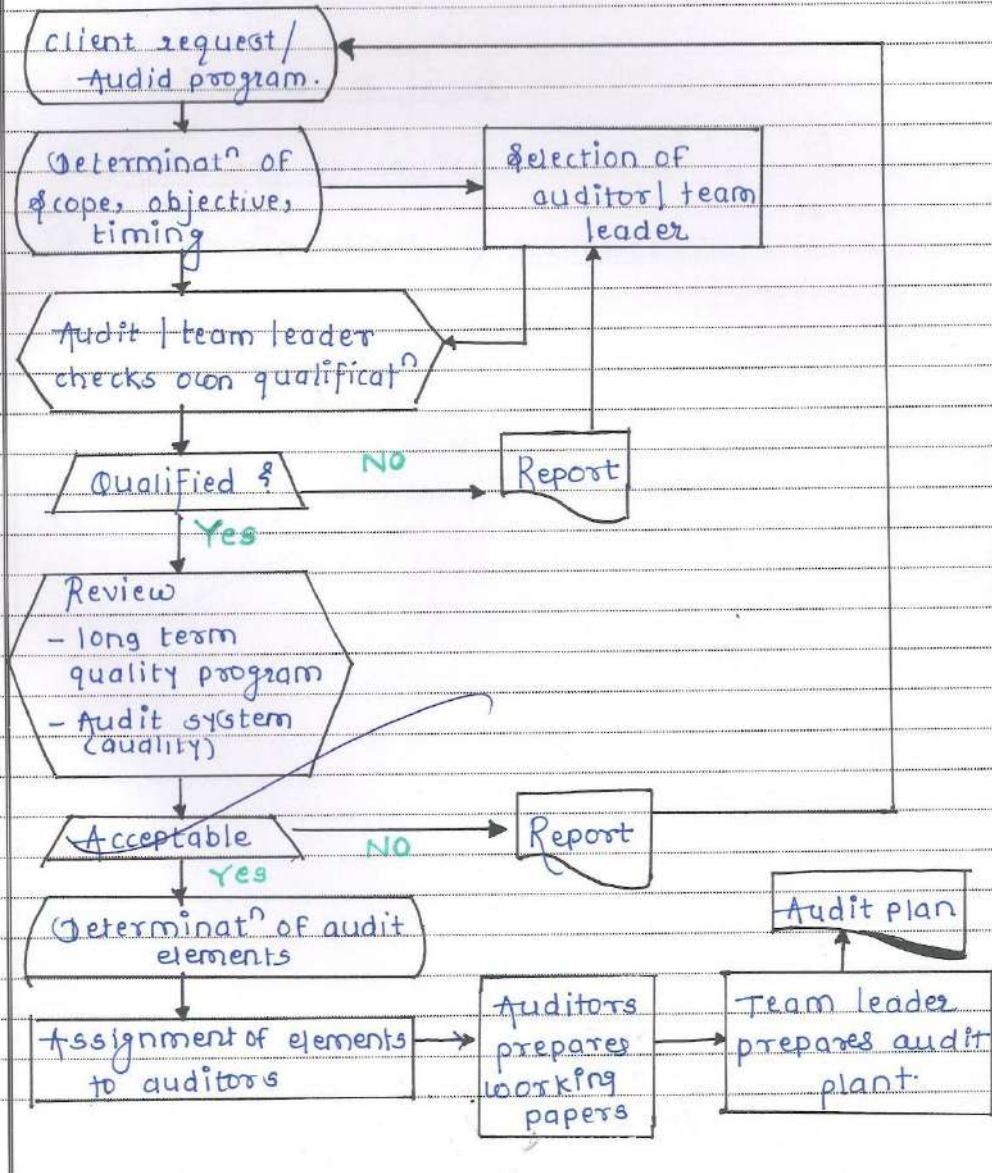
Audit teams of upper managers, middle managers and specialists can also be effective.




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Planning Audits of Activities :-

The main steps in performing an audit are planning, performing, reporting, Follow-up on corrective action, and closure.



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Audit Performance —:

Several Policy issues affect audit performance —

These are —

1. Verification of facts
2. Discovery of causes.
3. Recommendations & remedies.
4. Status of the audit.

Status reports enables the company to check the accuracy of the auditor's observations & give the people responsible for the activity audited a chance to explain their plan to correct the deficiency.




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ज्ञानगंगा सरोवरी

VISHAL JUNNAR SEVA MANDAL'S

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

1.1.4. LAB MANUAL (B. PHARM)

Pharmaceutics I

Lab Manual

Faculty: Ms. Chinchawade A. B.

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1. Syrups

- a) Syrup IP'66
- b) Compound syrup of Ferrous Phosphate BPC'68

2. Elixirs

- a) Piperazine citrate elixir
- b) Paracetamol pediatric elixir

3. Linctus

- a) Terpin Hydrate Linctus IP'66
- b) Iodine Throat Paint (Mandles Paint)

4. Solutions

- a) Strong solution of ammonium acetate
- b) Cresol with soap solution
- c) Lugol's SOLUTION

5. Suspensions (Any two experiments)

- a) Calamine lotion
- b) Magnesium Hydroxide mixture
- c) Aluminium Hydroxide gel

6. Emulsions

- a) Turpentine Liniment
- b) Liquid paraffin emulsion

7. Powders and Granules (Any three experiments)

- a) ORS powder (WHO)
- b) Effervescent granules
- c) Dusting powder
- d) Divided powders

8. Suppositories (Any two experiments)

- a) Glycero gelatin suppository
- b) Cocoa butter suppository
- c) Zinc Oxide suppository

8. Semisolids (Any two experiments)

- a) Sulphur ointment
- b) Non staining-iodine ointment with methyl salicylate
- c) Carbopol gel



9. Gargles and Mouthwashes

- a) Iodine gargle
- b) Chlorhexidine mouthwash

Recommended Books:

1. H.C. Ansel et al., Pharmaceutical Dosage Form and Drug Delivery System, Lippincott Williams and Walkins, New Delhi.
2. Carter S.J., Cooper and Gunn's-Dispensing for Pharmaceutical Students, CBS publishers, New Delhi.
3. M.E. Aulton, Pharmaceutics, The Science & Dosage Form Design, Churchill Livingstone, Edinburgh.
4. Indian pharmacopoeia.
5. British pharmacopoeia.
6. Lachmann. Theory and Practice of Industrial Pharmacy, Lea & Febiger Publisher, The University of Michigan.
7. Alfonso R. Gennaro Remington. The Science and Practice of Pharmacy, Lippincott Williams, New Delhi.
8. Carter S.J., Cooper and Gunn's. Tutorial Pharmacy, CBS Publications, New Delhi.
9. E.A. Rawlins, Bentley's Text Book of Pharmaceutics, English Language Book Society, Elsevier Health Sciences, USA.
10. Isaac Ghebre Sellassie: Pharmaceutical Pelletization Technology, Marcel Dekker, INC, New York.
11. Dilip M. Parikh: Handbook of Pharmaceutical Granulation Technology, Marcel Dekker, INC, New York.
12. Francoise Nieloud and Gilberte Marti-Mestres: Pharmaceutical Emulsions and Suspensions, Marcel Dekker, INC, New York.



GOOD LABORATORY PRACTICES

1. Wear neat and ironed laboratory apron while working
2. Come well prepared by reading the principle and procedure for the experiment concerned.
3. Read the procedure and/or consult lab in-charges for solving your problem or clearing your doubts.
4. Maintain the discipline and norms in the laboratory.
5. Use clean glass wares and wash the glassware after completion of lab.
6. Use strong acids, alkalies and other corrosives carefully.
7. Do not displace the reagents from their respective places.
8. Do not interchange pipettes/ glass tubes from one reagent to the other without thorough cleaning.
9. Use the gas whenever necessary, close gas tap when not required.
10. Submit laboratory record for correction in every practical class
11. Take signature from your lecturer for all the observations.
12. Leave the laboratory only after cleaning your work bench.

WEIGHING TECHNIQUES

1. Check the balance for cleanliness and see that it is in order.
2. Do not weigh the sample directly on the pan
3. Use weighing paper (wax paper) for weighing.
4. Use stopper weighing bottle to weigh volatile (e.g. Iodine) or hygroscopic (e.g. Sodium hydroxide) sample.
5. Leave the balance neat and clean.



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1. Syrups

- a) Syrup IP b) Compound syrup of Ferrous phosphate BPC

2. Elixirs

- a) Piperazine citrate elixir b) Paracetamol pediatric elixir

3. Linctus

- a) Terpin hydrate linctus IP b) Iodine Throat Paint (Mandle's paint)

4. Solutions

- a) Strong solution of ammonium acetate b) Cresol with soap solution c) Lugol's Solution

5. Suspensions

- a) Calamine lotion b) Magnesium Hydroxide mixture c) Aluminum hydroxide gel

6. Emulsions

- a) Turpentine Liniment b) Liquid paraffin emulsion

7. Powders and Granules

- a) ORS powder (WHO) b) Effervescent granules c) Dusting powder d) Divided powder

8. Suppositories

- a) Glycero gelatin suppository b) Cocoa butter suppository c) Zinc oxide suppository

9. Semisolids

- a) Sulphur ointment b) Non staining iodine ointment with methyl salicylate c) Carbopol gel

10. Gargles and Mouthwashes

- a) Iodine gargle b) Chlorhexidine mouthwash




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SYRUPS - INTRODUCTION

Definition: Syrups are defined as oral liquids, which are sweet and viscous and then often contain added flavoring and coloring agents into which medicaments are incorporated. Syrups as such do not have any medicinal value, but used as vehicle for dispensing the drug.

According to I.P. the concentration of sugar in syrup is 66.7% w/w.

According to USP the concentration of sugar in syrup is 85% w/v.

Formulatory ingredients used in the preparation of Syrups are

- 1) Vehicle – E.g.: water, glycerin
- 2) Coloring agents – E.g.: Amaranth, tartrazine
- 3) Preservatives – E.g.: sodium benzoate, Methyl paraben, propyl paraben
- 4) Flavoring agents - E.g.: - Tincture of lemon, Tincture of ginger
- 5) Stabilizers – E.g.: Glycerin, sorbitol

Classification of Syrups:

Syrups are classified into two types namely 'Medicinal' and 'Flavored syrups'

Medicinal syrups: Pure drugs and extracts are added to the syrup

E.g.: Paracetamol syrup (I.P)

E.g.: Ephedrine hydrochloride syrup (N.F.)

Flavored syrups: Aromatic or flavored substances are added to the syrup

Eg: Orange syrup (B.P.),

Lemon syrup (B.P.C)

Preparation of Syrups:

They are prepared by two methods

- 1) Solution method. E.g.: Simple syrup
- 2) Extraction method. E.g.: Tolu syrup




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Advantages:

- Syrups retard oxidation of drugs; because sucrose itself gets hydrolyzed to laevulose and dextrose which are reducing sugars.
- They are sweet in taste. Therefore bitter taste of drugs can be reduced.
- Syrups prevent microbial decomposition of many vegetable drugs.

Disadvantages:

- On continuous intake syrups promote dental decay and cause gingivitis because it is a very good supplement for bacterial growth
- Syrups are not suitable for diabetic patients and patients who are on a restricted calorie intake.
- Aluminum salts cannot be included in syrups as these are incompatible with sucrose
- Syrups are not suitable for acidic drugs as they promote crystallization of sucrose.



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1. SIMPLE SYRUP

Aim: To prepare and submit 10ml of simple syrup.

Apparatus: Beakers, Glass rod, Measuring cylinder, funnel and spatula

Category: Sweetening agent.

Formula:

S. No	Ingredients	Official Formula(I.P.)
1	Sucrose	66.7 gm
2	Purified water	q. s. to 100 ml

Principle: Simple syrup (IP) is a concentrated or nearly saturated solution of sucrose in purified water. According to IP the concentration of sucrose is 66.7% w/w. The solubility of sugar in water is slow; at such a high concentration. Therefore the solution is heated to increase the rate of dissolution. If necessary, Methyl paraben at a concentration not higher than 0.15% may be used as preservative. Simple syrup is sweet in taste and used as vehicle in formulations containing nauseous bitter substances. Simple syrup as such does not have any medicinal value but used as vehicle for dispensing the drugs. Sucrose is a disaccharide, which partially hydrolyzed in to monosaccharide as glucose and fructose. These monosaccharides are called as invert sugars and reaction is called as inversion.

Procedure: Weigh the required quantity of sucrose and add required quantity of water. Then heat the mixture with occasional stirring. Take a precaution of not to overheat solution as it leads to crystallization of sugar. Add sufficient amount of purified water to get the final volume of the syrup. Filter if necessary, and then syrup is transferred into amber color container and labeled it.

Dispensing: Transfer the syrup to a clear or amber colored, narrow mouthed glass bottle, close it thoroughly with metallic screw cap, polish and label.

Storage: Stored in a tightly closed container in a cool place.

Auxiliary label: "STORE AT COOL TEMPERATURE, NOT EXCEEDING 25°C IN DARK PLACE.

Report:




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1.1.5. LAB MANUAL (M. PHARM)

2018

Laboratory Manual of Cosmetic Science



Dr. Shankar M. Dhobale M.Pharm, PhD
VJSM's Vishal Institute of Pharmaceutical
Education & Research, Ale. 412411
1/1/2018




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ACA/DI/43	Name of Subject	Cosmetic Science	Page	01/01
Date: 26/01/2018	No. of Practical's Plan	15	Rev	00

Department: **PHARMACEUTICS**

Sr. No.	Experiment No.	Description	Rev	Date	Location of Controlled Copy
01	--	General Instructions to Students	00	26/01/2018	
02	--	Do's And Don't	00	26/01/2018	
03	01	An Introduction to Cosmetics	00	26/01/2018	
		Prepare, Evaluate and Submit...			
04	02	Cold Cream	00	26/01/2018	
05	03	Vanishing Cream	00	26/01/2018	
06	04	Moisturizing Cream	00	26/01/2018	
07	05	Sunscreen Lotion	00	26/01/2018	
08	06	After Shave Lotion	00	26/01/2018	
09	07	Face Powder	00	26/01/2018	
10	08	Acid-Balanced Shampoo	00	26/01/2018	
11	09	Lipstick	00	26/01/2018	
12	10	Eye Shadow	00	26/01/2018	
13	11	Tooth Powder	00	26/01/2018	
14	12	Baby Powder	00	26/01/2018	
15	13	Eye Mascara	00	26/01/2018	
16	14	Eye Liner	00	26/01/2018	
17	15	Nail Lacquer	00	26/01/2018	
18	16	Face Pack	00	26/01/2018	
19	17	Shaving Cream	00	26/01/2018	

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Cosmetic Science	General Instructions to Students	Page	01/01
		Rev.: 00	Date: 01/01/2018

Students are advised to follow instructions given before they begin work in the laboratory.

1. While entering into the laboratory, everyone should ensure that they have the entire requirement. Apron, Head mask is must and should not enter without the same.
2. Before coming to perform the experiment go through the basic theory of the experiment at the home.
3. Keep your working place clean and tidy. A dirty seat leaves a poor impression about the student working there.
4. Carryout the preparation of formulation and evaluation as per the standard procedure.
5. Always carry your journal with you in the laboratory. The student without journal is as incomplete as a pen without ink.
6. The records made in the journal must be clear, concise and self-explanatory.
7. All the observations/outputs should be carefully entered in the journal.
8. Do not misplace any instrument like weighing balance, bulk density apparatus etc.
9. Always put date on which experiment is performed in the laboratory.
10. Journal should be maintained properly in all respect.
11. Avoid unnecessary gossiping, whispering, and / or moving in the laboratory.
12. It is once again emphasized that honest and regular work in laboratory is more important than good results. Those students, who try to change their observation for the sake of getting a accurate result, do not work with the true spirit of a student seeking to cultivate a scientific brain.
13. Put your bags towards the notice board.
14. Keep the chairs properly
15. Without permission of Lab In Charge do not disturb the setting of experiments
16. Please keep silence.

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Cosmetic Science	Do's And Don't	Page	01/01
		Rev.: 00	Date: 01/01/2018

Do's:

- **Before entering in the lab ensure**
 1. Dress properly during a lab activities.
 2. Wear proper apron.
 3. Long hair, dangling jewelry, loose or baggy clothing are hazardous in the lab. Long hair must be tie back, and dangling jewelry must be secured.
 4. Cut nails; shave your beard (For Gents)
 5. Wash hands with soap solution.
- Heated glassware remains very hot for a long time. They should be set aside in a designated place to cool and picked up with caution. Use tongs or heat protective gloves if necessary.
- It is mandatory to know the lab safety procedure thoroughly.
- Report any accident (Spill, breakage etc) or injury (Cut, Burn etc.) to the Lab in charge or Lab Attendant immediately, no matter how trivial it seems.
- Make sure all chemicals are clearly and correctly labeled with the substance name, concentration, date and validity.
- Keep your lab space clean and organized.
- Clean your lab bench, glassware or equipments.
- Clean up spills immediately.
- Adequate lighting is necessary in the lab to perform the activities.
- Students shall behave professionally in the lab.
- **Before coming out of the lab ensure**
 1. Switched off unnecessary instrument.
 2. Switched off Lights, Fan, exhaust fan
 3. Remove apron, cap etc.
 4. Wash hands with soap solution.

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• **Don'ts:**

- Don't enter in the lab when other practical is going on.
- Don't enter in the lab without permission.
- Do not bring any eatable or drinkables into the lab.
- Do not enter the lab in case of sickness.
- Contact lenses may not be worn in the lab.
- If you have lab partner is hurt, immediately (and loudly) yell out the others attention. Do not panic.
- Never return chemicals to reagent bottle.
- Do not work alone in the lab.
- Do not touch the reagents/ solvents/ standards/ drugs with bare hands.
- Do not run or rush in the lab.
- Do not leave an ongoing experiment unattended.
- Do not handle broken glass with your bare hands. Use brush or dustpan to clean up broken glass. Place broken glass in the designated glass disposal container.
- Do not shake hands while working.
- Do not heat the glassware that is cracked, chipped or scratched.

A To Z of Good Lab Practices:

Aprons	Justification	Safety
Balances	Knowledge	Training
Calibration	Log Book	Upkeep
Documentation	Methods	Validation
Entry and Exit	Note Book	Weighing
Fume Hood	Observation	Xperiment
Glassware	Procedure	Your Lab
Health	Qualification	Zero error
Instrument	Reagents	

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CS:	Name Of Experiment	Page	1/8
Experiment No.01	Semester-VIII	Rev:01	Date: 26/01/2018

Practical No. 01

Title of Experiment: An Introduction to Cosmetics

References:

1. Cosmetics, A Practical Manual, By Swarnlata Saraf, Shailendra Saraf, PharmaMed Press; 2007;1-12,

Cosmetic word is originated from Greek word "**Kosmetikos**" means adorn and preparation, which is used for this purpose, is known as cosmetic.

Definition:

- "Cosmetic are external preparation meant for to apply on external part of the body i.e., nails, skin, hair for coloring, covering, softening, cleaning, nourishing, waving, setting, mollification, preservation, removal and protection" etc.
- Also define it as "A cosmetic is an item intended to be rubbed, poured, sprinkled or sprayed on, introduced in to or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness or altering the appearance".

Description:

The "**active life**" of any cosmetic preparation begins the moment it is brought in contact with the skin/hair/teeth/or nails and ends when it is removed or has evaporated. During it is active life; it has intimate reciprocal relationship, which results, cosmetic changes on the body.

The cosmetic product prevents its outmost layer from drying out, penetrate below the external layer and introduce active substances in to deep lying strata or adhere only superficially to change color or luster of areas. The cosmetic which are used for decorative purposes, i.e., eye lines, rouges, mascara, face masking preparations etc and also carries the inherent risk of desirable side effects. It may inhibit important physiological process, chemically modify certain skin constituents (e.g., in case of bleaching and coloring preparations), and contribute towards their removal or even give rise to certain allergic reactions.

Classification:

There is varieties of cosmetic preparations are used which can be classifying by various ways:

(a) According to region, where it is use:

- (i) **Skin:** Powder, Lipstick, Rouge, Creams, Lotions and Solutions etc.
- (ii) **Hairs:** Shampoo, Conditioners, Creams, Bleach, Coloring preparation etc.
- (iii) **Nails:** Nail lacquers, Lacquers removers etc.

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Dr. S. L. Jadhav
Principal

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

1. EXPERIMENTAL LEARNING

1.2. INDUSTRIAL TRAINING

List of the Students Completed Industrial Training

Program name	Name of the Course that include experiential learning through project work/field work/internship	Year of offering	Name of the student studied course on experiential learning through project work/field work/internship
Industrial Training	Third Year B. Pharm	2017-18	Lokhande Sonali Anil
			Alhat Vidya Nagesh
			Andhale Komal Kashinath
			Auti Shital Kailas
			Badhe Nutan Suresh
			Belhekar Amruta Balasaheb
			Borude Priyanka Vasant
			Dalvi Apeksha Mukta
			Dangat Pranali Baburao
			Daphal Vaishali Ramdas
			Gaikwad Prajkta Sopan
			Gawade Rutuja Rohidas
			Ghogare Ankita Bharat
			Gunjal Madhuri Baban
			Hande Swapnali Dinkar
			Hingamire Akshay Dilip
			Hulawale Akshada Janardan
			Jadhav Manik Keshav
			Makhar Priyanka Ramdas
			Mandave Madhuri Balaso
			Matale Dipali Kisan
			Mate Trupti Tulshidas
			Meher Gauri Rajendra
			Mutake Snehal Anil

			Nilakh Sayali Prakash
			Padwal Monika Ashok
			Pawade Nikita Babaji
			Pingat Ashwini Rajendra
			Sable Etishri Balkrishna
			Sahane Shubham Shivaji
			Sali Rachana Rohidas
			Shelar Yogesh Anil
			Shelke Pradnya Ganesh
			Shewale Maya Sharad
			Suryawanshi Akshada Dilip
			Udamale Devyani Angad
			Wavhal Poonam Dnyaneshwar
			Yewale Akshay Raosaheb
Industrial Training	Third Year B. Pharm	2018-19	Babar Rutuja Bharat
			Badhe Pooja Vikas
			Balsaraf Chetana Dilip
			Bangar Mayuri Sharad
			Bhujbal Pooja Sharad
			Bhujbal Sanket Sanjay
			Bodke Nikita Nivrutti
			Dangat Sonali Dattatraya
			Date Shubhangi Haribhau
			Dere Tanhaji Ramdas
			Deshmane Jyoti Namdev
			tryDharade Swapnali Yuvraj
			Ek narayan Radhika Arjun
			Gadekar Madhuri Rajendra
			Gadekar Shital Subhash
			Gadhane Nayana Sharad
			Hanmante Leena Mohan

			Jadhav Rutuja Suresh
			Kedar Vikas Dagdu
			Kute Vaishnavi Balu
			Lohakare Anita Baban
			Mhaske Poonam Sanjay
			Mhaske Rutuja Bajirao
			Nipurte Arati Govind
			Padekar Sonali Ganpat
			Phalke Pooja Kachardas
			Pol Akshata Satish
			Shinde Komal Rajesh
			Shinde Priyanka Balu
			Shinde Vishakha Vikas
			Varhadi Monika Keshav
			Vethekar Komal Sharad
			Vishwakarma Neha Achhelal
			Waykar Gaytri Ramesh
			Shewale Shewale
			Patel Yasmin
Industrial Training	Third Year B. Pharm	2019-20	Arote Priti Maruti
			Bankar Prajakta Kailas
			Belhekar Surbhi Narhari
			Durgude Arati Namdev
			Gadge Nilam Hanumant
			Gandhi Harshal Santosh
			Bidkar Shubhangi Ravindra
			Chaudhari Rajshri Thakaram
			Zarekar Vipul Ravindra
			Darwatkar Ritu Dinesh
			Hase Akshay Popat

			Holkar Mayuri Santoshkumar
			Jadhav Aarti Deepak
			Jadhav ManishDnyaneshwar
			Jadhav Sayali Kachardas
			Bhagat Prashika Uttam
Industrial Training	Third Year B. Pharm	2020-21	Vikram Dabhade
			Vaishnavi Babasaheb Khatode
			Sonawane Pranita Ramdas
			Poonam Dhondibhau Korade
			Ganesh Jayram Lamkhade
			Abhishek Ashok Fulsundar
			Dukare Pranita Bharat
			Rushikesh Nitin Dhobale
			Sarthak Prakash Bangar
			Priyanka Sunil Gunjal
			Galande Ankit Ashok
			Shweta Dnyaneshwar Kokate
	Third year B. Pharm	2021-22	Pranali Krushna Abhang
			Darshan Digambar Adaki
			Vrushali Navnath Aher
			Prathamesh Suresh Alhat
			Shubham Gorakshanath Bangar
			Payal Santosh Batwal
			Devyani Bhaskar Bhor
			Komal Ramesh Bhujbal
			Aditi Madhukar Bodke
			Tejashree Suresh Deokar
			Mrunal Sambhaji Deshmukh
			Anjali Vilas Dongre
			Kirti Rajendra Fulsundar
			Arati Jalindar Gadge

		Rutuja Dipak Gopale
		Pratiksha Sunil Kale
		Prashant Sahebrao Kapase
		Sakshi Sabaji Kardile
		Prapti Ashok Khemnar
		Shraddha Laxman Khokrale
		Shradd Hasharad Khokrale
		Suraj Pandit Kotkar
		Aishwarya Chandrakant Kurhade
		Madhuri Sambhaji Kurhade
		Prajakta Balu Kurkute
		Shubham Suresh Lamkhade
		Pooja Jagannath Lokhande
		Divya Datta Maluskar
		Akshay Yashwant Mengal
		Sakshi Balajirao Mukhade
		Rani Ganesh Neharkar
		Deepali Sandeep Patade
		Siddhi Sunil Patil
		Vikram Arjun Pawar
		Saurabh Balasaheb Raut
		Deepti Sudhir Rayat
		Anuja Govind Sasane
		Pratik Santosh Shelke
		Suchita Anand Shirole
		Shraddha Popat Tonpe
		Harshada Hanmant Vhananavar

McCoy

McCoy Pharma Pvt. Ltd.

S-12, MIDC, Tarapur, Boisar-401506 Tal & Dist. Palghar, (MS)
Tel. 8433936701/02/03 E-mail id :E-mail mccoypharma2005@gmail.com
website-www.mccoypharma.com CIN U30007MH1994PTC079810

Date: 26th AUGUST, 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. SHRADDHA SHARAD KHOKRALE**, Student of **T. Y. B.Pharm.** from "**VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH ALE Tal JUNNAR Dist -Pune** Letter REF No. **VJSM/VIPER/2021-22/TPCELL-IND. TRAINING -101** underwent practical training at our Tarapur plant **S-12/13, MIDC Tarapur Boisar** from **10.07.2022** to **10.08.2022** for the period of Weeks.

During the period of training, Ms. **SHRADDHA SHARAD KHOKRALE** worked in the Quality Assurance Dept., Quality Control Laboratory, and also was trained and explained about the production processes in pharmaceuticals formulations such as Granulation, Tablet mfg., Capsule mfg., coating, primary and secondary packaging dept.

Ms. **SHRADDHA SHARAD KHOKRALE** performance during training was very good and attendance was regular.

We wish all success in her future career.

For McCoy Pharma Pvt. Ltd


RAKHI B SHAH
HR Manager
DT: - 26/08/2022




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To,
Principal
Vishal Institute of Pharmaceutical
Education and Research
Ale, Tal. Junnar, Dist.: Pune – 412 411

Date: 12th Feb., 2021

CERTIFICATE

This is to certify that Ms. Pranita Bharat Dukare student of B. Pharm Final year of Vishal Institute of Pharmaceutical Education and Research, Ale, Tal. Junnar, Dist.: Pune – 412 411 has successfully completed her one month In-plant training during 12th Jan., 2021 to 12th Feb., 2021 in Nulife Pharmaceuticals Pimpri, Pune.

Her attendance was regular and conduct was satisfactory.

Best wishes for her future.

For NULIFE PHARMACEUTICALS


SUDHIR DEVALE
HR MANAGER




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NuLife PHARMACEUTICALS

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FAX : +91 20 27130620
Email : contactus@nulifepharma.com
website : www.nulifepharma.com



To,

The Principal

Vishal Institute of Pharmaceutical Education and Research,
Ale, Tal.Junnar.

Pune- 412411

Date-10/8/2019

CERTIFICATE

This is to certify that Ms. Sayali Kachardas Jadhav
student of B.Pharm 3rd year Vishal Institute of Pharmaceutical Education and
Research, Ale, Tal.Junnar, Pune. has successfully completed her one month In-
plant training during 17 Jun to 17 July 2019 in Nulife Pharmaceuticals Pimpri,
Pune.

Her attendance was regular and conduct was satisfactory.

Best wishes for her future.

For Nulife Pharmaceuticals

Mr. Amar Shelke

(Training officer)



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July 03, 2018

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms Rutuja Babar has undergone Inplant training from June 4, 2018 to July 3, 2018 at our Patalganga Manufacturing unit.

We wish her all the best in her future endeavours.

For Cipla Ltd

C V Torgal

Cipla Ltd. (Manufacturing Division) MIDC, Patalganga - 410 220, Dist.: Raigad, Maharashtra
Phone 91 (0) 2192 660900, 660400 Fax 91 (0) 2192 250819, 660506

Cipla Ltd. Regd. Office Cipla House, Peninsula Business Park, Ganpatrao Kadam Marg, Lower Parel, Mumbai - 400 013
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(भारत सरकार का उपक्रम)
पंजीकृत कार्यालय और कारखाना : पिम्परी,
पुणे - 411 018.
दूरभाष : 27425411 - 12, 27303690
फैक्स : (020) 27425327.



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(A Government of India Enterprise)
Registered Office & Factory : Pimpri, Pune - 411 018.
Phone : 27425411 - 12, 27303690
Fax : (020) 27425327
Website : www.hindantibiotics.gov.in

Ref. No.: 2017/36

Date : 10-07-2017

CERTIFICATE

This is to certify that **Ms. Shital Kailas Auti**, student of
Vishal Institute of Pharmaceutical Education and Research,
Ale, Tal - Junnar, Dist - Pune, has completed one month
Industrial Training in this organization in the month of
June 2017.

fsmandh
10.7.2017
(MRS.A.S.MANDHRE)
ASST.PERSONNEL MANAGER (TRAINING)

महोदय - **A.S.Mandhre** (श्रीमती अरुण ए.मं.मं.)
Personnel Manager (तला, कार्यालय प्रबंधक)
Hindustan Antibiotics Ltd. / हिन्दुस्तान एंटीबायोटिक्स लि.
पुणे - 411 018.



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ज्ञानगंगा यरोवरी

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

1. EXPERIMENTAL LEARNING

1.3. PROJECT WORK

**RESEARCH PROJECT CARRIED OUT IN
INDUSTRY**

2021-22

Sr. No	Name of Student	Title of Work	Company	Department
1	Inamdar Muskan J.	Formulation, Development and Evaluation of NSAID gel reduction Pain, inflammation and swelling	ZenVision Pharma LLP	Pharmaceutics
2	Shingote Pratik R.	Formulation and Evaluation of IR tablet in combination for Antihypersensitive activity	Enaltech, Mumbai	Pharmaceutics
3	Sarang Vaibhav C.	Design and characterization of immediate release tablet dosage form for the treatment of Insomnia	Enaltech, Mumbai	Pharmaceutics
4	Kurkute Aishwarya S.	Formulation, development and characterization of film coated tablet containing anti-convulsant drug	ZenVision Pharma LLP	Pharmaceutics
5	Thobare Vaibhav V.	Formulation, preparation and characterization of IR film coated tablet containing API having anti spasmodic and anti muscuranic property	Enaltech, Mumbai	Pharmaceutics
6	Naikodi Vrushali K.	Formulation, development and evaluation of delayed release tablet containing anti-inflammatory drug by QbD Approach	ZenVision Pharma LLP	Pharmaceutical Quality Assurance
7	Deokar Vrushali S.	Analytical method development and validation of stability indicating RP-HPLC method for glutathione tablet Vs Capsule	SciTech Sinnar	Pharmaceutical Quality Assurance
8	Bhalerao Vibhati S.	Analytical method development and validation for the simultaneous estimation of Salbutamol, amroxol, guapensin hydrochloride by RP-HPLC method in oral liquid dosage form	Bidwai Chemicals Industries Vishmupuri, Nanded	Pharmaceutical Quality Assurance
9	Dongare Agasti M.	Analytical method development and validation of HPLC method for assay of Tofacitinib Citrate tablet dosage form	Enaltech, Mumbai	Pharmaceutical Quality Assurance
10	Malwadkar Satyam R	Analytical method development and validation of stability indicating RP-HPLC method for assay of Immunomodulated drug	Enaltech, Mumbai	Pharmaceutical Quality Assurance
11	Bhutambare Vais haliA	Formulation and Evaluation of Effervescent Tablet	SciTech Sinnar	Pharmaceutical Quality Assurance
12	Sahane Priya S.	Formulation, development and evaluation of immediate release tablet of Antidiabetic drug	ZenVision Pharma LLP	Pharmaceutical Quality Assurance
13	Shelke Snehal S.	Formulation, development and characterization of dispersible tablet containing hyperammonemia	ZenVision Pharma LLP	Pharmaceutical Quality Assurance
14	Vidhate Pooja G.	Analytical method Development and validation of stability indicating RP-HPLC assay method for estimation of Metaclopramide HCl inj. 5mg/ml	Enaltech, Mumbai	Pharmaceutical Quality Assurance
15	Mirza Nurain M.	Formulation, development and evaluation of Apple Sizer Vinegar Effervescent Tablet	SciTech Sinnar, Nashik	Pharmaceutical Quality Assurance

2020-21

Sr. No	Name of Student	Title of Work	Company	Department
1	Lohokare Anita	Analytical method development and validation of stability Indicating RP-HPLC Method for Related Substance of Alpremilast in tablet dosage form	Enaltech, Mumbai	Pharmaceutical Quality Assurance
2	Indore Monika	Method development and validation by RP-HPLC method in the formulation of Clindamycin Phosphate gel	Enaltech, Mumbai	Pharmaceutical Quality Assurance
3	Shewale Shweta	Development and Validation of Stability indicating RP-HPLC assay method for estimation of Dimethyl Fumarate in Capsule Dosage form	Enaltech, Mumbai	Pharmaceutical Quality Assurance
4	Kedar Vikas	Development and Validation of Stability indicating RP-HPLC assay method for Trosipium Chloride in Tablet Dosage form	Cadila Healthcare Ltd. Goa	Pharmaceutical Quality Assurance
5	Waykar Gayatri	Analytical method and validation of assay studies of Ranolazine bulk drug by RP-HPLC	Glenmark Mumbai	Pharmaceutical Quality Assurance
6	Arote Anita	Analytical method and validation Stability indicating RP-HPLC method for related substances of Tofacitinib Citrate in Pharmaceutical Dosage form	Enaltech, Mumbai	Pharmaceutical Quality Assurance
7	Indore Pranaya	Formulation, evaluation and development of immediate release tablet of Trifluromethyl phenothiazine derivative for management of manifestation of psychotic disorder	Enaltech, Mumbai	Pharmaceutics
8	Thopate Shubhangi	Formulation, development and evaluation of Immediate release tablet of Jaunus Kinase Inhibitor indicated for rheumatoid Arthritis	Enaltech, Mumbai	Pharmaceutics
9	Date Shubhangi	Analytical method development and validation of assay studies of Bilastine in bulk drug by RP-HPLC method	Glenmark Mumbai	Pharmaceutical Quality Assurance
10	Lohote Omkar	Formulation, development and evaluation of Orally Disintegrating tablets of melatonin and Jatamansi	SciTech Sinnar	Pharmaceutics
11	Madhavai Unnati	Formulation, development and evaluation of Bacillus clausii and zinc efferevescent tablet	SciTech Sinnar	Pharmaceutical Quality Assurance




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2019-20

Sr. No	Name of Student	Title of Work	Company	Department
1.	Ghule Krushna	Formulation, Development and Evaluation of Immediate Release Pellets For Antiemetic Drug.	Glenmark, Mumbai	Pharmaceutics
2	Ms. Kasabe Manisha K.	Formulation, Development and Evaluation of Sustained Release Capsules of Anti-Hypertensive Drug.	Enaltech, Mumbai	Pharmaceutics
3	Ms. Nilakh Sayali P.	Formulation, Development and Evaluation of Immediate Release Tablets of Antimigrane Drug.	Enaltech, Mumbai	Pharmaceutics
4	Sable Etishri B.	Formulation, Development and Evaluation of Ibuprofen (400mg) Effervescent Tablet	SciTech Sinnar	Pharmaceutics
5	Ms. Abhang Suchita R.	Development and Validation of Stability Indicating RP-HPLC Method for Fluphenazine HCl Tablet	Enaltech, Mumbai	Pharmaceutical Quality Assurance
6	Ms. Alhat Vidya N.	Development and Validation of Stability Indicating RP-HPLC Assay Method for Estimation of Ramelteon in Tablet Dosage Form	Enaltech, Mumbai	Pharmaceutical Quality Assurance
7	Ms. Badhe Nutan S.	Stability Indicating RP-HPLC Method for Assay of Betamethasone Dipropionate in Semisolid Dosage Form	RAP Analytical Nashik	Pharmaceutical Quality Assurance
8	Mr. Bhujbal Shubham M.	Stability Indicating RP-HPLC method Development and Validation of Assay of Topical Corticosteroid Drug in Semisolid Dosage Form	Glenmark, Mumbai	Pharmaceutical Quality Assurance
9	Ms. Borhade Akshada S.	Development and Validation of Analytical Method for the Estimation of Anti-Retroviral Drug in Solid Dosage Form by HPLC	Enaltech, Mumbai	Pharmaceutical Quality Assurance
10	Ms. Dalvi Apeksha M.	Development and Validation of Analytical Method for the Related Substances of Antineoplastic Drugs in Pharmaceutical Dosage Form by using RP-HPLC	Enaltech, Mumbai	Pharmaceutical Quality Assurance
11	Ms. Jadhav Manik K.	To Develop and Quantify HPLC Method for Purity Determination of Therapeutic Monoclonal Antibody By SEC-HPLC Method	Serum Institute, Pune	Pharmaceutical Quality Assurance



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2019-20

Sr. No	Name of Student	Title of Work	Company	Department
12	Ms. Hulawale Akshada J.	Development and Validation of Stability Indicating Analytical Method For the Estimation of Hydrochloroquine Sulphate in Tablet Dosage Form by SRP-HPLC	Enaltech, Mumbai	Pharmaceutical Quality Assurance
13	Ms. Kakade Vrushali B.	Analytical Method Development and Validation of Stability Indicating RP-HPLC Assay Method for Satranidazole Oral Suspension	Alkem Laboratories, Mumbai	Pharmaceutical Quality Assurance
14	Mr. Shinde Akhil A.	Stability Indicating RP-HPLC Method for Determination of Monteleukast Sodium and Levocetirizine Dihydrochloride in Bulk and Dosage Form	PellTech Healthcare Mumbai	Pharmaceutical Quality Assurance
15	Ms. Suryavanshi Akshada D.	Development and Validation of Stability Indicating RP-HPLC Assay Method for Amlodipine Besylate in Tablet Dosage Form	Enaltech, Mumbai	Pharmaceutical Quality Assurance
16	Ms. Udmale Devyani A.	Analytical Method Development and Validation for assay by RP-HPLC of Sulfamethoxazole and Trimethoprim Injection	Enaltech, Mumbai	Pharmaceutical Quality Assurance
17	Ms. Waghchoure Kalyani J.	Method Development and Validation of Assay Studies of Stability Indicating Effervescent Tablet of Ibuprofen (200mg) by RP-HPLC	SciTech Sinnar	Pharmaceutical Quality Assurance




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Sr. No	Name of Student	Title of Work	Company	Department
1	Patel Shamira	Development and Validation of stability indicating RP-HPLC method of Assay study of Teriflunomide tablet	Enaltech, Mumbai	Quality Assurance Technique
2	Bhore Pooja	Development and Validation of stability indicating RP-HPLC method of Assay study of Dexamethasone in tablet dosage form	Enaltech Mumbai	Quality Assurance Technique
3	Pachpute Karishma	Analytical Method Development and Validation of RP-HPLC method for assay study of Mexiletine HCl Capsule	Prosfora Mumbai	Quality Assurance Technique
4	Zinjad Sanchay	Analytical Method Development and Validation of Saxagliptin HCl by RP-HPLC	RAP Analytical Nashik	Quality Assurance Technique
5	Changediya Bhavana	CSV: A Risk based approach for Standalone system	Glenmark Mumbai	Quality Assurance Technique




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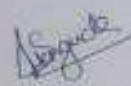
This is to certify that Ms. Mirza Nurain Munawwar of Vishal Institute of Pharmaceutical Education and Research, Ale has undergone her project training at R&D department from 07 Feb 2022 to 03 Jun 2022. She successfully completed her project **"Formulation, Development and Evaluation of Apple Cider Vinegar Effervescent Tablet"**.

During her project training period we found her to be extremely hardworking, studious, honest and took keen interest in all activities of R&D Department.

We wish her the very best for her future endeavours.

With best wishes,


Col Pravin Gadre (Retd)
Director Operations


Mr. Satish Nangude
General Manager R&D

Date : 14 Jun 2022
Place : Sinnar




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February 8, 2021

CERTIFICATE

This is to certify that Mr. Vikas Kedar, a student of M. Pharm from Vishal Institute of Pharmaceutical Education and Research Center Ale Pharmacy, Junnar has undergone project training in our plant at Cadila Healthcare Ltd., Kundaim Industrial Estate, Ponda, Goa from 17/07/2020 to 31/01/2021, as part of the curriculum.

During the above period, Mr. Kedar has shown keen interest while carrying out the given assignment and has acquired adequate practical knowledge.

This certificate is issued to him to enable him to submit the same to the College.



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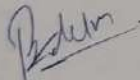
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We found him to be hard working and of good moral conduct.

He has successfully completed his training.

We wish his luck for all His future endeavors.

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Date: 31st December, 2018.

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This is to certify that **Ms. Bhavana Sanjaykumar Changediya** has undergone training in the **Development Quality Assurance** department from 04th June, 2018 to 31st December, 2018.

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We wish her luck for all her future endeavors.

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PROJECT WORK
(B. PHARM)

ACADEMIC YEAR-2021-2022
CLASS-FINAL YEAR B.PHARM

Roll No	Name Of Student	Title Of Project	Guide Name
1	Aher Sanket Dilip	Herbal Antidandruff Dry Shampoo	Dr.Dhobale G.S.
2	Aher Suvarna Piraji		
3	Aher Pranjali Nivrutti		
4	Argade Divya Kailas		
5	Bhadrige Ankita Kiran		
6	Bhandari Shubham Balu	In vitro evaluation of anti-inflammatory activity of Celosia Argentina	Ms.Gadhav N.S.
7	Bhelake Rupali Sharad		
8	Bombe Mayuri Vilas		
9	Chaudhari Sonal Navnath		
10	Chavan Soham Ashok		
11	Chavan Yukta Dnyaneshwar	Method development and validation of pharmaceutical dosage form by using UV visible spectrophotometry of Moxifloxacin Hydrochloride	Mr.Hole M.B.
12	Dabhade Mohan Dnyanadev		
13	Dawkhar Sonam Rajaram		
14	Deshmukh Pratiksha Sunil		
15	Deshmukh Rajashree Vilas		
16	Dhobale Sanket Sandip	Analytical method development and estimation of Valsartan in bulk and pharmaceutical dosage form by using uv visible spectrophotometry method	Dr. S. M. Dhobale
17	Dokhe Saurabh Bapusaheb		
18	Gaikwad Omkar Dattatray		
19	Galande Swapnil Ramdas		
20	Galande Aparna Santosh		
21	Gavit Sanika Yashavant	Comparative study of HPTLC fingerprinting profile and Isolated marker compounds from Cucumis dipsaceus and Momordica diocia	Dr.Kolhe S.S.
22	Ghone Vaishnavi Ramkrushna		
23	Hindurao Pratiksha Deepak		
24	Jadhav Ravi Manoj		
25	Jadhav Raju Balasaheb		
26	Kadam Dipak Dnyanoba	Evaluation of antidiabetic Activity of	Mr.U.R.

27	Kadam Shivam Ramdas	Celasia Argentica by In vitro method	Kumbhar
28	Kahane Bhakti Chaitanya		
29	Kakade Asmita Bhausaheb		
30	Kakade Rushikesh Balasaheb		
31	Kanawade Saurabh Sunil	Analytical Method development of Ambroxol Hydrochloride by UV spectroscopy and forced degradation studies and detection of stability.	Mr.Kadam S.S.
32	Khadsare Jayesh Nalesh		
33	Khollam Omkar Dilip		
34	Korade Pratiksha Subhash		
35	Korade Tejas Vilas		
36	Lad Akanksha Sunil	The spectrophotometric RP-HPLC method development and validation for the determination of Rosuvastatin in bulk drug and pharmaceutical dosage form	Mr. Hole M.B.
37	Magar Ashwini Arjun		
38	Mahale Ankita Laxman		
39	Mali Mansi Madhukar		
40	Mandlik Shweta Rajesh		
41	Mankar Sucheta Dhondibhau		Mr. Gaware R.U.
42	Nighot Shailesh Anil		
43	Nilakh Shruti Parshuram		
44	Pansare Sayli Ajit		
45	Patade Ashwini Mohan		
46	Patil Gitanjali Dattatray	Evaluation of antidiabetic activity of Saraca asoca by in vitro method	Mr. U.R. Kumbhar
47	Pawar Shraddha Shrimant		
48	Pawar Gokul Ashok		
49	Pukale Priyanka Dhondiram		
50	Rokade Hritik Vitthal		
51	Sable Akash Maruti	Formulation of herbal onintment and evaluation of physicochemical and phytochemical activity of Tinospora Cardifolia	Dr.Kolhe S.S.
52	Sabale KIRAN DEVIDAS		
53	Said Rushikesh Pandurang		
54	Sangale Rohini Jagan		
55	Sayyad Sameer Latib		
56	Shinde Shraddha Dinesh	Formulation, Development and	Mr.Kadam
57	Shinde Shweta		

	Chandrashekhar	Characteization of Esomeprazole containing Mucoadhsive Wafers by Fast Melt Away Method.	S.S.
58	Tattu Tanuja Bhagwan		
59	Thorat Rutuja Sandip		
60	Thube Ankita Santosh		
61	Varhadi Nikita Madhukar	Comparative study of HPTLC fingerprinting profile and Isolated marker compounds from Cucumis dipsaceus and Momordica diocia	Dr.Kolhe S.S.
62	Vetal Vikas Uddhav	Comparative Evaluation of Genetic versus Branded Paracetamol Tablet	Mr.Tambe S.T.
63	Waykar Divya Ramdas		
64	Yerande Ashwin Dayanand		
65	Zinjad Shubham Dattatray		



**"PRELIMINARY CHARACTERIZATION AND
FORMULATION OF MUCOADHESIVE MICROSPHERE
CONTAINING ONDENSETRON HYDROCHLORIDE BY
USING NATURAL POLYMER"**

Practice School Report Submitted

By

*Miss. Gopale Rutuja Dipak,
Miss. Hadawale Pranita Pandurang*

Under the guidance of

Prof. Dr. Dhobale Shankar M.

(M Pharm, PhD)



SAVITRIBAI PHULE PUNE UNIVERSITY

Department of Pharmaceutics

VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION

AND RESEARCH, ALE

2022-2023



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DECLARATION BY CANDIDATE

We hereby declare that the report entitled
"PRELIMINARY CHARACTERIZATION AND FORMULATION OF MUCOADHESIVE
MICROSPHERE CONTAINING ONDENSETRON HYDROCHLORIDE BY USING NATURAL
POLYMER"

*Submitted to the institute done by us under the supervision and guidance of
Prof. Dr. Dhobale Shankar M. Department of Pharmaceutics and it has not
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Pranita
Miss. Hadaware Pranita Pandurang

Place: Ale(Pune)

Date: 14/12/2022

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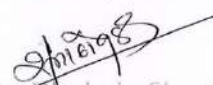


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*"PRELIMINARY CHARACTERIZATION AND FORMULATION OF MUCOADHESIVE
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POLYMER"*

*Submitted to the Institute and done by them of their study under my
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Prof. Dr. Diobale Shankar M.
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ENDORSEMENT BY THE PRINCIPAL

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*This work was carried out by them in the Computer Lab, laboratory and library
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Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

Acknowledgement

Its great pleasure for me to acknowledge all those who have contributed towards the conceptions origin and nurturing of this project the person whose picture comes first in my mind is that of my estimated guide **Dr. Dhobale Shankar M.** for this valuable guidance, timely advice, kind cooperation, understanding and constant inspiration throughout the course of the study. It is with affections and reverence that I dedicate often beyond the call of duty. It was pleasure of working under his guidance.

I would like to express my obligation to our **Principal Dr. Jadhav. Suresh L.** for providing excellent facility for study and parental attitude and constant encouragement.

I would like to express my sincere thanks to all the faculty members of pharmaceuticals department and there best wishes and guidance during my entire course of study.

I would like to extend my sincere thank to all the non teaching staff of my department especially to Mr. Kale G. for there valuable cooperation.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

INDEX

Sr. No	Topic	Page No.
1.	Introduction	3-11
2.	Literature study	12-13
3.	Aim and Objective	14
4.	Plane of Work	15
5.	List of materials and Equipment	16-18
6.	Experimental	19-23
7.	Result and Discussion	24-26
8.	Conclusion	27
9.	Reference	28



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

**PRELIMINARY CHARACTERIZATION AND FORMULATION OF
MUCOADHESIVE MICROSPHERE CONTAINING ONDANSETRON
HYDROCHLORIDE BY USING NATURAL POLYMER**

ABSTRACT

The present study was aimed to prepared mucoadhesive microsphere for sustained release of Ondansetron hydrochloride using natural polymer. Mucoadhesive Microspheres are an integral component of this multi-particle drug delivery system and play an important function in the delivery of a novel drug. Mucoadhesive microsphere have a longer duration of resistance at the absorption site and improves the therapeutic efficacy of the Ondansetron hydrochloride and also enhancing patient compliance by reducing done frequency. Preformulation characterization such as UV spectroscopy, physicochemical characteristics, solubility etc. has been studied. FTIR study recommends that the Compatibility study was carried out by following ICH guidelines.

Key words: FTIR, Mucoadhesion, ICH guideline, Ondansetron HCL



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

1. INTRODUCTION: [1]

Orally controlled release systems remain the most prominent among all drug delivery systems. This has many advantages compared to conventional systems, such as better plasma level profile, lower dosing, and toxicity, etc. Microspheres are a type of novel drug delivery system comprised of different polymers and also have a variety of applications. Ondansetron is a novel and specific antagonist of the 5-HT receptor indicated for chemotherapy-induced nausea and vomiting in cancer patients. The half-life in plasma has been reported to be 4-5 hours. The shorter biological half-life and frequent dosing in chemotherapy-induced nausea and vomiting make it as an ideal candidate for sustained release drug delivery system. Therefore, the objective of the work is to provide a sustained action pharmaceutical composition containing ondansetron in a modified release formulation, to maintain the blood level of active ingredient for a prolonged period of time. Microencapsulation is of the technique to sustain the rate release of the drug. Microencapsulation can improve the absorption of a drug and reduce side effects such as irritation of the gastrointestinal mucosa. Only limited studied on ondansetron extended-release formulation has been carried out using cellulose derivatives.

1.1. ADVANTAGES OF MUCOADHESIVE DRUG DELIVERY SYSTEM: [1]

- The formulation at the delivery site stays longer, due to the adhesion and intimate contact, improving the bioavailability of the API using a lower API concentration in the treatment of disease.
- Better compliance with patients and convenience because of lower doses of drugs.
- It offers an excellent route for the systemic delivery of drug with a high level of first pass metabolism by offering higher bioavailability.
- Significant cost reduction achieved and dose related side effects may be reduced due to the localization of the API at the diseased site.
- Approximately the morphology of microsphere allows for controlled variability in degradation and release of drug.
- Sufficient and prolonged therapeutic effect.

The use of Mucoadhesive microspheres in the development of Oral controlled drug delivery



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

systems for effective gastro-intestinal retention and sustained action. The Mucoadhesive system has proven to be very effective.

Due to their high Mucoadhesive functions and low toxicity, anionic polymers are the most often used as Mucoadhesive polymers in pharmaceutical formulations. These include alginates, carrageenan, and polyacrylic acid (PAA) and are weakly cross-linked with sodium-carboxymethylcellulose derivatives (NaCMC). Because of the high hydrogen-bonding interactions with mucin, PAA and NaCMC have excellent Mucoadhesive characteristics. The derivatives of polycarbophil and carbomers (Carbopol and PAA), as a Mucoadhesive platform for drug delivery to the GI system, were extensively studied.

1.3. CLASSIFICATION OF MUCOADHESIVE POLYMERS [1]

There are various mucoadhesive polymers of synthetic and natural origin, which are classified in the Table 1 below:

Table 1: A shortlist of Mucoadhesive Polymers

Sr. No	Synthetic Polymer	Natural Polymer
1	Hydroxypropyl methylcellulose (HPMC)	Chitosan
2	Poly (acrylic acid) polymers (carbomers, polycarbophil)	Sodium alginate
3	Polyvinyl pyrrolidone (PVP)	Pectin
4	Polyvinyl alcohol (PVA)	Locut bean gum
5	Polyhydroxyethyl methylacrylate	Guar gum
6	Polyethylene oxide	Xanthum gum
7	Sodium carboxy methyl cellulose (Na CMC)	Karaya gum
8	Hydroxyl ethyl cellulose (HEC)	Gelatin
9	Hydroxypropyl cellulose (HPC)	Tragacanth
10	Ethyl cellulose (EC)	Soluble starch
11	Methylcellulose (MC)	Lecithin

1.4. MECHANISM OF MUCOADHESION: [1-2]

It includes 2 steps: A. The Contact stage B. Consolidation Stage

A. The Contact Stage

The first phase of the Mucoadhesive Mechanism is the contact stage. This stage is marked by the

Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

association of the Mucoadhesive material with the mucosal surface, as well as by the swelling and spread of the formulation, which generates a deep contact with the mucosal surface.

B. Consolidation Stage

Mucoadhesive materials are activated in this process by the presence of moisture. The system is plasticized by humidity which allows the Mucoadhesive molecules to break free and link with weak hydrogen bonds.

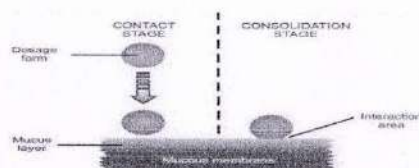


Fig.1. Mechanism of Mucoadhesion

1.5. THEORIES OF MUCOADHESION: [3]

Several theories have been proposed to explain the fundamental mechanisms of adhesion. In a particular system, one or more theories can equally well explain or contribute to the formation of bioadhesive bonds

1. Electronic theory

According to this theory, electron transfer occurs upon contact of an adhesive polymer with a mucus glycoprotein network because of differences in their electronic structures. This results in the formation of an electrical double layer at the interface. Adhesion occurs due to attractive forces across the double layer.

2. Absorption theory

According to this theory, after an initial contact between two surfaces, the material adheres because of surface forces acting between the atoms in the two surfaces. Two types of chemical bonds resulting from these forces can be distinguished:

- (i) Primary chemical bonds of covalent nature, which are undesirable in bio adhesion because their high strength may result in permanent bonds.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

- (ii) Secondary chemical bonds having many different forces of attraction, including electrostatic forces, Vander Waals forces and hydrogen and hydrophobic bonds.

3. Wetting theory

Wetting theory is predominantly applicable to liquid bio adhesive systems and analyse adhesive and contact behavior in terms of the ability of a liquid or a paste to spread over a biological system. The work of adhesion (expressed in terms of surface and interfacial tension, γ being defined as the energy per cm^2 released when an interface is formed. The work of adhesion is given by

$$W_a = \gamma_A + \gamma_B - \gamma_{AB} \quad \dots 1 \text{ where 'A' and 'B' refer to the biological membrane and the}$$

bioadhesive formulation respectively. work of cohesion is given by

$$W_c = 2\gamma_A \text{ or } \gamma_B \quad \dots 2 \text{ For a bio adhesive material B spreading on a biological}$$

substrate A, the spreading coefficient is given by

$$S_{B/A} = \gamma_A - (\gamma_B + \gamma_{AB}) \quad \dots 3 \text{ } S_{B/A} \text{ should be positive for a bioadhesive material to adhere}$$

to a biological membrane.

4. Diffusion theory

According to this theory, the polymer chains and the mucus mix to a sufficient depth to create a semi-permanent adhesive bond. The exact depth to which the polymer chains penetrate the mucus depends on the diffusion coefficient and the time of contact. This diffusion coefficient, in turn, depends on the value of molecular weight between crosslinks and decreases significantly as the cross-linking density increases

5. Fracture theory

This theory attempts to relate the difficulty of separation of two surfaces after adhesion.

Fracture theory equivalent to adhesive strength is given by:

$G = (E\epsilon/L)^{1/2}$ Where, E- Young's modulus of elasticity; ϵ - fracture energy, and L- critical crack length when two surfaces are separated.

1.6. Ondansetron Hydrochloride: [4]

Ondansetron, commonly referred to by its brand name Zofran, is a drug that was first developed and studied in the 1980s and is now widely approved for prevention and treatment of nausea and vomiting associated with chemotherapy, radiation, and surgery.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Ondansetron and other members of the steron drug family are serotonin antagonist. This means these drugs blocks the serotonin receptor in the chemoreceptor trigger zone (CTZ) with in the medulla oblongata. The CTZ communicates with the vomiting centre to the initiate vomiting. By blocking the serotonin receptor, there less serotonin that enters the CTZ, with decreases communication with vomiting centre. Ultimtely, the patient experience reduced nausea and vomiting.

1.7. Methods Of Preparation of Mucoadhesive Microspheres: [1,5]

Mucoadhesive microspheres can be prepared by using different techniques like:

1. Complex Coacervation

The theory of this approach is that when two hydrophilic colloids solutions are combined under appropriate conditions, the liquid precipitate separates. The coating material process, made by dissolving an immiscible polymer in a suitable vehicle, and the core material are dispersed in a coating polymer solution under constant stirring in this system. Changing the temperature of the polymer solution; changing the pH of the medium; applying salt or an incompatible polymer or a non-solvent to the polymer solution; inducing a polymer-polymer interaction were all used to achieve microencapsulation. To shape a self-sustaining microsphere, the coating is typically hardened using thermal cross-linking or desolation techniques.

2. Hot Melt Microencapsulation

This method was used to create microspheres of Polyanhydride copolymer of poly bis (p-carboxyl phenoxy) propane anhydride with sebacic acid. The polymer is melted first, and then the solid drug particles are added in a continuous mixing process. To obtain a stabilized emulsion, the prepared mixture is suspended in a non-miscible solvent such as silicone oil and heated at a temperature above the melting point of the polymer with continuous stirring. After cooling the emulsion to solidify the polymer particles, the microspheres are filtered and washed with petroleum ether.

3. Single emulsion technique

There are several Proteins and carbohydrates, which are prepared by this technique. In which the natural polymers are dissolved in aqueous medium and the followed by dispersion in oil phase i.e., non-aqueous medium. That is the first step in Next step cross linking is carried out by two methods.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

(1) **Cross linking by heat:** by adding the dispersion into heated oil, but it is unsuitable for the Thermo labile drugs.

2. **Chemical cross-linking agents:** by using agents i.e., formaldehyde, di acid chloride, glutaraldehyde etc. but it is having a disadvantage of excessive exposure of active ingredient to chemicals if added at the time of preparation and then subjected to centrifugation, washing and separation. Chitosan solution (in acetic acid) by adding to Liquid paraffin containing a surfactant resulting formation of w/o emulsion. Metformin hydrochloride microsphere are preparing by using glutaraldehyde 25% solution as a cross linking agent.

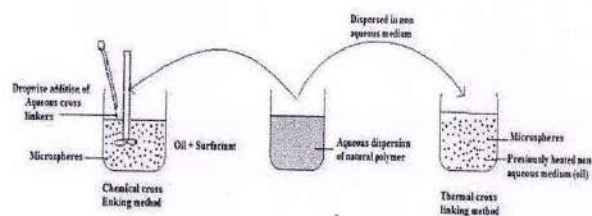


Fig. 2. Chemical cross-linking agent

4. Double Emulsion Method

A two-stage emulsification process is used to generate transient W1/O/W2 emulsions. The principle of encapsulation is based upon inducing phase separation of the polymer dissolved in an organic solvent due to partial extraction of the solvent in a large volume of an external water phase and evaporation of the volatile solvent. The polymer then forms a coacervate enclosing the internal aqueous phase (W) containing the active compound and microparticles are hardened under removal of residual solvent. A limited solubility of the solvent in the external water phase is beneficial. Dichloro- methane was frequently employed because of its low boiling point, which facilitates the removal of residual solvent from the finished product. The hydrophilic drug substance is dissolved either in water or buffer and represents the internal water phase (W). Stabilizing excipients can be added to protect the drug in the core of the microspheres. This W, phase is homogenized with the O phase yielding a W/O emulsion. Homogenization is carried out by using high-speed or high-pressure mixers, ultrasonication, or static mixers.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

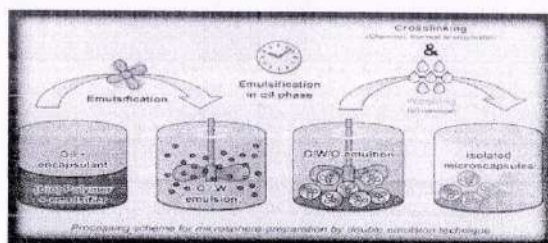


Fig. 3. Double emulsion method

5. Solvent Evaporation

This is done in a liquid production vehicle. The microcapsule coating is dispersed in a volatile solvent that is incompatible with the liquid manufacturing vehicle phase of the process. In the coating polymer solution, a central substance to be microencapsulated is dissolved or dispersed. The core material mixture is distributed in the liquid manufacturing vehicle process with agitation to achieve the desired microcapsule size. If required, the mixture is heated to evaporate the solvent from the core material's polymer, after which the polymer shrinks around the core. Matrix-

microcapsules are created when the core material is dissolved in the coating polymer solution.

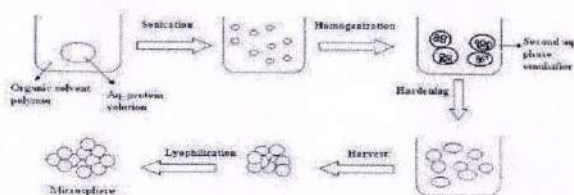


fig.4. Solvent Evaporation

6. Ionotropic Gelation Method

The drug is added to the aqueous sodium alginate solution by this method. To obtain a complete solution, the stirring continues and, after that, the solution containing $\text{Ca}^{2+}/\text{Al}^{3+}$ is added drop-

Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

wise. The microspheres formed were kept in the original solution for 24 hours for internal gellification followed by filtration for separation. The total release is achieved at pH 6.4-7.4, but the drug will not release at acidic PH. There are two methods by which microspheres can be generated using the ionotropic gelation technique, the external ionotropic gelation/cross-linking method, and the internal ionotropic gelation/emulsification method.

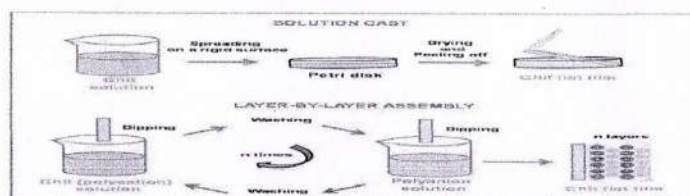


Fig.5. Ionotropic gelation method

6. Phase separation and coacervation Method

These phase separation processes can be used to encapsulate solid or liquid drug particles which are dispersed in the polymer solution. The encapsulation process involves three main stages,

1. Phase separation of the primary wall polymer solution is induced by one of the above mentioned methods. This leads to a three-phase system consisting of a polymer-rich liquid phase (coacervate phase), a polymer-lean liquid phase, and a solid or liquid phase made up of the drug particles. This suspension or emulsion is usually maintained by continuous agitation.

2. The polymer-rich phase deposits as micro droplets on the interface of the dispersed drug particles. The micro droplets then start to spread leading to fusion into a membrane

3. The polymer membrane is hardened through thermal, desolation, or chemical methods. A simple coacervation process can easily be demonstrated in an aqueous gelatin solution in which the solid or liquid drug is dispersed.

Spray Drying Method

Spray drying is traditionally used in the chemical, pharmaceutical, biochemical, and food industries for the drying of substances. For example, it is commonly used to process milk, ceramics, and various chemicals into a dry powder form. Therefore, information from food processing and chemical engineering is particularly relevant to pharmaceutical problems. The spray drying technique can be



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

used to encapsulate sensitive substances such as fragrances, essential oils, or vitamins. The internal structure of the microparticles depends on the solubility of the drug in the polymer leading to monolithic microspheres with dispersed or dissolved drug substance. True microcapsules can be obtained by spraying a suspension of a drug in an organic solution of the polymer. By contrast, microspheres of solid solution or solid dispersion morphology, are obtained by selection of appropriate process conditions and solvents. In the following sections, the different principles of the spray drying process, equipment, and pharmaceutical applications will be discussed.

1.8. FACTORS AFFECTING MUCOADHESION [1]

The Mucoadhesion of a drug carrier system to the mucous membrane depends on the below-mentioned factors:

- | | |
|-----------------------------------|------------------------------------|
| 1. The molecular weight | 6. Concentration of the polymer |
| 2. Stereochemistry of the polymer | 7. The chain length of the polymer |
| 3. Hydration of the polymer | 8. pH at the polymer |
| 4. substrate interface | 9. Swelling of the polymer |
| 5. Applied strength | |



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

2. LITERATURE SURVEY:

Salvucci AA, Squire B, Burdick M, et al. Ondansetron is safe and effective for prehospital treatment of nausea and vomiting by paramedics. *Prehosp Emerg Care* 15(1): 34-8, Jan 2011.

Ondansetron, an antiemetic, as a single dose reduced vomiting and facilitated oral rehydration in a study of children in an emergency department in the United States.

From: Feigin and Cherry's Textbook of Pediatric Infectious Diseases (Sixth Edition), 2009

Alginate aerogel beads doped with a polymeric deep eutectic solvent for green solid-phase micro extraction of 5-hydroxymethylfurfural in coffee samples

2022, *Micro chemical Journal*

Development of novel Co-MOF loaded sodium alginate-based packaging films with antimicrobial and ammonia-sensitive functions for shrimp freshness monitoring

2023, *Food Hydrocolloids*

Comparison of ondansetron HCl, granisetron HCl and palonosetron HCl for prevention of postoperative nausea and vomiting following gynaecological surgery under general anesthesia, Nita D Gosai, Rekha N Solanki*, Bhavna C Shah, Pooja Kumar, Rajdip Kubavat, 2019 102-106

Sodium alginate: the wonder polymer for controlled drug delivery

Nikhil K Sachan, Seema Pushkar, Antesh Jha, A. Bhattacharya 'University Institute of Pharmacy, C.S.J.M. University, Kanpur - 208024 Uttar Pradesh Anand College of Pharmacy, AEC Campus. Keetham. Agra - 282007. Uttar Pradesh Dept. of Pharmaceutical Sciences. Dibrugarh University, Dibrugarh - 786004 Assam

A Brief Review on Chitosan and Application in Biomedical Field. *American Journal of PharmTech Research* 2016. A Brief Review on Chitosan and Application in Biomedical Field

N Lakshmi Prasanthi, Hare Krishna Royl, N Jyothi, V Sri Vajrapriya. Department of Pharmaceutics, Nirmala College of Pharmacy, Artnaker (V), Guntur, Andhra Pradesh, India

The first reference to chitin in scientific literature was in 1811 when Henri Braconnot, a professor of natural history in France, separated chitin from a fungus (Khor, 2001). Odier in 1823 (Odier, 1823) managed to isolate the same material from the exoskeleton of a beetle and named this substance chitin from Greek meaning tunic or envelope.



*Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer*

In 1859, chitosan was discovered by a French scientist Rouget (Rouget, 1859), who boiled chitin in potassium hydroxide rendering a new substance soluble in organic acids. He named it modified chitin. However, 35 years later, this modified chitin was named 'chitosan' by Hoppe-Seyler in 1894 (Hoppe-Seyler, 1894).

The structure of chitosan was not resolved until 1950 (Khor, 2001). The first books on chitin were published in 1951 (Muzzarelli, 1977). In 1963, K.M. Rudall described the crystallographic structure of chitin for the first time (Rudall, 1963).

Due to recent increased understanding of its functionality and tremendous potential applications in several fields, chitosan has received increased attention over the last three decades as one of the promising renewable polymeric materials (Majeti & Kumar, 2000, Sinha et al, 2004).



*Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer*

3. AIM AND OBJECTIVES OF THE STUDY

AIM:

In this study the mucoadhesive microsphere of Ondansetron hydrochloride were prepared by single emulsion technique with an aim to avoid first pass effect and to improve therapeutic efficacy of Ondansetron in treatment of nausea and vomiting.

OBJECTIVE:

The objective of this study way to develop a mucoadhesive microsphere using natural polymer such as sodium alginate and chitosan. The formaldehyde is used as cross-linking agent. A total no. of 5 formulation was prepared by single emulsion technique. By this study it is possible to increase patient compliance, to increase bioavailability of drug, to act drug at targeted site, to decrease dose frequency and increase drug efficacy.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

4. PLAN OF WORK:

The present work was carried out preliminary characterization of mucoadhesive microsphere containing Ondansetron HCL by using natural polymer.

The study was purpose to carry out in the following stages,

Phase-1

- Preformulation study of Ondansetron HCL
- Preparation of standard curve of Ondansetron HCL.

Phase-2

- Formulation and preparation of mucoadhesive microsphere containing Ondansetron HCL.
- Evaluation of mucoadhesive microsphere
- Angle of repose
- Mocoadhesion test
- Drug release study



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

5. LIST OF MATERIALS AND EQUIPMENTS:

Table 3: List of Materials

SR. No	Name of Material	Mfg. BY	Use
1.	Ondansetron HCL	Dr. Reddy's Laboratories	Anti emetics
2.	Sodium Alginate	Hilab Chemicals	Polymer
3.	Chitosan	Research lab fine chem. Industry	polymer
4.	Formaldehyde	Research lab fine chem. Industry	Cross linking agent

Table 4: List of Instrument/Equipment

S. NO	Name of Instrument/Equipment	Model	Mfg By
1.	UV spectrophotometer	UV1800	Shimadzu
2.	Single panel electronic balance	AY220	Shimadzu
3.	FTIR Spectrometer	Spectrum 65	Perkin Elmer

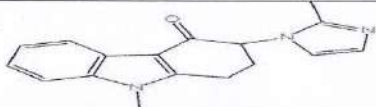


Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

5. 1. DRUG/EXCIPENTS PROFILE: -

5.1.1. Ondansetron Hydrochloride [6]

4.1. Ondansetron Hydrochloride:

Molecular formula	C ₁₈ H ₂₀ Cl ₃ O
Structure	
IUPAC Name	9-methyl-3-[(2-methylimidazol-1-yl)methyl]-2,3-dihydro-1H-carbazol-4-one; hydrochloride
Molecular weight	365.9
Schedule	Schedule H
Indication	Vomiting
Class	Anti-emetics drug, Selective 5-HT ₃ Antagonis
Bioavailability	similar to 60%
Protein Binding	70-60%
Metabolism	liver
Half life	5.7 hours
Excretion	kidney
Synonyms	Ondansetron hydrochloride, Zofan ondemet, Emeset, zuplenz,
Indication	To prevent nausea and vomiting caused by cancer chemotherapy, radiation therapy and surgery
Description	Blocking the action of serotonin, a natural substance that may cause nausea and vomiting
Safety	Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

5.1.2. SODIUM ALGINATES: [6,7]

Molecular formula	$(C_6H_7NaO_6)_n$
Synonyms	Alginato sodico, algin; alginic acid, sodium salt; E401; Kelcosol alginate Keltone; natrii alginas; Protanal; sodium polymannuronate.
Molecular weight	1.93×10^5 g/mol.
Indication	Thickening agent, gelling agent, emulsifier
Description	Sodium alginate occur as an odorless and tasteless, white to pale yellowish brown colored powder.
Safety	Formulations, such as tablets and topical products, including wound dressings. It is generally regarded as a nontoxic and nonirritant material, although excessive oral consumption may be harmful.

5.1.3. Chitosan: [6]

Molecular Formula	$C_{18}H_{35}N_3O_{13}$
Synonyms	chitosan
Molecular Weight	501.5
IUPAC name	2-amino-2-deoxy-beta-D-glucopyranosyl-(1->4)-2-deoxy-hexopyranosyl-(1->4)-2-deoxy-hexopyranose
Melting point	216.69



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

6. EXPERIMENTAL

6.1. PREFORMULATION STUDIES:

6.1.1. Organoleptic Properties: [8]

This includes recording of color, odor and taste of the drug using descriptive terminology:

Color- stability problems, improve appearance by including dye in body or coating.

Taste - palatability problems, flavor and excipients may be added.

Odor- degradation products, stable form of drug to be used, flavors and excipients may be used.

6.1.2. Solubility Study: [8]

The solubility test is an important parameter before formulation development. The solubility of solute means the maximum quantity of solute that can be dissolved in certain quantity of solvent or quantity of solution at a specified temperature. Solubility is usually determined in variety of commonly used solvents. The solubility of material is usually determined by the equilibrium solubility method.

6.1.3. Melting Point: [8]

Melting point is the temperature at which the solid phase is at equilibrium with the liquid Phase. It was determined by using the digital melting point instrument. Melting point of Ondansetron 230.6°C.

6.1.4. UV-Visible Spectroscopic Analysis of Ondansetron Hydrochloride:

Procedure [8,9]:

10 mg of ODN was accurately weighed and transferred to 100 ml of volumetric flask. The drug was dissolved in 100 ml distilled water to obtain a stock solution 100 µg/ml. One ml of this stock solution was again diluted with distilled water up to 10 ml to obtain a solution of 10 µg/ml. The resulting solution was scanned between 200 nm to 350 nm using Systronics 2205 double beam UV/visible spectrophotometer.

The solutions were scanned in the range of 400-200 nm against 0.1N HCL as reference, and the peaks were observed in the spectra at 310nm. The wavelength selected for analysis of drug was 310nm. The drug obeys the lamberts law in the range of 4-24 µg/ml. By using linearity plot the quantification was carried out.



Preliminary Characterization & Formulation of Mucosalhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Calibration Curve:

Accurately weighed 10 mg of ODN was transferred to 10 ml volumetric flask. The drug was dissolved in 10 ml distilled water (stock solution-I) to make a solution 1000 ug/ml. 5 ml of stock solutions-I diluted to 100 ml with distilled water to give a stock solution of concentration 50 ug/ml (Stock solution-II). From stock solution II aliquots of 1, 2, 3, 4, 5, & 6 ml were transferred to a series of 10 ml volumetric flasks and the volume was made up to the mark with 0.1 N hydrochloric acid to prepare the concentration from 5 to 30 ug/ml.

Assay of ondansetron hydrochloride [8]:

To determine the total drug content of the microspheres 100mg of microspheres was ground to a fine powder and dissolved in 5ml (water and methanol) and diluted with phosphate buffer pH 6.8 to 100ml. the drug content was determined spectrophotometrically at 248 nm. Three determinations of the microspheres content from the same batch for each ratio and method was performed.

Area under curve

Area under curve method involves the calculation of integrated value of absorbance with respect to the wavelength between two selected wavelengths such as λ_1 and λ_2 representing start and end point of curve region. The area under curve between λ_1 and λ_2 was calculated using UV probe software. In this study area was integrated between wavelength ranges from 248 to 254 nm. Where, α is area of portion bounded by curve data and a straight line connecting the start and end point, β is the area of portion bounded by a straight line connecting the start and end point on curve data and horizontal axis, λ_1 and λ_2 are wavelength range start and end point of curve region.

6.1.5. Compatibility Study by Using FTIR.

Fourier transform infrared spectroscopy (FTIR)[8]

The FTIR spectra acquired were taken from dried samples. FTIR (Thermo Nicolet 670) spectrometer was used for the analysis in the frequency range between 4000cm^{-1} and 400cm^{-1} .

6.1.6. Physical Stability Studies [8]

Physical stability study was performed at room temperature for one month. Stability of the prepared vesicles showed that drug leakage after one month. Vesicles also were found to be reasonably stable in terms of aggregation and fusion. In accordance with the results, it can be concluded that at room



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

temperature, there were slightly but insignificantly increase in the particle size. Results suggest that keeping the vesicular product at room temperature minimizes the stability of vesicles, but vesicular product may be stable in refrigerated condition.

**6.2. FORMULATION AND PREPARATION OF MUCOADHESIVE MICROSPHERE
CONTAINING ONDANSETRONE HYDROCHLORIDE BY USING NATURAL POLYMER**

5.2.1. Formulation table for Ondansetron Microspheres

Code	Drug: Polymer:	Drug (mg)	Sodium alginate	Chitosan	Formaldehyde
F1	1:1	4	4	-	Q. S
F2	1:2	4	8	-	Q. S
F3	1:3	4	12	-	Q. S
F4	1:1:1	4	-	4	Q. S
F5	1:1:2	4	-	8	Q. S

Table 1. Formulation Table

6.2.2: Method of Preparation Single emulsion technique

Description:

By this technique the macro particulate of the natural polymer i.e., carbohydrate and protein are prepared. The natural polymer are dissolved in aq. Medium which is followed by dispersion in the non aq. Medium like oil. The cross linking of the disperse globule is carried out in second step by heat or by using the chemical cross linkers, the cross linking can be achieved by using formaldehyde. For the thermolabile substance the heat denaturation is not suitable. The chemical cross linking having the drawback of excessive exposure of the active ingredient to the chemical, if added at the time of preparation. Then subjected to the centrifugation, separation, washing, nature of the surfactant used to stabilize the emulsion phase influenced by size distribution loading drug release, surface morphology and bio performance of the final multiparticulate product.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

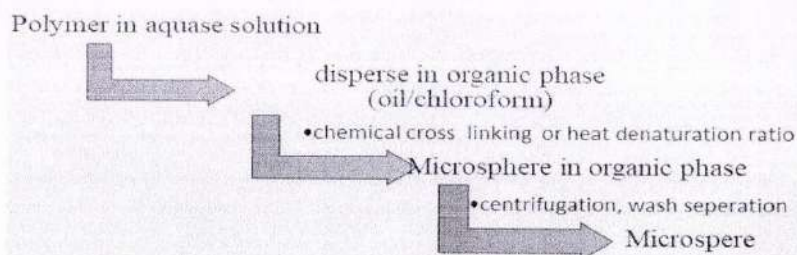


Fig.6. Single emulsion technique

6.3. Evaluation of Mucoadhesive Microsphere:

1. Particle Size and Shape [1]

Particle Size and Shape Microspheres' size, shape, and outer structure can be determined using light microscopy (LM) and scanning electron microscopy (SEM).

2. Micromeritics Properties [8]

A) Angle of Repose

Angle of repose of different formulations was measured according to the fixed funnel standing cone method. The angle of repose is designated by θ and given by equation

$$\tan \theta = \frac{h}{r}$$

Where,

h- Height of pile

r- Radius of the base of the pile

B) Mucohesion test [11]:

The mucoadhesive properties of various formulations of Ondansetron hcl loaded sodium alginate/chitosan beads were evaluated by the in vitro wash- off method. The adherence of beads was regularly observed. The beads that remained adhered to the mucosa were counted at regular intervals for up to 10 hours.

$$\% \text{ of mucoadhesion} = \frac{\text{No. of adhered microbeads}}{\text{Total no. of applied microbeads}} \times 100$$

C) Drug Release Study [11]:

The release of Ondansetron hydrochloride was studied in 900 ml phosphate buffer saline as



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

dissolution media using USP 2nd dissolution apparatus. The sample were withdrawn at an interval of 0,15,30,45,60,120,240,360,480 min and replaced simultaneously with fresh buffer. The collected sample were assayed with the help of UV spectrophotometer at 250nm. All measurement were carried out in triplicate and average values plotted.

D) Bulk Density and Tapped Density [8]

The density was measured by tapping method. The bulk density, and tapped density were calculated using the following formula

$$\text{Bulk density} = \frac{\text{Weight of the powder}}{\text{Bulk Volume of the powder}}$$

$$\text{Tapped density} = \frac{\text{Weight of the powder}}{\text{Volume of liquid it displaces the powder}}$$

E) Swelling index [8]

The following equation can be used to calculate the percent swelling value,

$$\text{Percent swelling} = \frac{D_T - D_0}{D_0} \times 100$$

F) Encapsulation efficacy [8]

Drug entrapment efficiency of the formed microspheres was evaluated by using cooling ultracentrifuge (Remi) at 4000 rpm in 3 subsequent rounds. The clear supernatant separated the un-entrapped drug and the absorbance taken at Amax at 248 nm using UV spectrophotometer (Shimadzu UV 1800).

$$\text{Encapsulation Efficacy} = \frac{\text{Actual drug content}}{\text{Theoretical drug content}} \times 100$$

G) Entrapment Efficacy [8]

Entrapment Efficiency Allowing washed microspheres to lyse can be used to calculate the microspheres' entrapment efficiency or percent entrapment. The lysate is then filtered or centrifuged, and the active constituents are determined according to the monograph's standards

$$\% \text{ Entrapment} = \frac{\text{Amount in supernatant} - \text{Amount in sediment}}{\text{Amount in supernatant}} \times 100$$



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

7. RESULTS AND DISCUSSION

7.1. Identification test of Ondansetron

Test	Ondansetron	
	Specification	Observation
Physical appearance	White to off-white powder	White powder
Taste	Tasteless	Tasteless
Odor	Odorless	Odorless
Melting Point	231 - 232°C	230.6 °C

Table 1. Identification test of Ondansetron

7.2 Solubility test

Table 2. Solubility test

Sr. No	Solvent	Solubility
1	Water	Sparingly soluble
2	Methanol	Soluble
3	Chloroform	Slightly soluble
4	Dichloromethane	Sparingly soluble
5	Methylene chloride	Slightly soluble

7.3. UV Determination

The UV visible spectroscopic method for the Ondansetron Hydrochloride by Second order derivative Area under Curve was found to be simple, accurate, economical and reproducible. The drug concentrations were found to be linear in the range of 04-24 µg/ml. The result of the analysis for pharmaceutical formulation by the development method was consistent with the label claim, highly reproducible and reliable. The method can be used for routine quality control analysis of Ondansetron Hydrochloride in bulk and pharmaceutical formulations.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Table 3. Linearity of ondansetron

Sr. No.	Concentration in $\mu\text{g/ml}$	Absorbance UV method
1	4	0.176
2	8	0.337
3	12	0.512
4	16	0.665
5	20	0.832
6	24	0.980

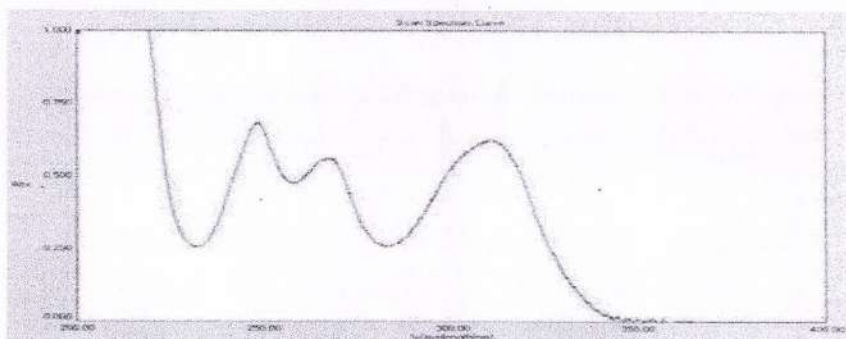


Fig. 6. Absorption maxima spectrum of Ondansetron

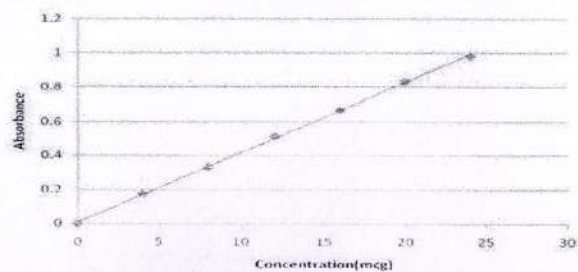


Fig. 7. Calibration curve of Ondansetron at 310nm



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Identification by FTIR study of pure drug and polymer

FTIR study of pure drug sample was carried out. This identification was done by measuring the wave number of particular functional group to characterize the pure drug. FTIR (Fourier Transform Infra-Red Spectroscopy) spectrum of pure Ondansetron (Fig 2) showed the characteristic peak at 1734.27cm^{-1} which can be assigned to the C-O stretching in the aromatic ring and a peak at 1637.07cm^{-1} which can be assigned to the C-N in the aromatic ring, a peak at 1529.82cm^{-1} which can be assigned to the N-H stretching and a peak at 1279.87cm^{-1} which can be assigned to the stretching of C-C in the aromatic ring.

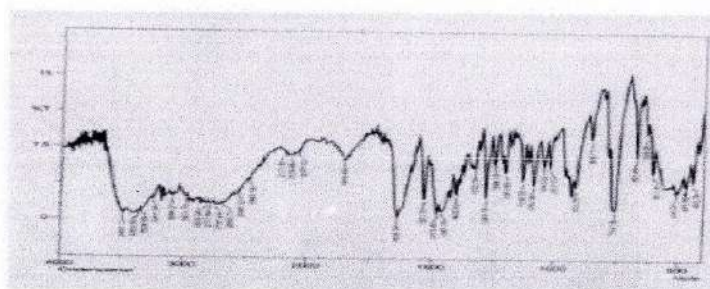


Fig 8. IR Spectrum of Pure Drug Ondansetron



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

8. CONCLUSION

The ondansetron hydrochloride microspheres sustained drug release for longer thereby it could be capable of reducing the frequency of administration and the dose-dependent side effects with the repeated administration of conventional ondansetron tablets. This type of sustained formulation will be better suitable for the cancer patients. No drug polymer interaction was found and formulations remained stable over a long period of time. The Mucoadhesive microsphere's promising goal is to achieve controlled release with increased bioavailability and drug targeting to specific body sites. The production method was optimized for particle size and production yield. The volume of internal phase, rate of agitation and concentration of emulsifying agent significantly influence the particle size and production yield of ODN microspheres. The prepared ODN microspheres exhibits good flow.

The proposed methods are simple, sensitive, and cost-effective. Validated in terms of precision, linearity and accuracy. The results are reproducible, and can be used successfully for the estimation of Ondansetron in bulk and its pharmaceutical formulations.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

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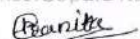
ज्ञानगंगा धरोहर

DECLARATION BY CANDIDATE

We hereby declare that the report entitled
**"PRELIMINARY CHARACTERIZATION AND FORMULATION OF MUCOADHESIVE
MICROSPHERE CONTAINING ONDENSETRON HYDROCHLORIDE BY USING NATURAL
POLYMER"**

*Submitted to the institute done by us under the supervision and guidance of
Prof. Dr. Dhobale Shankar M. Department of Pharmaceutics and it has not
formed the basis for the award of any Degree / Diploma / Associateship /
Fellowship or other similar titles to any candidate in any University so far.*


Miss. Gopale Rutuja Dipak


Miss. Hadaware Pranita Pandurang

Place: Ale(Pune)

Date: 14/12/2022

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And Research, Ale 412411



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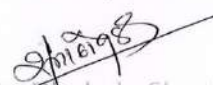
ज्ञानगंगा घरोघरी

CERTIFICATE BY GUIDE

*This is to certify that the Practice
school report entitled,*

*"PRELIMINARY CHARACTERIZATION AND FORMULATION OF MUCOADHESIVE
MICROSPHERE CONTAINING ONDENSETRON HYDROCHLORIDE BY USING NATURAL
POLYMER"*

*Submitted to the Institute and done by them of their study under my
supervision and guidance and the thesis has not formed the basis for the
award of any Degree/Diploma/Associateship / Fellowship or other similar
titles to any candidate of any University so far.*


Prof. Dr. Diobale Shankar M.
(M. Pharm, PhD)

VJSM's Vishal Institute of Pharmaceutical Education and
Research,
Ale 412411

Place: Ale(Pune)

Date:



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ENDORSEMENT BY THE PRINCIPAL

*This is to certify that the practice
School Report entitled*

*"PRELIMINARY CHARACTERIZATION AND FORMULATION OF MUCOADHESIVE
MICROSPHERE CONTAINING ONDENSETRON HYDROCHLORIDE BY USING NATURAL
POLYMER"*

*This work was carried out by them in the Computer Lab, laboratory and library
of Vishal Institute of Pharmaceutical Education and Research, Ale under the guidance
of Prof. Dr. Dhobale Shankar M.*

Dr. Suresh L. Jadhav

(M. Pharm. PhD)

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Date:



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

Acknowledgement

Its great pleasure for me to acknowledge all those who have contributed towards the conceptions origin and nurturing of this project the person whose picture comes first in my mind is that of my estimated guide **Dr. Dhobale Shankar M.** for this valuable guidance, timely advice, kind cooperation, understanding and constant inspiration throughout the course of the study. It is with affections and reverence that I dedicate often beyond the call of duty. It was pleasure of working under his guidance.

I would like to express my obligation to our **Principal Dr. Jadhav. Suresh L.** for providing excellent facility for study and parental attitude and constant encouragement.

I would like to express my sincere thanks to all the faculty members of pharmaceuticals department and there best wishes and guidance during my entire course of study.

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Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

INDEX

Sr. No	Topic	Page No.
1.	Introduction	3-11
2.	Literature study	12-13
3.	Aim and Objective	14
4.	Plane of Work	15
5.	List of materials and Equipment	16-18
6.	Experimental	19-23
7.	Result and Discussion	24-26
8.	Conclusion	27
9.	Reference	28



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

**PRELIMINARY CHARACTERIZATION AND FORMULATION OF
MUCOADHESIVE MICROSPHERE CONTAINING ONDANSETRON
HYDROCHLORIDE BY USING NATURAL POLYMER**

ABSTRACT

The present study was aimed to prepared mucoadhesive microsphere for sustained release of Ondansetron hydrochloride using natural polymer. Mucoadhesive Microspheres are an integral component of this multi-particle drug delivery system and play an important function in the delivery of a novel drug. Mucoadhesive microsphere have a longer duration of resistance at the absorption site and improves the therapeutic efficacy of the Ondansetron hydrochloride and also enhancing patient compliance by reducing done frequency. Preformulation characterization such as UV spectroscopy, physicochemical characteristics, solubility etc. has been studied. FTIR study recommends that the Compatibility study was carried out by following ICH guidelines.

Key words: FTIR, Mucoadhesion, ICH guideline, Ondansetron HCL



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

1. INTRODUCTION: [1]

Orally controlled release systems remain the most prominent among all drug delivery systems. This has many advantages compared to conventional systems, such as better plasma level profile, lower dosing, and toxicity, etc. Microspheres are a type of novel drug delivery system comprised of different polymers and also have a variety of applications. Ondansetron is a novel and specific antagonist of the 5-HT receptor indicated for chemotherapy-induced nausea and vomiting in cancer patients. The half-life in plasma has been reported to be 4-5 hours. The shorter biological half-life and frequent dosing in chemotherapy-induced nausea and vomiting make it as an ideal candidate for sustained release drug delivery system. Therefore, the objective of the work is to provide a sustained action pharmaceutical composition containing ondansetron in a modified release formulation, to maintain the blood level of active ingredient for a prolonged period of time. Microencapsulation is of the technique to sustain the rate release of the drug. Microencapsulation can improve the absorption of a drug and reduce side effects such as irritation of the gastrointestinal mucosa. Only limited studied on ondansetron extended-release formulation has been carried out using cellulose derivatives.

1.1. ADVANTAGES OF MUCOADHESIVE DRUG DELIVERY SYSTEM: [1]

- The formulation at the delivery site stays longer, due to the adhesion and intimate contact, improving the bioavailability of the API using a lower API concentration in the treatment of disease.
- Better compliance with patients and convenience because of lower doses of drugs.
- It offers an excellent route for the systemic delivery of drug with a high level of first pass metabolism by offering higher bioavailability.
- Significant cost reduction achieved and dose related side effects may be reduced due to the localization of the API at the diseased site.
- Approximately the morphology of microsphere allows for controlled variability in degradation and release of drug.
- Sufficient and prolonged therapeutic effect.

The use of Mucoadhesive microspheres in the development of Oral controlled drug delivery



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

systems for effective gastro-intestinal retention and sustained action. The Mucoadhesive system has proven to be very effective.

Due to their high Mucoadhesive functions and low toxicity, anionic polymers are the most often used as Mucoadhesive polymers in pharmaceutical formulations. These include alginates, carrageenan, and polyacrylic acid (PAA) and are weakly cross-linked with sodium-carboxymethylcellulose derivatives (NaCMC). Because of the high hydrogen-bonding interactions with mucin, PAA and NaCMC have excellent Mucoadhesive characteristics. The derivatives of polycarbophil and carbomers (Carbopol and PAA), as a Mucoadhesive platform for drug delivery to the GI system, were extensively studied.

1.3. CLASSIFICATION OF MUCOADHESIVE POLYMERS [1]

There are various mucoadhesive polymers of synthetic and natural origin, which are classified in the Table 1 below:

Table 1: A shortlist of Mucoadhesive Polymers

Sr. No	Synthetic Polymer	Natural Polymer
1	Hydroxypropyl methylcellulose (HPMC)	Chitosan
2	Poly (acrylic acid) polymers (carbomers, polycarbophil)	Sodium alginate
3	Polyvinyl pyrrolidone (PVP)	Pectin
4	Polyvinyl alcohol (PVA)	Locut bean gum
5	Polyhydroxyethyl methylacrylate	Guar gum
6	Polyethylene oxide	Xanthum gum
7	Sodium carboxy methyl cellulose (Na CMC)	Karaya gum
8	Hydroxyl ethyl cellulose (HEC)	Gelatin
9	Hydroxypropyl cellulose (HPC)	Tragacanth
10	Ethyl cellulose (EC)	Soluble starch
11	Methylcellulose (MC)	Lecithin

1.4. MECHANISM OF MUCOADHESION: [1-2]

It includes 2 steps: A. The Contact stage B. Consolidation Stage

A. The Contact Stage

The first phase of the Mucoadhesive Mechanism is the contact stage. This stage is marked by the

Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
 Natural Polymer

association of the Mucoadhesive material with the mucosal surface, as well as by the swelling and spread of the formulation, which generates a deep contact with the mucosal surface.

B. Consolidation Stage

Mucoadhesive materials are activated in this process by the presence of moisture. The system is plasticized by humidity which allows the Mucoadhesive molecules to break free and link with weak hydrogen bonds.

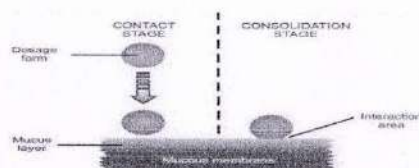


Fig.1. Mechanism of Mucoadhesion

1.5. THEORIES OF MUCOADHESION: [3]

Several theories have been proposed to explain the fundamental mechanisms of adhesion. In a particular system, one or more theories can equally well explain or contribute to the formation of bioadhesive bonds

1. Electronic theory

According to this theory, electron transfer occurs upon contact of an adhesive polymer with a mucus glycoprotein network because of differences in their electronic structures. This results in the formation of an electrical double layer at the interface. Adhesion occurs due to attractive forces across the double layer.

2. Absorption theory

According to this theory, after an initial contact between two surfaces, the material adheres because of surface forces acting between the atoms in the two surfaces. Two types of chemical bonds resulting from these forces can be distinguished:

- (i) Primary chemical bonds of covalent nature, which are undesirable in bio adhesion because their high strength may result in permanent bonds.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

- (ii) Secondary chemical bonds having many different forces of attraction, including electrostatic forces, Vander Waals forces and hydrogen and hydrophobic bonds.

3. Wetting theory

Wetting theory is predominantly applicable to liquid bio adhesive systems and analyse adhesive and contact behavior in terms of the ability of a liquid or a paste to spread over a biological system. The work of adhesion (expressed in terms of surface and interfacial tension, γ being defined as the energy per cm^2 released when an interface is formed. The work of adhesion is given by

$$W_a = \gamma_A + \gamma_B - \gamma_{AB} \quad \dots 1 \text{ where 'A' and 'B' refer to the biological membrane and the}$$

bioadhesive formulation respectively. work of cohesion is given by

$$W_c = 2\gamma_A \text{ or } \gamma_B \quad \dots 2 \text{ For a bio adhesive material B spreading on a biological}$$

substrate A, the spreading coefficient is given by

$$S_{B/A} = \gamma_A - (\gamma_B + \gamma_{AB}) \quad \dots 3 \text{ } S_{B/A} \text{ should be positive for a bioadhesive material to adhere}$$

to a biological membrane.

4. Diffusion theory

According to this theory, the polymer chains and the mucus mix to a sufficient depth to create a semi- permanent adhesive bond. The exact depth to which the polymer chains penetrate the mucus depends on the diffusion coefficient and the time of contact. This diffusion coefficient, in turn, depends on the value of molecular weight between crosslinks and decreases significantly as the cross-linking density increases

5. Fracture theory

This theory attempts to relate the difficulty of separation of two surfaces after adhesion.

Fracture theory equivalent to adhesive strength is given by:

$G = (E\epsilon/L)^{1/2}$ Where, E- Young's modulus of elasticity; ϵ - fracture energy, and L- critical crack length when two surfaces are separated.

1.6. Ondansetron Hydrochloride: [4]

Ondansetron, commonly referred to by its brand name Zofran, is a drug that was first develop and studied in the 1980s and is now widely approved for prevention and treatment of nausea and vomiting associated with chemotherapy, radiation, and surgery.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Ondansetron and other members of the steron drug family are serotonin antagonist. This means these drugs blocks the serotonin receptor in the chemoreceptor trigger zone (CTZ) with in the medulla oblongata. The CTZ communicates with the vomiting centre to the initiate vomiting. By blocking the serotonin receptor, there less serotonin that enters the CTZ, with decreases communication with vomiting centre. Ultimtely, the patient experience reduced nausea and vomiting.

1.7. Methods Of Preparation of Mucoadhesive Microspheres: [1,5]

Mucoadhesive microspheres can be prepared by using different techniques like:

1. Complex Coacervation

The theory of this approach is that when two hydrophilic colloids solutions are combined under appropriate conditions, the liquid precipitate separates. The coating material process, made by dissolving an immiscible polymer in a suitable vehicle, and the core material are dispersed in a coating polymer solution under constant stirring in this system. Changing the temperature of the polymer solution; changing the pH of the medium; applying salt or an incompatible polymer or a non-solvent to the polymer solution; inducing a polymer-polymer interaction were all used to achieve microencapsulation. To shape a self-sustaining microsphere, the coating is typically hardened using thermal cross-linking or desolation techniques.

2. Hot Melt Microencapsulation

This method was used to create microspheres of Polyanhydride copolymer of poly bis (p-carboxyl phenoxy) propane anhydride with sebacic acid. The polymer is melted first, and then the solid drug particles are added in a continuous mixing process. To obtain a stabilized emulsion, the prepared mixture is suspended in a non-miscible solvent such as silicone oil and heated at a temperature above the melting point of the polymer with continuous stirring. After cooling the emulsion to solidify the polymer particles, the microspheres are filtered and washed with petroleum ether.

3. Single emulsion technique

There are several Proteins and carbohydrates, which are prepared by this technique. In which the natural polymers are dissolved in aqueous medium and the followed by dispersion in oil phase i.e., non-aqueous medium. That is the first step in Next step cross linking is carried out by two methods.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

(1) **Cross linking by heat:** by adding the dispersion into heated oil, but it is unsuitable for the Thermo labile drugs.

2. **Chemical cross-linking agents:** by using agents i.e., formaldehyde, di acid chloride, glutaraldehyde etc. but it is having a disadvantage of excessive exposure of active ingredient to chemicals if added at the time of preparation and then subjected to centrifugation, washing and separation. Chitosan solution (in acetic acid) by adding to Liquid paraffin containing a surfactant resulting formation of w/o emulsion. Metformin hydrochloride microsphere are preparing by using glutaraldehyde 25% solution as a cross linking agent.

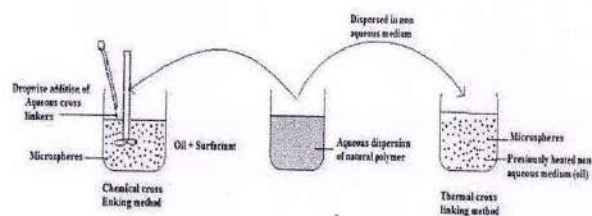


Fig. 2. Chemical cross-linking agent

4. Double Emulsion Method

A two-stage emulsification process is used to generate transient W1/O/W2 emulsions. The principle of encapsulation is based upon inducing phase separation of the polymer dissolved in an organic solvent due to partial extraction of the solvent in a large volume of an external water phase and evaporation of the volatile solvent. The polymer then forms a coacervate enclosing the internal aqueous phase (W) containing the active compound and microparticles are hardened under removal of residual solvent. A limited solubility of the solvent in the external water phase is beneficial. Dichloro- methane was frequently employed because of its low boiling point, which facilitates the removal of residual solvent from the finished product. The hydrophilic drug substance is dissolved either in water or buffer and represents the internal water phase (W). Stabilizing excipients can be added to protect the drug in the core of the microspheres. This W, phase is homogenized with the O phase yielding a W/O emulsion. Homogenization is carried out by using high-speed or high-pressure mixers, ultrasonication, or static mixers.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

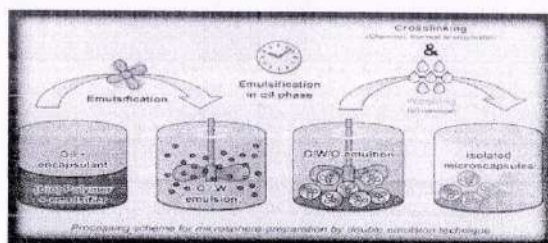


Fig. 3. Double emulsion method

5. Solvent Evaporation

This is done in a liquid production vehicle. The microcapsule coating is dispersed in a volatile solvent that is incompatible with the liquid manufacturing vehicle phase of the process. In the coating polymer solution, a central substance to be microencapsulated is dissolved or dispersed. The core material mixture is distributed in the liquid manufacturing vehicle process with agitation to achieve the desired microcapsule size. If required, the mixture is heated to evaporate the solvent from the core material's polymer, after which the polymer shrinks around the core. Matrix-

microcapsules are created when the core material is dissolved in the coating polymer solution.

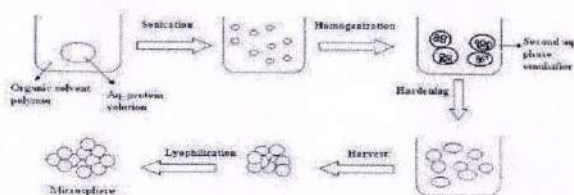


fig.4. Solvent Evaporation

6. Ionotropic Gelation Method

The drug is added to the aqueous sodium alginate solution by this method. To obtain a complete solution, the stirring continues and, after that, the solution containing $\text{Ca}^{2+}/\text{Al}^{3+}$ is added drop-

Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

wise. The microspheres formed were kept in the original solution for 24 hours for internal gellification followed by filtration for separation. The total release is achieved at pH 6.4-7.4, but the drug will not release at acidic PH. There are two methods by which microspheres can be generated using the ionotropic gelation technique, the external ionotropic gelation/cross-linking method, and the internal ionotropic gelation/emulsification method.

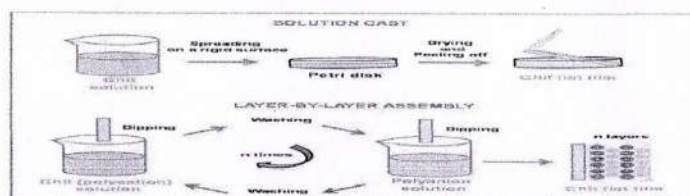


Fig.5. Ionotropic gelation method

6. Phase separation and coacervation Method

These phase separation processes can be used to encapsulate solid or liquid drug particles which are dispersed in the polymer solution. The encapsulation process involves three main stages,

1. Phase separation of the primary wall polymer solution is induced by one of the above mentioned methods. This leads to a three-phase system consisting of a polymer-rich liquid phase (coacervate phase), a polymer-lean liquid phase, and a solid or liquid phase made up of the drug particles. This suspension or emulsion is usually maintained by continuous agitation.

2. The polymer-rich phase deposits as micro droplets on the interface of the dispersed drug particles. The micro droplets then start to spread leading to fusion into a membrane

3. The polymer membrane is hardened through thermal, desolation, or chemical methods. A simple coacervation process can easily be demonstrated in an aqueous gelatin solution in which the solid or liquid drug is dispersed.

Spray Drying Method

Spray drying is traditionally used in the chemical, pharmaceutical, biochemical, and food industries for the drying of substances. For example, it is commonly used to process milk, ceramics, and various chemicals into a dry powder form. Therefore, information from food processing and chemical engineering is particularly relevant to pharmaceutical problems. The spray drying technique can be



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

used to encapsulate sensitive substances such as fragrances, essential oils, or vitamins. The internal structure of the microparticles depends on the solubility of the drug in the polymer leading to monolithic microspheres with dispersed or dissolved drug substance. True microcapsules can be obtained by spraying a suspension of a drug in an organic solution of the polymer. By contrast, microspheres of solid solution or solid dispersion morphology, are obtained by selection of appropriate process conditions and solvents. In the following sections, the different principles of the spray drying process, equipment, and pharmaceutical applications will be discussed.

1.8. FACTORS AFFECTING MUCOADHESION [1]

The Mucoadhesion of a drug carrier system to the mucous membrane depends on the below-mentioned factors:

- | | |
|-----------------------------------|------------------------------------|
| 1. The molecular weight | 6. Concentration of the polymer |
| 2. Stereochemistry of the polymer | 7. The chain length of the polymer |
| 3. Hydration of the polymer | 8. pH at the polymer |
| 4. substrate interface | 9. Swelling of the polymer |
| 5. Applied strength | |



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

2. LITERATURE SURVEY:

Salvucci AA, Squire B, Burdick M, et al. Ondansetron is safe and effective for prehospital treatment of nausea and vomiting by paramedics. *Prehosp Emerg Care* 15(1): 34-8, Jan 2011.

Ondansetron, an antiemetic, as a single dose reduced vomiting and facilitated oral rehydration in a study of children in an emergency department in the United States.

From: Feigin and Cherry's Textbook of Pediatric Infectious Diseases (Sixth Edition), 2009

Alginate aerogel beads doped with a polymeric deep eutectic solvent for green solid-phase micro extraction of 5-hydroxymethylfurfural in coffee samples

2022, *Micro chemical Journal*

Development of novel Co-MOF loaded sodium alginate-based packaging films with antimicrobial and ammonia-sensitive functions for shrimp freshness monitoring

2023, *Food Hydrocolloids*

Comparison of ondansetron HCl, granisetron HCl and palonosetron HCl for prevention of postoperative nausea and vomiting following gynaecological surgery under general anesthesia, Nita D Gosai, Rekha N Solanki*, Bhavna C Shah, Pooja Kumar, Rajdip Kubavat, 2019 102-106

Sodium alginate: the wonder polymer for controlled drug delivery

Nikhil K Sachan, Seema Pushkar, Antesh Jha, A. Bhattacharya 'University Institute of Pharmacy, C.S.J.M. University, Kanpur - 208024 Uttar Pradesh Anand College of Pharmacy, AEC Campus. Keetham. Agra - 282007. Uttar Pradesh Dept. of Pharmaceutical Sciences. Dibrugarh University, Dibrugarh - 786004 Assam

A Brief Review on Chitosan and Application in Biomedical Field. *American Journal of PharmTech Research* 2016. A Brief Review on Chitosan and Application in Biomedical Field

N Lakshmi Prasanthi, Hare Krishna Royl, N Jyothi, V Sri Vajrapriya. Department of Pharmaceutics, Nirmala College of Pharmacy, Artnaker (V), Guntur, Andhra Pradesh, India

The first reference to chitin in scientific literature was in 1811 when Henri Braconnot, a professor of natural history in France, separated chitin from a fungus (Khor, 2001). Odier in 1823 (Odier, 1823) managed to isolate the same material from the exoskeleton of a beetle and named this substance chitin from Greek meaning tunic or envelope.



*Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
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In 1859, chitosan was discovered by a French scientist Rouget (Rouget, 1859), who boiled chitin in potassium hydroxide rendering a new substance soluble in organic acids. He named it modified chitin. However, 35 years later, this modified chitin was named 'chitosan' by Hoppe-Seyler in 1894 (Hoppe-Seyler, 1894).

The structure of chitosan was not resolved until 1950 (Khor, 2001). The first books on chitin were published in 1951 (Muzzarelli, 1977). In 1963, K.M. Rudall described the crystallographic structure of chitin for the first time (Rudall, 1963).

Due to recent increased understanding of its functionality and tremendous potential applications in several fields, chitosan has received increased attention over the last three decades as one of the promising renewable polymeric materials (Majeti & Kumar, 2000, Sinha et al, 2004).



*Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer*

3. AIM AND OBJECTIVES OF THE STUDY

AIM:

In this study the mucoadhesive microsphere of Ondansetron hydrochloride were prepared by single emulsion technique with an aim to avoid first pass effect and to improve therapeutic efficacy of Ondansetron in treatment of nausea and vomiting.

OBJECTIVE:

The objective of this study way to develop a mucoadhesive microsphere using natural polymer such as sodium alginate and chitosan. The formaldehyde is used as cross-linking agent. A total no. of 5 formulation was prepared by single emulsion technique. By this study it is possible to increase patient compliance, to increase bioavailability of drug, to act drug at targeted site, to decrease dose frequency and increase drug efficacy.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

4. PLAN OF WORK:

The present work was carried out preliminary characterization of mucoadhesive microsphere containing Ondansetron HCL by using natural polymer.

The study was purpose to carry out in the following stages,

Phase-1

- Preformulation study of Ondansetron HCL
- Preparation of standard curve of Ondansetron HCL.

Phase-2

- Formulation and preparation of mucoadhesive microsphere containing Ondansetron HCL.
- Evaluation of mucoadhesive microsphere
- Angle of repose
- Mocoadhesion test
- Drug release study



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

5. LIST OF MATERIALS AND EQUIPMENTS:

Table 3: List of Materials

SR. No	Name of Material	Mfg. BY	Use
1.	Ondansetron HCL	Dr. Reddy's Laboratories	Anti emetics
2.	Sodium Alginate	Hilab Chemicals	Polymer
3.	Chitosan	Research lab fine chem. Industry	polymer
4.	Formaldehyde	Research lab fine chem. Industry	Cross linking agent

Table 4: List of Instrument/Equipment

S. NO	Name of Instrument/Equipment	Model	Mfg By
1.	UV spectrophotometer	UV1800	Shimadzu
2.	Single panel electronic balance	AY220	Shimadzu
3.	FTIR Spectrometer	Spectrum 65	Perkin Elmer

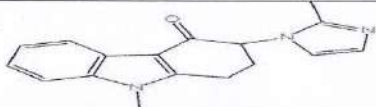


Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

5. 1. DRUG/EXCIPENTS PROFILE: -

5.1.1. Ondansetron Hydrochloride [6]

4.1. Ondansetron Hydrochloride:

Molecular formula	C ₁₈ H ₂₀ Cl ₃ O
Structure	
IUPAC Name	9-methyl-3-[(2-methylimidazol-1-yl)methyl]-2,3-dihydro-1H-carbazol-4-one; hydrochloride
Molecular weight	365.9
Schedule	Schedule H
Indication	Vomiting
Class	Anti-emetics drug, Selective 5-HT ₃ Antagonis
Bioavailability	similar to 60%
Protein Binding	70-60%
Metabolism	liver
Half life	5.7 hours
Excretion	kidney
Synonyms	Ondansetron hydrochloride, Zofan ondemet, Emeset, zuplenz,
Indication	To prevent nausea and vomiting caused by cancer chemotherapy, radiation therapy and surgery
Description	Blocking the action of serotonin, a natural substance that may cause nausea and vomiting
Safety	Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

5.1.2. SODIUM ALGINATES: [6,7]

Molecular formula	$(C_6H_7NaO_6)_n$
Synonyms	Alginato sodico, algin; alginic acid, sodium salt; E401; Kelcosol alginate Keltone; natrii alginas; Protanal; sodium polymannuronate.
Molecular weight	1.93×10^5 g/mol.
Indication	Thickening agent, gelling agent, emulsifier
Description	Sodium alginate occur as an odorless and tasteless, white to pale yellowish brown colored powder.
Safety	Formulations, such as tablets and topical products, including wound dressings. It is generally regarded as a nontoxic and nonirritant material, although excessive oral consumption may be harmful.

5.1.3. Chitosan: [6]

Molecular Formula	$C_{18}H_{35}N_3O_{13}$
Synonyms	chitosan
Molecular Weight	501.5
IUPAC name	2-amino-2-deoxy-beta-D-glucopyranosyl-(1->4)-2-deoxy-hexopyranosyl-(1->4)-2-deoxy-hexopyranose
Melting point	216.69



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

6. EXPERIMENTAL

6.1. PREFORMULATION STUDIES:

6.1.1. Organoleptic Properties: [8]

This includes recording of color, odor and taste of the drug using descriptive terminology:

Color- stability problems, improve appearance by including dye in body or coating.

Taste - palatability problems, flavor and excipients may be added.

Odor- degradation products, stable form of drug to be used, flavors and excipients may be used.

6.1.2. Solubility Study: [8]

The solubility test is an important parameter before formulation development. The solubility of solute means the maximum quantity of solute that can be dissolved in certain quantity of solvent or quantity of solution at a specified temperature. Solubility is usually determined in variety of commonly used solvents. The solubility of material is usually determined by the equilibrium solubility method.

6.1.3. Melting Point: [8]

Melting point is the temperature at which the solid phase is at equilibrium with the liquid Phase. It was determined by using the digital melting point instrument. Melting point of Ondansetron 230.6°C.

6.1.4. UV-Visible Spectroscopic Analysis of Ondansetron Hydrochloride:

Procedure [8,9]:

10 mg of ODN was accurately weighed and transferred to 100 ml of volumetric flask. The drug was dissolved in 100 ml distilled water to obtain a stock solution 100 µg/ml. One ml of this stock solution was again diluted with distilled water up to 10 ml to obtain a solution of 10 µg/ml. The resulting solution was scanned between 200 nm to 350 nm using Systronics 2205 double beam UV/visible spectrophotometer.

The solutions were scanned in the range of 400-200 nm against 0.1N HCL as reference, and the peaks were observed in the spectra at 310nm. The wavelength selected for analysis of drug was 310nm. The drug obeys the lamberts law in the range of 4-24 µg/ml. By using linearity plot the quantification was carried out.



Preliminary Characterization & Formulation of Mucosalhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Calibration Curve:

Accurately weighed 10 mg of ODN was transferred to 10 ml volumetric flask. The drug was dissolved in 10 ml distilled water (stock solution-I) to make a solution 1000 ug/ml. 5 ml of stock solutions-I diluted to 100 ml with distilled water to give a stock solution of concentration 50 ug/ml (Stock solution-II). From stock solution II aliquots of 1, 2, 3, 4, 5, & 6 ml were transferred to a series of 10 ml volumetric flasks and the volume was made up to the mark with 0.1 N hydrochloric acid to prepare the concentration from 5 to 30 ug/ml.

Assay of ondansetron hydrochloride [8]:

To determine the total drug content of the microspheres 100mg of microspheres was ground to a fine powder and dissolved in 5ml (water and methanol) and diluted with phosphate buffer pH 6.8 to 100ml. the drug content was determined spectrophotometrically at 248 nm. Three determinations of the microspheres content from the same batch for each ratio and method was performed.

Area under curve

Area under curve method involves the calculation of integrated value of absorbance with respect to the wavelength between two selected wavelengths such as λ_1 and λ_2 representing start and end point of curve region. The area under curve between λ_1 and λ_2 was calculated using UV probe software. In this study area was integrated between wavelength ranges from 248 to 254 nm. Where, α is area of portion bounded by curve data and a straight line connecting the start and end point, β is the area of portion bounded by a straight line connecting the start and end point on curve data and horizontal axis, λ_1 and λ_2 are wavelength range start and end point of curve region.

6.1.5. Compatibility Study by Using FTIR.

Fourier transform infrared spectroscopy (FTIR)[8]

The FTIR spectra acquired were taken from dried samples. FTIR (Thermo Nicolet 670) spectrometer was used for the analysis in the frequency range between 4000cm^{-1} and 400cm^{-1} .

6.1.6. Physical Stability Studies [8]

Physical stability study was performed at room temperature for one month. Stability of the prepared vesicles showed that drug leakage after one month. Vesicles also were found to be reasonably stable in terms of aggregation and fusion. In accordance with the results, it can be concluded that at room



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

temperature, there were slightly but insignificantly increase in the particle size. Results suggest that keeping the vesicular product at room temperature minimizes the stability of vesicles, but vesicular product may be stable in refrigerated condition.

**6.2. FORMULATION AND PREPARATION OF MUCOADHESIVE MICROSPHERE
CONTAINING ONDANSETRONE HYDROCHLORIDE BY USING NATURAL POLYMER**

5.2.1. Formulation table for Ondansetron Microspheres

Code	Drug: Polymer:	Drug (mg)	Sodium alginate	Chitosan	Formaldehyde
F1	1:1	4	4	-	Q. S
F2	1:2	4	8	-	Q. S
F3	1:3	4	12	-	Q. S
F4	1:1:1	4	-	4	Q. S
F5	1:1:2	4	-	8	Q. S

Table 1. Formulation Table

6.2.2: Method of Preparation Single emulsion technique

Description:

By this technique the macro particulate of the natural polymer i.e., carbohydrate and protein are prepared. The natural polymer are dissolved in aq. Medium which is followed by dispersion in the non aq. Medium like oil. The cross linking of the disperse globule is carried out in second step by heat or by using the chemical cross linkers, the cross linking can be achieved by using formaldehyde. For the thermolabile substance the heat denaturation is not suitable. The chemical cross linking having the drawback of excessive exposure of the active ingredient to the chemical, if added at the time of preparation. Then subjected to the centrifugation, separation, washing, nature of the surfactant used to stabilize the emulsion phase influenced by size distribution loading drug release, surface morphology and bio performance of the final multiparticulate product.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

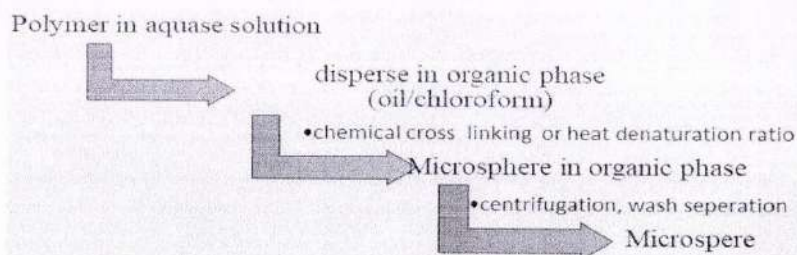


Fig.6. Single emulsion technique

6.3. Evaluation of Mucoadhesive Microsphere:

1. Particle Size and Shape [1]

Particle Size and Shape Microspheres' size, shape, and outer structure can be determined using light microscopy (LM) and scanning electron microscopy (SEM).

2. Micromeritics Properties [8]

A) Angle of Repose

Angle of repose of different formulations was measured according to the fixed funnel standing cone method. The angle of repose is designated by θ and given by equation

$$\tan \theta = \frac{h}{r}$$

Where,

h- Height of pile

r- Radius of the base of the pile

B) Mucohesion test [11]:

The mucoadhesive properties of various formulations of Ondansetron hcl loaded sodium alginate/chitosan beads were evaluated by the in vitro wash- off method. The adherence of beads was regularly observed. The beads that remained adhered to the mucosa were counted at regular intervals for up to 10 hours.

$$\% \text{ of mucoadhesion} = \frac{\text{No. of adhered microbeads}}{\text{Total no. of applied microbeads}} \times 100$$

C) Drug Release Study [11]:

The release of Ondansetron hydrochloride was studied in 900 ml phosphate buffer saline as



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

dissolution media using USP 2nd dissolution apparatus. The sample were withdrawn at an interval of 0,15,30,45,60,120,240,360,480 min and replaced simultaneously with fresh buffer. The collected sample were assayed with the help of UV spectrophotometer at 250nm. All measurement were carried out in triplicate and average values plotted.

D) Bulk Density and Tapped Density [8]

The density was measured by tapping method. The bulk density, and tapped density were calculated using the following formula

$$\text{Bulk density} = \frac{\text{Weight of the powder}}{\text{Bulk Volume of the powder}}$$

$$\text{Tapped density} = \frac{\text{Weight of the powder}}{\text{Volume of liquid it displaces the powder}}$$

E) Swelling index [8]

The following equation can be used to calculate the percent swelling value,

$$\text{Percent swelling} = \frac{D_T - D_0}{D_0} \times 100$$

F) Encapsulation efficacy [8]

Drug entrapment efficiency of the formed microspheres was evaluated by using cooling ultracentrifuge (Remi) at 4000 rpm in 3 subsequent rounds. The clear supernatant separated the un-entrapped drug and the absorbance taken at Amax at 248 nm using UV spectrophotometer (Shimadzu UV 1800).

$$\text{Encapsulation Efficacy} = \frac{\text{Actual drug content}}{\text{Theoretical drug content}} \times 100$$

G) Entrapment Efficacy [8]

Entrapment Efficiency Allowing washed microspheres to lyse can be used to calculate the microspheres' entrapment efficiency or percent entrapment. The lysate is then filtered or centrifuged, and the active constituents are determined according to the monograph's standards

$$\% \text{ Entrapment} = \frac{\text{Amount in supernatant} - \text{Amount in sediment}}{\text{Amount in supernatant}} \times 100$$



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

7. RESULTS AND DISCUSSION

7.1. Identification test of Ondansetron

Test	Ondansetron	
	Specification	Observation
Physical appearance	White to off-white powder	White powder
Taste	Tasteless	Tasteless
Odor	Odorless	Odorless
Melting Point	231 - 232°C	230.6 °C

Table 1. Identification test of Ondansetron

7.2 Solubility test

Table 2. Solubility test

Sr. No	Solvent	Solubility
1	Water	Sparingly soluble
2	Methanol	Soluble
3	Chloroform	Slightly soluble
4	Dichloromethane	Sparingly soluble
5	Methylene chloride	Slightly soluble

7.3. UV Determination

The UV visible spectroscopic method for the Ondansetron Hydrochloride by Second order derivative Area under Curve was found to be simple, accurate, economical and reproducible. The drug concentrations were found to be linear in the range of 04-24 µg/ml. The result of the analysis for pharmaceutical formulation by the development method was consistent with the label claim, highly reproducible and reliable. The method can be used for routine quality control analysis of Ondansetron Hydrochloride in bulk and pharmaceutical formulations.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Table 3. Linearity of ondansetron

Sr. No.	Concentration in $\mu\text{g/ml}$	Absorbance UV method
1	4	0.176
2	8	0.337
3	12	0.512
4	16	0.665
5	20	0.832
6	24	0.980

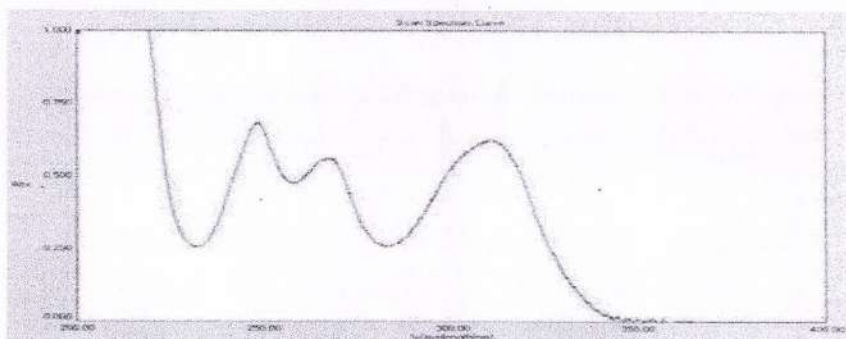


Fig. 6. Absorption maxima spectrum of Ondansetron

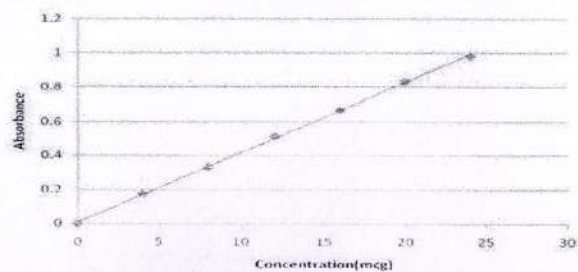


Fig. 7. Calibration curve of Ondansetron at 310nm



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

Identification by FTIR study of pure drug and polymer

FTIR study of pure drug sample was carried out. This identification was done by measuring the wave number of particular functional group to characterize the pure drug. FTIR (Fourier Transform Infra-Red Spectroscopy) spectrum of pure Ondansetron (Fig 2) showed the characteristic peak at 1734.27cm^{-1} which can be assigned to the C-O stretching in the aromatic ring and a peak at 1637.07cm^{-1} which can be assigned to the C-N in the aromatic ring, a peak at 1529.82cm^{-1} which can be assigned to the N-H stretching and a peak at 1279.87cm^{-1} which can be assigned to the stretching of C-C in the aromatic ring.

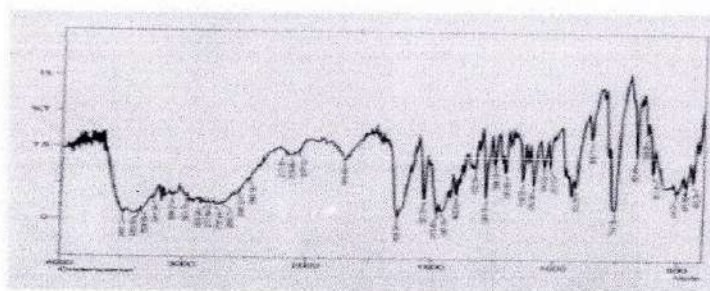


Fig 8. IR Spectrum of Pure Drug Ondansetron



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using Natural Polymer

8. CONCLUSION

The ondansetron hydrochloride microspheres sustained drug release for longer thereby it could be capable of reducing the frequency of administration and the dose-dependent side effects with the repeated administration of conventional ondansetron tablets. This type of sustained formulation will be better suitable for the cancer patients. No drug polymer interaction was found and formulations remained stable over a long period of time. The Mucoadhesive microsphere's promising goal is to achieve controlled release with increased bioavailability and drug targeting to specific body sites. The production method was optimized for particle size and production yield. The volume of internal phase, rate of agitation and concentration of emulsifying agent significantly influence the particle size and production yield of ODN microspheres. The prepared ODN microspheres exhibits good flow.

The proposed methods are simple, sensitive, and cost-effective. Validated in terms of precision, linearity and accuracy. The results are reproducible, and can be used successfully for the estimation of Ondansetron in bulk and its pharmaceutical formulations.



Preliminary Characterization & Formulation of Mucoadhesive Microsphere Containing Ondansetron Hydrochloride by Using
Natural Polymer

9. REFERENCE:

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ज्ञानगंगा धरोघरी

VISHAL JUNNAR SEVA MANDAL'S
**VISHAL INSTITUTE OF PHARMACEUTICAL
EDUCATION & RESEARCH**

Dr. S. L. Jadhav
Principal

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

1. EXPERIMENTAL LEARNING

1.4. HEALTH-CARE ACTIVITIES

INTERNATIONAL YOGA DAY

DATE	NUMBER OF STUDENTS PARTICIPATED
21-06-2017	150



International Yoga Day

Brief Report of the Activity:

International Yoga Day was organized in our college Auditorium. Mr. Naresh Wagh & team, Teacher of art of living guide & conducted yoga classes .They also informed the importance of yoga for our students & staffs in day to day life.In these program total 150 students, staffs participated & bring the event very smoothly & successfully.




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RALLY ON SWACHATAABHIYAN -ALEGAON	
DATE	NUMBER OF STUDENTS PARTICIPATED
14-08-2017	240



Rally on SwachataAbhiyan–Alegaon

Brief Report of the Activity:

On this day 'SwachhtaAbhiyan Rally' was arranged. All the college students and Teaching & Nonteaching staffs were participated in this rally. Students give the slogans on cleaning. Janjarutipatrak were circulated during rally for Alegaon peoples. In this total 150 college students & NSS volunteers and our college staffs were participated.




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VISIT TO PRIMARY HEALTH CENTER, ALE	
DATE	NO OF PARTICIPANTS
20-11-2017	60
  	
Visit to Primary Health center , Ale.	

Brief Report of the Activity:

As per F.Y Sem-I & II 2015 Pattern Syllabus in Human Anatomy and Physiology Practical there is visit to hospital or Pathology laboratory. Our Students Were Visited Primary Health center Ale. In this total 60 students were participated




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11. Joshi V.D. Practical Physiology. Vora Medical Publications, Mumbai.
12. DiFiore-Mariano S.H., Atlas of Human Histology. Lea and Febiger, Philadelphia.
13. Garg K., Babel I. and Kaul M., A Textbook of Histology. CBS Publishers and Distributors, New Delhi.
14. Goyal, R.K., Patel, N.M. and Shah, S.A., Practical Anatomy, Physiology and Biochemistry. B. S. Shah Prakashan, Ahmedabad.
15. Ranade, V.G., Joshi, P.N. and Pradhan, S., Textbook of Practical Physiology. Pune Vidyarthi Griha Prakashan, Pune.
16. Singh, I., BD., Chaurasia's Human Anatomy. CBS Publisher and Distributors, New Delhi.
17. Singh, I., Textbook of Human Histology. Jaypee brothers Medical Publishers, New Delhi.
18. Upasani, C.D. and Undale, V., Human Anatomy and Physiology. Tech-Max Publications, Pune.
19. Mukherjee, K.L., Medical Laboratory Technology. Tata McGraw Hill Publishing Company Ltd. New Delhi.
20. Beck, W.S., Human Design: Molecular, Cellular and Systemic Physiology. Harcourt Brace Jovanovich Inc. New York.

1.1.5 P HUMAN ANATOMY & PHYSIOLOGY –I

(Practical 3 hrs / week)

CREDITS 02

Experiments

- 1 To study the microscope (types, uses, care and handling of microscopes)
- 2 Histological study of important tissues (epithelial, connective, muscular and nervous tissue)
- 3 To determine RBC count
- 4 To determine WBC count
- 5 To determine hemoglobin content of blood sample using hemometer
- 6 To determine blood group
- 7 To determine clotting time.
- 8 To determine bleeding time.
- 9 To study of human cardiovascular system with the help of chart, model and histological slides.
- 10 To measure blood pressure, body temperature, pulse rate of healthy volunteer (Manual and digital).




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- 11 To record ECG, study PQRS waves and discuss the significance of ECG.
- 12 To study of human digestive system with the help of chart, model and histological slides.
- 13 Visit to Medical College and/or Hospital (Optional) 
Visit to Blood Bank (Optional)

Recommended Books:

1. Godkar P.B and Godkar D.P., Textbook of Medical Laboratory Technology. Bhalani Publishing House, Mumbai.
2. Joshi V.D. Practical Physiology. Vora Medical Publications, Mumbai.
3. DiFiore-Mariano S.H., Atlas of Human Histology. Lea and Febiger, Philadelphia.
4. Mukherjee, K.L., Medical Laboratory Technology. Tata McGraw Hill Publishing Company Ltd. New Delhi.
5. Beck, W.S., Human Design: Molecular, Cellular and Systemic Physiology. Harcourt Brace Jovanovich Inc. New York.
6. Chatterjee, C.C., Human Physiology. Medical Allied Agency, Kolkata.
7. Ganong, W.F., Review of Medical Physiology. Prentice-Hall International, London.
8. Guyton, A.C., Textbook of Medical Physiology. W. B. Saunders Co., Philadelphia, USA.
9. Tortora, G.J. and Grabowski, S.R., 2005. Principles of Anatomy and Physiology. Harper Collins College Publishers, New York.
10. Vander, A.J., Sherman, J.H. and Luciano, D.S., Human Physiology. McGraw-Hill Publishing Co., USA.
11. Garg K., Bahel I. and Kaul M., A Textbook of Histology. CBS Publishers and Distributors, New Delhi.

1.1.6 T COMMUNICATION AND SOFT SKILL DEVELOPMENT

(Theory 3 hrs / week)

CREDITS 03

Learning Objective:

On completion of following theory topics learner should be able to:

Knowledge:

1. handle interpersonal relations & communicate effectively.
2. choose career and make appropriate decisions
3. build a repertoire of functional vocabulary and to move from the lexical level to the syntactic level.
4. comprehend the concept of communication
5. *describe* the four basic communication skills – Listening, Speaking, Reading and Writing
6. convert the conceptual understanding of communication into everyday practice




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Practical Attendance

ss : F.Y.B.Pharm

Batch-A

o: H. Anatomy & Physiology - I.

II	Name	19/8/17	19/8	26/8	9/9	23/9	24/9	9/10	9/10	9/10	23/10	25/10	13/11	13/11	15/11	15/11
	ARDE GAYATRI VIJAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	ATTAR SABIYA SADIK				1	2	3	4	5	6	7	8	9	10	11	12
	BANGAR SARTHAK PRAKASH				1	2	3	4	5	6	7	8	9	10	11	12
	BHAMBARE AKSHAY PANDURANG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	BHOR KOMAL SHAM				1	2	3	4	5	6	7	8	9	10	11	12
	BHUJBAL KADAMBARI VILAS				1	2	3	4	5	6	7	8	9	10	11	12
	BORCHATE DHANASHRI ASHOK				1	2	3	4	5	6	7	8	9	10	11	12
	BRAMHANE POONAM RAJENDRA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	DABHADE VIKRAM NAVANATH				1	2	3	4	5	6	7	8	9	10	11	12
	DABHADE SUKANYA DIGAMBAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	DHOBALE RUSHIKESH NITIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	FULSUNDAR ABHISHEK ASHOK				1	2	3	4	5	6	7	8	9	10	11	12
	GADEKAR GAYATRI JAYSING				1	2	3	4	5	6	7	8	9	10	11	12
	GALANDE ANKIT ASHOK				1	2	3	4	5	6	7	8	9	10	11	12
	GAVHANE ASHVINI KAILAS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GAWARI PRATIKSHA RANGNATH				1	2	3	4	5	6	7	8	9	10	11	12
	GUNJAL PRIYANKA SUNIL				1	2	3	4	5	6	7	8	9	10	11	12
	GUNJAL VAISHANAVI SHANKAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	HADAWALE AISHWARYA ASHOK				1	2	3	4	5	6	7	8	9	10	11	12
	HODGAR KALYANI RANU				1	2	3	4	5	6	7	8	9	10	11	12

(15)

15/11/17




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 VISHAL INSTITUTE OF PHARMACEUTICAL
 EDUCATION AND RESEARCH
 ALE TAL-JUNNAR DIST-PUNE 412411

Practical Attendance

Class : F.Y.B.Pharm

Batch-B

Sub: H. Anatomy & Physiology-I.

Roll No:	Name	22/8/17	22/8	29/8	12/9	12/9	21/10	10/10	10/10	10/10	24/10	26/10	14/11	14/11	16/11	16/11
21	INAMDAR NAJMIN RASHID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
22	JADHAV ADINATH GOPAL			1	2	3	4	5	6	7	8	9	10	11	12	13
23	JADHAV NIKHIL BHAGWAT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
24	JADHAV NISHIGANDHA SHAHAJI				1	2	3	4	5	6	7	8	9	10	11	12
25	JARARE SURABHI SANJAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
26	KAD RUTUKESH KAILAS			1	2	3	4	5	6	7	8	9	10	11	12	13
27	KADAM SHAMAL JAYJAYRAM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
28	KAFARE SNEHAL SANDIP				1	2	3	4	5	6	7	8	9	10	11	12
29	KATE PRANJAL SHANKAR			1	2	3	4	5	6	7	8	9	10	11	12	13
30	KATKAR VAISHNAVI SATISH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
31	KHATODE VAISHNAVI BABASAHEB			1	2	3	4	5	6	7	8	9	10	11	12	13
32	KOKATE SHWETA DNYANESHWAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
33	KUTE PAYAL RAMESH			1	2	3	4	5	6	7	8	9	10	11	12	13
34	KUTE SAKSHI GOPINATH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
35	LAMKHADE GANESH JAYRAM			1	2	3	4	5	6	7	8	9	10	11	12	13
36	LOHOTE ANUJA ANIL			1	2	3	4	5	6	7	8	9	10	11	12	13
37	MAHAJAN AISHWARYA MOHAN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
38	MARWAT RUTUJA BALASAHEB	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
39	NAIKWADI NEHA DATTATRAY			1	2	3	4	5	6	7	8	9	10	11	12	13
40	NAIKWADI SAYALI MOHAN			1	2	3	4	5	6	7	8	9	10	11	12	13

(15) 18/11/17




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Practical Attendance

Class : F.Y.B.Pharm

Batch-C

Sub: H. Anatomy & physiology-I.

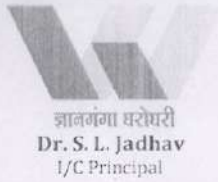
Roll No:	Name	7/8/17	14/8/17	21/8	28/8	11/9	23/09	14/10	14/10	14/10	27/10	28/10	17/11	17/11	26/11	20/11
41	NAMADE MAYURI BHARAT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
42	PAWADE KAJAL SUNIL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
43	PAWAR AISHWARYA SUNIL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
44	PAWAR NIKITA GANGARAM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
45	SAHANE SEJAL TANAJI					1	2	3	4	5	6	7	8	9	10	11
46	SAMAL AISHWARYA SHRINIVAS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
47	SHINGOTE TANVI BHARAT					1	2	3	4	5	6	7	8	9	10	11
48	SHIROLE PRATHAMESH LAXMAN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
49	SUMBARE SHIVANI VILAS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
50	SUPEKAR MADHURI VIJAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
51	THORAT SAMPADA ANIL					1	2	3	4	5	6	7	8	9	10	11
52	THORVE KOMAL DATTATRAY				1	2	3	4	5	6	7	8	9	10	11	12
53	VARPE VRUSHALI DILIP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
54	WAGH RUTUJA SHARAD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
55	WAJAGE RUTUJA PANDURANG					1	2	3	4	5	6	7	8	9	10	11
56	WANI AKSHADA SHANTARAM					1	2	3	4	5	6	7	8	9	10	11
57	YADAV TRUPTI DAGDUBHAU				1	2	3	4	5	6	7	8	9	10	11	12
58	YENDHE SHIVANI SANTOSH					1	2	3	4	5	6	7	8	9	10	11
59	YENDHE SHUBHAM BALKRISHNA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
60	YEWALE RUSHIKESH SUDAM				1	2	3	4	5	6	7	8	9	10	11	12

15

18/11/17



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EDUCATION AND RESEARCH**

AT- ALE, TAL - JUNNAR, DIST - PUNE MAHARASHTRA - 412411.
Contact No.9730003179. E-Mail:vism.principal@gmail.com website-www.vjsmale.com

Ref- No: VJSM/VIPER-VISIT/2016-17/1.

Date: 20/11/2017

Requesting Letter

To,
The Medical Officer,
Primary Health Centre, Ale,
Tal- Junnar, Dist- Pune.



Sub: Regarding visit to 'Primary Health Centre', Ale.

Respected Sir,

With reference to the above cited subject, as per syllabus of Human Anatomy & Physiology I & II practical, hospital visit is mandatory.

So cooperate for the same.

Thanking You.

Yours faithfully,

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Received
[Signature]



[Signature]
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ज्ञानार्जुना घरोवरी
Dr. S. L. Jadhav
I/C Principal

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AT- ALE, TAL - JUNNAR, DIST - PUNE MAHARASHTRA - 412411.
Contact No.9730003179. E-Mail:vjsm.principal@gmail.com website-www.vjsmale.com

Ref- No: VJSM/VIPER-VISIT/2016-17/2

Date: 26/11/2017

Thanking Letter

To,
The Medical Officer,
Primary Health Centre, Ale,
Tal- Junnar, Dist- Pune.



Sub: Regarding Thanking Letter.

Respected Sir,

With reference to above cited subject, we would like to thank you and your staff for spending valuable time for demonstrating various departments of primary health centre, Ale on dated 26/11/2017. Visit to hospital is the mandatory in Human Anatomy & Physiology I & II Practical which enlightens to students confidence for their bright future.

Thank you for co-operation.

Thanking You.

Received
[Signature]

Warm regards,

[Signature]
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HEATH CHECKUP CAMP FOR HIGHSCHOOL STUDENTS AND PEOPLES.	
DATE	NUMBER OF STUDENTS PARTICIPATED
23-01-2018	50



Heath checkup Camp for Highschool Students and peoples.

Brief Report of the Activity:

on this date Health checkup camp was organized for peoples of chalakwadi and highschool students .MLA Mr. Sharad Dada Sonawane of native chalakwadi village also visited the health checkup camp and our NSS volunteers checked the Hb and Blood Group of MLA Sonawane Sir .MLA advised to our NSS volunteers regarding do better work in futurefor society .MLA appreciate the NSS work.




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NATIONAL SERVICE SCHEME
(HEALTH CHECK-UP CAMP- JAN 2018)

Sr No	Name	Hemoglobin	Blood group	Body weight	Height	BMI	Signature
1	Sangita Sonawane	8		48.			
2	Shila Supekar	13		56			
3	Rajashree Salave	14.		70			
4	Punam Shelke	9		48			
5	Sulochana Chalak	9.8		52			
6	Vaishali Sonavane	12		46			
7	Narayan Waman	12		84			
8	Abhang Suchita	8	B+	50			
9	Waghule Balkrushna	14	O+	58			
10	Yewale Akshay	12	B+	65			
11	Rahinj Premad	10	B+	70			
12	Rajani Tori	12	O+	58.			
13	Yagesh Shinde	14	B+	78			
14	Suchila Sonavane	9		46			
15	Sharada Shelke	8		549			
16	Manisha Sonavane	12	O+	68			
17	Harshad Padekar	15	AB+	59			
18	Priyanka Thorat	10	B+	45			
19	Navanath Shinde	9		35			
20	Kiran Shinde	8	B+	32			
21	Vaibhav Gholap	8		33			
22	Shakshi Wagh	8		37			
23	Manjusha Sonavane	9	ABWE	27			
24	Mihir Bhujbal	10		30			
25	Akshada Warran	05	AWE	32			



Shil
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NATIONAL SERVICE SCHEME
(HEALTH CHECK-UP CAMP- JAN 2018)

Sr. No.	Name	Hemoglobin	Blood group	Body weight	Height	BMI	Signature
26	Komal Chavan	10		31			
27	Grotake? Woman	09	BIVE	31			
28	Taruna Nihong	09		29			
29	Poonam Malkar	07	BIVE	27			
30	Vaishnavi Woman	10	AIVE	20			
31	Balshiem Woman	12		34			
32	Aditha Chalak	07	AIVE	41			
33	MUGH. Fette	08	ABIVE	38			
34	Rachini Kolage	09		31			
35	Hehan Chingade	10		36			
36	OM Wagh	06		26			
37	Gudeshon Woman	14		41			
38	Anuradha Wagh	06		18			
39	Nana Zukane	05		29			
40	Nitin B. Shinde	07		25			
41	Shubham Woman	08		40			
42	Pirush Goble	08		24			
43	Kishor Gode	07		39			
44	Geethak Gawde	06		17			
45	Shantabai Dongre	07		42			
46	Heitwik Baekar	08		48			
47	Bobabai Dongre	12		50			
48	Abhishhek Jadhav	06		30			
49	Anil Bhige	07		39			
50	Sahin Zakate	08		22			



[Signature]
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**NATIONAL SERVICE SCHEME
(HEALTH CHECK-UP CAMP- JAN 2018)**

Sr No	Name	Hemoglobin	Blood group	Body weight	Height	BMI	Signature
51	Akshay Waman	05		15			
52	Nishant Gaikwad	06		27			
53	Atul Takalkar	5.3		40			
54	Akash Pawar	08		26			
55	Kaetik Sonawane	07		25			
56	Nikhil Ingundae	06		52			
57	Bhrita Zakne	06		29			
58	Vishnesh Cholak	07		31			
59	Gopinath Waman	07		25			
60	Parnima Kasabe	8		40			
61	Karan Shinde	5		25			
62	Diksha Kedar	9		25			
63	Ganesh Shinde	7		32			
64	Vedant Sonavane	8		25			
65	Pratham Sabale	9		26			
66	Suraj Mhauke	7		34			
67	Subhash Wajarkar	10		65			
68	Vinod Salave	8		41			
69	Kiran Thakane	7		42			
70	Sandesh Borhade	12		50			
71	Adesh Gunjal	-		27			
72	Vikram Dongare	13		55			
73	Bajubai Sonavane	8		45			
74	Baya Shinde	7		36			
75	Vishal Salave	8.5		29			




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**NATIONAL SERVICE SCHEME
(HEALTH CHECK-UP CAMP- JAN 2018)**

Sr No	Name	Hemoglobin	Blood group	Body weight	Height	BMI	Signature
76	Yash More	8		35			
79	Kiran Thorath	11		39			
78	Bamarth Wagh	10		33			
79	Sruhti Sonavane	8		25			
80	Sarthak Wagh	7		20			
81	Sandip Zhakane	8		40			
82	Vijay Kale	7		29			
83	Milesh Shinde	8		26			
84	Vaibhav Awhite	9		49			
85	Pallavi Pymode	10.5		26			
86	Rutuja Sonavane	10		48			
87	Samrudhi Sonavane	8.5		30			
88	Ankush Tadhar	8		34			
87	Sarika Chavhan	10		30			
88	Pradnya Suryavashi	8		22			
89	Tejal Gagare	7		20			
90	Samrudhi Wagh	10		32			
91	Ratan Shinde	8		26			
92	Yash Sonavane	11		46			
93	Siddharsh Sonavane	9		41			
94	Sarika Gade			30			
95	Ganesh Gaikwad	7		32			
96	Anushree Chalak	8	O+	24			
97	Mandabai Sonavane	-		68			
98	Aditi Mhante	8		24			



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**NATIONAL SERVICE SCHEME
(HEALTH CHECK-UP CAMP- JAN 2018)**

Sr No	Name	Hemoglobin	Blood group	Body weight	Height	BMI	Signature
99	Omkar waman	2		24			<i>[Signature]</i>
100	Rahul Auchite	10		67			<i>[Signature]</i>
101	Utkarsh Barve	16		44			
102	Vikas Kedar	16		72			
103	Abhimanyu Khair	10		54			
104	Lata Sonavane	9		48			
105	Siddharth Salave	11		33			<i>[Signature]</i>
106	Attharv sonavane	3		17			
107	Saniya shaikh	-		19			
108	P.B. sonavane	12		57			
109	Prasad Pardhi	11	O+	43			
110	Vandesh Sonawane	9	O+	45			<i>[Signature]</i>
111	Abhishek chalak	11.5		55			
112	Anasahab & Karu Shah	13	B+	61			
113	Aniket Borude	12		53			
114	Dongare Pooja	12		42			
115	Arati Fulmale	11		39			
116	Chirag Akhang	11	O+	45			<i>[Signature]</i>
117	Harshad Kadam	13		33			
118	Rupesh Jadhav	11		29			
119	Olviya Patmode	9.5	B+	66			
120	Ganatri Waghkar	9		38			
121	Nirmala Sonawane	11		46			<i>[Signature]</i>
122	Phantabai Sonawane	10		58			
123	Fasmin Patel	12.5	AB+	70			



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NATIONAL SERVICE SCHEME
(HEALTH CHECK-UP CAMP- JAN 2018)

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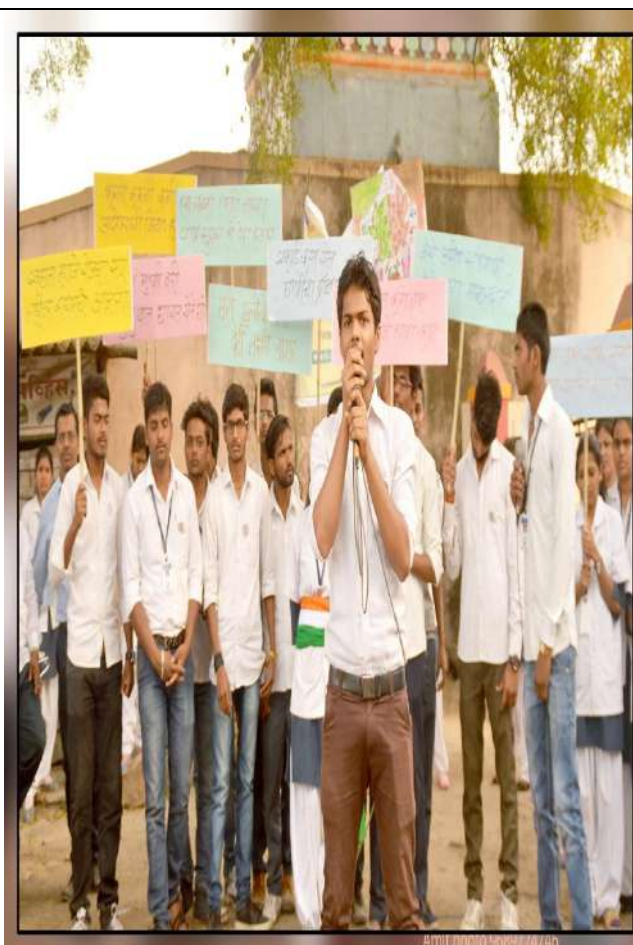
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JANJAGRUTI ON SWACHATA HEALTH

DATE	NUMBER OF STUDENTS PARTICIPATED
24-01-2018	50



Janjagruti On Swachata Health

Brief Report of the Activity:

On this date our NSS volunteers arranged the Janjagruti on Swachhata for peoples, highschool students Our NSS volunteers advised the importance of Swachhata, which was very useful for these peoples. In this total 50 volunteers were participated.




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GUEST LECT. ON IMPORTANCE OF YOGA

DATE	NUMBER OF STUDENTS PARTICIPATED
24-01-2018	50



Guest Lect. On Importance of yoga

Brief Report of the Activity:

On this date we conducted the guest lecture for villagers and high school students on Importance of Yoga. Guest advised to these villagers to do yoga for health and observe the effects of its own health. In this our 50 volunteers were participated and done the exercise for better health.




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GUEST LECT- ON NUTRITION DIET.	
DATE	NUMBER OF STUDENTS PARTICIPATED
27-01-2018	50

Guest Lect- on Nutrition Diet.	

Brief Report of the Activity:

On this date guest lecture was arranged on Nutrition Diet for peoples and highschool students. Speakers suggest the diet plan how it was important in day to day life. In this total 50 NSS volunteers were participated.




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Date	No of Participants
05/02/2018	30

NAME OF EVENT: BLODD DONATION

VENUE: Institute of Pharmacy, Ale

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized blood donation camp on the occasion of celebrating birth anniversary of honorable Sharad Chandra Pawar saheb. The said event was organized on 05/02/2018. Event was conducted at pharmacy college ale.

This Program was inaugurated by trustees. The students of VIPER, IOP and IOPW were donated the blood during this camp. All Teaching & Non Teaching Staff Attended the said Program. All the students of Degree Pharmacy had shown their active participation in this event.




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INTERNATIONAL DAY OF YOGA IN COLLEGE AUDITORIUM	
DATE	NO OF PARTICIPANTS
21-06-2018	142



International Day of Yoga in College Auditorium

Brief Report of the Activity:

International Yoga Day was organized in our college Auditorium. Dr. Gadekar and team Shree Nirmal Hospital Alephata, was conducted the lecture and yoga exercise. They also explain the importance of yoga and guide our students and staffs. Dr. Gadekar and team explained the Human body mechanism .How changes takes place due to the exercise. In this programmed total 142 students and staffs involved and bring the event smoothly and successfully.




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विषय : १ ते ३१ जुलै १३ कोटी वृक्ष लागवड
महोत्सवात आपल्या उपस्थिती बाबत

दि २१/६/२०१८

प्रती,

मा. प्राचार्य सर,
विशाल इंस्टिट्यूट ऑफ फार्मास्युटिकल्
एडुकेशन रिसर्च
महोदय,

वरील विषयान्वये आपणास आदरपूर्वक कळविण्यास आम्हाला अत्यंत आनंद होत आहे कि, महाराष्ट्र राज्य वनविभाग मार्फत दि. १ ते ३१ जुलै या महिन्यात संपूर्ण महाराष्ट्रात १३ कोटी वृक्ष लागवडीचे उद्दिष्ट्य मा. वनमंत्री साहेबांचे आहे. सदरील वन महोत्सवात अनेक सामाजिक संस्था, शाळा, महाविद्यालय, खाजगी संस्था तसेच सामाजिक कार्यकर्त्यांचा सहभाग स्वेच्छेने सहभाग होताना दिसून येत आहे. आपल्या सर्वांच्या सहकार्याने एक एक करत आपण १३ कोटीचे उद्दिष्ट्य नक्कीच पूर्ण करू असे आम्हाला वाटते. सालाबादाप्रमाणे वनविभाग जुन्नर मार्फत यावर्षी आपल्या आलेगावातील आलेखिंड व संतवाडी या वनपरिसरात सदरील वनमहोत्सव साबविण्यात येत आहे. तरी आपण सदरील वृक्षारोपणाच्या कार्यक्रमात सहभागी होऊन कार्यक्रमाची शोभा वाढवावी व पर्यावरण संरक्षणासाठी आपले मोलाचे सहकार्य मिळावे.

हीच आपणास नम्र विनंती.

८
आपला विश्वासू

वनपरिक्षेत्राधिकारी ओतूर : ९४०४९७१०३९

वन परिमंडळ अधिकारी आळे : ९८९०८४०९११

नियतक्षेत्र वनाधिकारी आळे : ९४४८०६४७६०



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INVOLVEMENT IN BLOOD DONATION CAMP (ALEPHATA)	
DATE	NO. OF PARTICIPANTS
08/08/2018	50



Involvement in blood donation camp (Alephata)

Brief Report of the Activity:

On this date our NSS volunteers were involved in the Blood donation camp which was organized by Rotary men club Alephata at Bhor mangal karyalaya Alephata. Some volunteers donate the blood and also counseling the other peoples to donate the blood and explain the importance of blood donation. Our NSS volunteers with the help of DR and Nurses involved in the estimation of Hb,weight. Some volunteers were participated to distribute snacks and tea for donors. In this total 50 NSS volunteers were participated.




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RALLY IN ALEGAON -SWACHATA RALLY	
DATE	NO OF PARTICIPANTS
14-08-2018	240



Rally in Alegaon -Swachata rally

Brief Report of the Activity:

On this date our college organized a 'Swachata Rally' in Alegaon. In rally various types of Swachata related slogans were given and message is given for villagers regarding importance of cleaning..On the stage of Grampanchayat lecture was conducted regarding Swachata. In this rally all college students, teaching and Nonteaching staffs were participated.




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GUEST LECT. ON CANCER	
DATE	NUMBER OF STUDENTS PARTICIPATED
19-01-2019	25



Guest Lect. on Cancer

Brief Report of the Activity:

On this date guest lecture on 'Cancer' was arranged for kolwadi and neighbor villagers. In this total 25 NSS volunteers were participated.



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GUEST LECT. ON SWACHATA ABHIYAN	
DATE	NUMBER OF STUDENTS PARTICIPATED
23-01-2019	25



Guest Lect. On SwachataAbhiyan

Brief Report of the Activity:

On this date Guest lecture was organized on Swachatta Abhiyan for Kolwadi villagers. Guest explained the importance of cleaning. In this total 25 NSS volunteers were participated.




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VISIT TO PATHOLOGY LABORATORY	
DATE	NO OF PARTICIPANTS
04-04-2019	70



Visit To Pathology Laboratory.

Brief Report of the Activity:

As per S.Y Sem-IV 2015 Pattern Syllabus in Path physiology and Clinical biochemistry Practical there is visit to hospital or Pathology laboratory. Our Students Were Visited OM Pathology laboratory Alephata. In this total 70 students were participated




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2.4.2 P PATHOPHYSIOLOGY AND CLINICAL BIOCHEMISTRY
(Practical) (3 Hrs/Week)

1	Study of commonly used instruments, equipments and accessories in clinical biochemistry laboratory, its management and maintenance of records.	
2	Study of general techniques of collection and recording of specimens of serum/plasma etc. Preservation techniques and their disposal.	
3	Study of qualitative determination of abnormal constituents of urine - sugar, protein, bile salt, bile pigment, ketones bodies.	
4	Chemical examination of stool: occult blood	
5	Kidney function test: To determine creatinine, urea, uric acid and electrolytes such as sodium, potassium, chloride from suitable body fluid	✓
6	Liver function test: To determine total bilirubin, direct bilirubin, indirect bilirubin, SGOT, ALT, Alkaline Phosphatase, proteins, globulin, albumin, from suitable body fluid	✓
7	Cardiac profile tests: To determine Cholesterol, Triglycerides, HDL, VLDL, LDL, Lipoprotein I from the suitable body fluid.	✓
8	To determine C-Reactive protein (CRP) from the suitable body fluid.	✓
9	Determination of serum Erythrocyte Sedimentation Rate (ESR)	✓
10	Determination of blood glucose level and HbA1c	
11	Determination of arterial blood gas.	
12	History of histopathology	✓
13	Detection of malaria parasite.	✓
14	Visit to pathology laboratory or blood bank	✓

Recommended Books:

1. Lehninger's Principles of Biochemistry by Albert Lehninger, 4/Ed., Palgrave Macmillan.
2. Biochemistry by Lubert Stryer, W.H., Freeman & Company, New York.
3. Harper's Illustrated Biochemistry by R.K. Murray & D.K. Granner, 27/Ed, McGraw Hill.
4. Introduction to Practical Biochemistry by David Plummer, 3/Ed, Tata McGraw-Hill Edition



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Class : S.Y.B.Pharm		Attendance				Sub: Path. & Cli. Bioch.											
Roll No:	Name	4/11/19	4/12/19	4/1/20													
1	ARDE GAYATRI VIJAY	43	44	45													
2	ATTAR SABIYA SADIK	42	43	44													
3	BANGAR SARTHAK PRAKASH	40	41	42													
4	BHOR KOMAL SHAM	43	44	45													
5	BHUJBAL KADAMBARI VILAS	43	44	45													
6	BORCHATE DHANASHRI ASHOK	43	44	45													
7	BRAMHANE POONAM RAJENDRA	43	44	45													
8	DABHADE VIKRAM NAVANATH	41	42	43													
9	DABHADE SUKANYA DIGAMBAR	43	44	45													
10	DHOBAL RUSHIKESH NITIN	43	44	45													
11	FULSUNDAR ABHISHEK ASHOK	43	44	45													
12	GADEKAR GAYATRI JAYSING	43	44	45													
13	GALANDE ANKIT ASHOK	39	40	41													
14	GAVHANE ASHVINI KAILAS	43	44	45													
15	GAWARI PRATIKSHA RANGNATH	43	44	45													
16	GODHALE AMRUTA GULAB	43	44	45													
17	GUNJAL PRIYANKA SUNIL	43	44	45													
18	GUNJAL VAISHNAVI SHANKAR	43	44	45													
19	HADAWALE AISHWARYA ASHOK	43	44	45													
20	HODGAR KALYANI RANU	43	44	45													
21	INAMDAR NAJMIN RASHID	32	33	34													
22	JADHAV ADINATH GOPAL	43	44	45													
23	JADHAV NIKHIL BHAGWAT	43	44	45													
24	JADHAV NISHIGANDHA SHAHAJI	31	32	33													
25	JARARE SURABHI SANJAY	36	37	38													
26	KAD RUTUKESH KAILAS	32	33	34													
27	KADAM SHAMAL JAYJAYRAM	43	44	45													
28	KAFARE SNEHAL SANDIP	43	44	45													
29	KARALE ANKITA YOGESH	43	44	45													
30	KATE PRANJAL SHANKAR	43	44	45													
31	KATKAR VAISHNAVI SATISH	43	44	45													
32	KHATODE VAISHNAVI BABASAHEB	43	44	45													
33	KOKATE SHWETA DNYANESHWAR	43	44	45													
34	KORADE POONAM DHONDIBHAU	43	44	45													
35	KUTE PAYAL RAMESH	39	40	41													

Total lectures = 45



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Class : S.Y.B.Pharm

Roll No:	Name	4/4/19	4/4	4/4																
36	KUTE SAKSHI GOPINATH	38	39	40																
37	LAMKHADE GANESH JAYRAM	42	43	44																
38	LOHOTE ANUJA ANIL	43	44	45																
39	MARWAT RUTUJA BALASAHEB	43	44	45																
40	NAIKWADI NEHA DATTATRAY	43	44	45																
41	NAIKWADI SAYALI MOHAN	43	44	45																
42	NAMADE MAYURI BHARAT	43	44	45																
43	PAWADE KAJAL SUNIL	43	44	45																
44	PAWAR AISHWARYA SUNIL	43	44	45																
45	PAWAR NIKITA GANGARAM	43	44	45																
46	SAHANE SEJAL TANAJI	43	44	45																
47	SAMAL AISHWARYA SHRINIVAS	43	44	45																
48	SHINGOTE TANVI BHARAT	43	44	45																
49	SHIROLE PRATHAMESH LAXMAN	43	44	45																
50	SONAWANE PRANITA RAMDAS	43	44	45																
51	SUMBARE SHIVANI VILAS	43	44	45																
52	SUPEKAR MADHURI VIJAY	43	44	45																
53	THORAT SAMPADA ANIL	43	44	45																
54	THORVE KOMAL DATTATRAY	43	44	45																
55	VARPE VRUSHALI DILIP	43	44	45																
56	WAGH RUTUJA SHARAD	43	44	45																
57	WAJAGE RUTUJA PANDURANG	43	44	45																
58	WANI AKSHADA SHANTARAM	43	44	45																
59	YADAV TRUPTI DAGDUBHAU	43	44	45																
60	YENDHE SHIVANI SANTOSH	38	39	40																
61	YENDHE SHUBHAM BALKRISHNA	36	37	38																
62	YEWALE RUSHIKESH SUDAM	36	37	38																
63	DUKARE PRANITA BHARAT	43	44	45																
64	BAHIRAT KUNAL RAJENDRA	43	44	45																
65	KANASKAR RUTUJA RAJENDRA	43	44	45																
66	PASHTA AKSHAY BHAGWAT	43	44	45																
67	RATHOD GAJANAN VASANTA	42	43	44																
68	THORAT AKSHADA JAYSING	43	44	45																
69	NEHARKAR DIKSHA SITARAM	43	44	45																
70	SAHANE SMITA ULHAS	43	44	45																

Total 1edures
= 45



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AT- ALE, TAL - JUNNAR, DIST - PUNE MAHARASHTRA - 412411.
Contact No.9730003179. E-Mail:vjsm.principal@gmail.com website-www.vjsmale.com

Ref- No: VJSM/VIPER-Vizit/2018-19/1.

Date: 2/4/2019.

Requesting Letter

To,
Dr. Saware,
Om Pathology Lab, Alephta,
Tal- Junnar, Dist- Pune.



Sub: Regarding Demonstration of Pathophysiology & Clinical Biochemistry Practical.

Respected Sir,

With reference to the above cited subject, Please guide our students of S. Y. B. Pharm (2015 Pattern) regarding Pathophysiology & Clinical Biochemistry Practical as per PCI Syllabus.

Thanking You.

Yours faithfully,

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*Received
Saware*



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Contact No. 9730003179. E-Mail: vjism.principal@gmail.com website-www.vjsmale.com

Ref- No: VJSM/VIPEP-VIS-4/2018-19/2

Date: 4/4/2019

Thanking Letter

To,
Dr. Saware,
Om Pathology Lab, Alephta,
Tal- Junnar, Dist- Pune.



Sub: Regarding Thanking Letter.

Respected Sir,

We would like to thank you for spending your valuable time for demonstrating the Pathophysiology & Clinical Biochemistry Practical on Date 04/04/2019. It enlightens to students confidence for their bright future.

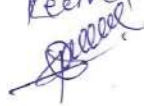
Thank you for co-operation.

Thanking You.


Warm regards.

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Om CLINICAL LAB

Computerised

S.B. SAWARE
B.Sc. D.M.L.T.
Cell : 9850012010

04/04/2019

Certificate

To,
The Principal,
Vishal Institute of Pharmaceutical Edu. & Res. Ale,
Tal-Junnar Dist- Pune 412411.

Sub- Regarding Om Pathology, Alephata Visit.

This is to certify that one faculty member Shri. Umesh Kumbhar of your college along with 70 second year of B Pharm have visited my Om Pathology lab, Alephata on date 04/04/2019.

In that visit I explained to all students regarding pathology & clinical Biochemistry practical like kidney function test, liver function test, cardiac profile test, CRP, ESR, Histopathology, Malaria Parasite etc.

[Signature]
14/04/2019
Dr. S.B. Saware

● Fully Automatic Blood Cell Counter - 210 (Japan) ● Chem Touch Erba (Germany) ● EL - 120 Electrolyte Analyser (Japan)

Jaineb-Papa Heights, Near Shrikrishna Press, Alephata, Tal. Junnar, Dist. Pune.



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STUDENT ARE INVOLVED IN BLOOD DONATION CAMP ALEPHATA.	
DATE	NO OF PARTICIPANTS
09-08-2019	50



Studentare involved in blood donation camp Alephata.

Brief Report of the Activity:

On this date our NSS volunteers were participated in the Blood Donation Camp which was organized by Rotary men club Alephata at Bhormangalkaryalaya. Some volunteers donate the blood and counseling the other blood donars. Also our volunteers explain the importance of Blood Donation. Some volunteers play a role with Dr. and Nurses for smooth conduct of this event. Many NSS volunteers participated in distribution of snacks for donors. In this total 50 NSS volunteers were participated



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INTERNATIONAL YOGA DAY

DATE	NUMBER OF STUDENTS PARTICIPATED
------	---------------------------------

21-06-2021	All Staff and Students
------------	------------------------



International Yoga Day

Brief Report of the Activity:

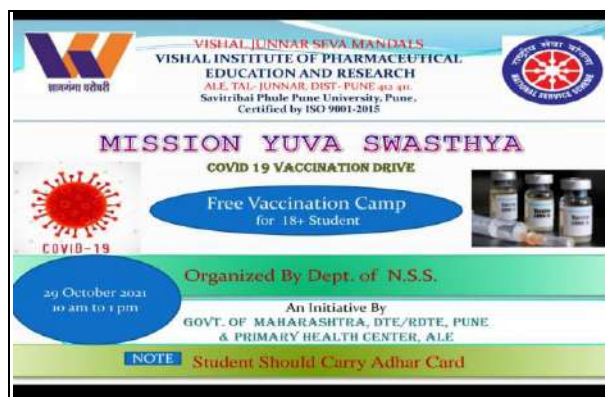
International Yoga Day was conducted through online mode. Devi Vaishnavi Shriji Alekar, the Teacher of art of living Ale, conducted the yoga exercises and also informed to our students and staffs importance of yoga in day to day life. In this programme total 175 students and staffs participated and bring the programme very smoothly and successfully.




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Covid-19 vaccination Drive.

DATE	NO OF PARTICIPANTS
29-10-2021	04



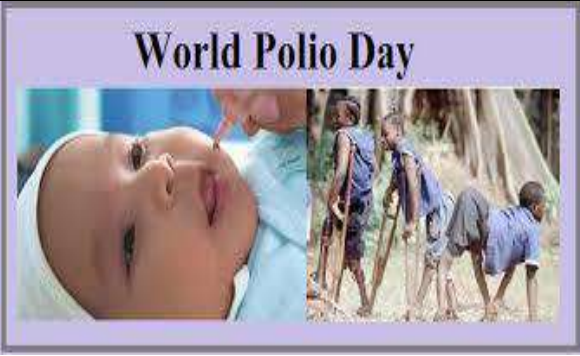
Covid-19 vaccination Drive.

Brief Report of the Activity:

Today 29/10/2021 Vishal Institute of Pharmaceutical Education and Research Ale, NSS Department successfully completed Covid -19 vaccination drives in association with Primary Health Centre Ale Covishield vaccine is given for four students.




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Pulse Polio Vaccination Drive	
DATE	NO OF PARTICIPANTS
27-02-2022	04
	 The National Pulse Polio Vaccination Campaign will be implemented in Pune from 27 February. The objective of this campaign is to give polio doses to every child between the age of 0-5 years. There are approximately 3,11,000 children in the given age group. This year, the entire campaign will be implemented #today
	 
Pulse Polio Vaccination Drive	

Brief Report of the Activity:

Polio free world' is our motto. All India Institute of Medical Sciences, New Delhi. The aim is **to boost immunity and protect vulnerable children against the virus**. The theme for the year 2022 is "**vaccines work for all**". **One drop can save many lives**. Let us work together for polio free tomorrow. Polio demands our patience and our dedication. Don't go easy with polio. Primary health center, Ale organized the pulse polio drive on 27th February 2022. Our NSS volunteers & me participated in this drive at Alephata ST stand booth. More than 600 doses were given to the children.




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Health Awareness Camp.

DATE	NO OF PARTICIPANTS
11-03-2022	32



Health Awareness Camp.



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Brief Report of the Activity:

The fourth day of our camp which was held on 11/03/2022. We went to our college at 8.15 a.m. When we had our breakfast and tea, then we moved towards bus and reached to the location which was Kolwadi by 9.00 a.m. As soon as we reached our work location, we distributed the work in respective teams. So the work for the day was a survey related to vaccination. We checked village people's oxygen levels, Temperature, Covid 19 dose they had taken and also we checked and collected expired medicines from their houses. We also distributed mask, sanitizer and informative pamphlet related to Covid and malaria to the villagers. This work was done up to 1.00 p.m. Then we went back to our camp location. We then had rest for a few minutes. Then we had our lunch till 2.30 p.m. Then we took rest for half hour. After rest we did sage and falicitation arrangements. Later by 3.30 p.m. our guest Shri. Adesh Raskar and Shri. Santosh Nagare educated us on the topic of "Yoga and its Benefits". till 5.00 p.m. As the session ended we distributed tea to the guest and volunteers. We really very energetic and full of knowledge. Here the programme for our fourth day ended.




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Health Awareness Camp.

DATE	NO OF PARTICIPANTS
12-03-2022	32



Health Awareness Camp.



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Brief Report of the Activity:

The fifth day of our camp which was on 12/3/2022. We went to our college at 8.15a.m. where we had our breakfast and tea. Then we move towards our bus and reached the location which was Santwadi by 9.00a.m. As soon as we reached to the location of our work we distributed our work according to our teams, so the work for the day was a survey related to Covid vaccination. So we checked villagers oxygen level, Temperature, Covid dose they had taken and checked expiry medicines and also collected it from them. We distributed mask, sanitizers and informative pamphlets to the villagers. All this work was done by 1.00p.m. by all the teams. Then we went back to our camp location where we took rest for a few minutes. Then served the food and after serving we had our food by 2.30p.m. After lunch we took rest for half an hour. Then we did saage and falcitation arrangements. Later by 3.30p.m. our guest Dr. Rahangadale Botany Dept. B.J. College Ale arrived. After the falcitation programme she educated us on “Innovations of Herbal Plants” till 5.00p.m. She gave us information about some endangered and endemic species, their uses over various disease. The session was really informative in terms of pharmacy as well. We enjoyed the day as whole. After the session was over we distributed tea to everyone and this is where we ended our fifth day.




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VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH

Dr. S. L. Jadhav
Principal

Ale, Tal. Junnar, Dist. Pune-412411 | Contact No. : 9892376014 | E-mail : vjrm.principal@gmail.com | Website: www.viperale.com

P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

A. PARTICIPATIVE LEARNING METHODOLOGIES

Sr. No.	Name of Documents
2	PARTICIPATIVE LEARNING
2.1	Participation by Students in Seminar/Workshop/Conference and Poster Presentation.
2.2	Cultural Programmes participation
2.3	Awareness Campaign Conducted during NSS/NPW
2.4	Tree plantation drives
2.5	Industrial Visit




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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

2. PARTICIPATIVE LEARNING

2.1. Participation by Students in Seminar/Workshop/Conference and Poster Presentation.

B. PHARM

Academic Year 2019-2020					
Sr. No	Date	Name of Student	Topic of conference	Organiser	Day
1.	7/02/2020	Belhekar S. N.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
2.	7/02/2020	Bankar P. K.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
3.	7/02/2020	Ghode, A. D.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
4.	7/02/2020	Jadhav R.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
5.	7/02/2020	Khadsare J.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
6.	7/02/2020	Gunjal P. S.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
7.	7/02/2020	Kokate S. D.	State Level Tech Quiz Poster presentation	Samarth COP, Belhe	1
8.	8/02/2020	Kate P. S.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
9.	8/02/2020	Kanaskar R. R.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
10.	8/02/2020	Neharkar D. S.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
11.	8/02/2020	Godhale A. G.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
12.	8/02/2020	Sahane S. V.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1

13.	8/02/2020	Sumbare S. V.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
14.	8/02/2020	Thorat A. J.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
15.	8/02/2020	Gunjal P. S.	Emerging prospective in pharmaceutical industry pharmacon 2020	MITCON Institute of Management, Pune	1
2018-2019					
16.	5/10/2018	Yewale M. K.	Science expo-2018	Sahyadrivally College Of Engineering and Technology, Rajuri	1
17.	5/10/2018	Dhamdhare S. K.	Science expo-2018	Sahyadrivally College Of Engineering and Technology, Rajuri	1
18.	5/10/2018	Khedkar R. A.	Science expo-2018	Sahyadrivally College Of Engineering and Technology, Rajuri	1
19.	6/021/2019	Kute V. B.	3 rd MET PAT 2019	MET BKC, Nashik	1
20.	6/021/2019	Kote P. S.	3 rd MET PAT 2019	MET BKC, Nashik	1
21.	6/021/2019	Varhadi M.	3 rd MET PAT 2019	MET BKC, Nashik	1
22.	6/021/2019	Vethekar K. S.	3 rd MET PAT 2019	MET BKC, Nashik	1
23.	6/021/2019	Mhaske R. B.	3 rd MET PAT 2019	MET BKC ,Nashik	1
24.	10-11/01/2019	Kute V. B.	Isolation Separation Purification characterisation of undiscovered phytoconstituent	SIPS COP, Lonawala	2
25.	10-11/01/2019	Kote P. S.	Isolation Separation Purification characterisation of undiscovered phytoconstituent	SIPS COP, Lonawala	2
26.	10-11/01/2019	Varhadi M.	Isolation Separation Purification characterisation of undiscovered	SIPS COP, Lonawala	2

			phytoconstituent		
27.	10-11/01/2019	Vethekar K.S.	Isolation Separation Purification characterisation of undiscovered phytoconstituent	SIPS COP, Lonawala	2
28.	10-11/01/2019	Mhaske R.	Isolation Separation Purification characterisation of undiscovered phytoconstituent	SIPS COP, Lonawala	2
29.	8/02/2019	All final year	Identification wild edible medicinal plant	B.J. Arts Commerce and Science College, Ale	1
30.	26-17/02/2019	All final year	State level workshop on IPR under QIP	B.J. Arts Commerce and Science College, Ale	1
2017-2018					
31.	28/10/17	Balsaraf C.	Avishkar-2017 zonal level research project competition	Marathwada Mitra Mandal's COP, Theragaon, Pune	1
32.	28/10/17	Padekar S. G.	Avishkar-2017 zonal level research project competition	Marathwada Mitra Mandal's COP, Theragaon, Pune	1
33.	19 & 20/01/18	Phalle S. B	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
34.	19 & 20/01/18	Hande Swapnil	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
35.	19 & 20/01/18	Matale Dipali	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
36.	19 & 20/01/18	Korde Priyanka	Recent Approaches in Environmental Protection	B. J. Arts, Commerce and Science College,	2

			and Sustainable Development	Ale	
37.	19 & 20/01/18	Yewale Akshay	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
38.	19 & 20/01/18	Andhale Komal	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
39.	24/01/18	Ritu D.	One day district level workshop of competitive exam	B. J. Arts, Commerce and Science College, Ale	1
40.	24/01/18	Datwatkar P.	One day district level workshop of competitive exam	B. J. Arts, Commerce and Science College, Ale	1
41.	24/01/18	Shubhangi R.	One day district level workshop of competitive exam	B. J. Arts, Commerce and Science College, Ale	1
42.	24/01/18	Bhagat U.	One day district level workshop of competitive exam	B. J. Arts, Commerce and Science College, Ale	1
43.	19 & 20/01/18	Padekar H.	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2




PRINCIPAL
 VISHAL INSTITUTE OF PHARMACEUTICAL
 EDUCATION AND RESEARCH
 ALE TAL-JUNNAR DIST-PUNE 412411



PHARMEET 2020

National Conference On

“Emerging Prospects in Pharmaceutical Industry”

This is to Certify that Mr./Ms. Varpe Vrushali Dilip
Attended Conference and Participated in Poster Presentation / Pharma Ad-Mad /
Whatsapp Quotes Competition during PHARMEET - 2020 organised by MITCON
Institute Of Management on 8th Feb 2020.

Prof. Nitpal Singh
Deputy Director-PHM

Dr. Ganesh Rao
Director



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B.Pharm Program
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(From 2017-18 to 2019-20)

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3rd MET PAT-2019
STATE LEVEL PHARMACY APTITUDE TEST



Highest Rank
"PLATINUM"
AICTE-CII Survey of
Industry-Linked
Technical Institutes 2018

Certificate

This is to certify that Mr./Ms./Mrs. Vaishnavi B. Kute (Final Year)
student of Vishal Institute of Pharmaceutical Edu. & Research has participated in
State Level Pharmacy Aptitude Test entitled **"3rd MET PAT-2019"** conducted on 06 January 2019,
organized by MET Institute of Pharmacy, Bhujbal Knowledge City, Adgaon, Nashik.


Prof. Pratap B. Pawar
Co-ordinator
Asst. Professor MET, IOP


Dr. Sanjay J. Kshirsagar
Principal
MET's Institute of Pharmacy



Sinhgad Technical Education Society's

Sinhgad Institute of Pharmaceutical Sciences (S.I.P.S)

309/310, off Mumbai-Pune expressway, Kusgaon (Bk), Lonavala 410401



Sinhgad Institutes

CERTIFICATE

This is to certify that

Dr. / Mr. / Ms. Mhaske Poonam

has actively participated as a **Resource Person** / **Delegate** / **Participant** / **Presented Poster**
at Savitribai Phule Pune University Sponsored Two days National Level Seminar

**"Isolation, Separation, Purification and Characterization of Undiscovered Phyto-Constituents :
Challenges and Opportunities" Dt. 10th & 11th January 2019**

Organised by

Sinhgad Institute of Pharmaceutical Sciences, Lonavala

His / Her participation in the seminar is Highly Appreciated.

Dr. Rajesh J. Oswal
Convener

Mr. Rahul S. Shivarkar
Co-ordinator



SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

University Research Cell

AVISHKAR 2017

ZONAL LEVEL RESEARCH COMPETITION

Certificate of Participation

This is to certify that Shri./Smt. Mayuri S. Bangar
of Vishal Institute Of Pharmaceutical Education And Research has
participated at the "Avishkar - 2017" Zonal Level Research Competition at UG / PG /
Post PG/ Teacher level in the Medicine And Pharmacy category, held at
Marathwada Mitra Mandal's College Of Pharmacy, Thergaon on 28th October 2017

Coordinator

Principal

Dr. S. P. Bathe
Deputy Registrar

M.PHARM

Academic year 2021-22					
Sr. No	Date	Name of Student	Topic of conference	Organizer	Day
1.	28/01/2022	Shelke S. S.	Prip Innovative 4: Novel sterically stabilized disulphide linker for gene therapy and peptide drug discovery .	Pulla Reddy Institute of Pharmacy, Hyderabad	1
2.	28/01/2022	Naykodi V. K.	Prip Innovative 4: Novel sterically stabilized disulphide linker for gene therapy and peptide drug discovery .	Pulla Reddy Institute of Pharmacy, Hyderabad	1
3.	28/01/2022	Bhutambare V. A.	Prip Innovative 4: Novel sterically stabilized disulphide linker for gene therapy and peptide drug discovery.	Pulla Reddy Institute of Pharmacy, Hyderabad	1
4.	28/01/2022	Deokar R. S.	Prip Innovative 4: Novel sterically stabilized disulphide linker for gene therapy and peptide drug discovery.	Pulla Reddy Institute of Pharmacy, Hyderabad	1
5.	26/02/2022	Bhutambre V. A.	Prip Innovative 5: Individual and Institutional measure to enhance effective use of plant as nutraceuticals	Pulla Reddy Institute of Pharmacy, Hyderabad	1
6.	26/02/2022	Vidhate P. G.	Prip Innovative 5: Individual and Institutional measure to enhance effective use of plant as nutraceuticals	Pulla Reddy Institute of Pharmacy, Hyderabad	1
7.	4/07/2021	Naykodi V. K.	Coronavirus and chemistry: It's research and response	Devchand College Arjunnagar, Kolhapur	1
8.	4/07/2021	Vidhate P. G.	Coronavirus and chemistry: It's research and response	Devchand College Arjunnagar, Kolhapur	1
9.	4/07/2021	Shelke S.S.	Coronavirus and chemistry: It's research and response	Devchand College Arjunnagar, Kolhapur	1
10.	20/02/2021 to 15 /05/2021	Dongre A.	International (FDP) Emerging trends in pharmaceutical research	Dr. D.Y. Patil Institute Of Pharmaceutical Science And Research, Pimpri	3 mont h
11.	20/02/2021 to 15 /05/2021	Malwadkar S. A.	International (FDP) Emerging trends in pharmaceutical research	Dr. D.Y. Patil Institute Of Pharmaceutical Science And Research, Pimpri	3 mont h
12.	20/02/2021 to 15/05/2021	Deokar R. S.	International (FDP) Emerging trends in pharmaceutical research	Dr. D.Y. Patil Institute Of Pharmaceutical Science And Research, Pimpri	3 mont h
13.	20/02/2021 to 15 /05/2021	Naykodi V. K.	International (FDP) Emerging trends in pharmaceutical research	Dr. D.Y. Patil Institute Of Pharmaceutical Science And	3 mont h

				Research, Pimpri	
14.	13/05/2022 to 15/05/2022	Mirza Nurain.	Recent progress in brain research and drug delivery (Poster presentation)	ISF College Of Pharmacy , Punjab	3
15.	13/05/2022 to 15/05/2022	Deokar R.	Recent progress in brain research and drug delivery (Poster presentation)	ISF College Of Pharmacy , Punjab	3
16.	13/05/2022 to 15/05/2022	Bhalerao V.	Recent progress in brain research and drug delivery (Poster presentation)	ISF College Of Pharmacy , Punjab	3
17.	22/12/2021	Naykodi V. K.	PripInnovative 3	Pulla Reddy Institute Of Pharmacy, Hyderabad	1
18.	22/12/2021	Sahane P. S.	PripInnovative 3	Pulla Reddy Institute Of Pharmacy, Hyderabad	1
19.	22/12/2021	Shelke S. S.	Prip Innovative 3	Pulla Reddy Institute Of Pharmacy, Hyderabad	1
20.	22/12/2021	Vidhate P.G.	Prip Innovative 3	Pulla Reddy Institute Of Pharmacy, Hyderabad	1
21.	22/12/2021	Bhutambare V. A.	Prip Innovative 3	Pulla Reddy Institute Of Pharmacy, Hyderabad	1
22.	12/03/2021	Sahane P. S.	Biodegradable polymer derived from renewable resources material	S.M.D.M.M., Kalamb,Osmanabad	1
23.	12/03/2021	Deokar R. S.	Biodegradable polymer derived from renewable resources material	S.M.D.M.M., Kalamb, Osmanabad	1
24.	12/03/2021	Malwadkar S. A.	Biodegradable polymer derived from renewable resources material	S.M.D.M.M., Kalamb, Osmanabad	1
25.	16/02/2022 to 18/02/2022	Vidhate P. G.	First International webinar series on artificial intelligence in drug discovery	Shri Vile Parle Kelavani Mandal's Institute Of Pharmacy, Dhule	3
26.	16/02/2022t o 18/02/2022	Sahane P. S.	First International webinar series on artificial intelligence in drug discovery	Shri Vile Parle Kelavani Mandal's Institute Of Pharmacy, Dhule	3
27.	16/02/2022t o 18/02/2022	Bhutambare V. A.	First International webinar series on artificial intelligence in drug discovery	Shri Vile Parle Kelavani Mandal's Institute Of Pharmacy, Dhule	3

28.	25/08/2021	Vidhate P. G.	Webinar on Consumerism and financial literacy in midst of Covid-19 pandemic	Vishal Institute Of Pharmaceutical Education And Research, Ale	1
29.	25/08/2021	Shelke S.S.	Webinar on Consumerism and financial literacy in midst of Covid-19 pandemic	Vishal Institute Of Pharmaceutical Education And Research,Ale	1
30.	27/09/2021 to 29/09/2021	Naykodi V.K.	International conference on Pharmaceutical Research and Innovation to tackle future health care arena	Sir Dr. M..S.Gosavi College Of Pharmaceutical Education And Research, Nashik	3
31.	27/09/2021 to 29/09/2021	Shelke S. S.	International conference on Pharmaceutical Research and Innovation to tackle future health care arena	Sir Dr. M.S. Gosavi College of Pharmaceutical Education And Research, Nashik	3
32.	16/07/2021	Sahane P. S.	A national level one day webinar on introduction to the current trends in experimental pharmacology	Institute Of Pharmacy Bhujbal Knowledge City, Nashik	1
33.	6/07/2021	Naykodi V.	Stereotoxic neurosurgery : exploration of the brain	Sharadchandra Pawar College Of Pharmacy, Otur	1
34.	6/07/2021	Sahane P. S.	Stereotoxic neurosurgery : exploration of the brain	Sharadchandra Pawar College Of Pharmacy, Otur	1
35.	18/06/2021	Vidhate P.	Diversity oriented synthetic strategics	Vels Institute of Science Technology And Advanced Studies,Chennai	1
36.	10/05/2022	Vibhati B.	Therapeutic advances against covid-19	International Pharmaceutical Foundation	1
37.	10/02/2022	Bhutambare V.	History of Pharmacognosy : A journey from traditional to recent approach	Institute Innovation Council Nootan College Of Pharmacy, Sadat	1
38.	5/03/2022	Naykodi V.	Important tips for communication and interview skill	Rajmata Jijau Shikshan Prasarak Mandals Institute Of Pharmacy, Moshi	1
39.	20/02/2021	Deokar R.	Career opportunities in healthcare management and medical tourism	P.E. Society Modern College Of Pharmacy ,Nigdi	1

2020-21

1.	13/06/2020 to 15/06/2020	Waykar G. R.	Innovative research trends in pharmaceutical industry	Baptla College Of Pharmacy, Baptala	3
2.	13/06/2020 to 15/06/2020	Lohkare A. B.	Innovative research trends in pharmaceutical industry	Baptla College Of Pharmacy, Baptala	3
3.	13/06/2020 to 15/06/2020	Arote T.	Innovative research trends in pharmaceutical industry	Baptla College Of Pharmacy, Baptala	3
4.	25/05/2020	Lohkare A. B.	Unintended misconduct in academic research and its impact	Bharti Vidyapeeth College Of Pharmacy, Kolhapur	1
5.	25/05/2020	Kedar V.D.	Unintended misconduct in academic research and its impact	Bharti Vidyapeeth College Of Pharmacy , Kolhapur	1
6.	25/05/2020	Waykar G.	Unintended misconduct in academic research and its impact	Bharti Vidyapeeth College Of Pharmacy, Kolhapur	1
7.	29/05/2020 to 31/05/2020	Kedar V. D.	Accustoming pharmaceutical professional with upcoming future challenges	Gurunanak College Of Pharmacy, Nagpur	3
8.	29/05/2020 to 31/05/2020	Madhawai U.	Accustoming pharmaceutical professional with upcoming future challenges	Gurunanak College Of Pharmacy, Nagpur	3
9.	13/06/2020 to 15/06/2020	Waykar G.R.	Innovative research trends in pharmaceutical industry	Baptla College Of Pharmacy, Baptala	3
10.	13/06/2020 to 15/06/2020	Lohkare A. B.	Innovative research trends in pharmaceutical industry	Baptla College Of Pharmacy, Baptala	3
11.	13/06/2020 to 15/06/2020	Arote T.	Innovative research trends in pharmaceutical industry	Baptla College Of Pharmacy, Baptala	3
12.	25/05/2020	Lohkare A. B.	Unintended misconduct in academic research and its impact	Bharti Vidyapeeth College Of Pharmacy, Kolhapur	1
13.	25/05/2020	Kedar V.D.	Unintended misconduct in academic research and its impact	Bharti Vidyapeeth College Of Pharmacy, Kolhapur	1
14.	25/05/2020	Waykar G.	Unintended misconduct in academic research and its impact	Bharti Vidyapeeth College Of Pharmacy, Kolhapur	1
15.	29/05/2020 to 31/05/2020	Kedar V. D.	Accustoming pharmaceutical professional with upcoming future challenges	Gurunanak College Of Pharmacy, Nagpur	3

16.	29/05/2020 to 31/05/2020	Madhawai U.	Accustoming pharmaceutical professional with upcoming future challenges	Gurunanak College Of Pharmacy, Nagpur	3
17.	29/05/2020 to 31/05/2020	Indore P.	Accustoming pharmaceutical professional with upcoming future challenges	Gurunanak College Of Pharmacy, Nagpur	3
18.	29/05/2020 to 31/05/2020	Shewale S.	Accustoming pharmaceutical professional with upcoming future challenges	Gurunanak College Of Pharmacy, Nagpur	3
19.	24/06/2020	Arote T.	International pharma webinar on can we discover a new drug from an old drug?	MNR College Of Pharmacy, Hyderabad	2
20.	24/06/2020	Indore M. P.	International pharma webinar on can we discover a new drug from an old drug?	MNR College Of Pharmacy, Hyderabad	2
21.	24/06/2020	Lohkare A. B.	International pharma webinar on can we discover a new drug from an old drug?	MNR College Of Pharmacy, Hyderabad	2
22.	24/06/2020	Waykar G.	International pharma webinar on can we discover a new drug from an old drug?	MNR College Of Pharmacy, Hyderabad	2
23.	14/02/2020 to 15/02/2020	Waykar G.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
24.	14/02/2020 to 15/02/2020	Madhawai U.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP , Sangmaner	2
25.	14/02/2020 to 15/02/2020	Indore P.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
26.	14/02/2020 to 15/02/2020	Indore M. P.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
27.	14/02/2020 to 15/02/2020	Meher R.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
28.	14/02/2020 to 15/02/2020	Kedar V.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
29.	14/02/2020 to 15/02/2020	Pingale S.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
30.	14/02/2020 to 15/02/2020	Arote T.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
31.	14/02/2020 to	Meher R.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2

	15/02/2020				
32.	14/02/2020 to 15/02/2020	Kedar V.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
33.	14/02/2020 to 15/02/2020	Pingale S.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP , Sangmaner	2
34.	14/02/2020 to 15/02/2020	Arote T.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
35.	28 to 29/01/2021	Waykar G.	Recent trends in pharmaceutical, Medical and applied sciences for global development(Paper presentation)	Pharma Medical Sciences Development Society, Rampur	2
36.	28 to 29/01/2021	Indore M. P.	Recent trends in pharmaceutical, Medical and applied sciences for global development(Paper presentation)	Pharma Medical Sciences Development Society, Rampur	2
37.	28 to 29/01/2021	Dhumane S.	Recent trends in pharmaceutical , Medical and applied sciences for global development(Paper presentation)	Pharma Medical Sciences Development Society, Rampur	2
38.	28 to 29/01/2021	Lohkare A. B.	Recent trends in pharmaceutical , Medical and applied sciences for global development(Paper presentation)	Pharma Medical Sciences Development Society, Rampur	2
39.	28 to 29/01/2021	Bhalerao R.	Recent trends in pharmaceutical , Medical and applied sciences for global development(Paper presentation)	Pharma Medical Sciences Development Society, Rampur	2
40.	28 to 29/01/2021	Meher R.	Recent trends in pharmaceutical , Medical and applied sciences for global development(Paper presentation)	Pharma Medical Sciences Development Society, Rampur	2
41.	14/02/2020 to 15/02/2020	Meher R.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
42.	14/02/2020 to 15/02/2020	Kedar V.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
43.	14/02/2020 to 15/02/2020	Pingale S.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2
44.	14/02/2020 to 15/02/2020	Arote T.	Modern Analytical tools in pharmaceutical research	Amrutvahini COP, Sangmaner	2

45.	9/05/2020 to 12/05/2020	Indore M. P.	Career edge –Knockdown to Lockdown online course	TCS Ion	4
46.	9/05/2020 to 12/05/2020	Lohkare A. B.	Career edge –Knockdown to Lockdown online course	TCS Ion	4
47.	9/05/2020 to 12/05/2020	Shewale S.	Career edge –Knockdown to Lockdown online course	TCS Ion	4
48.	9/05/2020 to 12/05/2020	Thopate S.	Career edge –Knockdown to Lockdown online course	TCS Ion	4
49.	9/05/2020 to 12/05/2020	Kedar V.	Career edge Knockdown to Lockdown online course	TCS Ion	4
50.	9/05/2020 to 12/05/2020	Pingale S.	Career edge –Knockdown to Lockdown online course	TCS Ion	4
51.	9/05/2020 to 12/05/2020	Meher R.	Career edge –Knockdown to Lockdown online course	TCS Ion	4
52.	27/04/2020 To 29/04/2020	Deokar R.	Covid 19 Awareness and prevention brace	Sharadchandra Pawar College of Pharmacy, Otur	3
53.	27/04/2020 To 29/04/2020	Shewale S.	Covid 19 Awareness and prevention brace	Sharadchandra Pawar College of Pharmacy, Otur	3
54.	27/04/2020 To 3/05/2020	Shelke Snehal	Covid 19 :community awareness and prevention Quiz competition	Samarth College of Pharmacy,Belhe	6
55.	12/06/2020	Arote T.	Scope of clinical research and associated domains,	PRES ,College of Pharmacy, Chincholi	1
56.	25/06/2020	Arote T.	Role of technology in higher education	Sharadchandra Pawar College of Pharmacy, Otur	1
57.	25/06/2020	Arote T.	Role of technology in higher education	Sharadchandra Pawar College of Pharmacy, Otur	1
58.	20/06/2020	Lohkare A.	Strategies in drug design and synthesis	Krishna Institute of Pharmacy, Karad	1
59.	26/06/2020	Arote T.	Scope in clinical research and associated domains	The Oxfard College of Pharmacy,Bengluru	1
60.	18/06/2020	Arote T.	Stress management in difficult situation	ISF college of pharmacy Moga	1

61.	27/04/2020 To 29/04/2020	Deokar R.	Covid 19 Awareness and prevention brace	Sharadchandra Pawar College of Pharmacy, Otur	3
62.	27/04/2020 To 29/04/2020	Shewale S.	Covid 19 Awareness and prevention brace	Sharadchandra Pawar College of Pharmacy, Otur	3
63.	17/5/2020	Kedar V.	Career opportunities in clinical research and medical writing	HSBPVT College of Pharmacy, Kashti	1
64.	9/05/2020	Kedar V.	Intellectual property rights for the development of academics research	Sharadchandra Pawar College of Pharmacy, Otur	1
65.	23/05/2020	Kedar V.	Exploring pathway on hypothesis and potential treatment option for mitigation of covid 19	Sharadchandra Pawar College of Pharmacy, Otur	1
66.	23/05/2020	Indore M.	Exploring pathway on hypothesis and potential treatment option for mitigation of covid 19	Sharadchandra Pawar College of Pharmacy, Otur	1
67.	24/05/2020	Kedar V.	Mindset and career enhancement	Sharadchandra Pawar College of Pharmacy, Otur	1
68.	24/05/2020	Waykar G.	Mindset and career enhancement	Sharadchandra Pawar College of Pharmacy, Otur	1
69.	15/06/2020	Kedar V.	Entrepreneurship development	Samarth College of Pharmacy, Belhe	1
70.	19/06/2020	Kedar V.	Webinar on what is plagiarism and why should it be avoided ?	MNR College of Pharmacy	1
71.	06/03/2021	Pingale S.	Expectations of pharma industry from graduates	Faculty of Pharmaceutical Science, Bangalore	1
72.	5/12/2020	Shewale S.	Hands on training on Mendeley reference manager,	Shrinath College of Pharmacy, Aurangabad	1
73.	15/05/2020 to 17/05/2020	Shewale S.	National level pharma employability skill test	Dr. D Y. Patil Institute of Pharmaceutical Sciences And Research, Pimpri	3
74.	15/05/2020 to 17/05/2020	Waykar G.	National level pharma employability skill test	Dr. D Y. Patil Institute of Pharmaceutical Sciences And Research, Pimpri	3
75.	03/06/2020	Lohakare A.	National level webinar on response surface methodology	Sharadchandra Pawar College of	1

			software minitab	Pharmacy, Otur	
76.	03/06/2020	Waykar G.	National level webinar on response surface methodology software minitab	Sharadchandra Pawar College of Pharmacy, Otur	1
77.	21/05/2020 to 23/05/2020	Lohakare A.	Diagnostics tools in biopharma and chemical duties	Guru Nanak Khalsa College of Arts , Science And Commerce, Matunga	3
78.	29/05/2020	Lohakare A.	Analytics in clinical trials	Marathwada Mitra Mandal College of Pharmacy, Pune	1
79.	17/05/2020	Lohakare A.	Career opportunities in clinical research and medical writing	HSBPVT College of Pharmacy ,Kashti	1
80.	07/05/2020	Lohakare A.	DCS center of skill and entrepreneurship development for clinical research and pharmacovigilance	Dr. D Y. Patil Institute of Pharmaceutical Sciences And Research, Pimpri	1
81.	30/05/2020	Indore M.	Current opportunity in drug evaluation /Drug safety clinical trial for pharmacist	G.S. Moze College of Pharmacy, Wagholi	1
82.	26/06/2020	Waykar G.	Scope in clinical research and associated domains	The Oxford College of Pharmacy, Bengluru	1
83.	25/05/2020	Waykar G.	Webinar on Take U-turn for our basic needs and immunity	Sharadchandra Pawar College of Pharmacy, Otur	1
84.	5/12/2020	Waykar G	Covid-19 pandemic general awareness program	SVPM College of Commerce Science and Computer , Baramati	1
85.	09/05/2020	Madhawai U.	Pediatric drug development	SVKM'S NMIMS, Hydrabad	1
2019-2020					
1.	28/08/2019	Meher R.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and Research, Ale	1
2.	28/08/2019	ThopateS.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and Research, Ale	1
3.	28/08/2019	Arote T.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and	1

				Research, Ale	
4.	28/08/2019	ShewaleS.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and Research, Ale	1
5.	28/08/2019	Bhalerao R.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and Research, Ale	1
6.	28/08/2019	Indore M.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and Research, Ale	1
7.	28/08/2019	Indore P.	Inter College Poster presentation competition	Vishal Institute of Pharmaceutical Education and Research, Ale	1
8.	30/08/2019	Kedar V. D.	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
9.	30/08/2019	Madhawai U. P.	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
10.	30/08/2019	Shewale S. S.	PHARMA EXPO - PHARMA-MODEL Competition	SitabaiThite College of Pharmacy, Shirur	1
11.	30/08/2019	Waykar G. R	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
12.	30/08/2019	Lohakare A. B	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
13.	30/08/2019	Indore M. P.	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
14.	30/08/2019	Dhumane S.A.	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
15.	30/08/2019	Date S.	PHARMA EXPO - PHARMA-MODEL Competition	Sitabai Thite College of Pharmacy, Shirur	1
16.	13/09/2019	Kedar V. D	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
17.	13/09/2019	Madhawai U. P.	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
18.	13/09/2019	Date S. H. .	Indo -African Conference Recent advances and future	Nootan College of Pharmacy, Sangali	1

			scenario of pharmaceutical and allied health sciences		
19.	13/09/2019	Arote T. B.	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
20.	13/09/2019	Pingale S. S.	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
21.	13/09/2019	Thopate S. R	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
22.	13/09/2019	Bhalerao R. K.	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
23.	13/09/2019	Date S. H.	Indo -African Conference Recent advances and future scenario of pharmaceutical and allied health sciences	Nootan College of Pharmacy, Sangali	1
24.	15-16/01/2020	Thopate S. R.	CADD Drug delivery system	Sinhgad COP , Vadgoan	2
25.	15-16/01/2020	Indore M. P.	CADD Drug delivery system	Sinhgad COP , Vadgoan	2
26.	15-16/01/2020	Lohate D.	CADD Drug delivery system	Sinhgad COP , Vadgoan	2
27.	15-16/01/2020	Meher R. S.	CADD Drug delivery system	Sinhgad COP, Vadgoan	2
2018-2019					
1.	7/9/2018	Alhat V. N.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
2.	7/9/2018	Padekar H. B.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
3.	7/9/2018	Sable E. B.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
4.	7/9/2018	Waman S. A.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
5.	7/9/2018	Kakade V. B.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1

6.	7/9/2018	Dalavi A. M.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
7.	7/9/2018	Abhang S. R.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
8.	7/9/2018	Jadhav M. K.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
9.	7/9/2018	Waghchoure K. J.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
10.	7/9/2018	Gandhat S. G.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
11.	7/9/2018	Udmale D. A.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
12.	7/9/2018	Suryavanshi A. D.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
13.	7/9/2018	Shinde A. A.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
14.	7/9/2018	Hulawale A. J.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
15.	7/9/2018	Hulawale A. J.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
16.	7/9/2018	Bhujbal S. M.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
17.	7/9/2018	Bhujbal S. M.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
18.	7/9/2018	Dangat P. N.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
19.	7/9/2018	Nilakh S. P.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
20.	7/9/2018	Kasabe M. K.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy, Sangamner	1
21.	7/9/2018	Ghule K.	Recent trend in novel drug delivery system.	Amrutvahini College of Pharmacy,	1

				Sangamner	
22.	8/9/2018	Sable E. B.	Current Challenges Pharmaceutical Drug Design and Pharmacology	L.S.D.P. College Of Pharmacy Mandavganpharata, Shirur	1
23.	8/9/2018	Hulawale A. J.	Current Challenges Pharmaceutical Drug Design and Pharmacology	L.S.D.P. College Of Pharmacy Mandavganpharata, Shirur	1
24.	25/9/2018	Sarang Waman	Pharmaexpo-2k18(pharma modelcompetition for diploma, UG, PG)	Sharadchandra Pawar College Of Pharmacy, Otur	1
25.	25/9/2018	Shubham Bhujbal	Pharmaexpo-2k18 (pharma model competition for diploma, UG, PG)	Sharadchandra Pawar College Of Pharmacy, Otur	1
26.	25/9/2018	Akhil Shinde	Pharmaexpo-2k18 (pharma model competition for diploma, UG, PG)	Sharadchandra Pawar College Of Pharmacy, Otur	1
27.	6/10/2018	Alhat V. N.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy, Tathawade	1
28.	6/10/2018	Padekar H. B.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy, Tathawade	1
29.	6/10/2018	Sable E. B.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy, Tathawade	1
30.	6/10/2018	Waman S. A.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy, Tathawade	1
31.	6/10/2018	Kakade V. B.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy, Tathawade	1
32.	6/10/2018	Dalavi A. M.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy ,Tathawade	1
33.	6/10/2018	Abhang S. R.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy , Tathawade	1

34.	6/10/2018	Borhade A. S.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy , Tathawade	1
35.	6/10/2018	Gandhat S. G.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy, Tathawade	1
36.	6/10/2018	Udmale D. A.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success	Indira College Of Pharmacy ,Tathawade	1
37.	6/10/2018	Suryavanshi A. D.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy ,Tathawade	1
38.	6/10/2018	Shinde A. A.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy , Tathawade	1
39.	6/10/2018	Hulawale A. J	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success.	Indira College Of Pharmacy , Tathawade	1
40.	6/10/2018	Bhujbal S.M.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy , Tathawade	1
41.	6/10/2018	Dangat P. N.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy , Tathawade	1
42.	6/10/2018	Nilakh S. P.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success	Indira College Of Pharmacy , Tathawade	1
43.	6/10/2018	Kasabe M. K.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success)	Indira College Of Pharmacy , Tathawade	1
44.	6/10/2018	Ghule K. B.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success).	Indira College Of Pharmacy ,Tathawade	1
45.	6/10/2018	Badhe N. S.	Controlled Release society- Indian chapter national seminar on (Excipients-the key delivers in formulation success).	Indira College Of Pharmacy , Tathawade	1

46.	8-10-2018	Waman S. A.	Pharma tech fest 2018-19	Dr.Vithalrao Vikhe Patil Foundation College of Pharmacy, A. Nagar.	1
47.	8-10-2018	Chaudhari R.	Pharma tech fest 2018-19	Dr.Vithalrao Vikhe Patil Foundation College of Pharmacy, A. Nagar.	1
48.	8-10-2018	Kurkute A.	Pharma tech fest 2018-19	Dr.Vithalrao Vikhe Patil Foundation College of Pharmacy, A. Nagar.	1
49.	4/1/2019 5/1/2019	Nilakh S. P.	Mutlidisciplinary health care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
50.	4/1/2019 5/1/2019	Abhang S. R.	Mutlidisciplinary health care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
51.	4/1/2019 5/1/2019	Alhat V. N.	Mutlidisciplinaryhealth care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
52.	4/1/2019 5/1/2019	Dalavi A. M.	Mutlidisciplinary health care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
53.	4/1/2019 5/1/2019	Suryawanshi A. D.	Mutlidisciplinary health care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
54.	4/1/2019 5/1/2019	Padekar H. B.	Mutlidisciplinary health care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
2017-2018					
1.	4/1/2019 5/1/2019	Suryawanshi A. D.	Mutlidisciplinary health care research: challenges opportunity and newer direction	Modern College Of Pharmacy, Nigadi.	2
2.	25/09/17	Pachpute K.	Pharma Model Expo2K17 (Intercollegiate Pharma Model Competition for Diploma, UG, PG) on Pharmacist Day	SPCOP, Dumberwadi, Otur	1
3.	25/09/17	Patel S. I	Pharma Model Expo-2K17(Intercollegiate Pharma Model Competition for Diploma, UG, PG) on Pharmacist Day	SPCOP, Dumberwadi, Otur	1
4.	25/09/17	Chordiya B.	Pharma Model Expo2K17 (Intercollegiate Pharma Model Competition for Diploma, UG,	SPCOP, Dumberwadi, Otur	1

			PG) on Pharmacist Day		
5.	25/09/17	Bhore P.	Pharma Model Expo-2K17 (Intercollegiate Pharma Model Competition for Diploma, UG, PG) on Pharmacist Day	SPCOP, Dumbarwadi, Otur	1
6.	25/09/17	Changedia B.	Pharma Model Expo-2K17 (Intercollegiate Pharma Model Competition for Diploma, UG, PG) on Pharmacist Day	SPCOP, Dumbarwadi, Otur	1
7.	28/09/17	Vaidande H.	SPPU, Pune sponsored seminar on ' Avishkar Orientation Workshop-2017 for zonal level research project competition	B. J. Arts, Commerce and Science College, Ale	1
8.	28/09/17	Pachpute K.	SPPU, Pune sponsored seminar on ' Avishkar Orientation Workshop-2017 for zonal level research project competition	B. J. Arts, Commerce and Science College, Ale	1
9.	28/09/17	Patel S. I	SPPU, Pune ne sponsored seminar on ' Avishkar Orientation Workshop-2017 for zonal level research project competition	B. J. Arts, Commerce and Science College, Ale	1
10.	28/09/17	Changedia B.	SPPU, Pune sponsored seminar on ' Avishkar Orientation Workshop-2017 for zonal level research project competition	B. J. Arts, Commerce and Science College, Ale	1
11.	28/10/17	Bangar M. S.	Avishkar-2017 zonal level research project competition	Marathwada Mitra Mandal's COP, Theragaon , Pune	1
12.	19 & 20/01/18	Chordiya Bhakti	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
13.	19 & 20/01/18	Dalvi Apeksha	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2
14.	19 & 20/01/18	Dangat Pranali	Recent Approaches in Environmental Protection and Sustainable Development	B. J. Arts, Commerce and Science College, Ale	2




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PULLA REDDY INSTITUTE OF PHARMACY

(Affiliated to JNTUH and Approved by PCI)

Dommadugu (V), Hyderabad- 502 313.

Certificate of Participation

This is to certify that

Ms. Bhutambare Vaishali Anil

of *Vishal Institute of Pharmaceutical Education and Research, A/c*

has participated in the International Webinar PRIP INNOVATE

4: "Novel Sterically Stabilized Disulphide Linkers for Gene Therapy and Peptide Drug Discovery" organized by Department of Pharmaceutical Analysis in association with IPA, Narsapur

Branch on 28th January 2022.

CONVENOR

Dr. V Rama Mohan Gupta



CO-CONVENOR

Dr. Subhas Sahoo



Ranked 54th in India



BHARATI VIDYAPEETH

COLLEGE OF PHARMACY, KOLHAPUR

CERTIFICATE OF PARTICIPATION

This certificate is awarded to

Gaytri Ramesh waykar

for participation in webinar on "Unintended Misconduct In Academic Research And It's Impact" delivered by Dr.C.R. Patil ,R C Patel College of Pharmacy, Shirpur. on 25rd May, 2020.

Ms. A. S. Jadhav
Co-cordinator

Prof. R.J. Jarag
Chief Co-ordinator

Dr. M. S. Bhatia
Vice-Principal

Dr. H. N. More
Principal

ANL4ZS-CE000126





ज्ञानरंगना घरोघरी

Vishal Junnar Seva Mandal's

Institute of Pharmacy

Institute of Pharmacy For Women

Vishal Institute of Pharmaceutical Education & Research

A/P. Ale, Tal-Junnar, Dist.-Pune-412411.

ISO 9001 : 2015 Certified



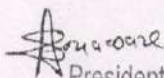
This is to Certify that

Mr./Mrs./Ms./Dr. Rupesh Bhalerao.

of V.I.P.E.R Ale.

has participated in INTER COLLEGIATE POSTER PRESENTATION COMPETITION on

28th September 2019 held at VISM's Vishal Institute of Pharmaceutical Education & Research, Ale.


President

Mr. A. P. Sonawane



C.E.O.

Dr. D. D. Gaikwad



Principal

Dr. S. L. Jadhav



Amrutvahini Sheti & Shikshan Vikas Sanstha's

AMRUTVAHINI COLLEGE OF PHARMACY

Amrutnagar, Sangamner, Dist. Ahmednagar (Maharashtra)



Certificate

This is Certified that,

Prof./Dr./Mr./Mrs./Ms. ALHAT VIDYA NAGESH.

*has participated as a Resource Person / Presenter / Volunteer / Delegate in the
Amrutvahini Sheti and Shikshan Vikas Sanstha sponsored One day Conferance on*

RECENT TRENDS IN NOVEL DRUG DELIVERY SYSTEMS

held at Amrutvahini College of Pharmacy, Sangamner at 7th September, 2018




Dr. K.S. Salunkhe
Co-ordinator




Dr. M. J. Chavan
Convener



Shri Gajanan Maharaj Shikshan Prasarak Mandal's

SHARADCHANDRA PAWAR COLLEGE OF PHARMACY

D.Pharm | B.Pharm | M. Pharm

Approved by AICTE, PCI, New Delhi, Recognised by DTE & Affiliated to Savitribai Phule Pune University
Dumbarwadi, Post. Khamundi, Tal. Junnar, Dist. Pune. Web Site : www.spcop.in



Late Vilas Tambe
Founder President, SGWSPM

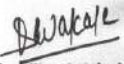
Organized
STATE LEVEL

PHARMA MODEL EXPO- 2K17

(Intercollegiate Pharma Model Competition for Diploma, UG, PG)

CERTIFICATE

This is to certify that Mr./Miss/Mrs. Bhoze Pooja
of Institute/College Vishal Institute of pharmaceutical education & Research, He
has participated in "Pharma Model Expo-2K17" held on 25th September 2017 on
the occasion of "PHARMACIST DAY" at Shri Gajanan Maharaj Shikshan Prasarak Mandal's SHARADCHANDRA
PAWAR COLLEGE OF PHARMACY, Dumbarwadi, Otur. He/She has been awarded this certificate.


Mr. Vijay Wakale
Co-ordinator


Mr. Kiran Mahajan
Co-ordinator


Mr. Sunil Harer
Co-ordinator


Dr. Ganesh Dama
Principal



VISHAL JUNNAR SEVA MANDAL'S
**VISHAL INSTITUTE OF PHARMACEUTICAL
EDUCATION & RESEARCH**

Dr. S. L. Jadhav
Principal

Ale, Tal. Junnar, Dist. Pune-412411 | Contact No. : 9892376014 | E-mail : vjsm.principal@gmail.com | Website: www.viperale.com

P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

2. PARTICIPATIVE LEARNING

2.2. CULTURAL PROGRAMME PARTICIPATION

Annual cultural Programme	
Date	No of Participants
11/02/2018	VENUE: Girls hostel campus.

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized Annual cultural programme dated on **11/02/2018**. The programme was started with prize distribution and felicitation of guests. The annual cultural programme includes the singing and dance competition for Boys and Girls. The aim of programme to give platform for student's development. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Diploma Pharmacy had shown their active participation in this event.




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Date	No of Participants
10/02/2018	16

NAME OF EVENT: Debate

VENUE:VIPER Ale.

EVENT PHOTOS:



Vishal Junnar Seva Mandal's, VIPER Ale, IOP and IOPW jointly organized event **Debate competition** for the students. The said event was organized dated **10/02/2018**. Event was conducted at, VIPER Ale .This Program was inaugurated by Concern Faculty. Students from diploma and Degree College were present for this event. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Degree& Diploma Pharmacy had shown their active participation in this event.




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Date	No of Participants
10/02/2018	

NAME OF EVENT: Drama and fashion show

VENUE: girls hostel campus

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Drama and fashion show competition**, for the B.pharm and d.pharm students. The said event was organized dated **10/02/2018**. This Program was inaugurated by Concern Faculty member and the evaluators for competitions. The programme was started with sarswati poojan and felicitation of the evaluators. Total 64 Participants from B.pharm were present for this event. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Degree Pharmacy had shown their active participation in this event.



[Signature]
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Date	No of Participants
09/02/2018	20

NAME OF EVENT: MEHANDI(BOYS AND GIRLS)

VENUE: VIPER Ale

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **MEHANDI COMPETITION** for the students. The said event was organized dated **09/02/2018**. Event was conducted at institute of pharmacy. This Program was inaugurated by Consent Faculty. Total 20 Participant Students were present for this event. All Teaching & Non-Teaching Staff attended the said Event/Program. All the students of B. Pharm D. Pharmacy had shown their active participation in this event.




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Date	No of participants
10/02/2018	16

NAME OF EVENT: Rangoli (BOYS AND GIRLS)

VENUE: VIPER Ale

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Rangoli competition** event for the degree and diploma students. The said event was organized dated **10/02/2018**. Event was conducted at institute of pharmacy. This Program was inaugurated by Consent Faculty. Total 16 Participant from Degree College. All Teaching & Non-Teaching Staff Attended the said Event/Program. All the students of B. Pharm D. Pharmacy had shown their active participation in this event




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Date	No of participants
09/02/2018	8 class

NAME OF EVENT: Traditional Day

VENUE: Diploma Campus

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale, IOP and IOPW jointly organized **Traditional day** event for the students. The said event was organized dated **09/02/2018**. Event was conducted at Diploma campus, Ale. This Program was inaugurated by CEO Dr. D D Gaikwad, Principal Dr. S L Jadhav, VIPER, DR R M Thorat, IOP and Mrs. A S Jadhav IOPW and programme evaluators. Total 8 Classes participated in the event. All Teaching & Non-Teaching Staff Attended the said Program. All the students of b. Parm and D Pharmacy had shown their active participation in this event.




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SOLO DANCE	
Date	No of Participants
17/02/2019	

NAME OF EVENT: Annual cultural Programme **VENUE:** Atharv Garden mangal karyalay

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized Annual cultural programme dated on **17/02/2019**. The programme was started with prize distribution and felicitation of guests. The annual cultural programme includes the singing and dance competition for Boys and Girls. The aim of programme to give platform for student's development. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Diploma Pharmacy had shown their active participation in this event.




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Date	No of Participants
16/02/2019	16

NAME OF EVENT: Debate

VENUE: VIPER ale.

EVENT PHOTOS:



Vishal Junnar Seva Mandal's, VIPER Ale, IOP and IOPW jointly organized event **Debate competition** for the students. The said event was organized dated **16/02/2019**. Event was conducted at, VIPER Ale .This Program was inaugurated by Concern Faculty. Students from diploma and Degree College were present for this event. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Degree& Diploma Pharmacy had shown their active participation in this event.




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Date	No of Participants
16/02/2019	

NAME OF EVENT: Drama and fashion show

VENUE: Atharv Garden mangal karyalay

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Drama and fashion show competition**, for the B.pharm and D.pharm students. The said event was organized dated **16/02/2019**. This Program was inaugurated by Concern Faculty member and the evaluators for competitions. The programme was started with sarswati poojan and felicitation of the evaluators. Total 64 Participants from B.pharm were present for this event. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Degree Pharmacy had shown their active participation in this event.




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 ALE TAL-JUNNAR DIST-PUNE 412411

Date	No of Participants
15/02/2019	16

NAME OF EVENT: MEHANDI(BOYS AND GIRLS)

VENUE: VIPER Ale

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale, IOP and IOPW jointly organized **MEHANDI COMPETITION** for the students. The said event was organized dated **15/02/2019**. Event was conducted at institute of pharmacy. This Program was inaugurated by Consent Faculty. Total 16 Participant from degree college were participated for this event. All Teaching & Non-Teaching Staff attended the said Event/Program All the students of B. Pharm D. Pharmacy had shown their active participation in this event.




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Date	No of participants
16/02/2019	16

NAME OF EVENT: Rangoli (BOYS AND GIRLS)

VENUE: Institute Of Pharmacy, Ale.

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Rangoli competition** event for the degree and diploma students. The said event was organized dated **16/02/2019**. Event was conducted at institute of pharmacy. This Program was inaugurated by Consent Faculty. Total 16 Participant from Degree College. All Teaching & Non-Teaching Staff Attended the said Event/Program. All the students of B. Pharm D. Pharmacy had shown their active participation in this event




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Date	No of participants
15/02/2019	8 class

NAME OF EVENT: Traditional Day

VENUE: Diploma Campus (institute of Pharmacy Ale)

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale, IOP and IOPW jointly organized **Traditional day** event for the students. The said event was organized dated **15/02/2019**. Event was conducted at Diploma campus, Ale. This Program was inaugurated by CEO Dr. D D Gaikwad, Principal Dr. S L Jadhav, VIPER, DR R M Thorat, IOP and Mrs. A S Jadhav IOPW and programme evaluators. Total 8 Classes participated in the event. All Teaching & Non-Teaching Staff Attended the said Program. All the students of b. Parm and D Pharmacy had shown their active participation in this event.




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SOLO DANCE	
Date	No of Participants
09/01/2020	

NAME OF EVENT: Annual cultural Programme

VENUE: Atharv Garden mangal karyalay

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized Annual cultural programme dated on **09/01/2020**. The programme was started with prize distribution and felicitation of guests. The annual cultural programme includes the singing and dance competition for Boys and Girls. The aim of programme to give platform for student's development. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Diploma Pharmacy had shown their active participation in this event.




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Date	No of Participants
08/01/2020	16

NAME OF EVENT: Debate

VENUE: VIPER ale.

EVENT PHOTOS:



Vishal Junnar Seva Mandal's, VIPER Ale, IOP and IOPW jointly organized event **Debate competition** for the students. The said event was organized dated **08/01/2020**. Event was conducted at, VIPER Ale .This Program was inaugurated by Concern Faculty. Students from diploma and Degree College were present for this event. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Degree& Diploma Pharmacy had shown their active participation in this event.




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Date	No of Participants
08/01/2020	

NAME OF EVENT: Drama and fashion show

VENUE: Atharv Garden mangal karyalay

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Drama and fashion show competition**, for the B.pharm and D.pharm students. The said event was organized dated **08/01/2020**. This Program was inaugurated by Concern Faculty member and the evaluators for competitions. The programme was started with sarswati poojan and felicitation of the evaluators. Total 64 Participants from B.pharm were present for this event. All Teaching & Non Teaching Staff Attended the said Event/Program. All the students of Degree Pharmacy had shown their active participation in this event.




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Date	No of Participants
07/01/2020	20

NAME OF EVENT: DRAWING (BOYS AND GIRLS)

VENUE: VIPER Ale

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Drawing competition** event for the students. The said event was organized dated **07/01/2020**. Event was conducted on Sports Ground of VJSM' VIPER Ale. This Program was inaugurated by Consent Faculty. Total 20 Participant Students were present for this event. All Teaching & Non-Teaching Staff Attended the said Event/Program. All the students of B. pharmacy and D. Pharmacy had shown their active participation in this event.



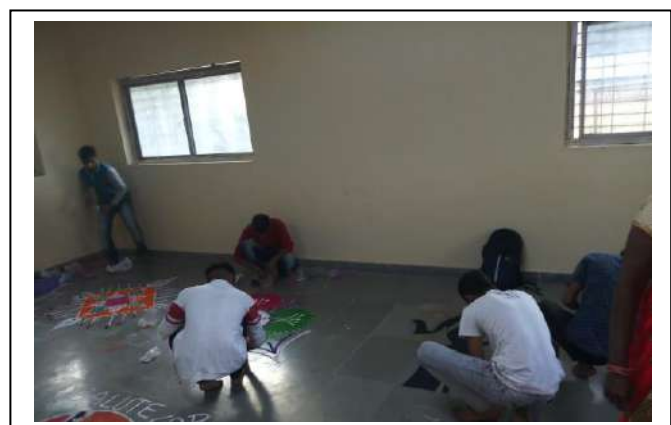

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Date	No of participants
08/01/2020	16

NAME OF EVENT: Rangoli (BOYS AND GIRLS)

VENUE: Institute Of Pharmacy, Ale.

EVENT PHOTOS:



Vishal JunnarSevaMandal's Vishal Institute of Pharmaceutical Education & Research, Ale , IOP and IOPW jointly organized **Rangoli competition** event for the degree and diploma students. The said event was organized dated 08/01/2020. Event was conducted at institute of pharmacy. This Program was inaugurated by Consent Faculty. Total 16 Participant from Degree College. All Teaching & Non-Teaching Staff Attended the said Event/Program. All the students of B. Pharm D. Pharmacy had shown their active participation in this event




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Date	No of participants
07/01/2020	8 class

NAME OF EVENT: Traditional Day

VENUE: Diploma Campus (Institute of Pharmacy Ale)

EVENT PHOTOS:



Vishal Junnar Seva Mandal's Vishal Institute of Pharmaceutical Education & Research, Ale, IOP and IOPW jointly organized **Traditional day** event for the students. The said event was organized dated **07/01/2020**. Event was conducted at Diploma campus, Ale. This Program was inaugurated by CEO Dr. D D Gaikwad, Principal Dr. S L Jadhav, VIPER, DR R M Thorat, IOP and Mrs. A S Jadhav IOPW and programme evaluators. Total 8 Classes participated in the event. All Teaching & Non-Teaching Staff Attended the said Program. All the students of b. Parm and D Pharmacy had shown their active participation in this event.




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Dr. S. L. Jadhav
Principal

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

2. PARTICIPATIVE LEARNING

2.3. AWARENESS CAMPAIGN CONDUCTED DURING NSS/NPW

DISTRIBUTION OF JAMJAGRUTI PATRAK AT CHALAKWADI.

DATE	NUMBER OF STUDENTS PARTICIPATED
06-08-2017 to 08-08-2017	50



Distribution of Jamjagruti Patrak at Chalakwadi.

Brief Report of the Activity:

During these days our few NSS volunteers distributed the Janjagruti patrak related to Swachhata Abhiyan in the Chalakwadi village. Remaining volunteers cleaned the Chalakwadi high school ground. In this total 50 volunteers were participated.




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JANJAGRUTI ON SWACHATA Health

DATE	NUMBER OF STUDENTS PARTICIPATED
23-01-2018	50



Janjagruti On Swachhata Health

Brief Report of the Activity:

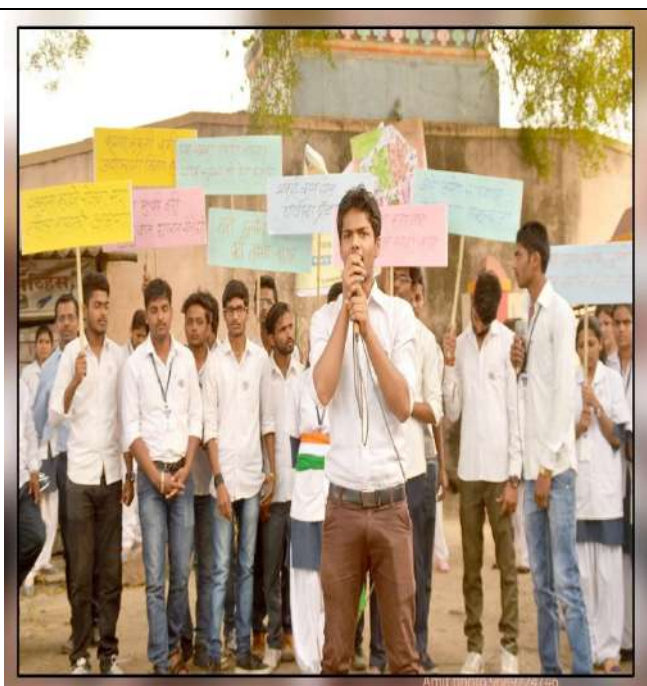
In addition NSS volunteers were conducted Janjaruti on 'Swachhata Health' for chalakwadi villagers and for highschool students Our 50 volunteers were participated in this Janjarutichampain.




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JANJAGRUTI ON SWACHATA HEALTH

DATE	NUMBER OF STUDENTS PARTICIPATED
24-01-218	50



Janjagruti On Swachata Health

Brief Report of the Activity:

On this date our NSS volunteers arranged the Janjagruti on Swachhata for peoples, high school students. Our NSS volunteers advised the importance of Swachhata, which was very useful for these peoples. In this total 50 volunteers were participated.




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AT CHALAKWADI - DISTRBUTION OF JANJAGRUTI PATRAK,	
DATE	NO. OF PARTICIPANTS
08/08/2018	50



At Chalakwadi - Distrbution of JanjagrutiPatrak.

Brief Report of the Activity:

On this date our NSS volunteers distributed the janjagrutipatrak in remaining area of Chalakwadi village and other area and explained the importance of cleaning. Some NSS volunteers collected the expiry medicines from the villagers house .In this total 50 NSS volunteers were participated.




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HEALTH AWARENESS CAMP.	
DATE	NO OF PARTICIPANTS
12-03-2022	32



Health Awareness Camp.

Brief Report of the Activity:

The fifth day of our camp which was on 12/3/2022. We went to our college at 8.15a.m. where we had our breakfast and tea. Then we move towards our bus and reached the location which was Santwadi by 9.00a.m. As soon as we reached to the location of our work we distributed our work according to our teams, so the work for the day was a survey related to Covid vaccination. So we checked villagers oxygen level, Temperature, Covid dose they had taken and checked expiry medicines and also

collected it from them. We distributed mask, sanitizers and informative pamphlets to the villagers. All this work was done by 1.00p.m. by all the teams. Then we went back to our camp location where we took rest for a few minutes. Then served the food and after serving we had our food by 2.30p.m. After lunch we took rest for half an hour. Then we did saage and falcitation arrangements. Later by 3.30p.m. our guest Dr. Rahangadale Botany Dept. B.J. College Ale arrived. After the falcitation programme she educated us on "Innovations of Herbal Plants" till 5.00p.m. She gave us information about some endangered and endemic species, their uses over various disease. The session was really informative in terms of pharmacy as well. We enjoyed the day as whole. After the session was over we distributed tea to everyone and this is where we ended our fifth day.




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Principal

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2. PARTICIPATIVE LEARNING

2.4. TREE PLANTATION

Plantation in Highschool Garden

DATE	NUMBER OF STUDENTS PARTICIPATED
27/01/2017	50



Plantation in Highschool Garden

Brief Report of the Activity:

During special NSS camp on this date volunteers planted the new few plants in the high school garden .And give the water for new & old live plants. In this total 50 volunteers were participated.




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TREE PLANTATION

DATE	NUMBER OF STUDENTS PARTICIPATED
01-07-2017	All Staff and Students



Amit Ale 9689724746



Tree plantation.

Brief Report of the Activity:

On the behalf of tree plantation day our collage students planted various plants in the premises of Santwadi forest region .In this all staffs and students were participated. The program was conducted smoothly and successfully.




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TREE PLANTATION OF ALEKHIND & SANTWADI FOREST AREA	
DATE	NO OF PARTICIPANTS
05-07-2018	240



Brief Report of the Activity:

On this date as per the Govt. of Maharashtra, total 1500 plants were planted with cooperation of forest department Ale region. In this all the college students, teaching and Nonteaching staffs were participated.




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TREE PLANTATION

DATE	NUMBER OF STUDENTS PARTICIPATED
05-07-2019	All Staff and Students



Tree Plantation.

Brief Report of the Activity:

On the occasion of tree plantation day our college student planted 1500 plant in the premises of Girls hostel Ale in presence of president of VJSM's Shri Ashoksheth Sonawane . The collage staff also planted few plants. In this way this event was conducted successfully and smoothly.




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TREE PLANTATION AFTER FLAG HOSTING (IN HOSTEL PREMISES)	
DATE	NO OF PARTICIPANTS
15-08-2019	25



Tree Plantation after flag hosting (In hostel premises)

Brief Report of the Activity:

On this date after Flag Hosting ceremony our NSS volunteers involved in the tree plantation in the Premises of girls hostel. All the college students and NSS volunteers were participated in this event.




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TREE PANTATION	
DATE	NO OF PARTICIPANTS
05-07-2020	2



Tree Plantation

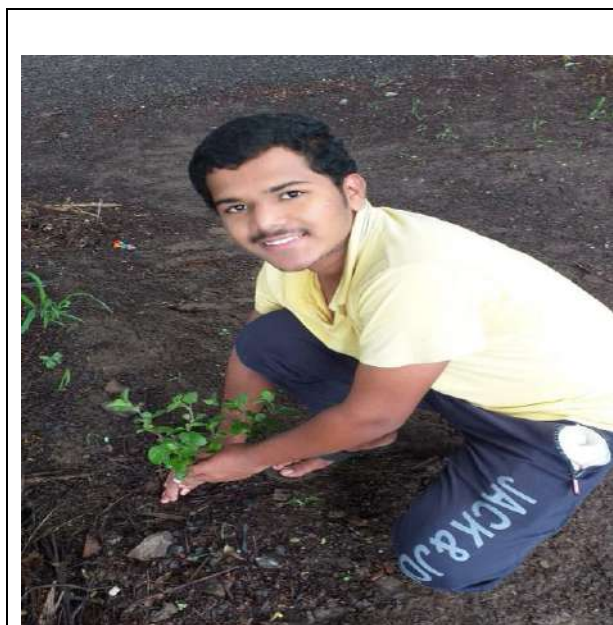
Brief Report of the Activity:

On the behalf of tree plantation 5 plants were planted in PratibhaTai Pawar Ladies Hostel Ale Garden.




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TREE PANTATION	
DATE	NO OF PARTICIPANTS
05-07-2021	50



Tree Plantation

Brief Report of the Activity:

On the behalf of tree plantation due to covid-19 pandemic situation our students planted two plants each in their respective village areas. All the NSS volunteers were participated and this event was conducted successfully.


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2. PARTICIPATIVE LEARNING

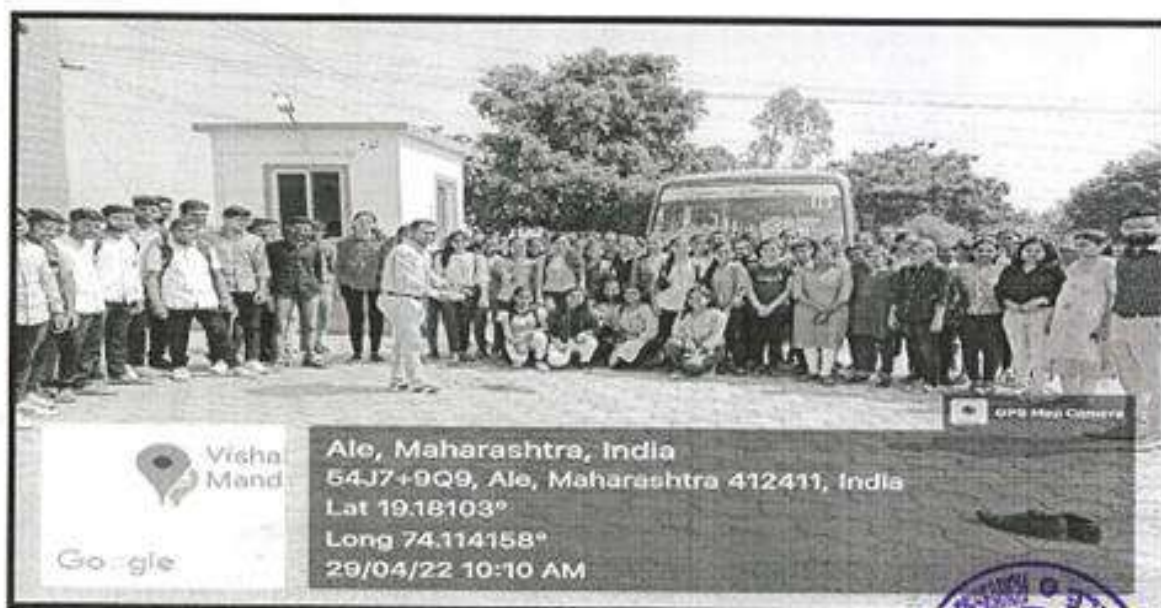
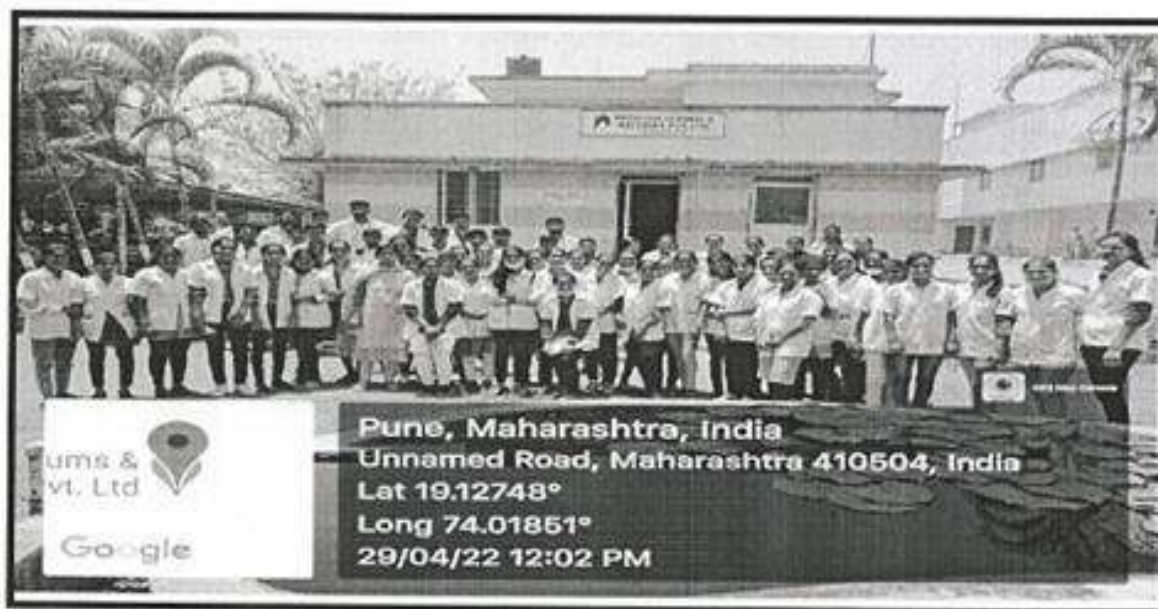
2.5. INDUSTRIAL VISIT

Sr. No.	Academic Year	No. of Industrial Visit	No. of Students	Name of Industry	Name of the staff Members
1	2021-22	02	68	b. Premium Serums & Vaccines Pvt Ltd. Narayangaon	Ms. Bansode A. S. Dr. Dhobale S. M.
			76	a. Sci Tech Specialities Pvt Ltd, Musalgaon, Sinnar, Nashik.	Ms. Bansode A. S. Dr. Dhobale S. M.
2	2019 - 20	04	65	a. Premium Serums & Vaccines Pvt Ltd. Narayangaon.	Ms. Bansode A. S. Mr. Patel S G Mr. Thange S.
			64	b. Sci Tech Specialities Pvt Ltd, Musalgaon, Sinnar, Nashik.	Mr. Gaware R U Ms Prity Undre.
			14	d. Sci Tech Specialities Pvt Ltd, Musalgaon, Sinnar, Nashik.	Mr. Salim Patel
			54	c. BioEra Life Scinces Pvt. Ltd, Pune	Ms. Bansode A. S. Dr. Dhobale S. M.
3.	2018 - 19	02	59	NuLile Pharmaceuticals, Bhosari , Pune	Ms. Bansode A. S. Dr. Dhobale S. M.
			21	d. Sci Tech Specialities Pvt Ltd, Musalgaon, Sinnar, Nashik.	Mr. Salim Patel
	2017- 18	01	70	Natco pharma ltd Hyderabaad	Dr. Dhobale S. M. Dr. Dhobale G. S.

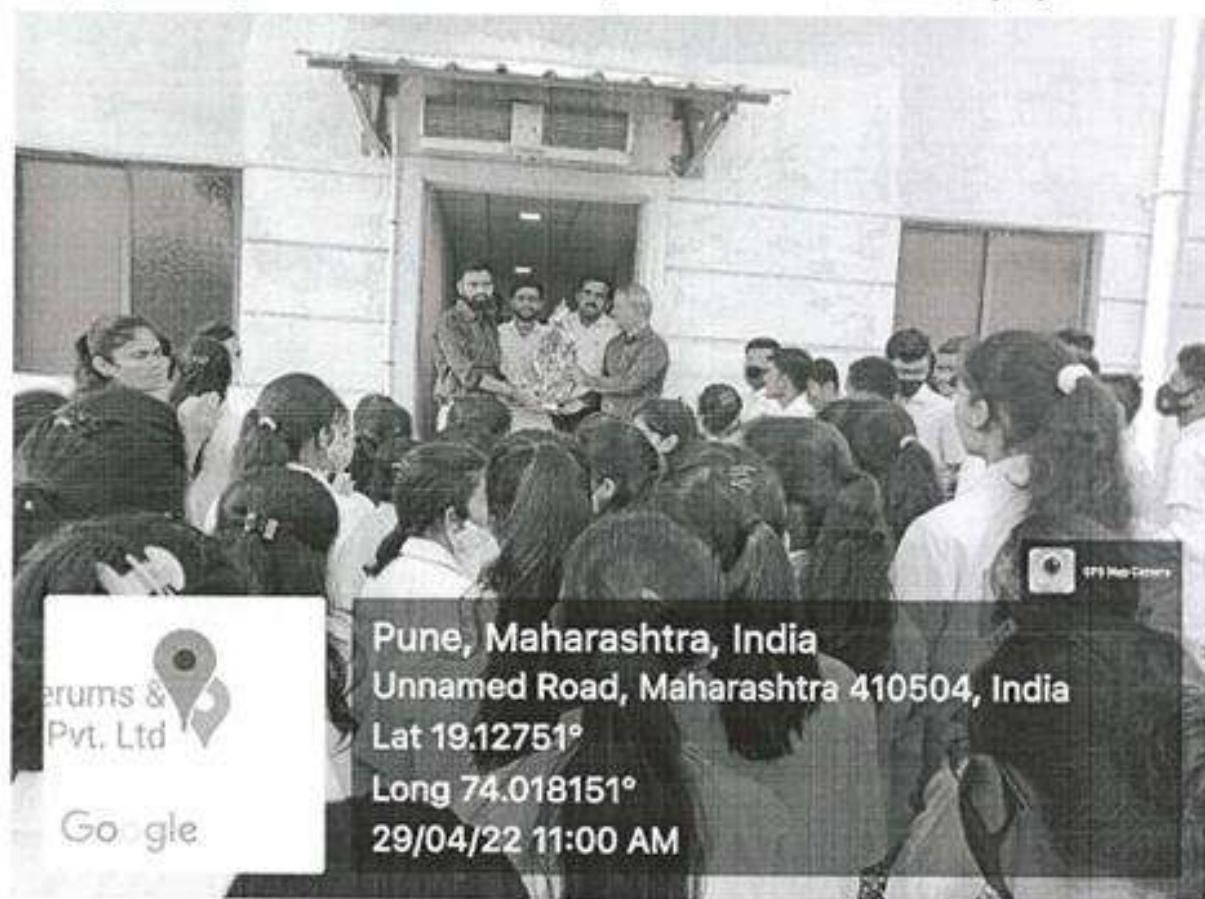



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Industrial visit- Premium Serum & Vaccines Pvt. Ltd,Kandali,Kandali, Narayangaon.	
Date	29/04/2022
Year	2021-22
Name Of Industry	Premium Serum & Vaccines Pvt. Ltd,Kandali,Kandali, Narayangaon.
Number Of Students Participated	68



Industrial visit was carried out for Third year B.Pharm students at *Premium Serum & Vaccines Pvt. Ltd, Kandali, Kandali, Narayangaon*. Total 68 students along with two faculty members Dr. shilpa Kolhe and Mr. Magesh Hole were visited to plant 29th April 2022. Training Manager and the officials of the industry of the particular unit explained our students about the manufacturing of vaccines from serum. They also explain that how antibodies are prepared and collected and utilized for poison treatment. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members. After reached at *industry*, all students were divided in to two groups along with staff members and each group was headed by one representative of company who helped them to understand how operations are carried out in company.




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Industrial Visit @ Premium Serum & Vaccines
 Pvt Ltd, Narayangaon.
 Date :- 29/04/2022.
 class. T.Y. B.pharm.



[Signature]
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A.I.C.T.E. Inst. I.D. : 1-4428021 | D.T.E. Inst. Code. : PH-6361, MP-6361 | University ID No. : CPHP012670 | P.C.I. Inst. Code : 32/610, 60/610

Ref No. : VJSM / VIPER / 2022-23 / TPCELL - 61

Date : 28 / 04 / 2022

To,
HR Manager
Premium Serum & vaccines Pvt. Ltd,
Kandali, Narayangaon.

Sub: Request for arranging one day Plant Visit for our Third year B.Pharm student on 29th April 2022.

Dear Sir,

This is to request you to kindly permit one day Plant visit for our ~~Third~~ year B.Pharm students (Male & Female) from Vishal Institute of pharmaceutical Education & Research ale, Tal. Junnar Dist. Pune, On 22/04/2022.

Total 75 Number of students & our two assistant professors shall accompany the students for the plant visit.

Thanking you in anticipation,

Yours sincerely

PRINCIPAL

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Recd
29/04/2022



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Ref No. : VJSM / VIPER / 2021-22 / TPCU - 62

Date : 29 / 04 / 2022

To,
HR Manager
Premium Serum & vaccines Pvt. Ltd,
Kandali, Narayangaon.

Thank You Letter

Dear Sir,

With Reference to Communication with the Mr. Sandip Patil Sir Our College Students of third Year B.pharm Visited your Plant on 29/04/2022.

We Appreciate Your Kind Gesture, permitting us to visit your Plant. We would also like to thank you for creating positive environment for nourishing our Students to understanding working of pharma industry.

Again, thank you for making our plant visit memorable and encouraging experience for all of us.

Thanking You.

Regards,


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29/04/2022




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To,
The Principal,
VJSM, Vishal Institute of Pharmaceutical Education & Research,
Ale, Tal. Junnar, Dist. Pune

Dear Sir,

We thank you for giving us an opportunity to conduct the industrial visit for Third year B.pharm students & staff on 29/04/2022.

QC Head & QA Head of our plant imparted training during the visit, and various queries, questions of the students have been answered. We are glad to place on record the visit of the two assistant professor & 68 students of final year B.Pharm on 29/04/2022, during which they actively interacted with QC Head & QA Head.

We are sure the above visit must have benefited your students in the ways of how industry works practically as against the theory which your students learned in their classrooms.

We thank you once again for the visit.

Best Regards,



Dr. Nitin Salvi
Deputy General Manager & Head QC
Premium Serums & Vaccines Pvt. Ltd.



Regd. Office :- 406, B' wing, Highway Rose Co-op. HSG. Society 92, Dixit Road Extn, Vile Parle (E), Mumbai 400 057, Maharashtra, India
Farm / Factory :- S. No. 354-1, 354-2 A/1, At & post - Narayangaon, Near 'Champagne India', Tal. Junnar, Dist-Pune 410 504, Maharashtra, India
Branch :- 2. 132/4/1, Engineers Enclave, Gangaram, Chanda Nagar, Hyderabad, (Telangana) 500 050
Phone :- 08275754803, 09421229972 **E-mail** - premiumserums@gmail.com. **Web**:- www.premiumserums.com




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VISHAL JUNNAR SEVA MANDALS
VISHAL INSTITUTE OF PHARMACEUTICAL
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 AT- ALE, TAL - JUNNAR, DIST - PUNE MAHARASHTRA - 412411

ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
RIV :00	Industrial Visit Student List	

Industrial Visit Student List

Date: 29/04/2022

Company name: Premium Serum & Vaccines Pvt Ltd, kandali Narayangaon.

Roll No	Name		Signature
1.	PRANALI KRUISHNA	ARHANG	<i>Bhargava</i>
2.	DARSHAN DIGAMBAR	ADAKI	<i>Adak</i>
3.	SANKET SUBHASH	AHER	<i>Sanket</i>
4.	VRUSHALI NAVNATH	AHER	<i>Vrushali</i>
5.	PRATHAMESH SURESH	ALHAT	<i>Prathamesh</i>
6.	SHUBHAM GORAKSHANATH	BANGAR	<i>Shubham</i>
7.	PAYAL SANTOSH	BATWAL	<i>Payal</i>
8.	PUNAM DHONDIBHAU	BHANDARI	<i>Punam</i>
9.	DEVYANI BHASKAR	BHOR	<i>Devyani</i>
10.	KOMAL RAMESH	BHUJBAL	<i>Komal</i>
11.	ADITI MADHUKAR	BODKE	<i>Aditi</i>
12.	RUTUJA PRADIP	DEOKAR	<i>Rutuja</i>
13.	TEJASHREE SURESH	DEOKAR	<i>Tejashree</i>
14.	MRUNAL SAMBHAJI	DESHMUKH	<i>Mrunal</i>
15.	AKASH MANGESH	DHANGARMALI	<i>Akash</i>
16.	ANKUSH PARMESHWAR	DHAWALE	<i>Ankush</i>
17.	ANJALI VILAS	DONGRE	<i>Anjali</i>
18.	SHUBHANGI VITTHAL	DUMBRE	<i>Shubhangi</i>
19.	KIRTI RAJENDRA	FULSUNDAR	<i>Kirti</i>
20.	ARATI JALINDAR	GADGE	<i>Arati</i>
21.	SAGAR SANTOSH	GAIKWAD	<i>Sagar</i>
22.	RUTUJA DIPAK	GOPALE	<i>Rutuja</i>
23.	PRATIBHA BABAN	GUNJAL	<i>Pratibha</i>
24.	PRANITA PANDURANG	HADAWALE	<i>Pranita</i>
25.	ANKITA MAHESH	HANDE	<i>Ab-</i>
26.	APURVA RAJENDRA	HANDE	<i>Apu</i>
27.	ARTI TUKARAM	HOLKAR	<i>Arti</i>

06-Ab.



[Signature]
PRINCIPAL
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 ALE TAL-JUNNAR DIST-PUNE 412411



VISHAL JUNNAR SEVA MANDALS
VISHAL INSTITUTE OF PHARMACEUTICAL
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 AT- ALE, TAL - JUNNAR, DIST - PUNE MAHARASHTRA - 412411

ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	
RIV :00		
	Industrial Visit Student List	A.Y. : 2021-22

Industrial Visit Student List

Date: 29/04/2022

Company name: Premium Serum & Vaccines Pvt Ltd, kandali Narayangaon

Roll No	Name	Signature	Signature
28	SHUBHAM ANIL	JADHAV	
29	TRUPTI KISAN	JADHAV	
30	AISHWARYA MUKUND	JADHAV	
31	PRATIKSHA SUNIL	KALE	
32	PRASHANT SAHEBRAO	KAPASE	
33	SAKSHI SABAJI	KARDILE	
34	PRAPTI ASHOK	KHEMNAR	
35	SAKSHI SANTOSH	KHILARI	
36	SHRADDHA LAXMAN	KHOKRALE	
37	SHRADDHA SHARAD	KHOKRALE	
38	PRANITA RAMBHAU	KHOSE	
39	DHANESH MAHADEV	KOKATE	
40	SURAJ PANDIT	KOTKAR	
41	AISHWARYA CHANDRAKANT	KURHADE	
42	MADHURI SAMBHAJI	KURHADE	
43	Prajakta Balu	Kurkute	
44	SHUBHAM SURESH	LAMKHADE	
45	RUTIKA DASHRATH	LANDE	
46	SHIVANI SHIVAJI	LOHATE	
47	POOJA JAGANNATH	LOKHANDE	
48	DIVYA DATTA	MALUSKAR	
49	AKSHAY YASHWANT	MENGAL	
50	SAKSHI BALAJIRAO	MUKHADE	
51	GAURAV VINOD	MUNDHE	



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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	
RIV :00		A.Y. : 2021-22
	Industrial Visit Student List	

52	VAIBHAV BABASAHEB	NAGARGOJE	<i>[Signature]</i>
53	JAYASHRI RAJARAM	NARAWADE	<i>[Signature]</i>
54	RANI GANESH	NEHARKAR	<i>[Signature]</i>
55	DEEPALI SANDEEP	PATADE	<i>[Signature]</i>
56	SIDDHI SUNIL	PATIL	<i>[Signature]</i>
57	VIKRAM ARJUN	PAWAR	<i>[Signature]</i>
58	VAISHNAVI AVINASH	PHALKE	<i>[Signature]</i>
59	VAISHNAVI VITTHAL	POKHARKAR	<i>[Signature]</i>
60	SAURABH BALASAHEB	RAUT	<i>[Signature]</i>
61	DEEPTI SUDHIR	RAYAT	<i>[Signature]</i>
62	SONAL GANGADHAR	SAHANE	<i>[Signature]</i>
63	PRANJAL SHIVAJI	SARODE	<i>[Signature]</i>
64	ANUJA GOVIND	SASANE	<i>[Signature]</i>
65	PRATIK SANTOSH	SHELKE	<i>[Signature]</i>
66	GANESH VIJAY	SHEVKAR	<i>[Signature]</i>
67	SHRADDHA GABAJI	SHINDE	<i>[Signature]</i>
68	SUCHITA ANAND SUNIL	SHIROLE	<i>[Signature]</i>
69	KASHINATHAPPA	SWAMI	<i>[Signature]</i>
70	SHRADDHA POPAT	TONPE	<i>[Signature]</i>
71	HARSHADA HANMANT	VHANANAVAR	<i>[Signature]</i>
72	PRADNYA PRAKASH	WAKCHAURE	<i>[Signature]</i>
73	PRANAV SHANKAR	WALUNJ	<i>[Signature]</i>
74	RASIKA ARVIND	WAYKAR	<i>[Signature]</i>



[Signature]
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ALE TAL-JUNNAR DIST-PUNE 412411

To,
The CEO,
Vishal Junnar Seva Mandal,
Ale.

Subject: Regarding availing the School bus for Industrial Visit on 29 April 2022.

Respected Sir,

As per above cited subject, we required a school bus for Industrial visit of Third year B.Pharm at Premium Serum & Vaccines Pvt Ltd, Kandali, Narayangaon 29th April 2022. Total 75 numbers of students and our two assistant professor will accompany during the visit. I wish to avail the school bus for our industrial visit. Waiting for your positive response.

Thanks & Regards,



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Industrial visit- Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.	
Date	22/04/2022 & 29/04/2022
Year	2021-22
Name Of Industry	SciTech Specialties' Pvt. Ltd, Musalgaon, Sinnar, Nashik.
Number Of Students Participated	76




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Industrial visit was carried out for Final year B.Pharm & M.pharm students at *SciTech Specialities Pvt. Ltd., Sinnar Nashik*. Total 76 students along with four faculty members Dr. Ashwini Bansode, Dr. Shankar Dhobale, Mr. Sachin Kadam and Ms Sonali Pawar in two batches were visited to plant number two on 22nd and 29th April 2022. Training Manager and the officials of the industry of the particular unit explained our students about the various Compounding, Dispensing, and packaging department. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members. After reached at *industry*, all students were divided in to two groups along with staff members and each group was headed by one representative of company who helped them to understand how operations are carried out in company. *Mr. Satish Nandgude sir, Mr Chaitanya Borawake sir and Ganesh Sir* employ of the industry has guided us during visit.



[Signature]

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**VISHAL INSTITUTE OF PHARMACEUTICAL
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ALE TAL. JALNAR DIST. AHMEDN. 412411**

Industrial Visit at SuTech Specialities Pvt Ltd Sinnar
Nashik. Date - 22/04/2022, class:- final yr. B.Pharm
& M. Pharm.




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Industrial visit @ SciTech Specialities Pvt Ltd Sinnar
Nashik. Date - 29/04/2022 class :- final year
B.pharm




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SciTech Specialities Pvt. Ltd.

Office: 501 DLH Park, S.V. Road, Goregaon (West), Mumbai 400 062. India • Tel: 22 417 50000
E-mail: scitech@scitech.net.in • CIN: U85190MH2007PTC175484
Factory: A-3/12/13, STICE Musalgaon, Tal: Sinnar, Dist: Nashik 422112.
Tel: +91 (2551) 240045 / 46 / 49 / 240244 Fax: +91 (2551) 240201 • E-mail: stsp@stsp.in

29/04/2022

To,
The principal,
Vishal Institute of Pharmaceutical Education & Research, Ale, Tal - Junnar,
Dist- Pune, 412411.

Subject: - Industrial Visit of B. Pharmacy (Final Year) Students & Staff.

Dear Sir,

1. We thank you for giving us an opportunity to conduct the students & staff for industrial visit on 29th April 2022.
2. Manager HR/Admin, Officer Production & Executive QA of our unit imparted training during the visit, and various queries and questions of the students have been answered.
3. We are glad to place on record the visit of Prof. Dr. Ashwini S. Bansode (Assistant Prof.) & Mr. Sachin Kadam (Assistant Prof.) with 37 students of B. Pharmacy (Final Year) on 29th April 2022, during which they actively interacted with our Manager HR/Admin, Office Production & Executive QA.
4. We are sure the above visit must have benefited your students in the ways of how industry works practically as against the theory which your students learned in their classrooms.
5. We thank you once again for the visit.

Yours Sincerely,

Mr. Chaitanya Borawake
Manager HR & Admin
SciTech Specialities Pvt. Ltd.



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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
RIV :00	Industrial Visit Student List	

Industrial Visit Student List

Date: 29/04/2022

Company name: SciTech specialities Pvt Ltd, sinnar, Nashik

Roll No	Name	Signature	Signature
28	Bhakti Chaitanya	Kahane	
29	Asmita Bhausaheb	Kakade	
30	Rushikesh Balasaheb	Kakade	
31	Saurabh Sunil	Kanawade	
32	Jayesh Nalash	Khadsare	
33	Omkar Dilip	Khollam	
34	Pratiksha Subhash	Korade	
35	Tejas Vilas	Korade	
36	Akanksha Sunil	Lad	
37	Ashwini Arjun	Magar	
38	Ankita Laxman	Mahale	
39	Mansi Madhukar	Mali	
40	Shweta Rajesh	Mandlik	
41	Sucheta Dhondibhau	Mankar	
42	Shailesh Anil	Nighot	
43	Shruti Parshuram	Nilakh	
44	Sayli Ajit	Pansare	
45	Ashwini Mohan	Patade	
46	Gitanjali Dattatray	Patil	
47	Shraddha Shrimant	Pawar	
48	Gokul Ashok	Pawar	
49	Priyanka Dhondiram	Pukale	
50	Hritik Vitthal	Rokade	
51	Akash Maruti	Sable	
52	Kiran Devidas	Sabale	
53	Rushikesh Pandurang	Said	
54	Rohini Jagan	Sangale	



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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
RIV :00	Industrial Visit Student List	

55	Sameer Latib	Sayyad	<i>Sameer Latib</i>
56	Shraddha Dinesh	Shinde	<i>Shinde</i>
57	Shweta Chandrashekhar	Shinde	<i>Shinde</i>
58	Tanuja Bhagwan	Tattu	<i>Tattu</i>
59	Rutuja Sandip	Thorat	<i>Thorat</i>
60	Ankita Santosh	Thube	<i>Thube</i>
61	Nikita Madhukar	Varhadi	<i>Varhadi</i>
62	Vikas Uddhav	Vetal	<i>Vetal</i>
63	Divya Ramdas	Waykar	<i>Waykar</i>
64	Ashwin Dayanand	Yerande	<i>Yerande</i>
65	Shubham Dattatray	Zinjad	<i>Zinjad</i>



[Signature]
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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	
RIV :00	Industrial Visit Student List	A.Y. : 2021-22

Industrial Visit Student List

Date: 29/04/2022

Company name: SciTech specialities Pvt Ltd, sinnar, Nashik

Roll No	Name	Signature	Signature
28	Bhakti Chaitanya	Kahane	
29	Asmita Bhausaheb	Kakade	
30	Rushikesh Balasaheb	Kakade	
31	Saurabh Sunil	Kanawade	
32	Jayesh Nalash	Khadsare	
33	Omkar Dilip	Khollam	
34	Pratiksha Subhash	Korade	
35	Tejas Vilas	Korade	
36	Akanksha Sunil	Lad	
37	Ashwini Arjun	Magar	
38	Ankita Laxman	Mahale	
39	Mansi Madhukar	Mali	
40	Shweta Rajesh	Mandlik	
41	Sucheta Dhondibhau	Mankar	
42	Shailesh Anil	Nighot	
43	Shruti Parshuram	Nilakh	
44	Sayli Ajit	Pansare	
45	Ashwini Mohan	Patade	
46	Gitanjali Dattatray	Patil	
47	Shraddha Shrimant	Pawar	
48	Gokul Ashok	Pawar	
49	Priyanka Dhondiram	Pukale	
50	Hritik Vitthal	Rokade	
51	Akash Maruti	Sable	
52	Kiran Devidas	Sabale	
53	Rushikesh Pandurang	Said	
54	Rohini Jagan	Sangale	




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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
RIV :00	Industrial Visit Student List	

55	Sameer Latib	Sayyad	
56	Shraddha Dinesh	Shinde	
	Shweta		
57	Chandrashekhar	Shinde	
58	Tanuja Bhagwan	Tattu	
59	Rutuja Sandip	Thorat	
60	Ankita Santosh	Thube	
61	Nikita Madhukar	Varhadi	
62	Vikas Uddhav	Vetal	
63	Divya Ramdas	Waykar	
64	Ashwin Dayanand	Yerande	
65	Shubham Dattatray	Zinjad	




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**VISHAL INSTITUTE OF PHARMACEUTICAL
EDUCATION AND RESEARCH**

Dr. S. L. Jadhav
VC Principal

Ale, Tal - Junnar, Dist - Pune, 412411 | Contact No. 9730003179 | E-mail : vjam.principal@gmail.com | Website : www.vjsmale.com
A.I.C.T.E. Inst. I.D. : 1-4420021 | D.T.E. Inst. Code : PH 6361, MI 6361 | University ID No. : CI 111012670 | P.G.I. Inst. Code : 32/610, 60/610

Ref No. : VJSM / VIPER / 2021-24 TPCELL - 60

Date : 29/04/2022

To,
HR Manager
Scitech Specialities Pvt Ltd.
Sinnar, Nashik.

Thank You Letter

Dear Sir,

With Reference to Communication Email dated 21st March 2022 Our College Students of Final Year B.pharm Visited your Plant on 29/04/2022.

We Appreciate Your Kind Gesture, permitting us to visit your Plant. We would also like to thank you for creating positive environment for nourishing our Students to understanding working of pharma industry.

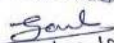
Again, thank you for making our plant visit memorable and encouraging experience for all of us.

Thanking You.

Regards,


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Received

28/04/2022




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VJSM VIPER <viper.tpcell@gmail.com>

Request for arranging Industrial Visit for final year B.pharm students

SciTech Specialities Pvt.Ltd.(STSP) <stsp@stsp.in>

21 March 2022 at 12:28

Reply-To: stsp@stsp.in

To: VJSM VIPER <viper.tpcell@gmail.com>

Cc: satishnangude4017@gmail.com, stsp.admin@stsp.in, gadrepravin@gmail.com, SUNITA -STLB <sunita.vyas0@gmail.com>, mukulagashe1@gmail.com, ameyamulay@yahoo.com

Dear Ms. A.S. Bansode,

Kindly refer to your mail of 14 March appended below.

We would like to confirm 22 April 2022 & 29 April 2022 (Batchwise) as dates for the visit at our Plant 2.

The visit is scheduled from 3.30 pm to 5.30 pm.

Students to get the following:-

- (a) Apron.
- (b) Cap.
- (c) Shoe cover.
- (d) Mask.

Our Factory address is :-

A-12&13, STICE, Musalgaon, Sinnar

Near Hotel Gulmohor.

Industrial visit will be conducted in batches. For every batch max 35 students will be allowed.

Kindly Confirm.

Thanks & Regards,

Chaitanya Borawake

Manager HR & Admin

8691009453



SciTech Specialities Pvt. Ltd.

Factory: A-12&13, STICE Musalgaon, Tal. Sinnar Dist. Nashik - 422112
Tel: +91 (2551) 240 045 / 046 / 244 E-mail: stsp@stsp.in
Office: 101, DLR Park, S.V. Road, Goregaon (West), Mumbai - 400 052
Tel: 22437 5000 Fax: +91 (22) 2874 5052 E-mail: stsp@stsp.in

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<https://mail.google.com/mail/u/1/?ik=84dedb6555&view=pt&search=all&permmsgid=msg-f%3A1727891775812273119&simpl=msg-f%3A172789...> 1/1


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ALE TAL-JUNNAR DIST-PUNE 412411

4/21/22, 10:35 AM

Gmail - Request for arranging Industrial Visit for final year B.pharm students



VJSM VIPER <viper.tpcell@gmail.com>

Request for arranging Industrial Visit for final year B.pharm students

SciTech Specialities Pvt.Ltd.(STSP) <stsp@stsp.in>

21 March 2022 at 12:28

Reply-To: stsp@stsp.in

To: VJSM VIPER <viper.tpcell@gmail.com>

Cc: satishnangude4017@gmail.com, stsp.admin@stsp.in, gadrepravin@gmail.com, SUNITA -STLB <sunita.vyas0@gmail.com>, mukulagashe1@gmail.com, ameyamulay@yahoo.com

Dear Ms. A.S. Bansode,

Kindly refer to your mail of 14 March appended below.

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- (d) Mask.

Our Factory address is :-

A-12&13, STICE, Musalgaon, Sinnar

Near Hotel Gulmohor.

Industrial visit will be conducted in batches. For every batch max 35 students will be allowed.

Kindly Confirm.

Thanks & Regards,

Chaitanya Borawake

Manager HR & Admin

8691009453



SciTech Specialities Pvt. Ltd.

Factory: A-12/13, STICE, Musalgaon, Tal. Sinnar, Dist. Nashik - 422112
Tel: +91 (2551) 240-045 / 244 E-mail: shg@stsp.in
Office: 101 Sun Park, S.V. Road, Goregaon (West), Mumbai - 400 042
Tel: 224417 56000 Fax: +91 (22) 2375 0692 E-mail: scitech@scitech.net.in

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<https://mail.google.com/mail/u/1/?ik=84dedb6555&view=pt&search=all&permmsgid=msg-f%3A1727891775812273119&simpl=msg-f%3A172789...> 1/1




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VJSM VIPER <viper.tpcell@gmail.com>

Request for arranging Industrial Visit for final year B.pharm students

3 messages

VJSM VIPER <viper.tpcell@gmail.com>

14 March 2022 at 15:03

To: stsp.admin@stsp.in

Cc: satishnangude4017@gmail.com

Bcc: vjasm.principal@gmail.com

Dear sir,

Greetings from V.I.P.E.R Group (Vishal Institute of Pharmaceutical Education & Research, Ale, Junnar, Dist: Pune) Maharashtra

This is to request you to kindly arrange a one day plant visit to our B. pharm final year students (Male & Female) from Vishal Institute of Pharmaceutical Education & Research ale, Tal. Junnar Dist. Pune, on any suitable day.

Total 65 Number of students & our two assistant professors shall accompany the students for the plant visit.
Thanking you in anticipation.

--
DR. S. L. JADHAV

PRINCIPAL

VISHAL JUNNAR SEVA MANDALS

VISHAL INSTITUTE OF PHARMACEUTICAL

EDUCATION AND RESEARCH,

ALE, TAL JUNNAR DIST PUNE 412411.

MISS. A. S. BANSODE

TRAINING AND PLACEMENT CELL INCHARGE

SciTech Specialities Pvt.Ltd.(STSP) <stsp@stsp.in>

21 March 2022 at 12:28

Reply-To: stsp@stsp.in

To: VJSM VIPER <viper.tpcell@gmail.com>

Cc: satishnangude4017@gmail.com, stsp.admin@stsp.in, gadrepravin@gmail.com, SUNITA -STLB <sunita.vyas0@gmail.com>, mukulagashe1@gmail.com, ameyamulay@yahoo.com

Dear Ms. A.S. Bansode,

Kindly refer to your mail of 14 March appended below.

We would like to confirm 22 April 2022 & 29 April 2022 (Batchwise) as dates for the visit at our Plant 2.

The visit is scheduled from 3.30 pm to 5.30 pm.

Students to get the following:-

- (a) Apron.
- (b) Cap.




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4/21/22, 10:30 AM

Gmail - Request for arranging Industrial Visit for final year B.pharm students

(c) Shoe cover.

(d) Mask.

Our Factory address is :-

A-12&13, STICE, Musalgaon, Sinnar

Near Hotel Gulmohor.

Industrial visit will be conducted in batches. For every batch max 35 students will be allowed.
Kindly Confirm.

Thanks & Regards,

Chaitanya Borawake

Manager HR & Admin

8691009453



SciTech Specialities Pvt. Ltd.

Factory: A-12/13, STICE Musalgaon, Tal. Sinnar, Dist. Nashik - 422312.
Tel: +91 (25511) 240 045 / 046 / 244 E-mail: stsp@stsp.in
Office: 501, CLM Park, S.V. Road, Goregaon (West), Mumbai - 400 062.
Tel: 22417 50005 Fax: +91 (22) 2571 0692 E-mail: scitech@scitech.net.in

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[Quoted text hidden]

VJSM VIPER <viper.tpcell@gmail.com>

19 April 2022 at 11:42

To: stsp@stsp.in

Cc: satishnangude4017@gmail.com, stsp.admin@stsp.in, gadrepravin@gmail.com, SUNITA -STLB
<sunita.vyas0@gmail.com>, mukulagashe1@gmail.com, ameyamulay@yahoo.com

Thank you sir for approving our industrial visit request. Here we will confirm the visit and we will reach the company premises by 3.00 pm as per dates, omn 22 & 29 april 2022.

[Quoted text hidden]

<https://mail.google.com/mail/u/1/?ik=84dedb6555&view=pt&search=all&permthid=thread-a%3Ar-3551927966297435103&simpl=msg-a%3Ar1939...> 2/2



[Signature]
PRINCIPAL

VISHAL INSTITUTE OF PHARMACEUTICAL
EDUCATION AND RESEARCH
ALE TAL-JUNNAR DIST-PUNE 412411



VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH

Dr. S. L. Jadhav
V/C Principal

Ale, Tal - Junnar, Dist - Pune, 412411.

Contact No. 9730003179

E-mail : vjsm.principal@gmail.com

Website : www.vjsmale.com

A.I.C.T.E. Inst. I.D. : 1-4428021

D.T.E. Inst. Code. : PH-6361, MP-6361

University ID No. : C1111012670

P.C.I. Inst. Code : 32/610, 60/610

Ref No. : VJSM / VIPER / 2021-22 / 177 PCELL - 33

Date : 26/04/2022

To,
HR Manager
SciTech Specialities Pvt Ltd.
Sinnar, Nashik.

Sub: Request for arranging one day Plant Visit for our final year B.Pharm student on 22nd & 29th April 2022.

Dear Sir,

This is to request you to kindly permit one day Plant visit for our final year B.Pharm and M.Pharm students (Male & Female) from Vishal Institute of pharmaceutical Education & Research ale, Tal. Junnar Dist. Pune, On 22nd & 29th April 2022.

Total 78 Number of students & our two assistant professors shall accompany the students for the plant visit.

Thanking you in anticipation,

Yours sincerely

PRINCIPAL
VISHAL INSTITUTE OF PHARMACEUTICAL
EDUCATION AND RESEARCH
ALE TAL, JUNNAR DIST. PUNE 412411



Received
Pravash
22/04/2022



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ALE TAL-JUNNAR DIST-PUNE 412411



VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH

Dr. S. L. Jadhav
i/c Principal

Ale, Tal - Junnar, Dist - Pune, 412411.

Contact No. 9730003179

E-mail : vjrm.principal@gmail.com

Website : www.vjrmale.com

A.I.C.T.E. Inst. I.D. : 1-4428021

D.T.E. Inst. Code. : PH-6361, MP-6361

University ID No. : C14IP012670

P.G.I. Inst. Code : 32810, 60610

Ref No. : VJSM / VIPER / 2021-22 / 17044 - 33

Date : 22/04/2022

To,
HR Manager
SciTech Specialities Pvt Ltd.
Sinnar, Nashik.

Thank You Letter

Dear Sir,

With Reference to Communication Email dated 21st March 2022 Our College Students of Final Year B.Pharm & M.pharm Visited your Plant on 22/04/2022.

We Appreciate Your Kind Gesture, permitting us to visit your Plant. We would also like to thank you for creating positive environment for nourishing our Students to understanding working of pharma industry.

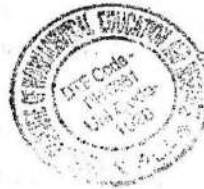
Again, thank you for making our plant visit memorable and encouraging experience for all of us.

Thanking You.

Regards,


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Received
Principal
22/04/2022




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AT- ALE, TAL - JUNNAR, DIST - PUNE MAHARASHTRA - 412411

ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
RIV :00	Industrial Visit Student List	

Industrial Visit Student List

Date: 22/04/2022

Company name: SciTech specialities Pvt Ltd, sinnar, Nashik

Roll No	Name	Class	Signature
1.	SABIYA SADIK ATTAR	M.pharm (QAT)	
2.	KADAMBARI VILASBHUIJBAL	M.pharm (QAT)	
3.	SHUBHAM SHIVHARI CHANGAN	M.pharm (QAT)	
4.	SAKSHI SUNIL KHAIRE	M.pharm (QAT)	
5.	RESHMA ARUN LONDHE	M.pharm (QAT)	
6.	MADHURI VIJAY SUPEKAR	M.pharm (QAT)	
7.	KOMAL SANTOH THUBE	M.pharm (QAT)	

Roll No	Name	Class	Signature
1.	KUNAL RAJENDRA BAHIRAT	M.pharm (Pharmaceutics)	
2.	NIKHIL BHAGWAT JADHAV	M.pharm (Pharmaceutics)	
3.	SNEHA PAPPU KHILLARE	M.pharm (Pharmaceutics)	
4.	PRIYANK BALASAHEB RANDHAVAN	M.pharm (Pharmaceutics)	
5.	TANAYA PRAKASHI WAKCHIAURE	M.pharm (Pharmaceutics)	




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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
RIV :00	Industrial Visit Student List	

Industrial Visit Student List

Date: 22/04/2022

Company name: SciTech specialities Pvt Ltd, sinnar, Nashik

Roll No	Name	Signature	Signature
1.	Sanket Dilip	Aher	
2.	Suvarna Piraji	Aher	
3.	Pranjal Nivrutti	Aher	
4.	Divya Kailas	Argade	
5.	Ankita Kiran	Bhadrige	
6.	Shubham Balu	Bhandari	
7.	Rupali Sharad	Bhelake	
8.	Mayuri Vilas	Bombe	
9.	Sonal Navnath	Chaudhari	
10.	Soham Ashok	Chavan	
11.	Yukta Dnyaneshwar	Chavan	
12.	Mohan Dnyanadev	Dabhade	
13.	Sonam Rajaram	Dawkhar	
14.	Pratiksha Sunil	Deshmukh	
15.	Rajashree Vilas	Deshmukh	
16.	Sanket Sandip	Dhobale	
17.	Saurabh Bapusaheb	Dokhe	
18.	Omkar Dattatray	Gaikwad	
19.	Swapnil Ramdas	Galande	
20.	Aparna Santosh	Galande	
21.	Sanika Yashavant	Gavit	
22.	Vaishnavi Ramkrushna	Ghone	
23.	Pratiksha Deepak	Hindurao	
24.	Ravi Manoj	Jadhav	
25.	Raju Balasaheb	Jadhav	
26.	Dipak Dnyanoba	Kadam	
27.	Shivam Ramdas	Kadam	




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4.	Divya Kailas	Argade	
5.	Ankita Kiran	Bhadrige	
6.	Shubham Balu	Bhandari	
7.	Rupali Sharad	Bhelake	
8.	Mayuri Vilas	Bombe	
9.	Sonal Navnath	Chaudhari	
10.	Soham Ashok	Chavan	
11.	Yukta Dnyaneshwar	Chavan	
12.	Mohan Dnyanadev	Dabhade	
13.	Sonam Rajaram	Dawkhar	
14.	Pratiksha Sunil	Deshmukh	
15.	Rajashree Vilas	Deshmukh	
16.	Sanket Sandip	Dhobale	
17.	Saurabh Bapusaheb	Dokhe	
18.	Omkar Dattatray	Gaikwad	
19.	Swapnil Ramdas	Galande	
20.	Aparna Santosh	Galande	
21.	Sanika Yashavant	Gavit	
22.	Vaishnavi Ramkrushna	Ghone	
23.	Pratiksha Deepak	Hindurao	
24.	Ravi Manoj	Jadhav	
25.	Raju Balasaheb	Jadhav	
26.	Dipak Dnyanoba	Kadam	
27.	Shivam Ramdas	Kadam	



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ADMN/GEN/DI/28	DEPARTMENT: TRAINING AND PLACEMENT	A.Y. : 2021-22
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Date: 22/04/2022

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2.	KADAMBARI VILASBHUIBAL	M.pharm (QAT)	
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4.	SAKSHI SUNIL KHAIRE	M.pharm (QAT)	
5.	RESHMA ARUN LONDHE	M.pharm (QAT)	
6.	MADHURI VIJAY SUPEKAR	M.pharm (QAT)	
7.	KOMAL SANTOH THUBE	M.pharm (QAT)	
8.	RUTUJA PANDURANG WAJAGE	M. pharm (QAT)	

Roll No	Name	Class	Signature
1.	KUNAL RAJENDRA BAHIRAT	M.pharm (Pharmaceutics)	
2.	NIKHIL BHAGWAT JADHAV	M.pharm (Pharmaceutics)	
3.	SNEHA PAPPU KHILLARE	M.pharm (Pharmaceutics)	
4.	PRIYANK BALASAHEB RANDHAVAN	M.pharm (Pharmaceutics)	
5.	TANAYA PRAKASH WAKCHAURE	M pharm (Pharmaceutics)	



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SciTech Specialities Pvt. Ltd.

Office: 501 DLH Park, S.V. Road, Goregaon (West), Mumbai 400 062. India • Tel: 22 417 50000
E-mail: scitech@scitech.net.in • CIN: U85190MH2007PTC175484
Factory: A-3/12/13, STICE Musalgaon, Tal: Sinnar, Dist: Nashik 422112.
Tel: +91 (2551) 240045 / 46 / 49 / 240244 Fax: +91 (2551) 240201 • E-mail: stsp@stsp.in

22/04/2022

To,
The Principal,
Vishal Institute of Pharmaceutical Education and Research, Junnar, Pune.

Subject: - Industrial Visit of B Pharmacy (Final Year)/M Pharmacy Students and Staff.

Dear Sir,

1. We thank you for giving us an opportunity to conduct the students & staff for industrial visit on 22th APR 2022.
2. Manager HR/Admin, Officer Production & Executive QA of our unit imparted training during the visit, and various queries and questions of the students have been answered.
3. We are glad to place on record the visit of Prof. Sonal Pawar, Dr. Shankar Dhobale. with 39 students of B. Pharmacy (Final Year) /M. Pharmacy on 22 March 2022, during which they actively interacted with our Manager HR/Admin, Office Production & Executive QA.
4. We are sure the above visit must have benefited your students in the ways of how industry works practically as against the theory which your students learned in their classrooms.
5. We thank you once again for the visit.

Yours Sincerely,

Mr. Chaitanya Borawake
Manager HR & Admin
SciTech Specialities Pvt. Ltd.



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To,
The CEO,
Vishal Junnar Seva Mandal,
Ale.



Subject: Regarding availing the School bus for Industrial Visit on 22 & 29 April 2022.

Respected Sir,

As per above cited subject, we required a school bus for Industrial visit of final year B.Pharm and M.pharm students at SciTech Specialties' Pvt Ltd, Sinnar. Nashik on 22nd & 29th April 2022. Total 80 numbers of students in two batches (40 each) and our two assistant professor will accompany during the visit. I wish to avail the school bus for our industrial visit. Waiting for your positive response.

Thanks & Regards,


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Industrial visit- Premium Serums & Vaccines Pvt Ltd.Narayangaon.	
Date	02/01/2020
Year	2019-20
Name Of Industry	Premium serum & Vaccines Pvt. Ltd. Narayangaon
Number Of Students Participated	65



Industrial visit was carried out for Final year B.Pharm students at NuLile Pharmaceuticals, Bhosari , Pune. Total 65 student along with two faculty members were present. After reached at industry, all students were divided in to two groups along with staff members and each group was headed by one representative of company who helped them to understand how operations are carried out in company. Employ of the industry has guided us. Maximum production in company is carried out by means of machinery subdivide in various activities like inception of raw material, processing of materials towards the product and then converting it into finished goods. Finally Finished goods are packed and are sealed where production batch no is embossed for its future verification required. Company defective ratio is less than 1 percent which shows the how effective company works.



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Industrial visit- Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.	
Date	18/10/2019
Year	2019-20
Name Of Industry	Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.
Number Of Students Participated	64

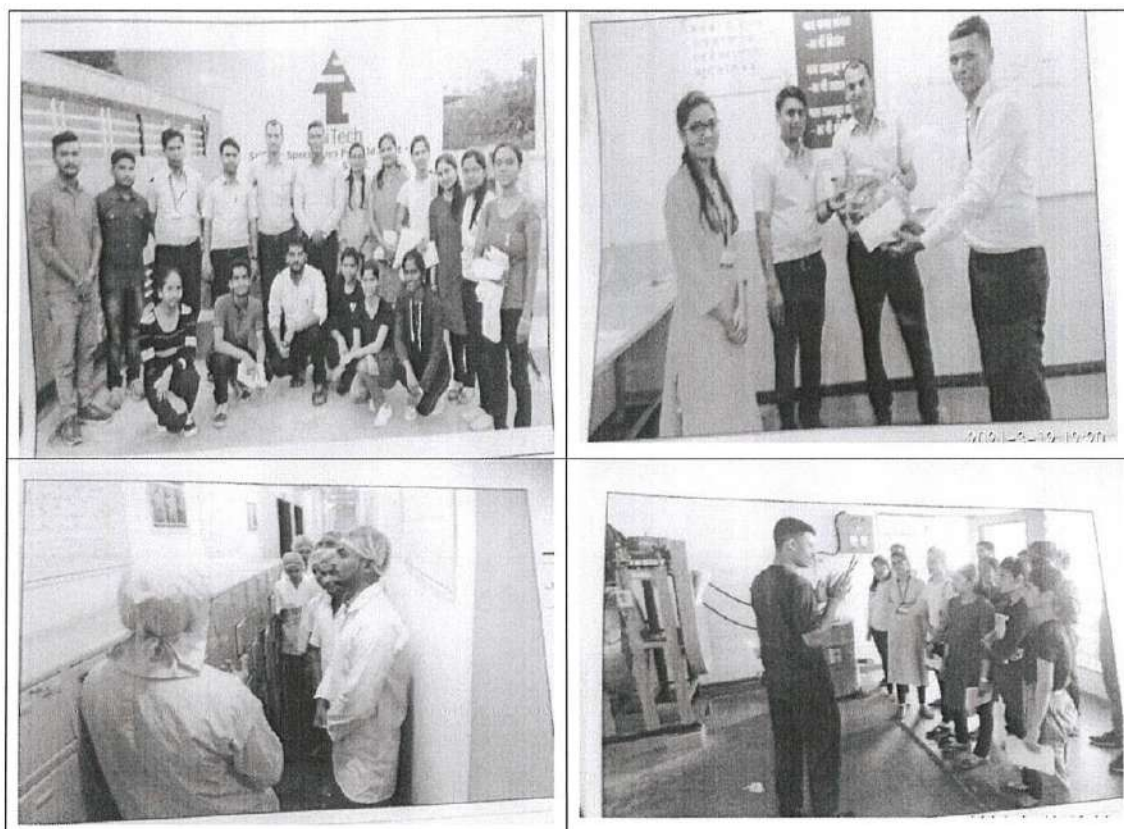


Industrial visit was carried out for Final year R Pharm students at **Sci Tech Specialties Pvt. Ltd., Sinnar**. Total 64 students along with one faculty members were present. Training Manager and the officials of the industry of the particular unit explained our students about the various Compounding, Dispensing, and packaging department. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members. After reached at industry, all students were divided in to two group along with staff members and each group was headed by one representative of company who helped them to understand how operations are carried out in company. **Mr Nandgude sir**, employ of the industry has guided us.



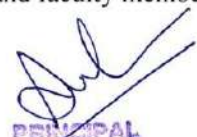

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Industrial visit- Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.	
Date	11/10/2019
Year	2019-20
Name Of Industry	Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.
Number Of Students Participated	14 m.pharm students



Industrial visit was carried out for Final year B.Pharm students at **Sci Tech Specialties Pvt. Ltd., Sinnar**. Total 14 M.Pharm students along with one faculty members were present. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members. **Mr Nandgude sir**, employ of the industry has guided us




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Industrial visit-	BioEra Life Scinces Pvt. Ltd, Pune
DATE	11/09/2019
YEAR	2019-20
NAME OF INDUSTRY	BioEra Life Scinces Pvt. Ltd, Pune
NUMBER OF STUDENTS PARTICIPATED	54



Institute organizes “one Industrial tour cum workshop” for final year B.Pharm students. By attending this worksjop Students get the knowledge on industry best practices and also packed activities. Tour also contain the demonstration of some biotechnological process including PCR and GENE TRANSFER. Objective of this tour is to provide the knowledge of new modern techniques employed in the industries. Industrial visit was carried out for Final year B.Pharm students at **BioEra Life Scinces Pvt. Ltd, Pune** Total 54 students along with two faculty members were present.. It was very informative and learning experience for students and faculty members



[Signature]
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Industrial visit- NuLile Pharmaceuticals, Bhosari , Pune	
Date	05/03/2019
Year	2018-19
Name Of Industry	NuLile Pharmaceuticals, Bhosari , Pune
Number Of Students Participated	59



Industrial visit was carried out for Final year B.Pharm students at **NuLile Pharmaceuticals, Bhosari , Pune** Total 59 student along with two faculty members were present. Training Manager and the officials of the industry of the particular unit explained our students about the various Compounding, Dispensing, and packaging department. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members.

After reached at industry, all students were divided in to two groups along with staff members and each group was headed by one representative of company who helped them to understand how operations are carried out in company. Employ of the industry has guided us.




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Industrial visit- Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.	
Date	23/11/2018
Year	2018-19
Name Of Industry	Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.
Number Of Students Participated	M.pharm 21 students



Industrial visit was carried out for Final year B.Pharm students at **Sci Tech Specialties Pvt. Ltd, Musalgaon, Sinnar, Nashik.** Total 21 M.pharm students along with two faculty members were present. Training Manager and the officials of the industry of the particular unit explained our students about the various Compounding, Dispensing, and packaging department. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members.



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Industrial visit- Natco Pharma Ltd. Hyderabad	
DATE	07/10/2017
YEAR	2017-18
NAME OF INDUSTRY	NATCO PHARMA LTD HYDERABAD
NUMBER OF STUDENTS PARTICIPATED	70
Industrial visit was carried out for Final year B.Pharm students at Natco pharma Ltd Hyderabad. Total 70 students along with two faculty members were present. Training Manager and the officials of the industry of the particular unit explained our students about the various Compounding, Dispensing, and packaging department. The students had good interaction with them. They also briefed the students about the process flow and Quality assurance Dept. It was very informative and learning experience for students and faculty members. After reached at industry, all students were divided in to two group along with staff members and each group was headed by one representative of company who helped them to understand how operations are carried out in company. Mr. Sachin Sapkal, employ of the industry has guided us.	




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VISHAL JUNNAR SEVA MANDAL'S

VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH

Dr. S. L. Jadhav
Principal

Ale, Tal. Junnar, Dist. Pune-412411 | Contact No. : 9892376014 | E-mail : vjrm.principal@gmail.com | Website: www.viperale.com

P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

PROBLEM SOLVING METHODOLOGIES

Sr. No.	Name of Documents
3.1	Expert talk through Seminar/Workshops
3.2	Competitive Examination




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Dr. S. L. Jadhav
Principal

Ale, Tal. Junnar, Dist. Pune-412411 | Contact No. : 9892376014 | E-mail : vjrm.principal@gmail.com | Website: www.viperale.com

P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

3. PROBLEM SOLVING METHODOLOGIES

3.1. EXPERT TALK THROUGH SEMINAR/WORKSHOP

Personality Development	
DATE	29/01/18 & 30/01/18
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr Harshad Tathed, Founder Study hub
NUMBER OF STUDENTS PARTICIPATED	70



Personality development

The VIPER, ALE organized Workshop on personality Development Skills, on **29/01/18 & 30/01/18** for the students of Pharmacy. The workshop was conducted by **Mr Harshad Tathed, Founder Study hub**, presently working as Founder Director, ‘Study hub’, who strive for excellence & follows the pedagogy of active learning i.e. experiential learning. **Mr Harshad Tathed**, conducted workshop in two sessions. In the first day session he interacted with final year B.Pharm & 2nd day on M,Pharm. The session started at around 10AM in the morning at went on till 05.00 PM in the Evening.




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Career guidance & Opportunity in Pharma industry	
DATE	10/02/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Akhilesh Jain, QC Manager Lupin Pharma Ltd
NUMBER OF STUDENTS PARTICIPATED	256



VIPER, ALE organized Seminar on Opportunity in Pharma industry during Pharmotsav, on 10/02/2018 for the students of Pharmacy. The Seminar was conducted by **Mr. Akhilesh Jain, QC Manager Lupin Pharma Ltd.**




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Career Guidance	
DATE	10/02/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Vitthal Labade, HR Manager, Lupin pharma Ltd
NUMBER OF PARTICIPANTS	256



Seminar on **Career Guidance** was held at **VIPER, ALE** on **10/02/2018** By **Mr. Vitthal Labade, HR Manager, Lupin Pharma Ltd.** To make the seminar an interactive one, he asked the students about their career preferences. After listening to the students' views; he gave important information related to personality development and personal interview.




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Entrepreneurship as a career choice and motivation.	
DATE	01/02/2018 to 03/02/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Suresh B. Umap Regional Officer MCED, Pune
NUMBER OF STUDENTS PARTICIPATED	70



Entrepreneurship as a career choice and motivation.

A seminar on **Entrepreneurship as a career choice and motivation** was held at **VIPER, ALE** on **01/02/2018** By **Mr. Suresh B. Umap Regional Officer MCED(Maharashtra Centre for Entrepreneurship Development)**. Final year B.pharm students of VIPER ale and second year diploma students of IOP and IOPW attended this seminar.




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Business Opportunities & Guidance

DATE	01/02/2018 to 03/02/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Ashok Pattar, Mr. Hemant Bhagwat, Mr. Mohan Mane – Faculty MCED, Pune, Mr. G Y Tirandaj (Faculty in Bank)
NUMBER OF STUDENTS PARTICIPATED	70



Business Opportunities Guidance

The VIPER, ALE organized 3 days seminar from 01/02/2018 to 03/02/2018 in which various aspects of entrepreneurship such as business opportunities, basic management concepts, project financing and documents required & forth coming training opportunities from MCED are discussed with the final year students. The Seminar was conducted by faculties mentioned above.




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Lecture on “Personality Development”	
DATE	14/09/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Ms. Dhanashri Pawar, Vishwa Solution's Academy, Pune
NUMBER OF STUDENTS PARTICIPATED	57



Lecture on “Personality Development”

The VIPER, ALE organized Workshop on personality Development Skills, on 14/09/2018 for the students of Pharmacy. The seminar was conducted by **Ms Dhanashri Pawar, Vishwa Solution's Academy Pune**. The programme was aimed to teach students to work with various professionals, people and groups to understand the meaning of life and work in the present context; to enhance their communication skills and interpersonal skills in order to function in professional and social settings effectively.




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Guidance on DRA,PV, CR	
DATE	21/09/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Ms. Archana Gawade, Elite Academy ,Pune
NUMBER OF STUDENTS PARTICIPATED	54



Guidance on DRA,PV, CR

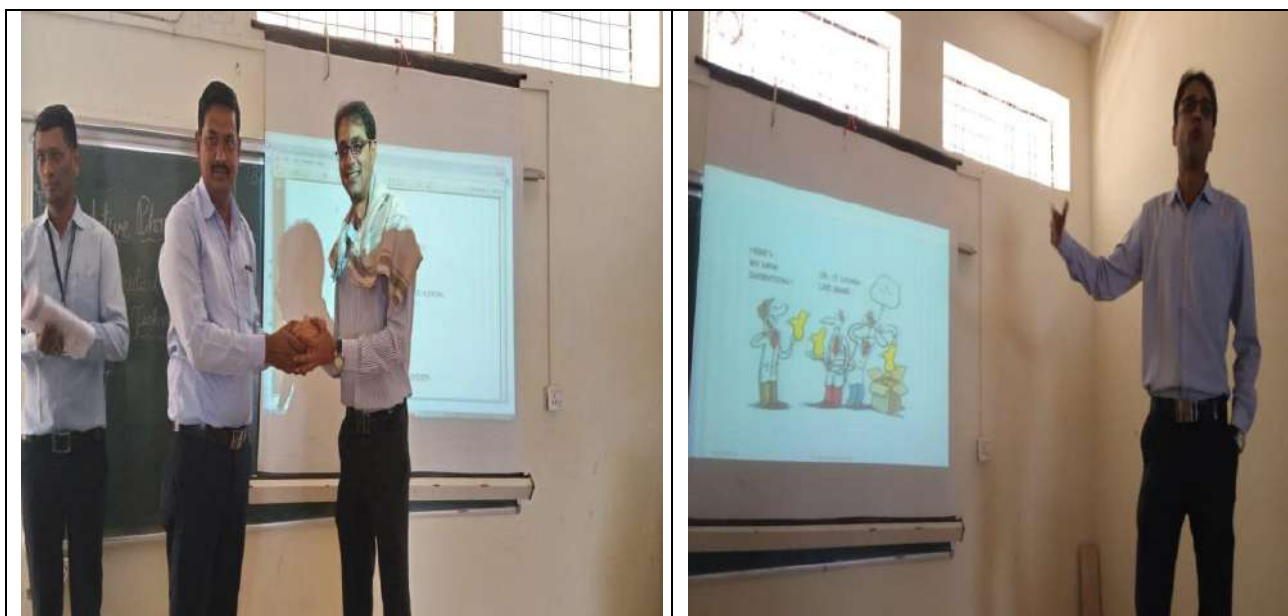
The VIPER, ALE organized seminar on **Guidance on DRA, PV and CR** on **21/09/2018**. The seminar was conducted by **Ms. Archana Gawade, Elite Academy; Pune**. The programme was aimed to teach students about DRA, Pharmacovigilance and CR. The seminar was also arranged to aware students regarding current scenario of this field and also to know about future different job opportunities available in this area.




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Guidance on IPR, Patent profiling and job opportunity in IPR

DATE	15/10/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Anup Patwa (Executiveve IPR, Hikal Ltd.
NUMBER OF STUDENTS PARTICIPATED	64



Guidance on IPR, Patent profiling and job opportunity in IPR

A workshop on Intellectual Property Rights was organized by VIPER, ALE on **15/10/2018**. The workshop was conducted by **Mr. Anup Patwa**. The workshop began with examples of small things like patents for plastic bottle design, sharpener design, the technology behind lighter and numerous more examples. The speaker further explained types of patents i.e. Design patents and utility patents.




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Lecture on New Trend in Pharmacy and Health care industries.

DATE	05/02/2019
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Rajesh Gade(Assistant prof. Lotus Business School, Pune)
NUMBER OF STUDENTS PARTICIPATED	64



Lecture on New Trend in Pharmacy and Health care industries.

A seminar on New Trend in Pharmacy and Health care industries was held at VIPER, ALE on 05/02/2019 by Mr. Rajesh Gade (Assistant Prof, Lotus Business School Pune).




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Lecture on Career Guidance

DATE	17/02/2019
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Sandip Patil, Vice President Premium Serums & Vaccines Pvt Ltd
NUMBER OF STUDENTS PARTICIPATED	280



Lecture on Career Guidance

All the students of VIPER, IOP and IOPW ale was attended the seminar on Career Guidance Program held in the college premises on **17/02/2019** during VISHAL PHARMOSTAV 2018-19. **Mr. Sandip Patil Vice President Premium Serums & Vaccines Pvt Ltd**, guided our student about the industrial practices, opportunities & requirements in Pharmacy industry.




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One Day MCED Workshop	
DATE	16/07/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr sunil V Shete (corporate Trainer), Mr. Uttam Bheke & Mr. Pranjal kale (co ordinator MCED)
NUMBER OF STUDENTS PARTICIPATED	64



One Day MCED Workshop

The VIPER, ALE organized Workshop on **Training Opportunities in MCED**, on **16/07/2018**.

The Seminar was conducted by **Mr sunil V Shete (corporate Trainer) Mr. Uttam Bheke & Mr. Pranjal kale (co ordinator MCED)**.




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Pre placement workshop	
DATE	03/04/2019
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	Mr. Sachin Kombuje
NUMBER OF STUDENTS PARTICIPATED	64



Pre placement workshop

VIPER, ALE organized Pre Placement workshop on 03/04/2019. Resource person Mr. Sachin Kombuje conducted this workshop in which he gave on field training to our students regarding various types of interviews & its aspects.




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Three days Entrepreneurship awareness camp

DATE	17/07/2019 to 19/07/2019
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	MCED, Pune
NUMBER OF STUDENTS	65



Three days Entrepreneurship awareness camp

Three days Entrepreneurship Awareness Camp (from **17/07/2019** to **19/07/2019**) was organized by **VIPER, ALE** in collaboration with Entrepreneurship and Management Development Institute (an **MCED, Pune**). The Camp was inaugurated by Dr. Jadhav Suresh L. Principal, VIPER. Joint Director **MCED, Pune** delivered lecture on Camp Objective and Business Opportunities Identification. Several other dignitaries delivered their lectures on different topics related to Entrepreneurship.




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Guidance Session on DRA, PV, CR

DATE	27/07/2019
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	Ms. Archana Gawade, Elite institute of pharma skills, Pune
NUMBER OF STUDENTS PARTICIPATED	65



Guidance Session on DRA, PV, CR

The VIPER, ALE organized seminar on **Guidance on DRA, PV and CR** on **27/07/2019**. The seminar was conducted by **Ms. Archana Gawade, Elite Academy; Pune**. The programme was aimed to teach students to know more about DRA, Pharmacovigilance and CR. The seminar was also arranged to aware students regarding current scenario of this field and also to know about future different job opportunities available in this area.




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Carrier guidance for pharmacy professionals in IT Industries

DATE	20/09/2019
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	Mr. Srinivas Inamdar, Principal Advisor, Ex-Associate Director, Cognizant, Pune
NUMBER OF STUDENTS PARTICIPATED	65



Carrier guidance for pharmacy professionals in IT Industries

Seminar on Career Guidance was held at VIPER, ALE on 20/09/2019 by Mr. Srinivas Inamdar, Principal Advisor, Ex-Associate Director, Cognizant, Pune. To make the seminar an interactive one, he asked the students about their career preferences. He wanted to know about the career related scenario with the students, after listening to the students' views; he gave important information related to personality development and personal interview.




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New trends in Pharma & Health Care sector- Pharm. MBA program

DATE	04/02/2020
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Rajesh Gade(Assistant prof. Lotus Business School Pune)
NUMBER OF STUDENTS PARTICIPATED	65



New trends in Pharma & Health Care sector- Pharm. MBA program

A seminar on- “New trends in Pharma & Health Care sector- Pharm. MBA program” was held at VIPER, Ale, on 04/02/2020 by Mr. Rajesh Gade (Assistant prof. Lotus Business School Pune).




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Session on “Opportunities in Pharma industry after B.Pharm”

DATE	08/02/2020
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	Ms Sunita Vyas ,GM SciTech Specialities Pvt Ltd, Nashik
NUMBER OF STUDENTS PARTICIPATED	130



Session on “ Opportunities in Pharma industry after B.Pharm”

The VIPER, ALE organized a seminar on **Opportunities in Pharma industry** on **08/02/2020**. **Ms Sunita Vyas** (GM SciTech specialties Pvt Ltd, Sinnar, Nashik) explained how India is becoming global hub for Generic drugs & accordingly different opportunities for our Pharma students.




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Session on “Opportunities in Pharma industry after B.Pharm”

DATE	08/02/2020
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	Mr. Satish Nandgude, Manager Technical Operation, SciTech Specialities Pvt Ltd, Nashik
NUMBER OF STUDENTS PARTICIPATED	130



Session on “Opportunities in Pharma industry after B.Pharm”

In seminar titled “Opportunities in Pharma industry after B.Pharm” organized by VIPER, Ale on 08/02/2020, **Mr. Satish Nandgude (Manager Technical Operation, SciTech Specialities Pvt Ltd, Nashik)** guided our students on different skills required & how to acquire them to grab opportunities in emerging Pharma field.

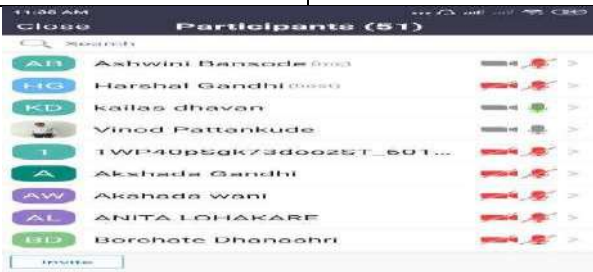



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Online webinar on " Concept of Calibration & validation of equipment in Pharma industry

DATE	28/06/2020
VENUE	Virtual meeting via Zoom
NAME OF RESOURCE PERSON	KV Pharma Consultant by Kailas Dhavan and Vinod Pattan Kude
NUMBER OF STUDENTS PARTICIPATED	51



Online webinar on " Concept of Calibration & validation of equipment in Pharma industry

VIPER, Ale organized Webinar on **Concept of Calibration & validation of equipment** on **28/06/2020**. The Webinar was conducted by **KV Pharma Consultant by Kailas Dhavan and Vinod Pattan Kude**. Following topics are covered in webinar :

- Regulatory requirements
- Correlation or calibration?
- Requirements to calibration models (linear single-point and multiple-

point calibration, non- linear calibration, standard addition, internal calibration)

- Suitable strategies to validate calibration models (linearity)
- Statistical calculations (regression, suitable parameters)
- Acceptance criteria for calibration function (residual and sensitivity plot) and ordinate intercept.




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Clinical Research and Pharmacovigilance: Industry highlights with introduction and career prospects

DATE	16/07/2020
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Mr. Ravi Punde and Mrs. Promita Saha, Mrs. Rashmi Sangam, Dysmech Clinical Services (DCS), Pune.
NUMBER OF STUDENTS PARTICIPATED	73

The VIPER, ALE organized Webinar (**Virtual meeting through Zoom**) on “Clinical Reserach and Pharmacovigilance:” on **16/07/2020** for the students of Pharmacy. The Webinar was conducted by **Mr. Ravi Punde and Mrs. Promita Saha, Mrs. Rashmi Sangam, Dysmech Clinical Services (DCS), Pune.. 73 students online attended this webinar. During webinar importance of Pharmacovigilance** was discuss by resource persons. Following concepts are discuss in the webinar.

Pharmacovigilance is a branch of pharmacy which keeps vigilant and takes care of the adverse effects of the drugs and is concerned with identifying, validating, quantifying and evaluating adverse drug reactions associated with the use of drugs thereby improving the safety of the medicines in use. A career in Pharmacovigilance is exciting with a well-defined career path. Briefly, Pharmacovigilance professionals have to monitor, assess, detect and prevent the adverse effects of medicines. This discipline touches the sectors such as healthcare and pharmacy.

Then speaker discuss the various placement opportunities in Pharmacovigilance along with the pay packages and also discuss the course details for which students can apply after completing B.Pharm.




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New Career Opportunities in Pharmacovigilance, Clinical Research and Medical Coding

DATE	17/07/2020
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Ms. Archana Gawade, Elite institute of Pharma skills, Pune
NUMBER OF STUDENTS PARTICIPATED	73

The VIPER, ALE organized Webinar (**Virtual meeting through Zoom**) on “**New Career opportunities in Pharmacovigilance, clinical research and medical coding** on 17/07/2020 for the students of Pharmacy. The Webinar was conducted by **Ms. Archana Gawade, Elite institute of Pharma skills, Pune** 73 students were attended this seminar through the zoom. Objective of this webinar is to share the knowledge and information regarding Pharmacovigilance, clinical research, medical coding and various job opportunities available in this field.




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5 days Online Spoken English course	
DATE	13/10/2020 to 17/10/2020
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Miss Neelam Bhambere, Sapphyre Spoken English Course
NUMBER OF STUDENTS PARTICIPATED	60

4:46 PM

Close

Participants (100)

Search

AR

Ashwini Bansode (me)

Neelam Bhambere (host)

01 Aher Sanket

01. Gayatri Arde

OP

01.Abhang Pranali

02.Aher Suvarna

OP

03 Pranjal Aher

04. Vrushali Aher

OB

05 Bhandari Shubham

Invite

5 days Online Spoken English course

The **5 days Online** Spoken English Course for the year 2020 was organized by **VIPER, ALE** from 13/10/2020 to 17/10/2020 By Miss Neelam Bhambere, Sapphyre Online Spoken English Course for the students who have just completed their 10th and 12th Standard (first year B.Pharm).




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The VIPER, ALE organized Webinar (**Virtual meeting through Zoom**) on “**HOW TO GET SELECTED IN FIRST INTERVIEW**” on **10/12/2020** for the students of Pharmacy. The Webinar was conducted by Mr. **Rahul Wathore (RBM leadership trainer & lifestyle coach) Pune. Total 82 students take advantages of this webinar through zoom meeting.**

After completing webinar students done healthy discussion with speaker to clear their doubts regarding interview. Mr. Rahul sir told students many important things related to interviews.




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Scope and challenges in Clinical Research

DATE	26/12/2020
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Prof Ashwini Jadhav, Director Dr SSK labs pvt ltd and Xcel carrier pune
NUMBER OF STUDENTS PARTICIPATED	100

The VIPER, ALE organized Webinar (**Virtual meeting through Zoom**) on **Scope and challenges in clinical Research** on **26/12/2020** for the students of Pharmacy. The Webinar was conducted by **Prof Ashwini Jadhav, Director Dr. SSK Labs Pvt. Ltd. and Xcel carrier, Pune. 80 students attended webinar through zoom.**

Clinical Trials webinar which includes thought inspiring keynote presentations, plenary talk career development programs. This will discuss most recent techniques, developments, novel strategies and various disciplines involved in drug discovery, clinical research, patient centricity, clinical site & supply management, medical imaging, data management and outsourcing in clinical trials. It will educate healthcare and clinical researcher professionals about design, operation, organizing, research computing, regulatory aspects and reporting of clinical trials. It also promotes better understanding by the general public about the importance of clinical trials in prevention, diagnosis and treatment of diseases.

Webinar also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Clinical Trials and Clinical Research.

The Webinar will provide opportunities for everyone to learn, gain insight and new skills, which you will be able to apply after the webinar is over.




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How to face interview	
DATE	12/03/2022
VENUE	VIPER, Ale
NAME OF RESOURCE PERSON	Mr. Akshay Yewale Project Manager, Aarti drugs pvt ltd, Navi Mumbai
NUMBER OF STUDENTS PARTICIPATED	60



How to face interview

Seminar on “How to Face Interview” was organized at VIPER, Ale on 12/03/2022 by Mr. Akshay Yewale, Project Manager, Aarti drugs Pvt Ltd, Navi Mumbai.




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Career Opportunities in PV	
DATE	10/08/2022
VENUE	VIPER, Ale
NAME OF RESOURCE PERSON	Ms Smita Dumbre, Cognizant Pvt. Ltd, Pune
NUMBER OF STUDENTS PARTICIPATED	



Career Opportunities in PV

Seminar on “Career Opportunities in PV” was organized at VIPER, Ale on 10/08/2022 by Ms Smita Dumbre, Cognizant Pvt. Ltd, Pune.




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Power of Positive Thinking	
DATE	13/08/2022
VENUE	VIPER, Ale
NAME OF RESOURCE PERSON	Mr. Nitin B Patil Director- Uttung Bharari Training Academy
NUMBER OF STUDENTS PARTICIPATED	145



Power of Positive Thinking

Expert Lecture on “Power of Positive Thinking” was organized at VIPER, Ale on 13/08/2022 by Mr. Nitin B Patil, Director, Uttung Bharari Training Academy.




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Manufacturing of Health Care Products	
DATE	24/09/2022
VENUE	VIPER, Ale
NAME OF RESOURCE PERSON	Mr. Sambhaji V Patade Sr. EHS manager, 3M India Ltd, Ranjangaon.
NUMBER OF STUDENTS PARTICIPATED	145



Manufacturing of Health Care Products

Expert Lecture on “Manufacturing of Health Care Products” was organized at VIPER, Ale on 24/09/2022 by Mr. Sambhaji V Patade, Sr. EHS manager, 3M India Ltd, Ranjangaon.




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VISHAL JUNNAR SEVA MANDAL'S

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Dr. S. L. Jadhav
Principal

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

3. PROBLEM SOLVING METHODOLOGIES

3.2. COMPETATIVE EXAMINATION

GPAT exam orientation guidance	
DATE	03/10/2017
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Dr. C. Bothiraja, Prof. Bharti vidyapeeth Pune
NUMBER OF STUDENTS PARTICIPATED	70



GPAT exam orientation guidance

The program was organized with the aim of providing information and preparation aspects of GPAT exam. **Dr. C. Bothiraja, Prof. Bharti vidyapeeth Pune, on 03/10/2017** conducted this informative session, which includes

- To create awareness of GPAT competitive examinations among the students.
- To provide necessary information and guidance for the preparation of GPAT examination.
- To orient the student for GPAT examination.




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Career guidance Programme for MBA /CAT exam	
DATE	04/01/2018
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Abhale Ganesh, sharadchandra Pawar Institute of MBA Otur.
NUMBER OF STUDENTS PARTICIPATED	70



Career guidance Programme for MBA /CAT exam

A seminar on **Career guidance Programm for MBA /CAT exam** was held at **VIPER, ALE** on **04/01/2018** by **Mr. Abhale Ganesh, sharadchandra Pawar Institute of MBA Otur.**




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Orientation programme for GPAT 2019 Exam

DATE	16/07/2018(T.Y) & 18/07/2018 (Final year)
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. R U Gaware Professor at VIPER ALE
NUMBER OF STUDENTS PARTICIPATED	59+54=113



Orientation programme for GPAT 2019 Exam

The program was organized with the aim of providing information and preparation aspects of GPAT exam. **Mr. R U Gaware VIPER ALE on 16/07/2018 & 18/07/2018** conducted this informative session on T Y B Pharm & Final year B. Pharm students respectively, which included,

- To create awareness of GPAT competitive examinations among the students.
- To provide necessary information and guidance for the preparation of GPAT examination.




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Guidance on Competitive exams- MPSC & UPSC

DATE	05/01/2019
VENUE	Atharv mangal Karayalay, Ale
NAME OF RESOURCE PERSON	Mr. Yajuvendra Mahajan(Director & Founder of Deepstambh Academy, Jalgaon.)
NUMBER OF STUDENTS PARTICIPATED	257



Guidance on Competitive exams- MPSC & UPSC

VIPER, ALE organized Workshop for preparation of **MPSC & UPSC** on **05/01/2019**. The Seminar was conducted by **Mr. Yajuvendra Mahajan (Director & Founder of Deepstambh Academy, Jalgaon)**. Along with VIPER, IOP & IOPW, students from other local institutes also attended the seminar.




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Career guidance Programme for MBA /CAT exam

DATE	10/01/2019
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Mr. Ganesh Abhale (Sharadchandra Pawar Institute of MBA Otur.)
NUMBER OF STUDENTS PARTICIPATED	52



Career guidance Programme for MBA /CAT exam

A seminar on **Career guidance Programme for MBA /CAT exam** was held at **VIPER, ALE** on 10/01/2019 by Mr. Abhale Ganesh, Sharadchandra Pawar Institute of MBA Otur.




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Guidance Session on GPAT 2020 Exam

DATE	02/08/2019
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Dr. Rajendra Patil, JSPM's Rajarshi Shahu College of Pharmacy & Research, Tathawade
NUMBER OF STUDENTS PARTICIPATED	118



Guidance Session on GPAT 2020

The program was organized to create awareness of GPAT exam among the students & to provide necessary information and guidance for the same. **Dr. Rajendra Patil from JSPM's Rajarshi Shahu College of Pharmacy & Research, Tathawade**, conducted this informative session on 02/08/2019.




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Guidance Session on GPAT 2020 Exam

DATE	20/08/2019
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Dr. Rajesh Vagh, Pharma Tutor, Gujrat
NUMBER OF STUDENTS PARTICIPATED	115



Guidance Session on GPAT 2020

The program was organized to create awareness of GPAT exam among the students & to provide necessary information and guidance for the same. **Dr. Rajesh Vagh, Pharma Tutor, Gujrat**, conducted this informative session on 20/08/2019.




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MPSC-UPSC Foundation Course	
DATE	04/10/2019
VENUE	VIPER, ale
NAME OF RESOURCE PERSON	Prof. Sandip Patil, HOD Competitive exam, Dipstambh Foundation, Jalgaon
NUMBER OF STUDENTS PARTICIPATED	240



MPSC-UPSC Foundation Course

The VIPER, ALE organized Workshop on MPSC-UPSC Foundation Course on **04/10/2019**. The Seminar was conducted by **Prof. Sandip Patil, HOD Competitive exam, Dipstambh Foundation, Jalgaon**.




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Preparation of competitive Exam CAT, MBA

DATE	31/01/2020
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Dr. Ramesh Kakad, SPCOMBA, Otur.
NUMBER OF STUDENTS PARTICIPATED	62



Preparation of competitive Exam CAT, MBA

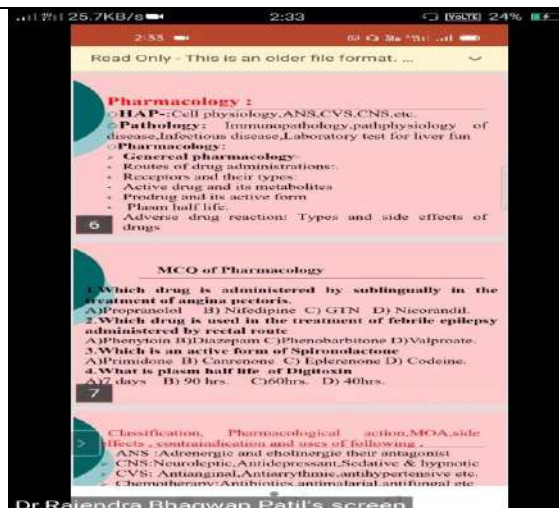
A seminar on Preparation of competitive Exam CAT, MBA was held at **VIPER, ALE** on 10/01/2019, by Dr. Ramesh Kakad, Sharadchandra Pawar Institute of MBA Otur.



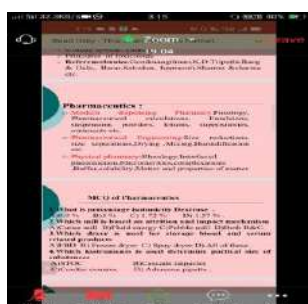

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Guidance Session on GPAT 2021 Exam

DATE	31/10/2020
VENUE	VIPER ALE
NAME OF RESOURCE PERSON	Dr. Rajendra Patil, JSPM's Rajarshi Shahu College of Pharmacy & Research, Tathawade
NUMBER OF STUDENTS PARTICIPATED	54 (TY)



Guidance Session on GPAT 2021



The Webinar was organized to create awareness of GPAT exam among the students & to provide necessary information and guidance for the same. **Dr. Rajendra Patil** from **JSPM's Rajarshi Shahu College of Pharmacy & Research, Tathawade**, conducted this informative session on 31/10/2020.




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Guidance session on NIPER for GPAT qualified students	
DATE	21/03/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Akash Ghode, Dakshata Sable, Babasaheb Sodnar (VIPER Alumini), NIPER, Ahmedabad, Gujrat.
NUMBER OF STUDENTS PARTICIPATED	15

Guidance Session on NIPER 2021

Online session was organized for our GPAT qualified students to guide them for upcoming NIPER 2021 exam. **Mr. Akash Ghode, Dakshata Sable, Babasaheb Sodnar (VIPER Alumini), NIPER, Ahmedabad, Gujrat** conducted this informative session on 21/03/2021.



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Guidance Session on “Basics of Medicinal Chemistry for GPAT”	
DATE	23 & 24/03/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Mrs. Madhuri Tarkase, Faculty Pharmacy College, Vilad, Ahmednagar.
NUMBER OF STUDENTS PARTICIPATED	44(TY)

The image displays two screenshots from a Zoom meeting. The left screenshot shows a presentation slide titled "Anticancer Antibiotics (Antitumor)". The text on the slide states: "Inhibits transcription. The primary effect of this interaction is the inhibition of DNA-directed RNA synthesis. doxorubicin are referred to as topoisomerase II poisons rather than inhibitors. They have tetracycline ring structures with unusual sugar daunamine attached by glycosidic linkage." Below the text are chemical structures of Doxorubicin and Daunorubicin. The right screenshot shows a presentation slide titled "Anticancer Antibiotics (Antitumor)". The text on the slide states: "Inhibits transcription. The primary effect of this interaction is the inhibition of DNA-directed RNA synthesis. doxorubicin are referred to as topoisomerase II poisons rather than inhibitors. They have tetracycline ring structures with unusual sugar daunamine attached by glycosidic linkage." Below the text are chemical structures of Doxorubicin and Daunorubicin.

Guidance Session on “Basics of Medicinal Chemistry for GPAT”

Online session was organized for our T. Y. B. Pharm students on “Basics of Medicinal Chemistry for GPAT”. Mrs. Madhuri Tarkase, Faculty Pharmacy College, Vilad, Ahmednagar conducted this informative session on 23 & 24/03/2021.




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Guidance Session on GPAT	
DATE	20/05/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Dr. Vijaykumar Chakote, Professional GPAT Teacher, Director of Pharmastar Academy, Nanded
NUMBER OF STUDENTS PARTICIPATED	89

Guidance Session on GPAT

Online session on GPAT preparation was organized for our S. Y & T. Y. B. Pharm students. **Dr. Vijaykumar Chakote, Professional GPAT Teacher, Director of Pharmastar Academy, Nanded** conducted this informative session on 20/05/2021.

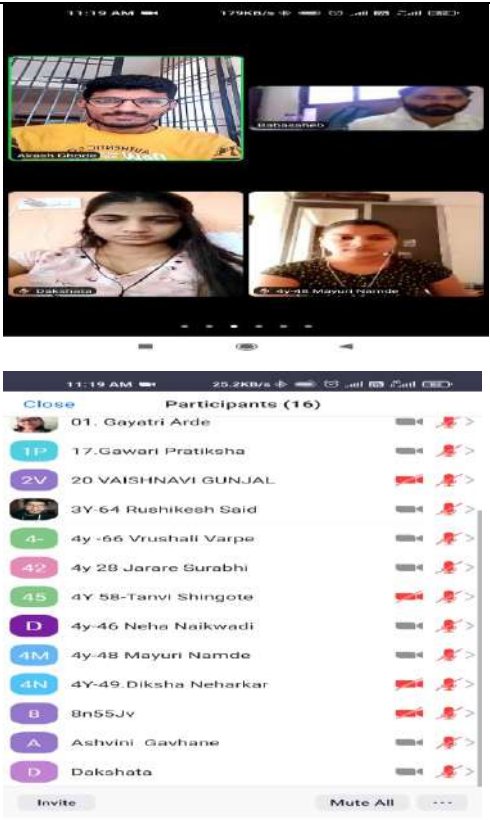


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Guidance session on NIPER for GPAT qualified students	
DATE	21/03/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Akash Ghode, Dakshata Sable, Babasaheb Sodnar (VIPER Alumini), NIPER, Ahmedabad, Gujrat.
NUMBER OF STUDENTS PARTICIPATED	15



WhatsApp chat with Akash Ghode. The message includes a Zoom link: <https://us04web.zoom.us/j/6125725364?pwd=Zzh2N3R0aGhaaVNaVEZGbjlMc0FZQT09>. Meeting ID: 612 572 5364, Passcode: 8n55Jv. The meeting is scheduled for 11:00 AM on March 21, 2021, in Mumbai, Kolkata, and New Delhi.



Zoom meeting interface showing four participants in a grid view. Below the grid is a list of 16 participants, including Gayatri Arde, Gawari Pratiksha, VAISHNAVI GUNJAL, Rushikesh Said, Vrushali Varpe, Jarare Surabhi, Tanvi Shingote, Neha Naikwadi, Mayuri Namde, Diksha Neharkar, and others.

Guidance Session on NIPER 2021

Online session was organized for our GPAT qualified students to guide them for upcoming NIPER 2021 exam. **Mr. Akash Ghode, Dakshata Sable, Babasaheb Sodnar (VIPER Alumini), NIPER, Ahmedabad, Gujrat** conducted this informative session on 21/03/2021.




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Guidance Session on “Basics of Medicinal Chemistry for GPAT”	
DATE	23 & 24/03/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Mrs. Madhuri Tarkase, Faculty Pharmacy College, Vilad, Ahmednagar.
NUMBER OF STUDENTS PARTICIPATED	44(TY)

The image displays two screenshots from a Zoom meeting. The left screenshot shows a presentation slide titled "Anticancer Antibiotics (Antitumor)". The text on the slide states: "Inhibits transcription. The primary effect of this interaction is the inhibition of DNA-directed RNA synthesis. doxorubicin are referred to as topoisomerase II poisons rather than inhibitors. They have tetracycline ring structures with unusual sugar daunosamine attached by glycosidic linkage." Below the text are chemical structures of Doxorubicin and Daunorubicin. The right screenshot shows a presentation slide titled "Anticancer Antibiotics (Antitumor)". The text on the slide states: "Inhibits transcription. The primary effect of this interaction is the inhibition of DNA-directed RNA synthesis. doxorubicin are referred to as topoisomerase II poisons rather than inhibitors. They have tetracycline ring structures with unusual sugar daunosamine attached by glycosidic linkage." Below the text are chemical structures of Doxorubicin and Daunorubicin.

Guidance Session on “Basics of Medicinal Chemistry for GPAT”

Online session was organized for our T. Y. B. Pharm students on “Basics of Medicinal Chemistry for GPAT”. Mrs. Madhuri Tarkase, Faculty Pharmacy College, Vilad, Ahmednagar conducted this informative session on 23 & 24/03/2021.



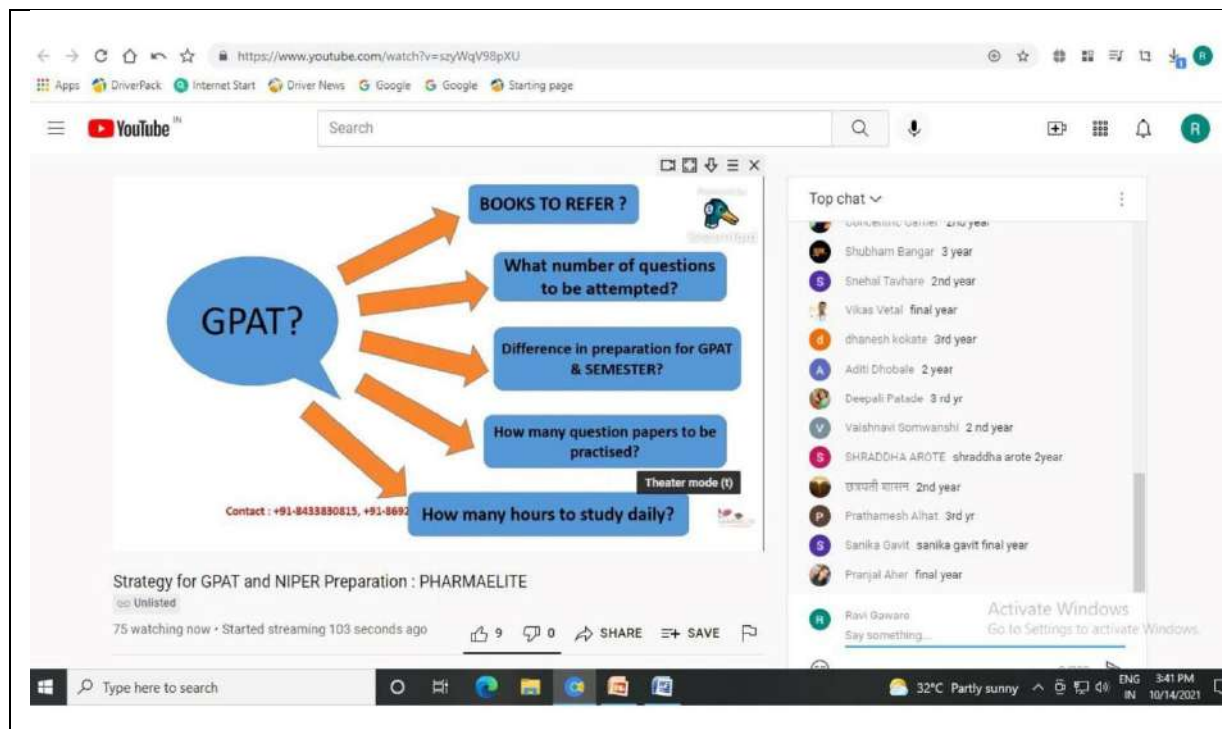
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Guidance Session on GPAT	
DATE	20/05/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Dr. Vijaykumar Chakote, Professional GPAT Teacher, Director of Pharmastar Academy, Nanded
NUMBER OF STUDENTS PARTICIPATED	89

Guidance Session on GPAT


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Strategy for GPAT & NIPER Preparation	
DATE	14/10/2021
VENUE	Virtual meeting through Youtube
NAME OF RESOURCE PERSON	Ms. Aishwarya Kashelkar, M.S (Pharm) Pharmacology and Toxicology, NIPER, Mohali.
NUMBER OF STUDENTS PARTICIPATED	75



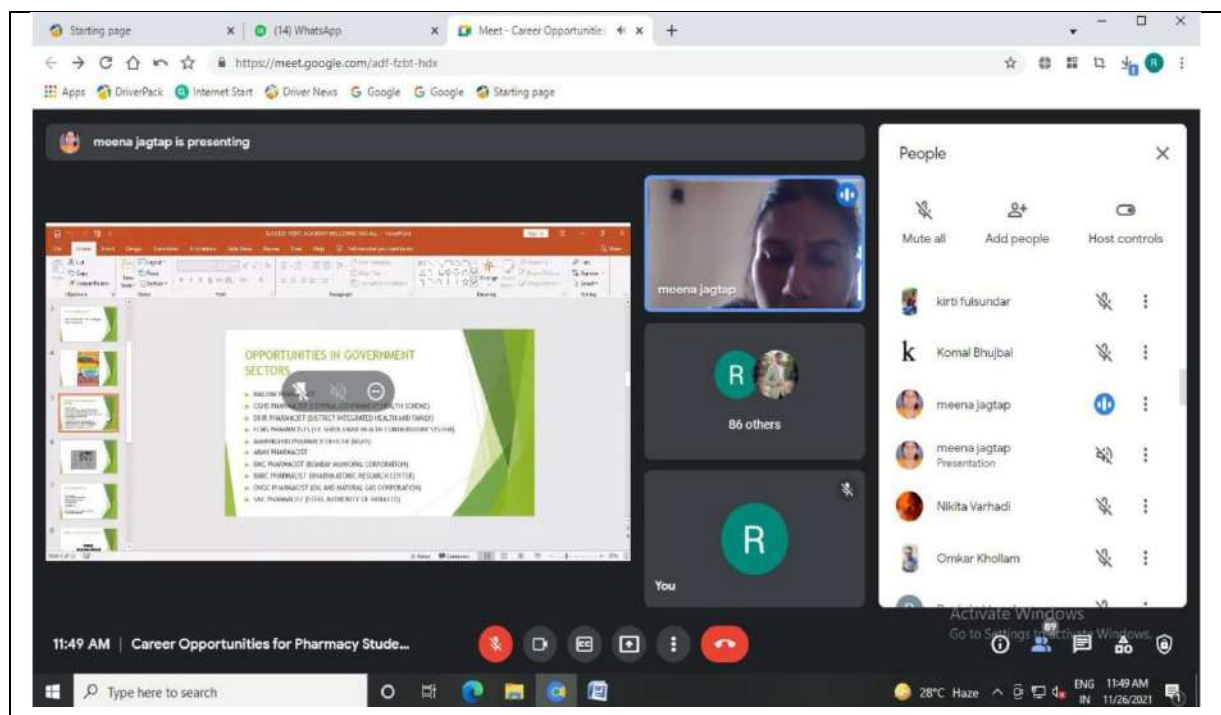
Strategy for GPAT & NIPER Preparation

Online session on “Strategy for GPAT & NIPER Preparation” was organized for our students. **Ms. Aishwarya Kashelkar, M.S (Pharm), Pharmacology and Toxicology, NIPER, Mohali**, conducted this informative session on 14/10/2021.




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Competitive Exams for Government Jobs	
DATE	26/11/2021
VENUE	Virtual meeting through Zoom
NAME OF RESOURCE PERSON	Prof. Meena Jagtap, Director, Success Point Academy, Satara.
NUMBER OF STUDENTS PARTICIPATED	86



Competitive Exams for Government Jobs

Online session on “Competitive Exams for Government Jobs” was conducted. Prof. Meena Jagtap, Director, Success Point Academy, Satara, Maharashtra, conducted this informative session on 26/11/2021.




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LIST OF GPAT QUALIFIED STUDENTS

Year	Registration number of Student	Name of Student
2021-22	MR01000572	Zinjad Shubham D.
	MR01000603	Bhandari Shubham B.
	MR22000482	Nilakh Shruti P.
	MR22002101	Said Rushikesh P.
	MR22000557	Vetal. Vikas U
2020-21	MR22002454	Neharkar Diksha Sitaram
	MR16000523	Shingote Tanvi Bharat
	MR22000769	Pashte Akshay Bhagwat
	MR22001220	Jarare Surabhi Sanjay
	MR22002275	Naikwadi Neha Dattatray
	MR22002792	Kute Payal Ramesh
	MR22001298	Gayatri Vijay Arde
	MR22001209	Gavhane Ashvini Kailas
	MR01000357	Varpe vrushali Dilip
	MR16000178	Gunjal Vaishnavi Shankar
	MR22001632	Gawari Pratiksha Rangnath
	MR01000198	Gadekar Gayatri Jaysing
	MR16000401	Namade Mayuri Bharat
	MR22000428	Said Pandurang Rushikesh
	MR22001395	Nilakh Shruti Parshuram
	MR01000418	Shubham Dattatray Zinjad
2019-20	MR2202102731	Akash Dashrath Ghode
	MR2202102653	Sodnar Babasaheb Bhiva
	MR0102100088	Lokhande Shushma Raosaheb
	MR2202103089	Gadge Shubham Chandrakant
	MR2202101113	Kurkute Aishwarya Santosh
	MR2202103421	Hase Akshay Popat
	MR2202100772	Sahane Priya Subhash

	MR2202102183	Jadhav Sayli Kachardas
	MR2802100254	Sable Dakshata Eknath
	MR2202101260	Bhutambre Vaishali Anil
	MR0102100271	Sumbre Shivani Vilas
	MR2202103195	Jadhav Nikhil Bhagwat
	MR0102100286	Pashte Akshay Bhagwat
	MR2202100776	Arde Gayatri Vijay
	MR1902101033	Bramhane Poonam Rajendra
2018-19	MR 11202657	Dangat Sonali Dattatraya
	MR 06200804	Bodke Nikita Nivrutti
	MR 06200704	Kadale Pratiksha Balu
2017-18	2151017310	Pingat Ashwini Rajendra
	2151017348	Alhat Vidya Nagesh




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Dr. S. L. Jadhav
Principal

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

INDEX

S. No.	Name of Documents
4.1	Sample Power Point presentation
4.2	Use of social media
4.3	Zoom Videoconferencing
4.4	Online e-resources
4.5	ICT Enabled Classrooms Photo
4.6	Use of Software



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4. ICT TOOLS

4.1. SAMPLE POWERPOINT PRESENTATION

FOOD SAFETY AND STANDARDS ACT, 2006

DR. Shankar M. Dhobale

FOOD

"Food" means a raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption, or chewing gum.

(Food and Drug Administration
1999 Food Code)



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FOOD



Eating food is a risky process



Innate Immunity and traditional culinary practices are major protective factors



FOOD SAFETY

- A suitable product which when consumed orally either by a human or an animal does not cause health risk to consumer.

OR

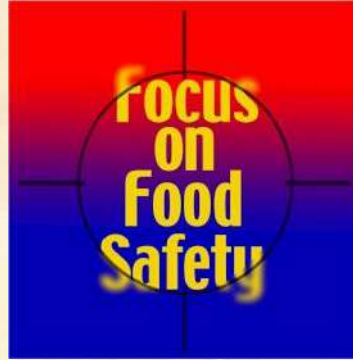
- Assurance that food will not cause harm to the consumer when it is prepared and/ or eaten according to its intended use.




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FOOD SAFETY: Why???

- Changing food habits
- Increased processing and handling
- Changing processes, products
- Globalization of food trade



FOOD SAFETY A Global Concern

- Acute diarrhoeal illness is very common worldwide and estimated to account for 1.8 million childhood deaths annually, predominantly in developing countries

(World Health Organization, 2005)




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CLIMATE CHANGE AND FOOD SAFETY

- Eco system changes lead to more pests, less predators, more vectors for microbes
- Unseasonal rains – humidity and fungal growth
- Flooding – water contamination- soil contamination- unsafe food
- Higher Ocean temperatures- algal blooms- harbour Vibrios in spore like forms- Novel strains' eg O139 Bengal
- Changes in aquatic life and formation of marine biotoxins in sea foods due to production of phytotoxins by harmful algae

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CLIMATE CHANGE AND FOOD SAFETY

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FOOD INDUSTRY

- India is the world's second largest producer of food next to China
- India is one of the worlds major food producers but accounts for less than 1.5 per cent of international food trade.
- This indicates vast scope for both investors and exporters.
- Food exports in 1998 stood at US \$5.8 billion whereas the world total was US \$438 billion.




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FOOD INDUSTRY

- The Indian food industries sales turnover is Rs 140,000 crore (1 crore = 10 million) annually as at the start of year 2000.
- The industry has the highest number of plants approved by the US Food and Drug Administration (FDA) outside the USA.

Pre FSSAI Scenario

- Multiple food laws
- Varied quality/safety standards
- Rigid and non responsive standards
- Poor information dissemination to consumers




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Pre FSSAI Scenario

- Nine different laws and eight different ministries governing the food sector
- Laws framed by different Ministries/Depts. With different perspective and enforcement approach
- Overlapping laws with different quality standards & labelling requirements



FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA

THE ACT.....

The Food Safety & Standards Act 2006 is Act to consolidate the laws relating to food and to establish the Food Safety and Standards Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage distribution, sale and import, to ensure availability of safe and wholesome food for human consumption and for matters connected therewith or incidental thereto.

Prevention of Food Adulteration Act, 1954

Fruit Products Order, 1955

Meat Food Products Order, 1973

Vegetable Oil Products (Control) Order, 1947

Edible Oils Packaging (Regulation) Order, 1988,

Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order, 1967

Milk and Milk Products Order, 1992

Any order under Essential Commodities Act, 1955 relating to food.




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FSSA



The PFA Act, 1954

EOP Order 1988

FPO 1995

MMPO 1992

MFPO 1973

VOP Order 1947

Solvent Extracted Oil,
De-oiled Meal and
Edible Flour (Control)
Order, 1967

FOOD SAFETY AND STANDARD ACT 2006

Chronology

Food Safety and Standards Act ,2006 -
passed by Indian Parliament and notified on
24th August, 2006

Authority Established- in Sept, 2008

FSS Regulations Notified -3rd August, 2011

New Act operationalised- 5th August,2011

All Food Business Operators in India to get
Licensed/Registered with Food Safety
Authority




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FOOD SAFETY LEGISLATION - the need.....

Issues with existing regulatory regime-

- Nine different laws and eight different ministries governing the food sector
- Laws framed by different Ministries/Depts. With different perspective and enforcement approach
- Overlapping laws with different quality standards & labelling requirements

Need for new law-

- Removal of multiple regulations
- Harmonizing with international law
- Framing regulatory requirements based on science and risk analysis
- Facilitating trade without compromising consumer safety and bringing in innovation in foods

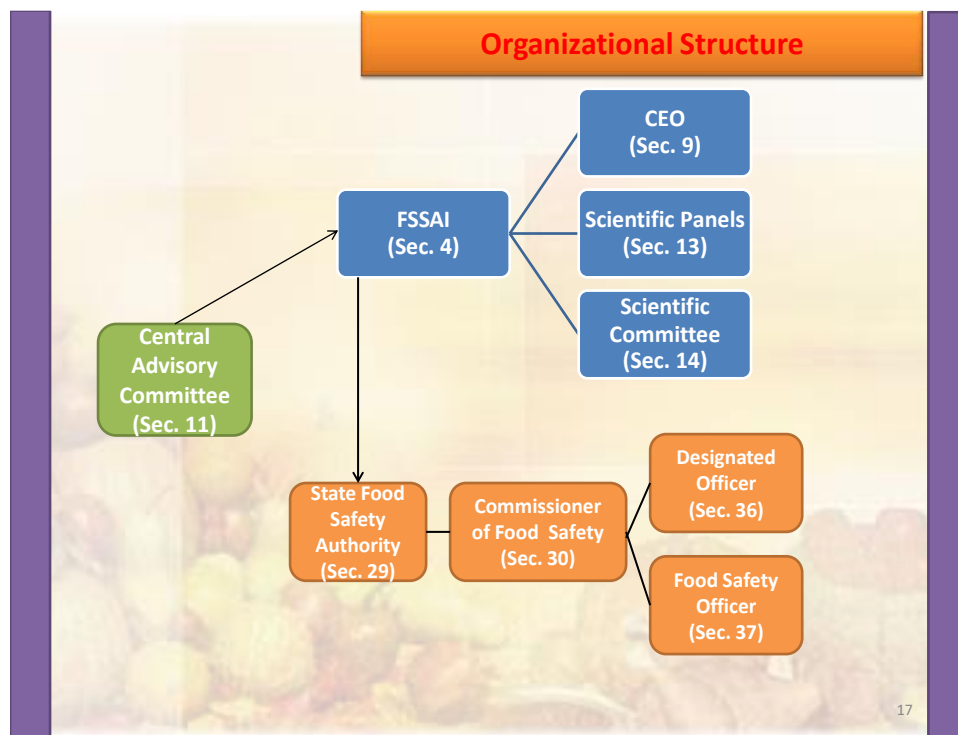
An Act to consolidate the laws relating to food and

to establish the Food Safety and Standards Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption and for matters connected therewith or incidental thereto.

August 24, 2006 came into effect.




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SALIENT FEATURE OF THE ACT.....

- ☐ To ensure that all food meets consumers' expectations in terms of nature, substance and quality and is not misleadingly presents;
- ☐ To provide legal powers and specify offences in relation to public health and consumers' interest;
- ☐ To shift from regulatory regime to self compliance through Food Safety Management system.
- ☐ Science based standards
- ☐ Proprietary food, novel food, GM food, dietary supplements, nutraceuticals etc brought into the ambit of the new act.




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SCOPE OF THE ACT.....

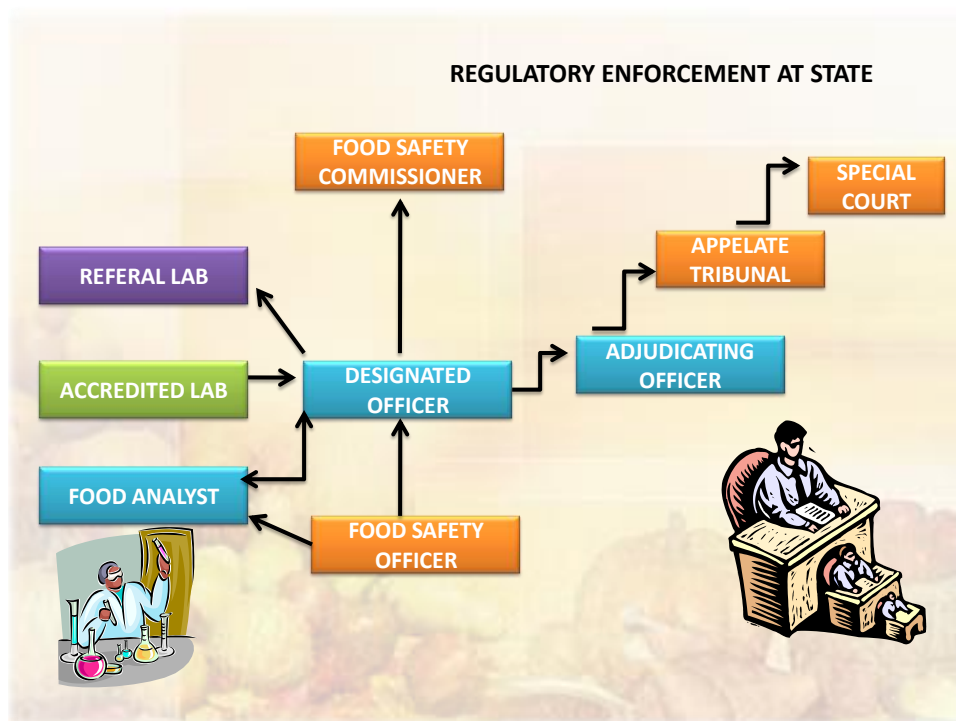
- ☐ The Act covers activities throughout the food distribution chain, from primary production through distribution to retail and catering.
- ☐ The Act gives the Government powers to make regulations on matters of food safety.
- ☐ The Food Safety & Standards Authority of India is the principal Government Authority responsible for preparing specific regulations under the Act.

FUNCTIONS OF AUTHORITY (SEC 16).....

- To regulate, monitor the manufacture, processing, distribution, sale and import of food to ensure its safety and wholesomeness.
- To specify standards, guidelines for food articles
- Limits for Food additives, contaminants, veterinary drugs, heavy metals, mycotoxin, irradiation of food, processing aids.
- Mechanisms & guidelines for accreditation of certification bodies engaged in FSMS certification
- Quality control of imported food
- Specify food labeling standards including claims on health, Nutrition, special dietary uses & food category systems
- Scientific advice and technical support to central / state governments




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FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA

ROLE OF STATE AS PER THE ACT....

ROLES & RESPONSIBILITIES OF FOOD SAFETY COMMISSIONER

- Prohibit in the interest of public health, the manufacture, storage, distribution, or sale of any article of food.
- Carry out survey/inspection of the food processing units in the state to find out compliance of prescribed standards.
- Conduct training programmes for the personnel engaged in food safety.
- Ensure efficient and uniform implementation of the standards and other requirements of food safety.
- Sanction prosecution for offences punishable with imprisonment under this Act.




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ROLE OF STATE AS PER THE ACT....

ROLES & RESPONSIBILITIES OF DESIGNATED OFFICER

- Issue or cancel license of Food Business Operator.
- Prohibit sale in contravention of this Act.
- Receive report and samples of articles of food from Food Safety Officer and get them analyzed.
- Make recommendation to the Commissioner of Food Safety for sanction to launch prosecutions
- Sanction prosecution
- Maintain record of all inspections made by Food Safety Officers
- Get complaints investigated in respect of any contravention of the provision of this Act or against FSO



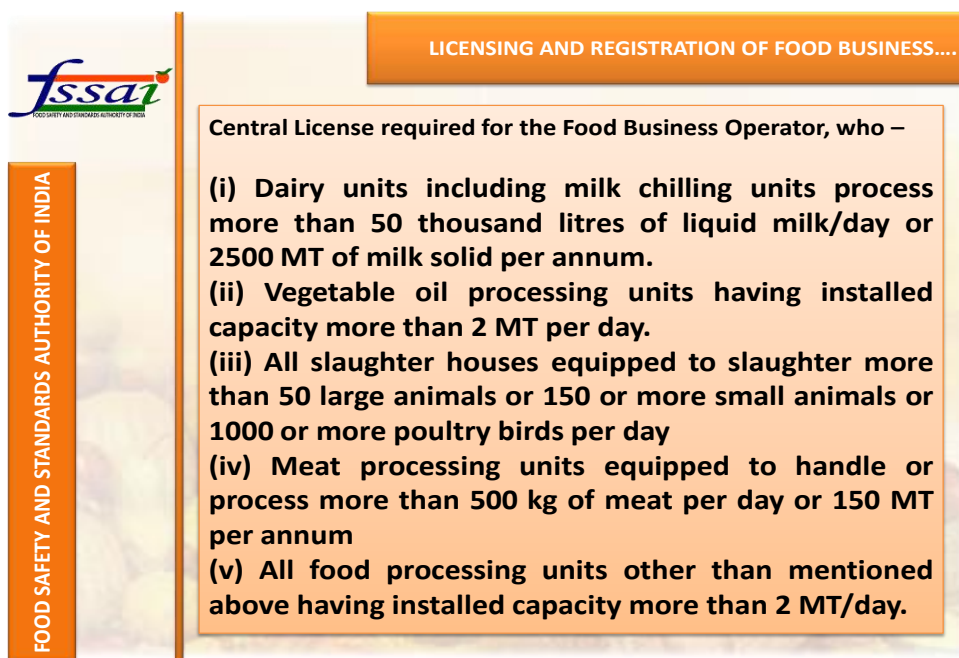
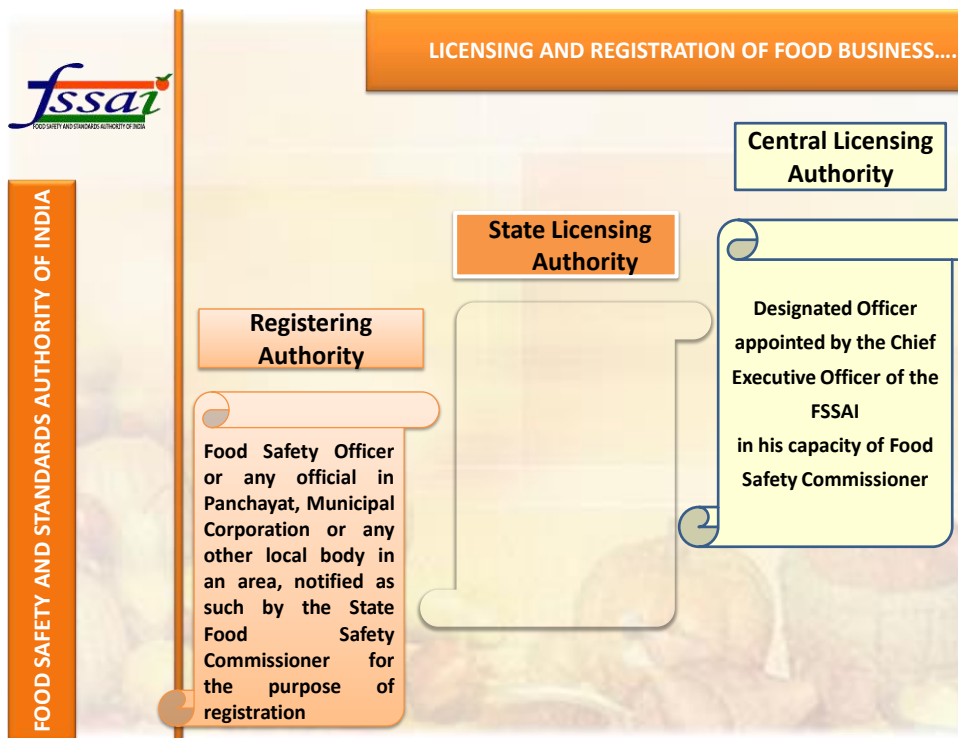
ENFORCEMENT OF PROVISIONS OF THE ACT....

- Article 31 lays down Licensing and Registration conditions which are compulsory for any food business.
- Any person desirous to commence or carry on any food business shall make an application to grant of a License to the Designated Officer alongwith fees.
- In case a license is not issued within two months from the date of making the application or his application is not rejected, the applicant may start his food business after expiry of the said period.
- The provision of obtaining a licence for carrying on any food business shall not apply to a petty retailer, hawker, itinerant vendor or a temporary stall holder or small scale or cottage or such other industries relating to food business or tiny Food Business Operator. **But they shall have Registration with the Designated Officer.**




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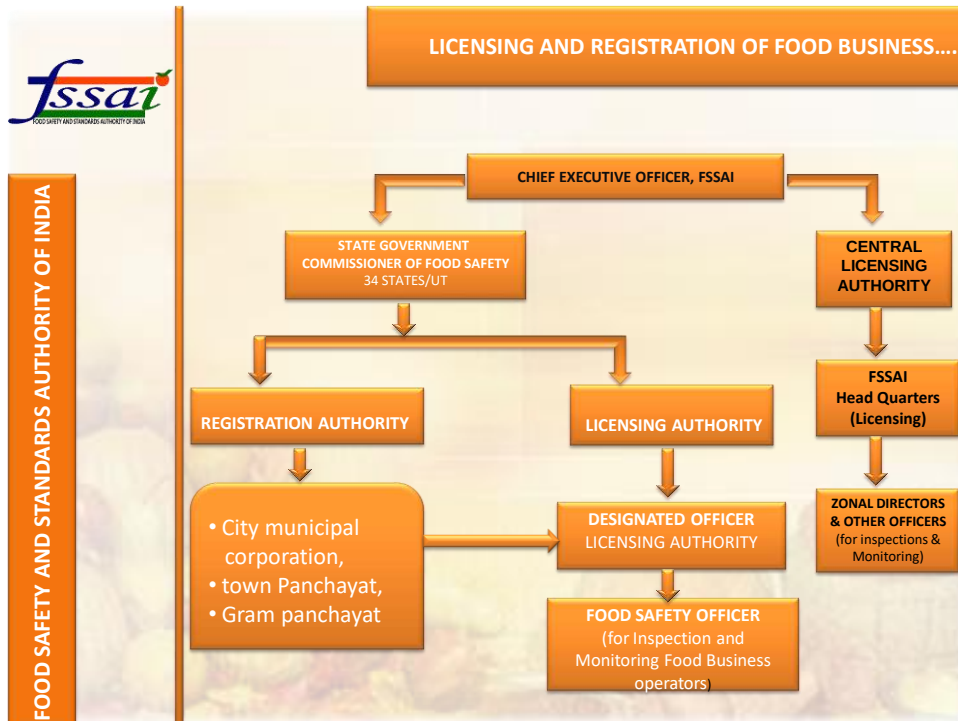


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LICENSING AND REGISTRATION OF FOOD BUSINESS....

Central License required for the Food Business Operator, who –

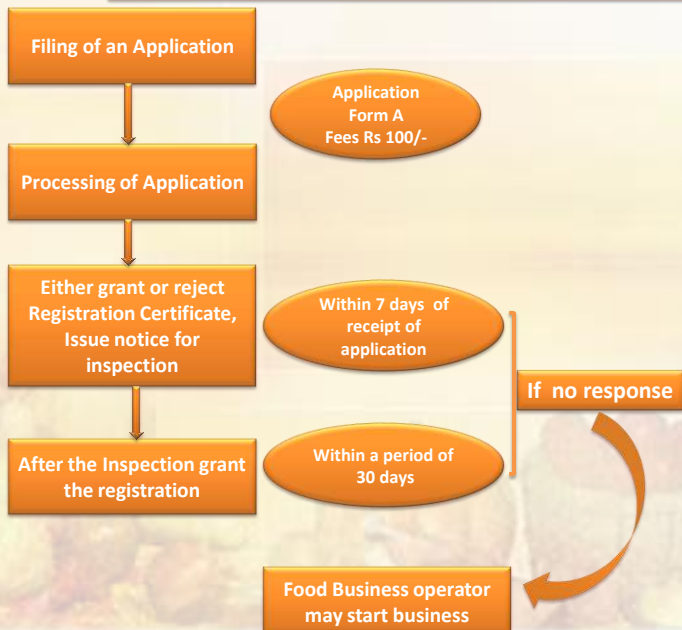
- (vi) 100 % Export Oriented Units
- (vii) All Importers importing food items for commercial use.
- (viii) All Food Business Operators manufacturing any article of Food which does not fall under any of the food categories prescribed under these regulations or deviates in any way from the prescribed specification for additives therein.
- (ix) Retail chains operating in three or more states.
- (x) Food catering services in establishments and units under Central government Agencies like Railways, Air and airport, Seaport, Defence etc.





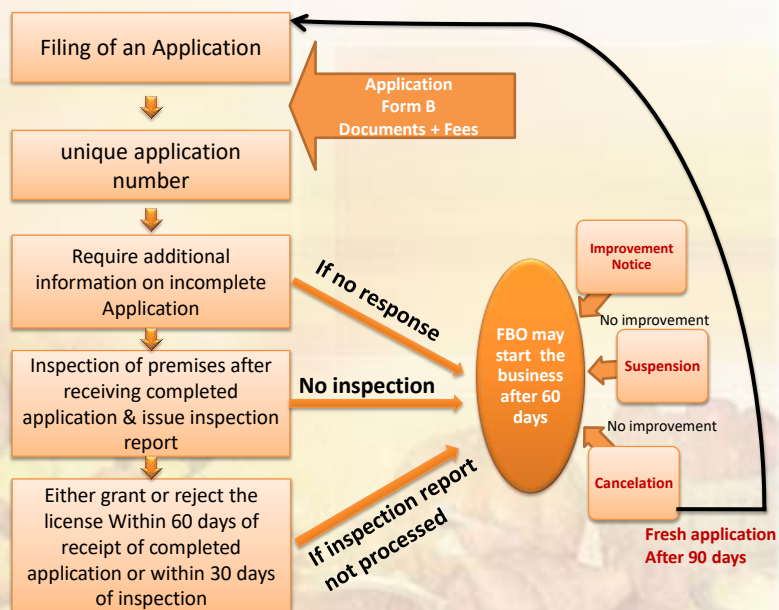
FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA

PROCEDURE FOR REGISTRATION OF FOOD BUSINESS....



FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA

PROCEDURE FOR LICENSING OF FOOD BUSINESS....




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ADJUDICATION AND FOOD SAFETY TRIBUNALS.....

ADJUDICATING
OFFICER

FOOD SAFETY
APPELLET
TRIBUNAL

SPECIAL
COURTS

ENFORCEMENT OF THE ACT.....

Adjudicating Officer of the State govt.

- ✚ To impose penalty for offences
- ✚ Shall have the powers of civil court



Central / State govt. to establish one or more tribunals to attend to appeals

- ✚ One member tribunal called Presiding Officer (District Judge)
- ✚ Power to establish special courts for expedient hearing for offences relating to grievous injury or death




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Offences:

- ❑ **Causing food to be injurious**
 - ❑ **Abstracting any constituent**
 - ❑ **Deliberate adulteration**
 - ❑ **Nonconformance in Label information etc.,**



Penalties:

- ❑ **Substandard food: Upto Rs. 2.00 lakhs**
- ❑ **Misbranded: Upto Rs. 3.00 lakhs**
- ❑ **Misleading advertisement : Upto Rs. 10.00 lakhs**
- ❑ **Food with extraneous matter: Upto Rs. 1.00 lakhs**
- ❑ **Fail to meet the requirements as directed by FSO: Upto Rs. 2.00 lakhs**
- ❑ **Unhygienic / unsanitary preparations: Upto Rs. 1.00 lakhs**
- ❑ **Adulterant not injurious to health: Upto Rs. 2.00 lakhs**
- ❑ **Adulterant injurious to health: Upto Rs. 10.00 lakhs**
- ❑ **Unsafe food – but does not cause immediate injury : 6 months imprisonment with fine of Rs.1.0 lakh**



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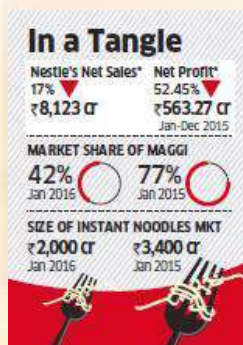
Penalties:

- ❑ Unsafe food causing non-grievous injury :
1 year imprisonment with fine of **Rs. 3.00 lakh**
Compensation in case for injury :
upto **Rs.1.00 lakh**
- ❑ Causing grievous injury : **6 years imprisonment** with
fine of **Rs. 5.00 lakh**
Compensation in case for grievous injury :
upto **Rs.3.00 lakh**
- ❑ Causing death : **7 years or life imprisonment**
and fine of **Rs. 10.00 lakh**
Compensation in case of death :
upto **Rs. 5.00 lakh** minimum



Maggi ban impact: Nestle India may take 3 years to recover

FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA



Read more at:

http://economictimes.indiatimes.com/articleshow/51114562.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cpps February 24, 2016



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4. ICT TOOLS

4.2. USE OF SOCIAL MEDIA

1. YOUTUBE:

YouTube Channel content - YouTube Studio

studio.youtube.com/channel/UCUif0gwwfjRrIV24nDyyQ/videos/upload?filter=%5B%5D&sort=%7B"columnType"%3A"date"%2C"sortOrder"%3A"DESCENDING"%7D

Studio Search across your channel

CREATE

Your channel
Dr. Gayatri Shankar Dhoobale

Dashboard

Content

Playlists

Analytics

Comments

Subtitles

Community

Settings

Send feedback

Videos Live

Filter

Video	Visibility	Restrictions	Date ↓	Views	Comments	Likes (vs. dislikes)
 SYNTHETIC SCHEMES FINAL Y.B. PH... SYNTHETIC SCHEMES FINAL Y.B. PHARM SEM - VIII MEDICINAL...	Public	None	07-Jun-2021 Published	557	0	100 1
 Diagnostic agents radio opaque diagnostic agents and agents for organ function tests thanks f...	Public	None	20-May-2021 Published	541	0	100 2 II
 phenytoin Synthesis: step 3:- Condens... Urea may be recognized as a structural unit in 5,5-diphenyl hydantoin and it...	Public	None	23-Mar-2021 Published	602	0	100 1
 Phenytoin Synthesis: Step 2:- Oxidatio... Reaction Equation: Required Items: Copper II-acetate Ammonium nitrate 80...	Public	None	23-Mar-2021 Published	558	0	100 2 II
 Preparation of 2-Iodobenzoic acid Synthesis. 2-Iodobenzoic acid can be synthesized via a Sandmeyer reaction...	Public	None	23-Mar-2021 Published	742	0	100 3 II



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2. FACEBOOK PAGE:

The screenshot shows a web browser displaying the Facebook page of the Vishal Institute of Pharmaceutical Education & Research. The browser's address bar shows the URL facebook.com/groups/niper. The Facebook interface includes a top navigation bar with the logo, search, and home icons, and a right-hand sidebar with user avatars and notification counts. The main content area features a large cover photo of the 'VISHAL JUNNAR EDUCATIONAL COMPLEX' building. Below the photo, the page title 'VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION & REASERCH ,ALE' is displayed, along with the group type 'Public group · 1.2K members'. On the left sidebar, there are sections for 'Groups' with a search bar, 'Your feed', 'Discover', 'Your notifications', and 'Groups you've joined' which lists 'Move out sale Pune - Buy and Sell Used Items' and 'Home Decor Central India - Ideas/Tips'. At the bottom of the browser window, a taskbar shows several open Excel files: 'SCAN 2.1.2 (1).docx', 'GENERAL_1__ADM...xls', 'TY 2020-21 (2018...xlsx', 'SY 2020-21 (2019...xlsx', and 'FY 2020-21 (2019...xlsx'.




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facebook.com/groups/niper/about

VISHAL INSTITUTE OF
PHARMACEUTICAL EDUCATION
& REASERCH ,ALE

Public group · 1.2K members

Joined + Invite

About Discussion Topics People Events Media

About this group

<http://www.vishaljunnaeducation.com/map.html>

Public
Anyone can see who's in the group and what they post.

Visible
Anyone can find this group.

General

Transparency

Groups you've joined

Move out sale Pune - Buy and Sell
Used Items
1 post for you

Home Decor Central India -
Ideas/Tips
1 post for you

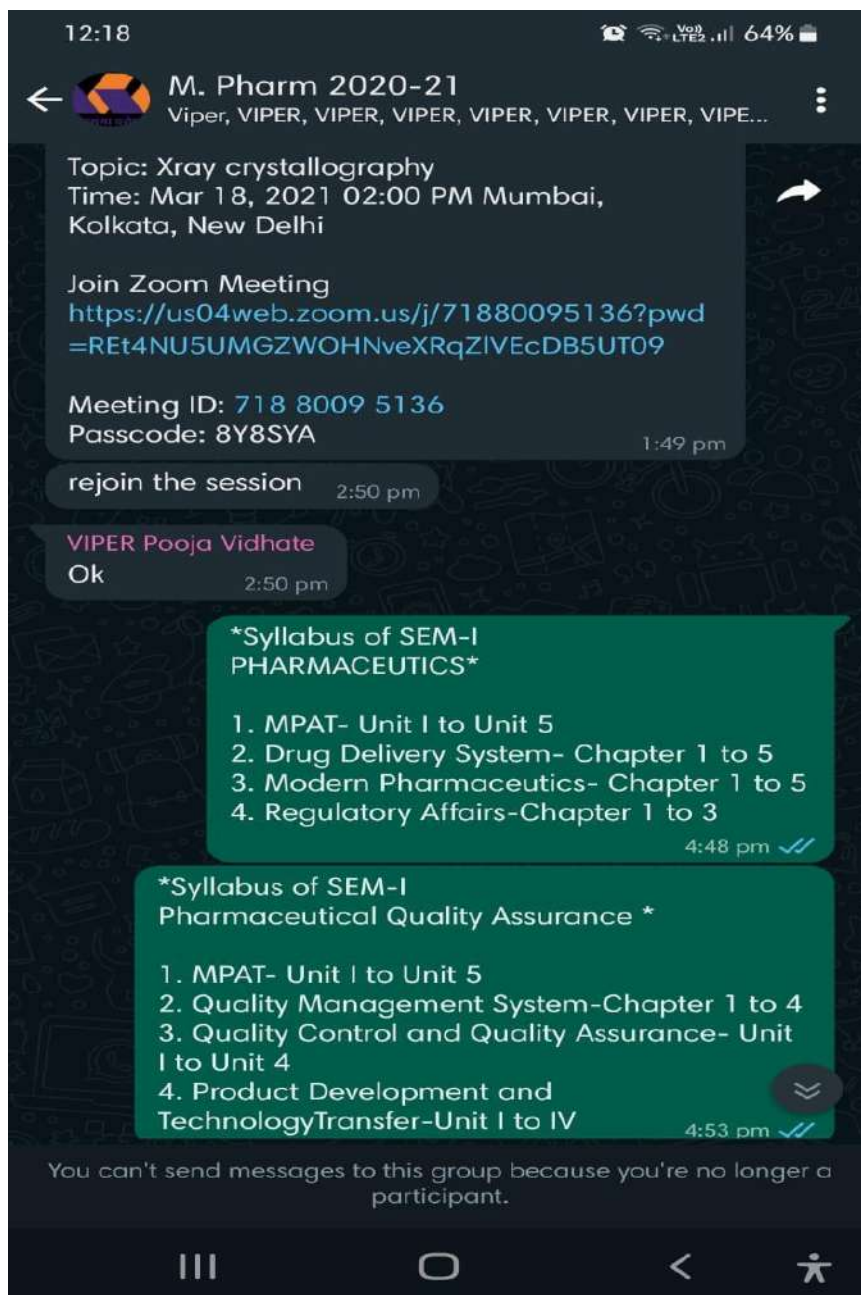
ॐ गौरी खरेदी आणि विक्री ग्रुप ॐ

SCAN 2.1.2 (1).docx GENERAL_1__ADM...xls TV 2020-21 (2018...xlsx SY 2020-21 (2019...xlsx FY 2020-21 (2019...xlsx Show all

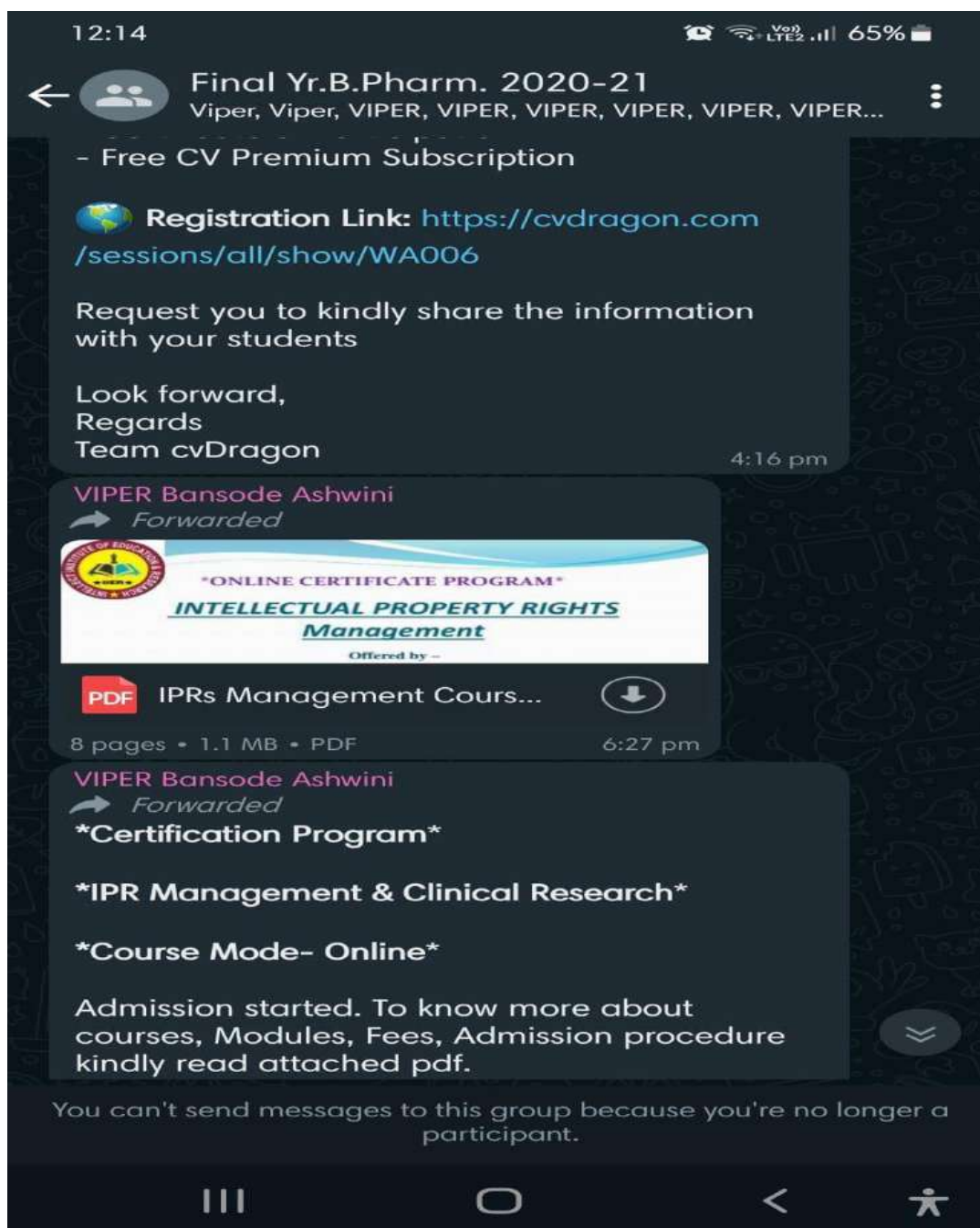


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3. WHATSAPP GROUP:




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VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION & RESEARCH

Dr. S. L. Jadhav
Principal

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P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

4. ICT TOOLS

4.3. ZOOM VIDEO CONFERENCING

Zoom Meeting 40-Minutes

You are viewing Sachin Shinde's screen

View Options

Participants (94)

Q. Find a participant

Ashwini Bansode (Me)

Sachin Shinde (Host)

01. Gayatri Arde

1A 16 Ashwini Govhane

1G 19 Priyanka Gargal

2R 29 Rutukesh Lad

35 Vikas Vetel

3Y-10 Yukta chavan

3Y-38 mohan dabhade

3Y-53 sonam dawkar

3Y-01 Aher Sanket

3A 3Y-03Pranjal Aher

3B 3Y-05 Bhandari Shubham

3B 3Y-07 Bombe Mayuri

Pre-Interview Preparation

- About the company
 - Research position, company, & industry
- Know yourself
 - You are muted. Press Alt+A to unmute your microphone, or press and hold the SPACE key to temporarily unmute.
 - Articulate your skills, accomplishments, and career goals
- Necessary materials
 - Copies of resume
 - References
 - Portfolio/pen
 - Any identity proof

Unmute Start Video Participants Chat Share Screen Record Reactions Leave

11:24 AM 10/05/2021



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Meet - apm-nkov-tyt

meet.google.com/apm-nkov-tyt

Apps http://www.google... Twoo - Meet new p... 4 dc1494shared.com... www.unipune.ac.in/... Gmail YouTube Maps

Reading list

MANSI MALI SKK Favs Prajakt Kurkute Payal Batwal gaurav mundhe sonam dawkar Pratika Kora... Aher Suvarna DIVYA WAYKAR

Harshada Vhan... Rutuja Thorat SAURABH KAN... saurabh raut dhanesh kokate Ashwini Magar divya maluskar AKASH Dhanga... pratiksha desh...

Shraddha Tonpe Sanika Gavit sakshi khilari prathmesh alhat Shraddha Shar... PRANITA HADA... arati gadge Pratiksha Hind... Priyanka Pukale

Punam Bhandari Komal Bhujbal Darshan Adaki divya argade Raju Jadhav Vrushali Aher aditi bodke 24 others You

15:58 | Introduction to Clinical Research& Its Scope

3:58 PM 16/09/2021

Meet - apm-nkov-tyt

meet.google.com/apm-nkov-tyt

SKK Favs is presenting

Advantages In India

- ✓ Numerous government-funded medical and pharmaceutical institutions
- ✓ Well-trained and qualified manpower, well versed in English
- ✓ Cost to conduct a trial here is lower by 50 to 75 percent than in United States or European Union.
- ✓ Large and diverse patient's pool & treatment naïve patient population for conducting clinical trials.
- ✓ Availability of Medical, Pharmacy and Science graduates
- ✓ Excellent infrastructure facilities

15:55 | Introduction to Clinical Research & Its Scope

3:55 PM 16/09/2021



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Dr. S. L. Jadhav
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4. ICT TOOLS

4.4. ONLINE E-SOURCES

K-Hub Software:

https://k-hub.in/NewResources.aspx?id=2

Welcome VISHAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH

Knowledge Hub: A Virtual Library

A product of Infotrack Library Solutions

COVID-19: Find the latest articles and resources here.

Search for Articles, Keywords and other resources

EXACT MATCH SEARCH SIMILAR OLIP MEDICAL

Subscribed Subjects

- PHARMACY
- THE LIBRARY & INFORMATION SCIENCES
- ALL (3321)
- Books (1341)
- Case Reports (4)
- Magazines (1)
- Journals (1068)
- Newspapers (8)
- Conference Proceedings (1)

Recently Added

- AMERICAN VISION AND EYE HEALTH: eJournal
- BLOOD GLUCOSE & RESISTANCE IN MISTY
- DIETARY & MEDICAL CARE FOR EYE

54J7+7F4, Ale, Maharashtra 412411, India

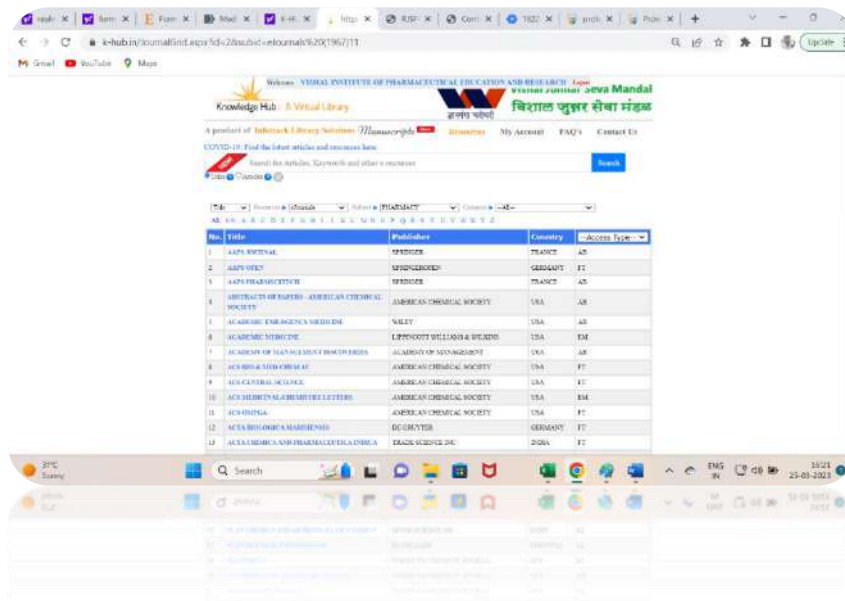
11 Feb 2022, 16:19 PM

Clouds 1.1 °C 34.1 °F




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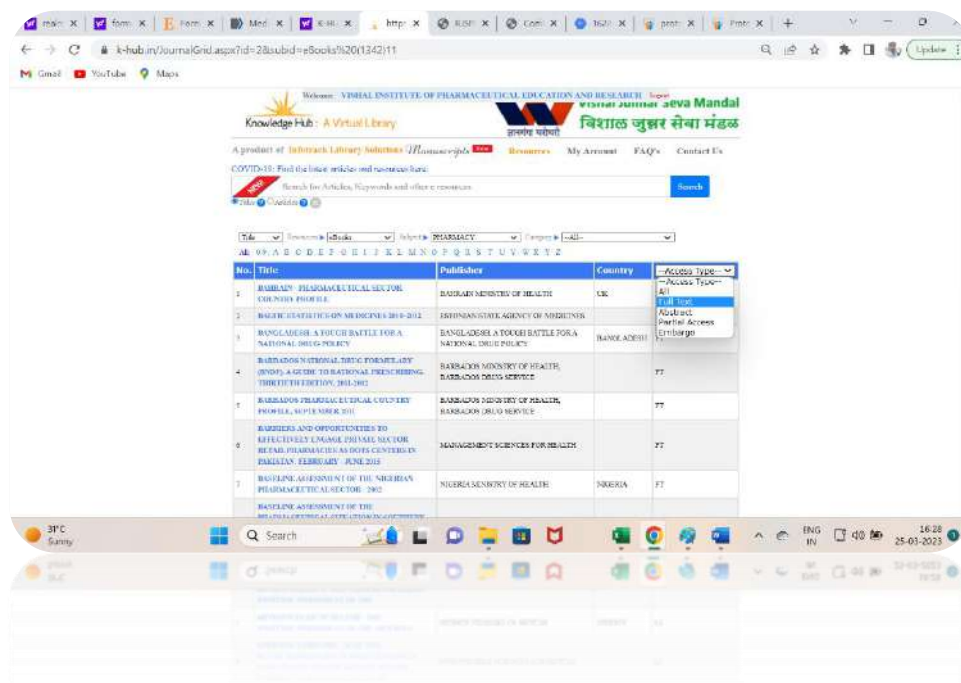
List of Pharmacy Journals Available Online



The screenshot shows the website of Vishal Institute of Pharmaceutical Education and Research. The page displays a list of pharmacy journals available online. The table below is a representation of the data shown on the website.

No.	Title	Publisher	Country	Access Type
1	JAPR JOURNAL	SPRINGER	FRANCE	AS
2	JAPR JET	SPRINGER	GERMANY	FT
3	JAPR PHARMACEUTICAL	SPRINGER	FRANCE	AS
4	ABSTRACTS OF PAPERS - AMERICAN CHEMICAL SOCIETY	AMERICAN CHEMICAL SOCIETY	USA	AS
5	ACADEMIC EMERGENCY MEDICINE	WILEY	USA	AS
6	ACADEMIC MEDICINE	LEIPPSWORTH WILLIAMS & WILKINS	USA	EM
7	ACADEMY OF PHARMACEUTICAL SCIENCES	ACADEMY OF PHARMACEUTICAL SCIENCES	USA	AS
8	ACR JOURNAL	AMERICAN CHEMICAL SOCIETY	USA	FT
9	ACR JOURNAL	AMERICAN CHEMICAL SOCIETY	USA	FT
10	ACR JOURNAL	AMERICAN CHEMICAL SOCIETY	USA	EM
11	ACR JOURNAL	AMERICAN CHEMICAL SOCIETY	USA	FT
12	ACR JOURNAL	AMERICAN CHEMICAL SOCIETY	USA	FT
13	ACR JOURNAL	AMERICAN CHEMICAL SOCIETY	USA	FT

List of Pharmacy e-Books Available Online



The screenshot shows the website of Vishal Institute of Pharmaceutical Education and Research. The page displays a list of pharmacy e-books available online. The table below is a representation of the data shown on the website.

No.	Title	Publisher	Country	Access Type
1	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text
2	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text
3	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text
4	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text
5	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text
6	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text
7	BARBADOS PHARMACEUTICAL ACT FOR COORDINATED PHARMACY	BARBADOS MINISTRY OF HEALTH	BARBADOS	Full Text



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List of Pharmacy e-Books Available Online

The screenshot shows the website of Vishal Institute of Pharmaceutical Education & Research. The header includes the institute's name in English and Marathi, along with the founder's name, Dr. Seva Mandal. Below the header, there is a search bar and a list of e-books available online. The list is organized into columns: No., Title, Publisher, Country, and e-Book Type.

No.	Title	Publisher	Country	e-Book Type
1	ESSENTIALS OF PHARMACOLOGY	ELSEVIER - SCIENCE DIRECT	USA	PDF
2	HISTORY OF PHARMACEUTICAL ANALYSIS	ELSEVIER - SCIENCE DIRECT	USA	PDF
3	HISTORICAL	ELSEVIER - SCIENCE DIRECT	USA	PDF
4	RESEARCH AND DEVELOPMENT OF PHARMACEUTICALS	ELSEVIER - SCIENCE DIRECT	USA	PDF
5	PHARMACEUTICAL JOURNAL	ELSEVIER - SCIENCE DIRECT	USA	PDF
6	TOXICOLOGY REPORTS	ELSEVIER - SCIENCE DIRECT	USA	PDF

The screenshot shows the Online e-Resource Requisition System interface. The header includes the system's name and the institute's name. Below the header, there is a login section with a text box for the username and a button for the password. The main content area displays the institute's profile, including the name, address, and contact information. A message box indicates that the Global Static IP Range is not found and requests the user to enter the Global Static IP Range. The footer shows the system's status, including the number of users and the security level.

Welcome Vishal Junnar Seva Mandals Vishal Institute of Pharmaceutical Education & Research, Ale, Tal. Junnar, Dist. Pune 412411

Global Static IP Range not found
Institute is requested to enter Global Static IP Range. After entering Global Static IP range, you are allowed to access other information.

Vishal Junnar Seva Mandals Vishal Institute of Pharmaceutical Education & Research, Ale, Tal. Junnar, Dist. Pune 412411

User Details:
Source: asha (2019-20)
No. of FTE / Users: 378 (25 Security) + 297 (25 Security)




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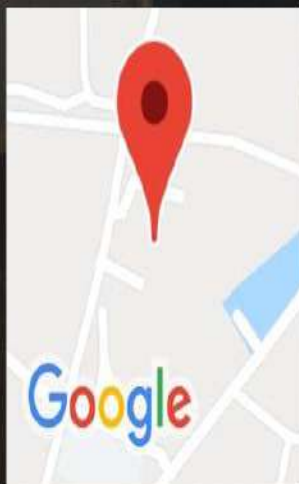
Dr. S. L. Jadhav
Principal

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4. ICT TOOLS

4.5. ICT ENABLED CLASSROOMS




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Dr. S. L. Jadhav
Principal

Ale, Tal. Junnar, Dist. Pune-412411 | Contact No. : 9892376014 | E-mail : vjrm.principal@gmail.com | Website: www.viperale.com

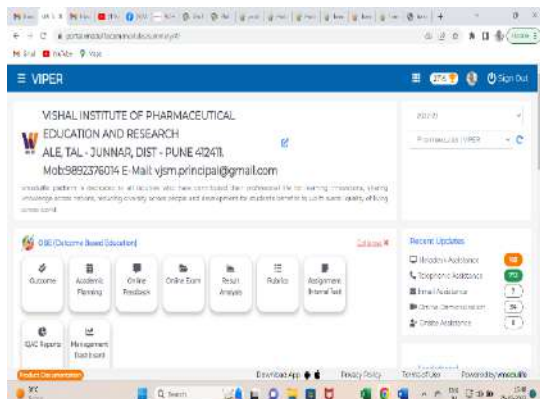
P.C.I. Inst. Code : PCI-2620 | D.T.E. Inst. Code : 6361 | University I.D. No. : CPHP012670

4. ICT TOOLS

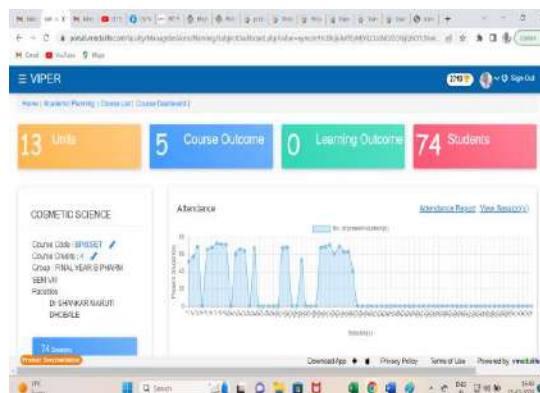
4.6. USE OF SOFTWARE:

VMEDULIFE SOFTWARE

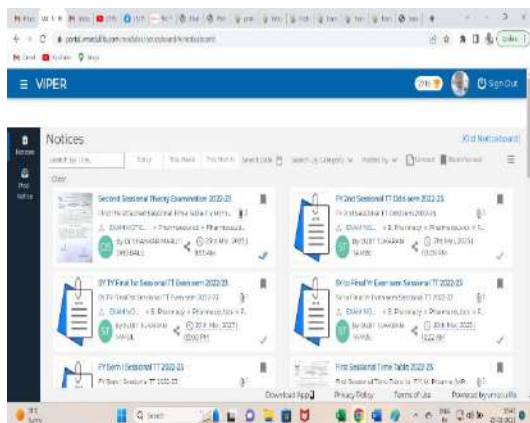
HOME PAGE:



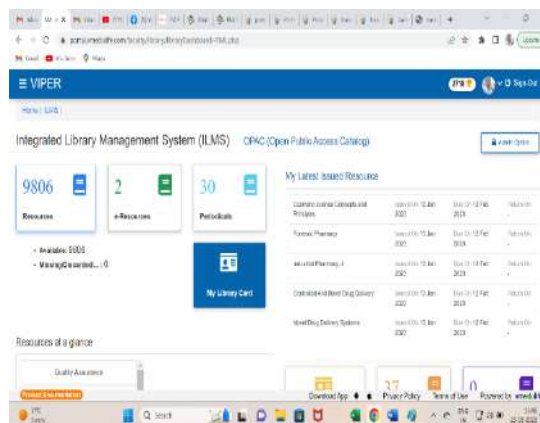
ACADEMIC PLANNING:



NOTICE BOARD:

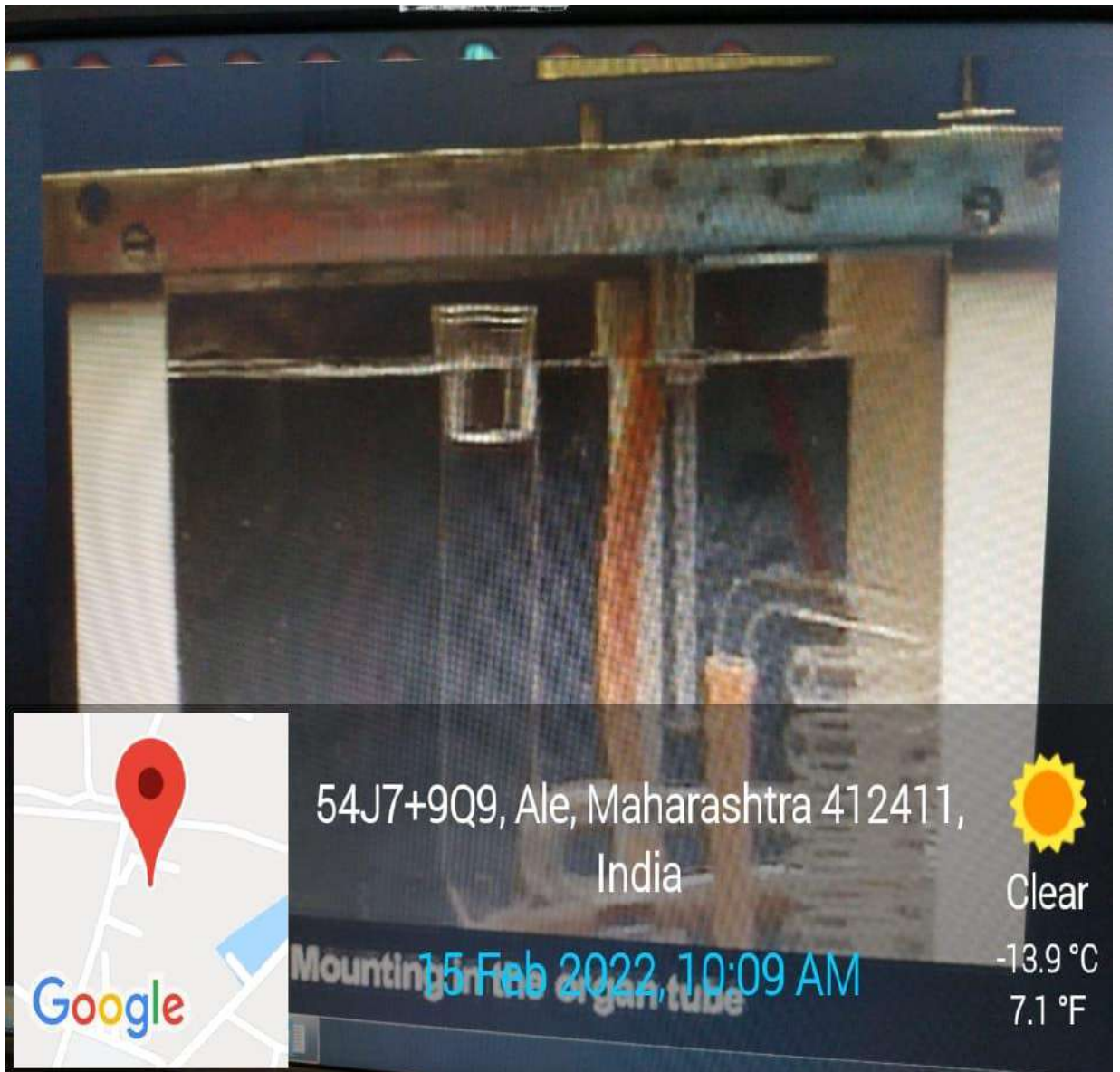


LIBRARY:

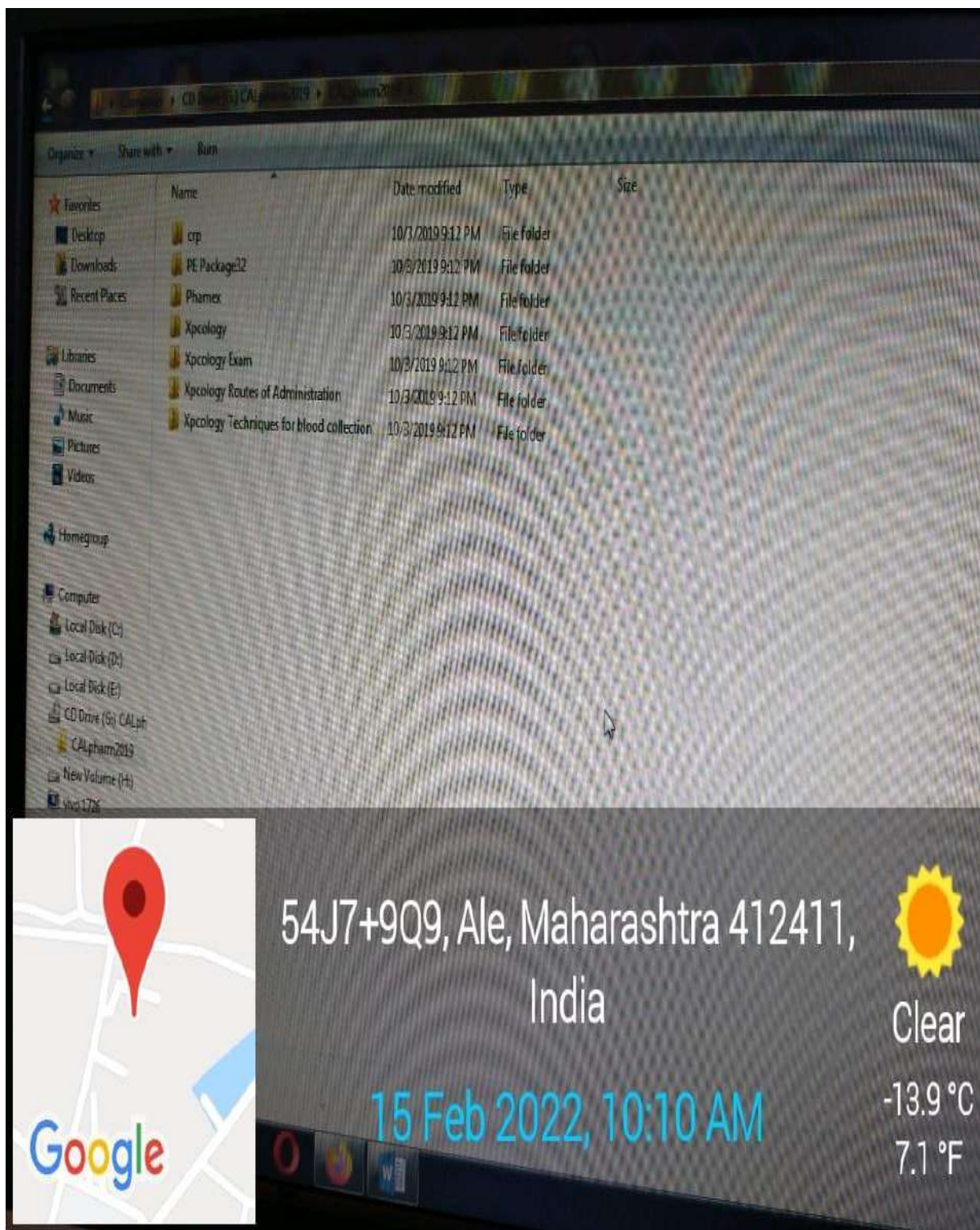


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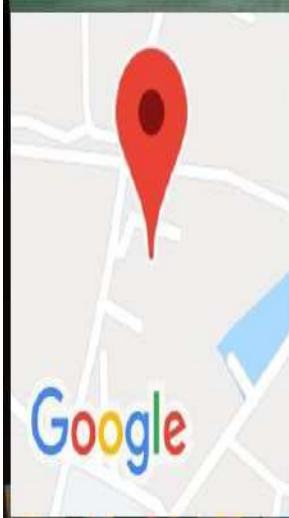
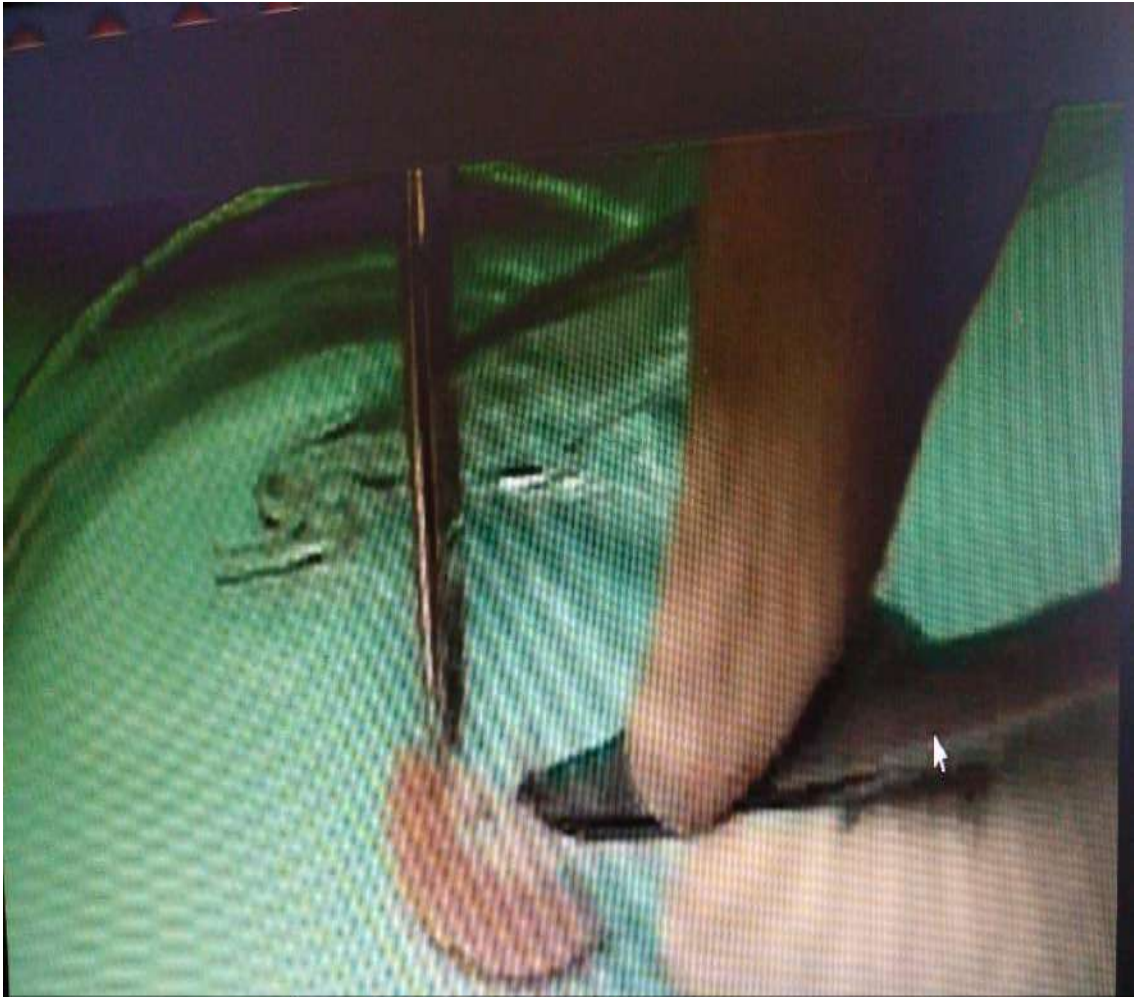
FOR ANIMAL EXPERIMENTATION



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54J7+9Q9, Ale, Maharashtra 412411,
India



Clear

-13.9 °C

7.1 °F

15 Feb 2022, 10:08 AM

removal of mesenteric attachment




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