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Aditya Nagar, ADB Road, Surampalem – 533437, Kakinada Dist., A.P., INDIA.

B - PHARMACY

S. NO	SUBJECT / CODE	NAME OF THE SUBJECT TITLE					
1	BP601 T	MEDICINAL CHEMISTRY -III (THEORY)	1				
2	BP 809 ET	COSMETIC SCIENCE (THEORY)	7				
3	BP 808 ET	CELL AND MOLECULAR BIOLOGY (ELECTIVE SUBJECT)	12				
4	BP 810 ET	MEDICINAL CHEMISTRY -III (THEORY) COSMETIC SCIENCE (THEORY)					
5	BP 507 P	PHARMACOLOGY – II (PRACTICAL)					
6	BP811 ET	ADVANCED INSTRUMENTATION TECHNIQUES					
7	BP 606 T	606 T PHARMACEUTICAL QUALITY ASSURANCE (THEORY)					
8	BP 812 ET	312 ET DIETARY SUPPLIMENTS AND NUTRACEUTIGALS					
9	BP 506 P	BP 506 P INDUSTRIAL PHARMACY – I (PRACTICAL)					
10	BP 704 T	P 506 P INDUSTRIAL PHARMACY – I (PRACTICAL) P 704 T NOVEL DRUG DELIVERY SYSTEMS (THEORY)					
11	BP607 P MEDICINAL CHEMISTRY -III (PRACTICAL)						
12	BP405 T PHARMACOGNOSY AND PHYTOCHEMISTRY –I (THEORY)						
13	BP 307 P	BP 307 P PHARMACEUTICAL MICROBIOLOGY (PRACTICAL)					
14	BP 609 P	P HERBAL DRUG TECHNOLOGY (PRACTICAL)					
15	BP 111P	COMMUNICATION SKILLS (PRACTICAL)					
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Formerly known as Aditya Institute of Pharmaceutical Sciences & Research)

(An AUTONOMOUS Institution)

• Approved by PCI, New Delhi • Accredited by NAAC "A"Grade

• Permanently Affiliated to JNTUK, Kakinada

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M.PHARMACY

	SUBJECT / CODE	NAME OF THE SUBJECT TITLE	Pg. No
S.NO	CODE		
37	MPH 102 T	DRUG DELIVERY SYSTEMS	198
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PHARM -D

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	CODE		
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BP601T. MEDICINAL CHEMISTRY - III (Theory)

45 Hours

Scope: This subject is designed to impart fundamental knowledge on the structure, chemistry and therapeutic value of drugs. The subject emphasis on modern techniques of rational drug design like quantitative structure activity relationship (QSAR), Prodrug concept, combinatorial chemistry and Computer aided drug design (CADD). The subject also emphasizes on the chemistry, mechanism of action, metabolism, adverse effects, Structure Activity Relationships (SAR), therapeutic uses and synthesis of important drugs.

Objectives: Upon completion of the course student shall be able to

- Understand the importance of drug design and different techniques of drug design.
- 2. Understand the chemistry of drugs with respect to their biological activity.
- 3. Know the metabolism, adverse effects and therapeutic value of drugs.
- 4. Know the importance of SAR of drugs.

Course Content:

Study of the development of the following classes of drugs, Classification, mechanism of action, uses of drugs mentioned in the course, Structure activity relationship of selective class of drugs as specified in the course and synthesis of drugs superscripted by (*)

UNIT-I

10 Hours

Antibiotics

Historical background, Nomenclature, Stereochemistry, Structure activity relationship, Chemical degradation classification and important products of the following classes.

β-Lactam antibiotics: Penicillin, Cepholosporins, β- Lactamase inhibitors, Monobactams,

Aminoglycosides: Streptomycin, Neomycin, Kanamycin

Tetracyclines: Tetracycline,Oxytetracycline, Chlortetracycline, Minocycline, Doxycycline

UNIT - II

10 Hours

Antibiotics

Historical background, Nomenclature, Stereochemistry, Structure activity relationship, Chemical degradation classification and important products of the following classes.

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Aditya Pharmacy College SURAMPALEM-533 437 Macrolide: Erythromycin Clarithromycin, Azithromycin.

Miscellaneous: Chloramphenicol*, Clindamycin.

Prodrugs: Basic concepts and application of prodrugs design.

Antimalarials: Etiology of malaria.

Quinolines: SAR, Quinine sulphate, Chloroquine*, Amodiaquine, Primaquine phosphate, Pamaquine*, Quinacrine hydrochloride, Mefloquine.

Biguanides and dihydro triazines: Cycloguanil pamoate, Proguanil.

Miscellaneous: Pyrimethamine, Artesunete, Artemether, Atovoquone.

UNIT - III

10 Hours

Anti-tubercular Agents

Synthetic anti tubercular agents: Isoniozid*, Ethionamide, Ethambutol, Pyrazinamide, Para amino salicylic acid.*

Anti tubercular antibiotics: Rifampicin, Rifabutin, Cycloserine Streptomycine, Capreomycin sulphate.

Urinary tract anti-infective agents

Quinolones: SAR of quinolones, Nalidixic Acid, Norfloxacin, Enoxacin, Ciprofloxacin*, Ofloxacin, Lomefloxacin, Sparfloxacin, Gatifloxacin, Moxifloxacin

Miscellaneous: Furazolidine, Nitrofurantoin*, Methanamine.

Antiviral agents:

Amantadine hydrochloride, Rimantadine hydrochloride, Idoxuridine trifluoride, Acyclovir*, Gancyclovir, Zidovudine, Didanosine, Zalcitabine, Lamivudine, Loviride, Delavirding, Ribavirin, Saquinavir, Indinavir, Ritonavir.

UNIT - IV 08 Hours

Antifungal agents:

Antifungal antibiotics: Amphotericin-B, Nystatin, Natamycin, Griseofulvin.

Synthetic Antifungal agents: Clotrimazole, Econazole, Butoconazole, Oxiconazole Tioconozole, Miconazole*, Ketoconazole, Terconazole, Itraconazole, Fluconazole, Nattifine hydrochloride, Tolnaftate*.

Anti-protozoal Agents: Metronidazole*, Tinidazole, Ornidazole, Diloxanide, Iodoquinol, Pentamidine Isethionate, Atovaquone, Eflornithine.

Anthelmintics: Diethylcarbamazine citrate*, Thiabendazole, Mebendazole*, Albendazole, Niclosamide, Oxamniquine, Praziquantal, Ivermectin.

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Aditya Pharmacy College SURAMPALEM-533 437

"FORMULATION AND EVALUATION OF METRONIDAZOLE FAST DISSOLVING TABLETS"

Dissertation submitted to the JNTU-K University in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy.

(2019-2023)



Jawaharlal Nehru Technological University,

Kakinada, A.P

BY:

PALIVELA SAHITHI (193G1R0073) PAMPANA PRASANNA VENI (193G1R0074) PANDRANGI SATYA LAKSHMI (193G1R0075)

PRASENJIT SARKAR (193G1R0076) PRATIM BHATTACHERJEE (193G1R0077)

Under the guidance of,

T. Uday Kumar M.Pharm,PhD

Associate. Professor

Department of Pharmaceutical Technology

Aditya Pharmacy College

Surrampalem-533437

2019-2023





CERTIFICATE



dissertation entitled "FORMULATION the that certify AND EVALUATION OF METRONIDAZOLE FAST DISSOLVING TABLETS", is to This submitted to the JNTU-K University, Kakinada, in partial fulfilment of the requirements for the award of the degree of Bachelor of Pharmacy is a record of original research work carried out by Palivela Sahithi (193G1R0073), Veni(193G1R0074), Pandrangi Prasanna Pampana Lakshmi(193G1R0075), Prasenjit sarkar(193G1R0076), Pratim Bhattacherjee 193G1R0077) under the supervision of T. Uday Kumar and it has been previously not submitted to any other University of Academic Institution for any higher degree.

Place: Surampalem

Date:

Aditya Pharmacy College SURAMPALEM-533 437

Dr. D. SATHIS KUMAR, M. Pharm, Ph. D

Principal and Professor,

Aditya Pharmacy College

Internal Examiner

External Examinerditya P

PRINCIPAL Pharmacy





CERTIFICATE BY THE GUIDE



I hereby declare that this dissertation entitled "Formulation and Evaluation of Metronidazole Fast Dissolving Tablets", is a original research work carried out by Palivela Sahithi(193G1R0073), Pampana Prasanna Veni(193G1R0074), Pandrangi Satya Lakshmi(193G1R0075), Prasenjit sarkar(193G1R0076), Pratim Bhattacherjee(193G1R0077) under my supervision in partial fulfilment of the requirement for the degree of Bachelor of Pharmacy.

T. udayastamer.

T.Uday kumar M.Pharm,Ph.D

Associate. Professor

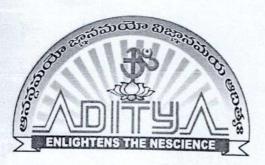
Department of Pharmaceutical Technology

Aditya Pharmacy College

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DECLARATION



The project embodied in this thesis entitled "Formulation and Evaluation of Metronidazole Fast Dissolving Tablets", was carried out in the Department of Pharmaceutics under the guidance of T. Kumar, M. Pharm, Ph.D, Aditya Pharmacy College, Uday Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

PALIVELA SAHITHI (193G1R0073) P. Salitlii

AMPANA PRASANNA VENI(193G1R0074) P. Roccocunto

ANDRANGI SATYA LAKSHMI(193G1R0075) P. Satya

RASENJIT SARKAR (193G1R0076) Praventit Sauteur

RATIM BHATTACHERJEE(193G1R0077) Perchy Prochoga Aditya



BP809ET. COSMETIC SCIENCE(Theory)

45Hours

UNIT I

10Hours

Classification of cosmetic and cosmeceutical products

Definition of cosmetics as per Indian and EU regulations, Evolution of cosmeceuticals from cosmetics, cosmetics as quasi and OTC drugs

Cosmetic excipients: Surfactants, rheology modifiers, humectants, emollients,

preservatives. Classification and application

Skin: Basic structure and function of skin.

Hair: Basic structure of hair. Hair growth cycle.

Oral Cavity: Common problem associated with teeth and gums.

UNIT II

10 Hours

Principles of formulation and building blocks of skin care products: Face wash.

Moisturizing cream, Cold Cream, Vanishing cream and their advantages and disadvantages. Application of these products in formulation of cosmecuticals.

Antiperspants & deodorants- Actives & mechanism of action.

Principles of formulation and building blocks of Hair care products:

Conditioning shampoo, Hair conditioner, anti-dandruff shampoo.

Hair oils.

Chemistry and formulation of Para-phylene diamine based hair dye.
Principles of formulation and building blocks of oral care products:
Toothpaste for bleeding gums, sensitive teeth. Teeth whitening, Mouthwash.

UNIT III

10 Hours

Sun protection, Classification of Sunscreens and SPF.

Role of herbs in cosmetics:

Skin Care: Aloe and turmeric

Hair care: Henna and amla.

Oral care: Neem and clove

Analytical cosmetics: BIS specification and analytical methods for shampoo, skincream and toothpaste.

UNIT IV

08 Hours.

Principles of Cosmetic Evaluation:Principles of sebumeter, corneometer. Measurement of TEWL, Skin Color, Hair tensile strength, Hair combing properties Soaps, and syndet bars. Evolution and skin benfits.



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"FORMULATION AND EVALUATION OF SITAGLIPTIN SUSTAINED RELEASE TABLETS"

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy (2023)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA BACHELOR OF PHARMACY

SUBMITTED BY

BHEEMIREDDI RAJANI (193G1R0014) BIBEKANAND CHAUDHARY (193G1R0015) BIKKINA VENKATA DURGA DEVI (193G1R0016) BOKKA NAGA SRAVYA (193G1R0017) CHAJEN GATLUAK DENG (193G1R0019)

UNDER THE GUIDANCE OF

Mr. S. NOOKA RAJU, M. Pharm. Assistant professor **Department of Pharmaceutics**



ADITYA PHARMACY COLLEGE

Surampalem - 533437 2022-2023

Aditya Pharmacy Colleg

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PHARMACY COLLEGE

Approved by AICTE, PCI and affiliated to JNT University, Kakinada Aditya Nagar, ADB Road, Surampalem, E.G. Dist., A.P pin:533437

CERTIFICATE

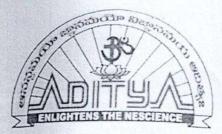
This is to certify that the dissertation entitled "FORMULATION AND EVALUATION OF SITAGLIPTIN SUSTAINED RELEASED TABLETS" submitted to the JNT University, Kakinada in partial fulfillment of the requirements for the award of the degree of Bachelor of pharmacy is a record of original research work carried out by BHEEMIREDDI RAJANI (193G1R0014), BIBEKANAND CHAUDHARY (193G1R0015), BIKKINA VENKATA DURGA DEVI (193G1R0016), BOKKA NAGA SRAVYA (193G1R0017), CHAJEN GATLUAK DENG (193G1R0019) under the supervision of Mr. S. NOOKA RAJU, M.PHARM and it has not been previously submitted to any other university or academic institution for any higher degree.

Internal Examiner

External Examiner

PRINCIPAL





PHARMACY COLLEGE

Approved by AICTE, PCI and affiliated to JNT University, Kakinada Aditya Nagar, ADB Road, Surampalem, E.G. Dist., A.P pin:533437

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Place: Surampalem

Date: 17/4/2013

Dr. D. Sathis Kumar, M. Pharm, Ph. D.

Principal & Professor.

Aditya Pharmacy College SURAMPALEM-532 430

PINICIPAL

Aditya Pharmacy College SURAMPALEM - 533 437



DECLARATION

The project embodied in this thesis entitled "FORMULATION AND EVALUATION OF SITAGLIPTIN SUSTAINED RELEASED TABLETS" was carried out in the department of Pharmaceutical Technology under the guidance of Mr. S. NOOKA RAJU, M.pharm, Aditya Pharmacy College, Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

BHEEMIREDDI RAJANI (193G1R0014)

BIBEKANAND CHAUDHARY (193G1R0015)

BIKKINA VENKATA DURGA DEVI (193G1R0016) B. Naga Snowy BOKKA NAGA SRAVYA (193GIR0017)

CHAJEN GATLUAK DENG (193G1R0019)

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BP808ET: CELL AND MOLECULAR BIOLOGY (Elective subject)

45 Hours

Scope:

- Cell biology is a branch of biology that studies cells their physiological properties, their structure, the organelles they contain, interactions with their environment, their life cycle, division, death and cell function.
- This is done both on a microscopic and molecular level.
- Cell biology research encompasses both the great diversity of single-celled organisms like bacteria and protozoa, as well as the many specialized cells in multi-cellular organisms such as humans, plants, and sponges.

Objectives: Upon completion of the subject student shall be able to;

- · Summarize cell and molecular biology history.
- · Summarize cellular functioning and composition.
- · Describe the chemical foundations of cell biology.
- · Summarize the DNA properties of cell biology.
- · Describe protein structure and function.
- · Describe cellular membrane structure and function.
- · Describe basic molecular genetic mechanisms.
- · Summarize the Cell Cycle

Course content:

10Hours

- a) Cell and Molecular Biology: Definitions theory and basics and Applications.
- b) Cell and Molecular Biology: History and Summation.
- c) Properties of cells and cell membrane.
- d) Prokaryotic versus Eukaryotic
- e) Cellular Reproduction
- f) Chemical Foundations an Introduction and Reactions (Types)

Unit II

Unit I

10 Hours

- a) DNA and the Flow of Molecular Information
- b) DNA Functioning
- c) DNA and RNA
- d) Types of RNA
- e) Transcription and Translation

Unit III

10 Hours

- a) Proteins: Defined and Amino Acids
- b) Protein Structure



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- c) Regularities in Protein Pathways
- d) Cellular Processes
- e) Positive Control and significance of Protein Synthesis

Unit IV

08 Hours

- a) Science of Genetics
- b) Transgenics and Genomic Analysis
- c) Cell Cycle analysis
- d) Mitosis and Meiosis
- e) Cellular Activities and Checkpoints

Unit V

07 Hours

- a) Cell Signals: Introduction
- b) Receptors for Cell Signals
- c) Signaling Pathways: Overview
- d) Misregulation of Signaling Pathways
- e) Protein-Kinases: Functioning

Recommended Books (latest edition):

- 1. W.B. Hugo and A.D. Russel: Pharmaceutical Microbiology, Blackwell Scientific publications, Oxford London.
- Prescott and Dunn., Industrial Microbiology, 4th edition, CBS Publishers & Distributors, Delhi.
- 3. Pelczar, Chan Kreig, Microbiology, Tata McGraw Hill edn.
- 4. Malcolm Harris, Balliere Tindall and Cox: Pharmaceutical Microbiology.
- 5. Rose: Industrial Microbiology.
- 6. Probisher, Hinsdill et al: Fundamentals of Microbiology, 9th ed. Japan
- 7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
- 8. Peppler: Microbial Technology.
- 9. Edward: Fundamentals of Microbiology.
- 10. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi
- 11. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company
- 12. B.R. Glick and J.J. Pasternak: Molecular Biotechnology: Principles and Applications of RecombinantDNA: ASM Press Washington D.C.
- 13. RA Goldshy et. al., : Kuby Immunoiogy.

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SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF SOME NOVEL 6-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-4-PHENYL-3,4-DIHYDROPYRIMIDIN-2(1H)-ONE

A dissertation submitted to Jawaharlal Nehru Technology University, Kakinada in partial fulfilment for the award of the degree of



BACHELOR OF PHARMACY

(2019-2023)

Submitted by

VANAPALLI SUSMITHA (193G1R00A3)

YERRAMILLI SRI DATTA AGASTHYA NIKHIL TILAK (193G1R00A5)

AKI NIKITHA SAI PADMA (193G1R00A6)

CHALLA PRAVEEN KUMAR (193G1R00A7)

MD SAIFUL ISLAM (193G1R00A8)

ALISHA KHANAM (193G1R00A9)

Under the guidance of

SHAIK.RAFI M. Pharm



ADITYA PHARMACY COLLEGE Aditya Pharmacy College

SURAMPALEM - 533 437

SURAMPALEM - 533437



CERTIFICATE



ANTIBACTERIAL ACTIVITY OF SOME NOVEL 6-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-4-PHENYL-3,4-

DIHYDROPYRIMIDIN-2(1H)-ONE was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the award of the degree of Bachelor of Pharmacy is a record of original research work carried out by VANAPALLI SUSMITHA (193G1R00A3), YERRAMILLI SRI DATTA AGASTHYA NIKHIL TILAK (193G1R00A5), AKI NIKITHA SAI PADMA (193G1R00A6), CHALLA PRAVEEN KUMAR (193G1R0OA7), MD SAIFUL ISLAM (193G1R00A8), ALISHA KHANAM (193G1R00A9). They have done this research work under the supervision of Mr.SHAIK.RAFI, M.Pharm and it has not been submitted to any other university or academic institution for any high degree.

Place: Surampalem

Date: 15-04-2023

(Principal)

Dr. Sathis Kumar, M-Pharm, Ph.D

Principal & Professor.

Aditya Pharmacy College

Surampalem
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SURAMPALEM - 533 437

CERTIFICATE



This is to certify that the dissertation entitled "SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF SOME NOVEL 6-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-4-PHENYL-3,4-

DIHYDROPYRIMIDIN-2(1H)-ONE" was submitted to the
Jawaharlal Nehru Technological University, Kakinada in partial
fulfilment of the award of the degree of Bachelor of Pharmacy is a record of
original research work carried out by VANAPALLI SUSMITHA
(193G1R00A3), YERRAMILLI SRI DATTA AGASTHYA NIKHIL TILAK
(193G1R00A5), AKI NIKITHA SAI PADMA (193G1R00A6), CHALLA
PRAVEEN KUMAR (193G1R00A7), MD SAIFUL ISLAM (193G1R00A8)
, ALISHA KHANAM (193G1R00A9). They have done this research work under
the supervision of Mr. SHAIK.RAFI, M. Pharm and it has not been submitted to
sany other university or academic institution for any higher degree.

Place: Surampalem

Date: 15-04-2023

Internal examiner

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External examiner

DECLARATION

The project embodied in this thesis "SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF SOME NOVEL 6-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-4-PHENYL-3,4-DIHYDROPYRIMIDIN-2(1H)-ONE" was carried out in the department of Pharmaceutical Organic Chemistry under the guidance of Mr. Shaik Rafi M. Pharm, Aditya Pharmacy College, Surampalem. The extent and source of information derived from existence literature have been indicated throughout thesis of the project work at appropriate places.

VANAPALLI SUSMITHA (193G1R00A3) V. Susmithe.

YERRAMILLI SRI DATTA AGASTHYA NIKHIL TILAK(193G1R00A5) Y. LIWIL AKI NIKITHA SAI PADMA (193G1R00A6) A. Nikitha.

CHALLA PRAVEEN KUMAR (193G1R00A7) C. Proveen Lumar

MD SAIFUL ISLAM (193G1R00A8) - Sfy

ALISHA KHANAM (193G1R00A9) Willia

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BP810 ET. PHARMACOLOGICAL SCREENING METHODS

45 Hours

Scope: This subject is designed to impart the basic knowledge of preclinical studies in experimental animals including design, conduct and interpretations of results.

Objectives

Upon completion of the course the student shall be able to,

- Appreciate the applications of various commonly used laboratory animals.
- Appreciate and demonstrate the various screening methods used in preclinical
- Appreciate and demonstrate the importance of biostatistics and researchmethodology
- · Design and execute a research hypothesis independently

Unit –I Laboratory Animals:	08 Hours
Study of CPCSEA and OECD guidelines for maintenance, breeding and conduct of experiments on laboratory animals, Common lab animals: Description and applications of different species and strains of animals. Popular transgenic and mutant animals. Techniques for collection of blood and common routes of drug administration in laboratory animals, Techniques of blood collection and euthanasia.	
Unit –II	10 Hours
Preclinical screening models a. Introduction: Dose selection, calculation and conversions, preparation of drug solution/suspensions, grouping of animals and importance of sham negative and positive control groups. Rationale for selection of animal species and sex for the study. b. Study of screening animal models for Diuretics, nootropics, anti-Parkinson's, antiasthmatics, Preclinical screening models: for CNS activity- analgesic, intipyretic, anti-inflammatory, general anaesthetics, sedative and ypnotics, antipsychotic, antidepressant, antiepileptic, intiparkinsonism, alzheimer's disease	



Aditya Pharmacy College SURAMPALEM-533 437

"FORMULATION AND EVALUATION OF SALICYLIC ACID SUSPENSION USING ARAUCARIA HETEROPHYLLA GUM AS A SUSPENDING AGENT"

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy (2023)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA BACHELOR OF PHARMACY

SUBMITTED BY

SUNKARA SURYA KIRAN (193G1R0095)

SUSHIL KUMAR (193G1R0096)

SWAMIREDDY MAHALAKSHMI (193G1R0097)

SWEETY CHYRMANG (193G1R0098)

AVINASH RANJAN SAH (193G1R00B4)

UNDER THE GUIDANCE OF

Dr. CH. S PHANI KUMAR M. Pharm, Ph. D

Professor

Department of Pharmaceutics



PRINCIPAL Aditya Pharmacy College SURAMPALEM - 533 43

ADITYA PHARMACY COLLEGE

Surampalem - 533437 2022-2023





PHARMACY COLLEGE

Approved by AICTE, PCI and affiliated to JNT University, Kakinada Aditya Nagar, ADB Road, Surampalem, E.G. Dist., A.P pin:533437

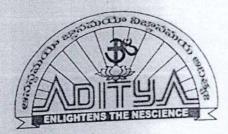
CERTIFICATE

This is to certify that the dissertation entitled "FORMULATION AND EVALUATION OF SALICYLIC ACID SUSPENSION USING ARAUCARIA HETEROPHYLLA GUM AS A SUSPENDING AGENT" submitted to the JNT University, Kakinada in partial fulfillment of the requirements for the award of the degree of Bachelor of pharmacy is a record of original research work carried out by SUNKARA SURYA KIRAN (193G1R0095) SUSHIL KUMAR (193G1R0096) SWAMIREDDY MAHALAKSHMI (193G1R0097) SWEETY CHYRMANG(193G1R0098) AVINASH RANJAN SAH (193G1R0094) under the supervision of Dr. CH. S PHANI KUMAR M. Pharm, Ph.D. and it has not been previously submitted to any other university or academic institution for any higher degree.

Internal Examiner

PRINCIPAL
Aditya Pharmacy Colleg
SURAMPALEM - 533 437
External Examiner





PHARMACY COLLEGE

Approved by AICTE, PCI and affiliated to JNT University, Kakinada Aditya Nagar, ADB Road, Surampalem, E.G. Dist., A.P pin:533437

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Place: Surampalem

Date:

Dr. D. Sathis Kumar, M. Pharm, Ph. D. - 533

Principal & Professor.

Aditva Pharmac

Aditya Pharmacy College SURAMPALEM-533 437





PHARMACY COLLEGE

Approved by AICTE, PCI and affiliated to JNT University, Kakinada Aditya Nagar, ADB Road, Surampalem, E.G. Dist., A.P pin:533437

CERTIFICATE

I hereby declare that this dissertation entitled "FORMULATION AND EVALUATION OF SALICYLIC ACID SUSPENSION USING ARAUCARIA HETEROPHYLLA GUM AS A SUSPENDING AGENT" is a record of original research work carried out by SUNKARA SURYA KIRAN (193G1R0095) SUSHIL KUMAR (193G1R0096) SWAMIREDDY MAHALAKSHMI (193G1R0097) SWEETY CHYRMANG(193G1R0098) AVINASH RANJAN SAH (193G1R00B4) under my supervision in partial fulfillment of the requirement for the degree of Bachelor of Pharmacy.

Dr. CH S PHANI KUNGO 3

Dr. CH. S PHANI KUMAR M. Pharm, Ph.D.

Professor,

Department of Pharmaceutics

PRINCIPAL
Aditya Pharmacy Coll
SURAMPALEM - 53: 43:



DECLARATION

embodied in this thesis entitled "FORMULATION AND SALICYLIC ACID SUSPENSION USING ARAUCARIA **EVALUATION** OF HETEROPHYLLA GUM AS A SUSPENDING AGENT" was carried out in the department of Pharmaceutical Technology under the guidance of Dr. CH. S PHANI KUMAR M. Pharm, Ph.D., Aditya Pharmacy College, Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

SUNKARA SURYA KIRAN (193G1R0095) S. J. Sushil Kumar (193G1R0096) Quyle SWAMIREDDY MAHALAKSHMI (193G1R0097) S. mahalaluhmi

SWEETY CHYRMANG(193G1R0098) Symong

AVINASH RANJAN SAH (193G1R00B4) AUNGW

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BP601T. MEDICINAL CHEMISTRY - III (Theory)

45 Hours

Scope: This subject is designed to impart fundamental knowledge on the structure, chemistry and therapeutic value of drugs. The subject emphasis on modern techniques of rational drug design like quantitative structure activity relationship (QSAR), Prodrug concept, combinatorial chemistry and Computer aided drug design (CADD). The subject also emphasizes on the chemistry, mechanism of action, metabolism, adverse effects, Structure Activity Relationships (SAR), therapeutic uses and synthesis of important drugs.

Objectives: Upon completion of the course student shall be able to

- Understand the importance of drug design and different techniques of drug design.
- 2. Understand the chemistry of drugs with respect to their biological activity.
- 3. Know the metabolism, adverse effects and therapeutic value of drugs.
- 4. Know the importance of SAR of drugs.

Course Content:

Study of the development of the following classes of drugs, Classification, mechanism of action, uses of drugs mentioned in the course, Structure activity relationship of selective class of drugs as specified in the course and synthesis of drugs superscripted by (*)

UNIT-I

10 Hours

Antibiotics

Historical background, Nomenclature, Stereochemistry, Structure activity relationship, Chemical degradation classification and important products of the following classes.

 β -Lactam antibiotics: Penicillin, Cepholosporins, β - Lactamase inhibitors, Monobactams,

Aminoglycosides: Streptomycin, Neomycin, Kanamycin

Tetracyclines: Tetracycline,Oxytetracycline, Chiortetracycline, Minocycline, Doxycycline

UNIT - II

10 Hours

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Antibiotics

Historical background, Nomenclature, Stereochemistry, Structure activity relationship, Chemical degradation classification and important products of the following classes.



PRINCIPAL Aditya Pharmacy College SURAMPALEM 533 437 Macrolide: Erythromycin Clarithromycin, Azithromycin.

Miscellaneous: Chloramphenicol*, Clindamycin.

Prodrugs: Basic concepts and application of prodrugs design.

Antimalarials: Etiology of malaria.

Quinolines: SAR, Quinine sulphate, Chloroquine*, Amodiaquine, Primaquine phosphate, Pamaquine*, Quinacrine hydrochloride, Mefloquine.

Biguanides and dihydro triazines: Cycloguanil pamoate, Proguanil.

Miscellaneous: Pyrimethamine, Artesunete, Artemether, Atovoquone.

UNIT - III

10 Hours

Anti-tubercular Agents

Synthetic anti tubercular agents: Isoniozid*, Ethionamide, Ethambutol, Pyrazinamide, Para amino salicylic acid.*

Anti tubercular antibiotics: Rifampicin, Rifabutin, Cycloserine Streptomycine, Capreomycin sulphate.

Urinary tract anti-infective agents

Quinolones: SAR of quinolones, Nalidixic Acid, Norfloxacin, Enoxacin, Ciprofloxacin*, Ofloxacin, Lomefloxacin, Sparfloxacin, Gatifloxacin, Moxifloxacin

Miscellaneous: Furazolidine, Nitrofurantoin*, Methanamine.

Antiviral agents:

Amantadine hydrochloride, Rimantadine hydrochloride, Idoxuridine trifluoride, Acyciovir*, Gancyclovir, Zidovudine, Didanosine, Zalcitabine, Lamivudine, Loviride, Delavirding, Ribavirin, Saquinavir, Indinavir, Ritonavir.

UNIT - IV 08 Hours

Antifungal agents:

Antifungal antibiotics: Amphotericin-B, Nystatin, Natamycin, Griseofulvin.

Synthetic Antifungal agents: Clotrimazole, Econazole, Butoconazole, Oxiconazole Tioconozole, Miconazole*, Ketoconazole, Terconazole, Itraconazole, Fluconazole, Nattifine hydrochloride, Tolnaftate*.

Anti-protozoal Agents: Metronidazole*, Tinidazole, Ornidazole, Diloxanide, Iodoquinol, Pentamidine Isethionate, Atovaquone, Eflornithine.

Anthelmintics: Diethylcarbamazine citrate*, Thiabendazole, Mebendazole*, Albendazole, Niclosamide, Oxamniquine, Praziquantal, Ivermectin.



Aditya Pharmacy College SURAMPALEM 533 437

Evaluation of antihelminthic activity of ethanolic extract of seeds of Salvia Hispanica in Pheretima Posthuma

Dissertation Submitted to



JNT UNIVERSITY KAKINADA

In partial fulfillment for the award of the degree of BACHELOR OF PHARMACY

BY

Aman Mandal (193G1R0001)

Anjali Chaudhary (193G1R0002)

Aroma Bakor Wann(193G1R0008)

G. Harika(193G1R0030)

G. Anitha (193G1R0031)

Under the guidance of

Dr. P. S. S. Sai Kiran M. Pharm, Ph.D. Associate Professor



Aditya Pharmacy College, Surampalem, Andhra Pradesh, India-533 437 2019- 2023



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SURAMPALEM - 533 437



ADITYA PHARMACY COLLEGE

(Approved by AICTE & PCI, Affiliated to JNTUK). Surampalem-533437, E.G. District, Andhra Pradesh.

CERTIFICATE

This is to certify that the dissertation work entitled a study on "Evaluation of Antihelminthic activity ethanolic extract of seeds of Salvia Hispanica on Pheretima Posthuma" submitted in partial fulfillment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2017-2021. This is a bonafide work carried out by Aman Mandal (193G1R0001), 'Anjali Chaudhary (193G1R0002), Aroma Bakor Wann(193G1R0008), G. Harika(193G1R0030), G. Anitha (193G1R0031), under the direct guidance and supervision of Dr.P.S.S. Sai Kiran M.Pharm, Ph.D., Associate Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

(Internal Examiner)

(External Examiner)

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ADITYA PHARMACY COLLEGE (Approved by AICTE & PCI, Affiliated to JNTUK).

Surampalem-533437, E.G.District, Andhra Pradesh.

Dr.P.S.S. Sai Kiran M.Pharm, Ph.D., Associate Professor.

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(Dr.P.S.S. Sai Kiran M. Pharm, Ph.D.)

pslum.



PRINCIPAL
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SURAMPALEM - 533 437

DECLARATION



We hereby declare that the dissertation work entitled "Evaluation of Antihelminthic activity ethanolic extract of seeds of Salvia Hispanica in Pheretima Posthuma" in partial fulfillment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023, was carried out by us in the library and laboratories of Aditya Pharmacy College, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision of Dr.P.S.S. Sai Kiran M. Pharm, Ph.D., Associate Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh. We also declare that the matter embodied in it is a genuine work.

Aman Mandal (193G1R0001) Aman Mardal

Anjali Chaudhary (193G1R0002) Artioni Cloudhory

Aroma Bakor Wann (193G1R0008) Arana

G. Harika(193G1R0030) Harika,

G. Anitha (193G1R0031) G. Anith



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BP 507 P. PHARMACOLOGY+II (Practical)

4Hrs/Week

1. Introduction to in-vitro pharmacology and physiological salt solutions.

2. Effect of drugs on isolated frog heart...

3. Effect of drugs on blood pressure and heart rate of dog.

Study of diuretic activity of drugs using rats/mice.

5. DRC of acetylcholine using frog rectus abdominis muscle.

6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus abdominis muscle and rat ileum respectively.

7. Bioassay of histamine using guinea pig ileum by matching method.

8. Bioassay of oxytocin using rat uterine horn by interpolation method. ~

9. Bioassay of serotonin using rat fundus strip by three point bioassay.

- 10. Bioassay of acetylcholine using rat ileum/colon by four point bioassay.
- 11. Determination of PA2 value of prazosin using rat anococcygeus muscle (by Schilds plot method).

12. Determination of PD2 value using guinea pig ileum.

13. Effect of spasmogens and spasmolytics using rabbit jejunum.

- 14. Anti-inflammatory activity of drugs using carrageenan induced paw-edema
- 15. Analgesic activity of drug using central and peripheral methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier

2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.

3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics

4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.

5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-

Pharmacology.

- 6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
- 7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher 8. Modern Pharmacology with clinical Applications, by Charles R.Craig& Robert.
- 9. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company,
- Kolkata. 10. Kulkarni SK. Handbook of experimental pharmacology. Vallabh Prakashan.



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Aditya Pharmacy College

INVESTIGATING THE PRESENCE OF STAPHYLOCOCCUS AUREUS & ESCHERICHIA COLI IN DAIRY PRODUCTS BY INVITRO METHOD

A Dissertation Submitted to



JNT UNIVERSITY KAKINADA

In partial fulfilment for the award of the degree of BACHELOR OF PHARMACY

Anjali Mishra (193G1R0003)

Ankit Dev (193G1R0004)

G. Satya Snehaja (193G1R0032)

G. Bhavya Tejaswi (193G1R0033)

G. Gowri Prasanna (193G1R0034)

Under the esteemed guidance of

S.Nageswara Rao, M.Pharm., (Ph.D.)

Associate Professor



ADITYA PHARMACY COLLEGE

Approved by AICTE & PCI, Affiliated to JNTUK, Kakinada Aditya Nagar, ADB Road, Surampalem - 533437 East Godavari District, Andhra Pradesh

Batch: 2019-2023

ditya Pharmacy College SURAMPALEM - 533 437

is is to certify that the dissertation work entitled a study on "INVESTIGATING THE PRESENCE OF FAPHYLOCOCCUS AUREUS& ESCHERICHIA COLI IN DAIRY PRODUCTS By INVITRO ETHOD." submitted in partial fulfilment of the degree in Bachelor of Pharmacy of the JNT University, akinada for the academic year 2019-2023. This is a bonafide work carried out by Anjali Mishra 93G1R0003), AnkitDey(193G1R0004), G.SatyaSnehaja(193G1R0032), G.BhavyaTejaswi(193G1R0033), Gowri Prasanna (193G1R0034) under the direct guidance and supervision of S.Nageswara Rao, Pharm., (Ph.D.), Associate Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

(Internal Examiner)

(External Examiner)

SURAMPALEM 533 437

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437

s is to certify that the dissertation work entitled a study on "INVESTIGATING THE PRESENCE OF APHYLOCOCCUS AUREUS &ESCHERICHIACOLI IN DAIRY PRODUCTS BY INVITRO THOD." submitted in partial fulfilment of the degree in Bachelor of Pharmacy of the JNT University, cinada for the academic year 2019-2023. This is a bonafide work carried out byAnjali Mishra 3G1R0003),AnkitDey (193G1R0004), G.SatyaSnehaja(193G1R0032), G.BhavyaTejaswi(193G1R0033), Gowri Prasanna (193G1R0034) under my direct guidance and supervision.

Guide

Associate professor.



PRINCIPAL
Aditya Pharmacy College
Surammanem - 593 437

DECLARATION

hereby declare that the dissertation work entitled "INVESTIGATING THE PRESENCE OF PHYLOCOCCUS AUREUS & ESCHERICHIACOLI IN DAIRY PRODUCTS BY INVITRO [THOD." in partial fulfilment of the degree in Bachelor of pharmacy of the JNT University, Kakinada for icademic year 2019-2023, was carried out by us in the library and laboratories of Aditya Pharmacy ege, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision of 3. Nageswara Rao, M. Pharm., Ph.D., Associate professor, Aditya Pharmacy college, Surampalem, hra Pradesh. We also declare that the matter embodied in it is a genuine work.

ali Mishra (193G1R0003), Anjali Mishra cit Dey (193G1R0004), Aukit Dey Satya Snehaja (193G1R0032), G. Satya Snehaja 3havya Tejaswi (193G1R0033), G. Bhavya Tejaswi Jowri Prasanna (193G1R0034). G. Giocori prasanna

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SURAMPALEM-533 437

BP 811 ET. ADVANCED INSTRUMENTATION TECHNIQUES

45 Hours

Scope: This subject deals with the application of instrumental methods in qualitative and quantitative analysis of drugs. This subject is designed to impart advanced knowledge on the principles and instrumentation of spectroscopic and chromatographic hyphenated techniques. This also emphasizes on theoretical and practical knowledge on modern analytical instruments that are used for drug testing.

Objectives: Upon completion of the course the student shall be able to

- understand the advanced instruments used and its applications in drug analysis
- understand the chromatographic separation and analysis of drugs.
- understand the calibration of various analytical instruments
- know analysis of drugs using various analytical instruments.

Course Content:

UNIT-I

10 Hours

Nuclear Magnetic Resonance spectroscopy

Principles of H-NMR and C-NMR, chemical shift, factors affecting chemical shift, coupling constant, Spin - spin coupling, relaxation, instrumentation and applications

Mass Spectrometry- Principles, Fragmentation, Ionization techniques -Electron impact, chemical ionization, MALDI, FAB, Analyzers-Time of flight and Quadrupole, instrumentation, applications

UNIT-II

10 Hours

Thermal Methods of Analysis: Principles, instrumentation and applications of ThermogravimetricAnalysis (TGA), Differential Thermal Analysis (DTA), Differential Scanning Calorimetry (DSC)

X-Ray Diffraction Methods: Origin of X-rays, basic aspects of crystals, Xray

Crystallography, rotating crystal technique, single crystal diffraction, powder diffraction, structural elucidation and applications.

UNIT-III

10 Hours

Calibration and validation-as per ICH and USFDA guidelines Calibration of following Instruments

Electronic balance, UV-Visible spectrophotometer, IR spectrophotometer,



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Fluorimeter, Flame Photometer, HPLC and GC

UNIT-IV 08 Hours

Radio immune assay: Importance, various components, Principle, different methods, Limitation and Applications of Radio immuno assay

Extraction techniques: General principle and procedure involved in the solid phase extraction and liquid-liquid extraction

UNIT-V 07 Hours

Hyphenated techniques-LC-MS/MS, GC-MS/MS, HPTLC-MS.

Recommended Books (Latest Editions)

- 1. Instrumental Methods of Chemical Analysis by B.K Sharma
- 2. Organic spectroscopy by Y.R Sharma
- 3. Text book of Pharmaceutical Analysis by Kenneth A. Connors
- 4. Vogel's Text book of Quantitative Chemical Analysis by A.I. Vogel
- 5. Practical Pharmaceutical Chemistry by A.H. Beckett and J.B. Stenlake
- 6. Organic Chemistry by I. L. Finar
- 7. Organic spectroscopy by William Kemp
- 8. Quantitative Analysis of Drugs by D. C. Garrett
- 9. Quantitative Analysis of Drugs in Pharmaceutical Formulations by P. D. Sethi
- 10. Spectrophotometric identification of Organic Compounds by Silverstein

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Aditya Pharmacy College
SURAMPALEM-533 437

COMPARATIVE STUDY OF ANTIMICROBIAL ACTIVITY OF ETHANOLIC EXTRACT OF STEMS AND ROOTS OF ABUTILON INDICUM

Dissertation submitted to



JNTU, KAKINADA

In partial fulfillment for the award of the degree of

BACHELOR OF PHARMACY

BY

- E. Navya Sri Lekha (193G1R0025)
- G. Babuji (193G1R0026)

Gayatri Mukhi (193G1R0027)

- G. Yamini Naga devi (193G1R0028)
- G. Surya Naga Lakshmi (193G1R0029)

Under the guidance of

Mr.K.V.R.Raju M.Pharm,(PhD)

Associate professor



Aditya Pharmacy College, Surampalem, Andhra Pradesh, India-533437

Aditya Pharmacy College



ADITYA PHARMACY COLEGE

(Affiliated to PCI, AICTE and JNTUK)

Surampalem - 533437, Kakinada District, Andhra Pradesh

CERTIFICATE

This is to certify that the dissertation work entitled a study on "COMPARATIVE STUDY OF ANTIMICROBIAL ACTIVITY OF ETHANOLIC EXTRACT OF STEMS AND ROOTS OF ABUTILON INDICUM" submitted in partial fulfilment of the degree in Bachelor of Pharmacy of the JNTU, Kakinada for the academic year 2019-2023. This is a bonafide work carried out by E.Navya Sri Lekha(193G1R0025), G.Babuji(193G1R0026), Gayatri Mukhi (193G1R0027), G.Yantini Naga Devi(193G1R0028), G.Surya Naga Lakshmi (193G1R0029) under the guidance and supervision of Mr.K.V.R.Raju, M.Pharm., (PhD), Associate Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

Internal Examiner

External Examiner



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SURAMPALEM - 533 437

ADITYA PHARMACY COLEGE

(Affiliated to PCI, AICTE and JNTUK)

Surampalem - 533437, Kakinada District, Andhra Pradesh

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Mr.K.V.R.Raju 15.04 2027

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PRINCIPA Aditya Pharmacy Colleg SURAMPALEM - 533 437

DECLARATION

We, hereby declare that the dissertation work entitled "COMPARATIVE STUDY OF ANTIMICROBIAL ACTIVITY OF ETHANOLIC EXTRACT OF STEMS AND ROOTS OF ABUTILON INDICUM " in partial fulfilment of the degree in bachelor of pharmacy of the JNTU, Kakinada for the academic year 2019-2023, was carried the laboratories of Aditya Pharmacy College, Surampalem, out by us in Andhra Pradesh under the guidance and supervision of Mr.K.V.R.Raju, M.Pharm.(PhD), Associate professor, Aditya Pharmacy college, Surampalem, Andhra Pradesh. We also declare that the matter embodied in it is a genuine work.

E. Navya Sri Lekha(193G1R0025)

G. Babiji (193G1R0026) Bayatur Mukhi (193G1R0027)

G. Yamini Naga Devi(193G1R0028)

Gr. Layo Mago laushmi G. Surya Naga Lakshmi (193G1R0029)

Aditya Pharmacy College SURAMPALEM - 533 137



BP606TPHARMACEUTICAL QUALITY ASSURANCE (Theory)

45 Hours

Scope: This course deals with the various aspects of quality control and quality assurance aspects of pharmaceutical industries. It deals with the important aspects like cGMP, QC tests, documentation, quality certifications and regulatory affairs.

Objectives: Upon completion of the course student shall be able to:

- understand the cGMP aspects in a pharmaceutical industry
- appreciate the importance of documentation
- understand the scope of quality certifications applicable to pharmaceutical industries
- understand the responsibilities of QA & QC departments

Course content:

UNIT-I

10 Hours

Quality Assurance and Quality Management concepts: Definition and concept of Quality control, Quality assurance and GMP

Total Quality Management (TQM): Definition, elements, philosophies

ICH Guidelines: purpose, participants, process of harmonization, Brief overview of QSEM, with special emphasis on Q-series guidelines, ICH stability testing guidelines

Quality by design (QbD): Definition, overview, elements of QbD program, tools ISO 9000 & ISO14000: Overview, Benefits, Elements, steps for registration

NABL accreditation : Principles and procedures

UNIT - II 10 Hours

Organization and personnel: Personnel responsibilities, training, hygiene and personal records.

Premises: Design, construction and plant layout, maintenance, sanitation, environmental control, utilities and maintenance of sterile areas, control of contamination.

Equipments and raw materials: Equipment selection, purchase specifications, maintenance, purchase specifications and maintenance of stores for raw materials.

UNIT – III

Quality Control: Quality control test for containers, rubber closures and secondary packing

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materials. '

Good Laboratory Practices: General Provisions, Organization and Personnel, Facilities, Equipment, Testing Facilities Operation, Test and Control Articles, Protocol·for Conduct of a Nonclinical Laboratory Study, Records and Reports, Disqualification of Testing Facilities

UNIT - IV

Complaints: Complaints and evaluation of complaints, Handling of return good, recalling and

Document maintenance in pharmaceutical industry: Batch Formula Record, Master Formula Record, SOP, Quality audit, Quality Review and Quality documentation, Reports and documents, distribution records.

UNIT - V

Calibration and Validation: Introduction, definition and general principles of calibration, qualification and validation, importance and scope of validation, types of validation, validation master plan. Calibration of pH meter, Qualification of UV-Visible spectrophotometer, General principles of Analytical method Validation.

Warehousing: Good warehousing practice, materials management

Recommended Books: (Latest Edition)

- 1. Quality Assurance Guide by organization of Pharmaceutical Products of India.
- Good Laboratory Practice Regulations, 2nd Edition, Sandy Weinberg Vol. 69.
- 3. Quality Assurance of Pharmaceuticals- A compendium of Guide lines and Related materials Vol I WHO Publications.
- 4. A guide to Total Quality Management- Kushik Maitra and Sedhan K Ghosh
- 5. How to Practice GMP's P P Sharma.
- 6. ISO 9000 and Total Quality Management Sadhank G Ghosh
- The International Pharmacopoeia Vol I, II, III, IV-General Methods of Analysis and Quality specification for Pharmaceutical Substances, Excipients and Dosage
- 8. Good laboratory Practices Marcel Deckker Series
- 9. ICH guidelines, ISO 9000 and 14000 guidelines

Aditya Pharmacy College SURAMPALEM-533 437

METHOD DEVELOPMENT AND VALIDATION OF OXCARBAZEPINE

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the degree of



BACHELOR OF PHARMACY JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

Submitted BY

I.MANORANJANI (193G1R0035)
I.S.SUPRIYA (193G1R0036)
ISTHAKAR AHMED (193G1R0037)
K.D.G.V.SIVANI (193G1R0039)
K.SUPRAJA (193G1R0040)

Under the esteemed guidance of M.SARIKA, M.Pharm, (Ph.D.) Assistant Professor



ADITYA PHARMACY COLLEGE

Approved by AICTE & PCI, Affiliated to JNTUK, Kakinada Aditya Nagar, ADB Road, Surampalem – 533437 East Godavari District, Andhra Pradesh.

Batch: 2019-2023

PRINCIPAL Aditya Pharmacy College SURAMPALEM - 533 437





This is to certify that the dissertation work entitled a study on "METHOD DEVELOPMENT AND VALIDATION OF OXCARBAZEPINE BY USING U.V VISIBLE SPECTROSCOPY"

submitted in partial fulfillment of the degree in Bachelor of Pharmacy of the Jawaharlal Nehru hnological University, Kakinada for the academic year 2019-2023. This is a bonafide work carried out by *I.Manoranjani* (193G1R0035), *I.S.Supriya* (193G1R0036), *Isthakar Ahmed* (193G1R0037), *D.G.V.Sivani* (193G1R0039), *K.Supraja* (193G1R0040) under the direct guidance and supervision of arika M.Pharm., (Ph.D.), Assistant Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

ternal Examiner)

(External Examiner)

PRINCIPAL
Aditus Pharmacy College
SURAMPALEM - 533 437





is is to certify that the dissertation work entitled a study on "METHOD DEVELOPMENT AND IDATION OF OXCARBAZEPINE BY USING U.V VISIBLE SPECTROSCOPY" submitted in fulfillment of the degree in Bachelor of Pharmacy of the Jawaharlal Nehru Technological University,

Kakinada for the academic year 2019-2023. This is a bonafide work carried out by I.Manoranjani (193G1R0035,) I.S.Supriya (193G1R0036), Isthakar Ahmed (193G1R0037), G.V.Sivani (193G1R0039), K.Supraja (193G1R0040) under my direct guidance and supervision

M. Saxi Ka

Guide

M.Sarika M.Pharm., (Ph.D.),
Assistant Professor,
Aditya Pharmacy College,
Surampalem,
Andhra Pradesh.

PRINCIPAL Diva Pharmacy Colle SURAMPALEM - 533 437



DECLARATION

hereby declare that the dissertation work entitled a study on METHOD DEVELOPMENT AND JIDATION OF OXCARBAZEPINE BY USING U.V VISIBLE SPECTROSCOPY" partial Iment of the degree in Bachelor of pharmacy of the Jawaharlal Nehru Technological University, nada for the academic year 2019-2023, was carried out by us in the library and laboratories of Aditya macy College, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision 1.Sarika M.Pharm., (Ph.D.), Assistant Professor, Aditya Pharmacy College, Surampalem, Andhra esh. We also declare that the matter embodied in it is a genuine work.

anoranjani (193G1R0035),

Supriya (193G1R0036),

akar Ahmed (193G1R0037),

.G.V.Sivani (193G1R0039),

upraja (193G1R0040).

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Aditya Pharmacy College

SURAMPALEM - 533 437



"SYNTHESIS AND MOLECULAR DOCKING STUDIES OF 2,4,5-TRIPHENYL-1H- IMIDAZOLE"

Dissertation submitted to the Jawaharlal Nehru Technological University ,Kakinada in partial fulfillment of the requirements for the degree of Bachelor of *Pharmacy*(2023)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

Submitted by

MANIKALA SAI DEEPIKA (193G1R0057)

MATTA SUJITHA (193G1R0058)

MERUGU SIRISHA (193G1R0060)

MITHILESH KUMAR CHAUHAN (193G1R0061)

NARSIPUDI SANDHYA (193G1R0066)

Under the guidance of L.PARINAYA SRI, M.Pharm.,

Department of Pharmaceutical chemistry
Assistant Professor



PRINCIPAL Aditya Pharmacy college SURAMPALEM - 531 457

Aditya Pharmacy College, Surampalem, Andhra Pradesh, India-533 437
Batch: 2019- 2023





ADITYA PHARMACY COLLEGE

(Approved by AICTE & PCI, Affiliated to JNTUK). Surampalem-533437, E.G. District, Andhra Pradesh.

CERTIFICATE

This is to certify that the dissertation work entitled a study on "SYNTHESIS AND MOLECULAR DOCKING STUDIES OF 2,4,5-TRIPHENYL-1H-IMIDAZOLE" submitted in partial fulfillment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023. The original research work carried out by MANIKALA SAI DEEPIKA (193G1R0057), MATTA SUJITHA (193G1R0058), MERUGU SIRISHA (193G1R0060), MITHILESH KUMAR CHAUHAN (193G1R0061), NARSIPUDI SANDHYA (193G1R0066) under the direct guidance and supervision of Ms. L.PARINAYA SRI M.Pharm., Department of pharmaceutical chemistry, Assistant Professor, Aditya Pharmacy College, Surampalem, and Andhra Pradesh.

Place: Surampalem

Date:

(Internal/Examiner)

Principal

(External Examiner)



rmacy Collaga



ADITYA PHARMACY COLLEGE (Approved by AICTE & PCI, Affiliated to JNTUK).

Surampalem-533437, E.G.District, Andhra Pradesh.

Dr. D. Sathis kumar, M.Pharm., Ph.D.,

Principal & Professor.

CERTIFICATE

This is to certify that the dissertation work entitled a study on "SYNTHESIS AND MOLECULAR DOCKING STUDIES OF 2,4,5-TRIPHENYL-1H-IMIDAZOLE" submitted in partial fulfillment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023. The original research work carried out by MANIKALA SAI DEEPIKA (193G1R0057), MATTA SUJITHA (193G1R0058), MERUGU SIRISHA (193G1R0060), MITHILESH KUMAR CHAUHAN (193G1R0061), NARSIPUDI SANDHYA (193G1R0066) under the direct guidance and supervision of Ms. L PARINAYA SRI, M.Pharm., Pharmaceutical chemistry, Assistant Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

(PRINCIPAL)

Aditya Pharmacy C SURAMPALEM



Aditya Pharmacy College SURAMPALEM - 513 437



ADITYA PHARMACY COLLEGE (Approved by AICTE & PCI, Affiliated to JNTUK). Surampalem-533437, E.G. District, Andhra Pradesh.

DECLARATION

We hereby declare that the dissertation work entitled "SYNTHESIS AND MOLECULAR DOCKING STUDIES OF 2,4,5-TRIPHENYL-1H-IMIDAZOLE" in partial fulfillment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023, was carried out by us in the library and laboratories of Aditya Pharmacy College, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision of Ms.L.PARINAYA SRI M.Pharm., Pharmaceutical chemistry, Assistant Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh. We also declare that the matter embodied in it is a genuine work.

Bul Deepika.M.

(193G1R0057)

M·Sirisha. MERUGU SIRISHA

(193G1R0060)

N. Sandlya.
NARSIPUDI SANDHYA
(193G1R0066)

M. Sujitha MATTA SUJITHA

(193G1R0058)

MITHILESH KUMAR CHAUHAN

(193G1R0061)

(Mauhan



Aditya PRINCIPA SURAMPALEM - 5:

BP808ET: CELL AND MOLECULAR BIOLOGY (Elective subject)

45 Hours

Scope:

- Cell biology is a branch of biology that studies cells their physiological properties, their structure, the organelles they contain, interactions with their environment, their life cycle, division, death and cell function.
- This is done both on a microscopic and molecular level.
- Cell biology research encompasses both the great diversity of single-celled organisms like bacteria and protozoa, as well as the many specialized cells in multi-cellular organisms such as humans, plants, and sponges.

Objectives: Upon completion of the subject student shall be able to;

- · Summarize cell and molecular biology history.
- · Summarize cellular functioning and composition.
- · Describe the chemical foundations of cell biology.
- Summarize the DNA properties of cell biology.
- · Describe protein structure and function.
- Describe cellular membrane structure and function.
- · Describe basic molecular genetic mechanisms.
- · Summarize the Cell Cycle

Course content:

Unit I

10Hours

- a) Cell and Molecular Biology: Definitions theory and basics and Applications.
- b) Cell and Molecular Biology: History and Summation.
- c) Properties of cells and cell membrane.
- d) Prokaryotic versus Eukaryotic
- e) Cellular Reproduction
- f) Chemical Foundations an Introduction and Reactions (Types)

Unit II

10 Hours

- a) DNA and the Flow of Molecular Information
- b) DNA Functioning
- c) DNA and RNA
- d) Types of RNA
- e) Transcription and Translation

Unit III

a) Proteins: Defined and Amino Acids

b) Protein Structure

10 Hours

Aditya Pharmacy College SURAMPALEM-533 437

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- c) Regularities in Protein Pathways
- d) Cellular Processes
- e) Positive Control and significance of Protein Synthesis

Unit IV

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08 Hours

- a) Science of Genetics
- b) Transgenics and Genomic Analysis
- c) Cell Cycle analysis
- d) Mitosis and Meiosis
- e) Cellular Activities and Checkpoints

Unit V

07 Hours

- a) Cell Signals: Introduction
- b) Receptors for Cell Signals
- c) Signaling Pathways: Overview
- d) Misregulation of Signaling Pathways
- e) Protein-Kinases: Functioning

Recommended Books (latest edition):

- 1. W.B. Hugo and A.D. Russel: Pharmaceutical Microbiology, Blackwell Scientific publications, Oxford London.
- Prescott and Dunn., Industrial Microbiology, 4th edition, CBS Publishers & Distributors, Delhi.
- 3. Pelczar, Chan Kreig, Microbiology, Tata McGraw Hill edn.
- 4. Malcolm Harris, Balliere Tindall and Cox: Pharmaceutical Microbiology.
- 5. Rose: Industrial Microbiology.
- 6. Probisher, Hinsdill et al: Fundamentals of Microbiology, 9th ed. Japan
- 7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
- 8. Peppler: Microbial Technology.
- 9. Edward: Fundamentals of Microbiology.
- 10. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi
- 11. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company
- 12. B.R. Glick and J.J. Pasternak: Molecular Biotechnology: Principles and Applications of RecombinantDNA: ASM Press Washington D.C.
- 13. RA Goldshy et. al., : Kuby Immunology.



PRINCIPAL
Aditya Pharmacy College
SUKAMPALEM-533 437

BP 812 ET. DIETARY SUPPLEMENTS AND NUTRACEUTICALS

No. of hours :3

Tutorial:1

Credit point:4

Scope:

This subject covers foundational topic that are important for understanding the need and requirements of dietary supplements among different groups in the population.

Objective:

This module aims to provide an understanding of the concepts behind the theoretical applications of dietary supplements. By the end of the course, students should be able to:

1. Understand the need of supplements by the different group of people to maintain

2. Understand the outcome of deficiencies in dietary supplements.

3. Appreciate the components in dietary supplements and the application.

4. Appreciate the regulatory and commercial aspects of dietary supplements including

UNIT I

07 hours

- a. Definitions of Functional foods, Nutraceuticals and Dietary supplements. Classification of Nutraceuticals, Health problems and diseases that can be prevented or cured by Nutraceuticals i.e. weight control, diabetes, cancer, heart disease, stress, osteoarthritis, hypertension etc.
- b. Public health nutrition, maternal and child nutrition, nutrition and ageing, nutrition education in community.
- c. Source, Name of marker compounds and their chemical nature, Medicinal uses and of following used as nutraceuticals/functional foods: Spirulina, Soyabean, Ginseng, Garlic, Broccoli, Gingko, Flaxseeds

UNIT II

15 hours

Phytochemicals as nutraceuticals: Occurrence and characteristic features(chemical nature medicinal benefits) of following

a) Carotenoids- α and β -Carotene, Lycopene, Xanthophylls, leutin

b) Sulfides: Diallyl sulfides, Allyl trisulfide.

- c) Polyphenolics: Reservetrol
- d) Flavonoids- Rutin, Naringin, Quercitin, Anthocyanidins, catechins, Flavones

e) Prebiotics / Probiotics.: Fructo oligosaccharides, Lacto bacillum

f) Phyto estrogens: Isoflavones, daidzein, Geebustin, lignans

g) Tocopherols

h) Proteins, vitamins, minerals, cereal, vegetables and beverages as functional foods: oats, wheat bran, rice bran, sea foods, coffee, tea and the like.

III TIN

07 hours

Introduction to free radicals: Free radicals, reactive oxygen species, production of free radicals in cells, damaging reactions of free radicals on lipids, proteins, Carbohydrates, nucleic acids.

> Aditya Pharmacy College SURAMPALEM-533 437

b) Dietary fibres and complex carbohydrates as functional food ingredients..

UNIT IV 10 hours

a) Free radicals in Diabetes mellitus, Inflammation, Ischemic reperfusion injury, Cancer, Atherosclerosis, Free radicals in brain metabolism and pathology, kidney damage, muscle damage. Free radicals involvement in other disorders. Free radicals theory of ageing.

b) Antioxidants: Endogenous antioxidants – enzymatic and nonenzymatic antioxidant defence, Superoxide dismutase, catalase, Glutathione peroxidase, Glutathione Vitamin C, Vitamin E, α- Lipoic acid, melatonin

Synthetic antioxidants: Butylated hydroxy Toluene, Butylated hydroxy Anisole.

c) Functional foods for chronic disease prevention

UNIT V 06 hours

a) Effect of processing, storage and interactions of various environmental factors on the potential of nutraceuticals.

b) Regulatory Aspects; FSSAI, FDA, FPO, MPO, AGMARK. HACCP and GMPs on Food Safety. Adulteration of foods.

c) Pharmacopoeial Specifications for dietary supplements and nutraceuticals.

References:

1. Dietetics by Sri Lakshmi

2. Role of dietary fibres and neutraceuticals in preventing diseases by K.T Agusti and P.Faizal: BSPunblication.

3. Advanced Nutritional Therapies by Cooper. K.A., (1996).

4. The Food Pharmacy by Jean Carper, Simon & Schuster, UK Ltd., (1988).

5. Prescription for Nutritional Healing by James F.Balch and Phyllis A.Balch 2nd Edn., Avery Publishing Group, NY (1997).

6. G. Gibson and C.williams Editors 2000 Functional foods Woodhead Publ.Co.London.

7. Goldberg, I. Functional Foods. 1994. Chapman and Hall, New York.

8. Labuza, T.P. 2000 Functional Foods and Dietary Supplements: Safety, Good Manufacturing Practice (GMPs) and Shelf Life Testing in *Essentials of Functional Foods* M.K. Sachmidl and T.P. Labuza eds. Aspen Press.

9. Handbook of Nutraceuticals and Functional Foods, Third Edition (Modern Nutrition)

10. Shils, ME, Olson, JA, Shike, M. 1994 Modern Nutrition in Health and Disease. Eighth edition. Lea and Febiger



PRINCIPAL
Aditya Pharmacy College
SUKAMPALEM-533 437

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the degree of Bachelor of Pharmacy (2023)



JAWAHARLAL NEHRU TECHNOLOGIAL UNIVERSITY, KAKINADA

Submitted BY

RIYA KUMARI (193G1R0083)

TINASHE MUFUDZA (193G1R00A1)

TIPPANI BHARGAVI (193G1R00A2)

VELISETTI VENKATA RAMA KRISHNA CHAITANYA (193G1R00A4)

MUNGALLA SURYA VASANTHA LAKSHMI (193G1R00B1)

MD.MANAUL ANSARY (193G1R00B5)

Under the Guidance of

Miss BALLA. SUJIYA, M. Pharm.

Associate Professor



Aditya Pharmacy College

Surampalem-533437

2019-2023







This is to certify that the dissertation entitled "COLORIMETRIC DETERMINATION OF PHENOLS AND FLAVONOIDS OF PUNICA GRANATUM PLANT EXTRACTS BY DERIVATIZATION METHOD AND FTIR STUDIES" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of Bachelor of Pharmacy is a record of original research work carried out by

RIYA KUMARI (193G1R0083), TINASHE MUFUDZA (193G1R00A1), TIPPANI BHARGAVI (193G1R00A2), VELISETTI VENKATA RAMA KRISHNA CHAITANYA (193G1R00A4), MUNGALLA SURYA VASANTHA LAKSHMI (193G1R00B1), MD. MANAUL ANSARY (193G1R00B5).

They have done this research work under the supervision of MISS. BALLA.SUJIYA, M. Pharm and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. D. Sathis Kumar, M. Rharm, Ph.D.

Principal,

Aditya Pharmacy College SURAMPALEM-533 437

Aditya Pharmacy College,

Surampalem-533437.

Place: Surampalem

Date:

Internal Examiner

A CURAMPALEM FEG

PRINCIPAL
Aditya Pharmacy CollSUPAMPALEM - 52

External Examiner



This is to certify that the dissertation entitled "COLORIMETRIC DETERMINATION OF PHENOLS AND FLAVONOIDS OF PUNICA GRANATUM PLANT EXTRACTS BY DERIVATIZATION METHOD AND FTIR STUDIES" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of Bachelor of Pharmacy is a record of original research work carried out by

RIYA KUMARI (193G1R0083), TINASHE MUFUDZA (193G1R00A1), TIPPANI BHARGAVI (193G1R00A2), VELISETTI VENKATA RAMA KRISHNA CHAITANYA (193G1R00A4), MUNGALLA SURYA VASANTHA LAKSHMI (193G1R00B1), MD. MANAUL ANSARY (193G1R00B5).

Under my supervision and it has not been previously submitted to any other university or academic institution for any higher degree.

Miss. BALLA. SUJIYA, M. Pharm,

ASSOCIATE PROFESSOR,

Aditya Pharmacy College,

Surampalem-533437.

Place: Surampalem

Date:

Internal Examiner

SURAMPALEM FINES S33 437 G

PRINCIPAL
External ExaminerAMPAIEM - 533 43

DECLARATION

The Project embodied in this thesis entitled "COLORIMETRIC DETERMINATION OF PHENOLS AND FLAVONOIDS OF PUNICA GRANATUM PLANT EXTRACTS BY DERIVATIZATION METHENOD AND FTIR STUDIES" was carried out in the Department of Pharmaceutical Analysis under the guidance of Miss. BALLA.SUJIYA, M. Pharm, Aditya Pharmacy College, Surampalem.

The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

Riyakumagi

RIYA KUMARI (193G1R0083) TINASHE MUFUDZA (193G1R00A1)

TIPPANI BHARGAVI (193G1R00A2) V.V.R.K.ch atanja VELISETTI VENKATA RAMA KRISHNA CHAITANYA (193G1R00A4)

M. Vasautha

MUNGALLA SURYA VASANTHA LAKSHMI (193G1R00B1) MD. MANAUL ANSARY
(193G1R00B5)



PRINCIPAL Aditya Pharmacy Colleg SURAMPALEM - 533

BP 507 P. PHARMACOLOGY-II (Practical)

4Hrs/Week

- 1. Introduction to in-vitro pharmacology and physiological salt solutions.
- 2. Effect of drugs on isolated frog heart.
- 3. Effect of drugs on blood pressure and heart rate of dog.
- 4. Study of diuretic activity of drugs using rats/mice.
- 5. DRC of acetylcholine using frog rectus abdominis muscle.
- 6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus abdominis muscle and rat ileum respectively.
- 7. Bioassay of histamine using guinea pig ileum by matching method.
- 8. Bioassay of oxytocin using rat uterine horn by interpolation method.
- 9. Bioassay of serotonin using rat fundus strip by three point bioassay.
- 10. Bioassay of acetylcholine using rat ileum/colon by four point bioassay.
- 11. Determination of PA₂ value of prazosin using rat anococcygeus muscle (by Schilds plot method).
- 12. Determination of PD₂ value using guinea pig ileum.
- 13. Effect of spasmogens and spasmolytics using rabbit jejunum.
- 14. Anti-inflammatory activity of drugs using carrageenan induced paw-edema model.
- 15. Analgesic activity of drug using central and peripheral methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

- Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier
- 2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.
- 3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
- Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.
- Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology.
- 6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
- 7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher
- 8. Modern Pharmacology with clinical Applications, by Charles R. Craig& Robert.
- Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata.
- 10. Kulkarni SK. Handbook of experimental pharmacology. Vallabh Prakashan.



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ASSESSMENT OF ANTI-INFLAMMATORY AND ANTIOXIDANT ACTIVITIES OF THE ETHANOLIC EXTRACT OF "SYZYGIUM SAMARANGENSE" LEAVES.

A Dissertation Submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA



In the partial fulfilments of the requirements for the Award of the degree of

BACHELOR OF PHARMACY in PHARMACOLOGY

by

Cheruku. Naga Durga Pravallika (193G1R0020)

Chinthakula Tejaswini

(193G1R0021)

Dara. Tony Priyanka

(193G1R0022)

Debashish Ghosh

(193G1R0023)

Deyyala.Saritha

(193G1R0024)

Under the esteemed guidance of:

M.LALITHAKALA, M. PHARM

Assistant professor



ADITYA PHARMACY COLLEGE

Approved by AICTE & PCI, Affiliated to JNTUK, Kakinada

Aditya Nagar, ADB Road, Surampalem - 533 437

East Godavari District, Andhra Pradesh

BATCH: 2019-2023



Aditya Pharmacy College SURAMPALEM - 533 437

This is to certify that the dissertation work entitled a study on "ASSESSMENNT OF ANTI-INFLAMMATORY AND ANTI-OXIDANT ACTIVITIES OF THE ETHANOLIC EXTRACT OF SYZYGIUM SAMARANGENSE LEAVES" submitted in partial of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2022. This is a bonafide work carried out by Ch. Naga Durga Pravallika (193G1R0020), Ch. Tejaswini (193G1R0021), D. Tony Priyanka (193G1R0022), Debashish Ghosh (193G1R0023), D. Saritha (193G1R0024) under the direct guidance and supervision of M. Lalitha kala, M. Pharm, Assistant professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

Internal Examiner

External Examiner

SURAMPALEM F

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 532

DECLARATION

We hereby declare that the dissertation work entitled "ASSESSMENT OF ANTI-INFLAMMATORY AND ANTI-OXIDANT ACTIVITIES OF THE ETHANOLIC EXTRACT OF SYZYGIUM SAMARANGENSE LEAVES" in partial fulfilment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023, was carried out by us in the library and laboratories of Aditya Pharmacy College, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision of Miss. M. Lalitha kala, M. Pharm, Assistant Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh. We also declare that the matter embodied in it is a genuine work.

Cheruku. Naga Durga Pravallika (193G1R0020) Chop Pravallica

Chinthakula. Tejaswini (193G1R0021) Ch. Tejaswini

Dara. Tony Priyanka (193G1R0022) D. Long priyanke

Debashish Ghosh (193G1R0023) Delatis le

Deyyala. Saritha (193G1R0024)

D. salta.

PRINCIPAL Aditya Pharmacy College SURAMPALEM - 533 437

BP 506 P. Industrial PharmacyI (Practical)

4 Hours/week

- 1. Preformulation studies on paracetamol/asparin/or any other drug
- 2. Preparation and evaluation of Paracetamol tablets
- 3. Preparation and evaluation of Aspirin tablets
- 4. Coating of tablets- film coating of tables/granules
- 5. Preparation and evaluation of Tetracycline capsules
- 6. Preparation of Calcium Gluconate injection
- 7. Preparation of Ascorbic Acid injection
- 8. Qulaity control test of (as per IP) marketed tablets and capsules
- 9. Preparation of Eye drops/ and Eye ointments
- 10. Preparation of Creams (cold / vanishing cream)
- 11. Evaluation of Glass containers (as per IP)

Recommended Books: (Latest Editions)

- 1. Pharmaceutical dosage forms Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman &J.B.Schwartz
- 2. Pharmaceutical dosage form Parenteral medication vol- 1&2 by Liberman & Lachman
- 3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
- 4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
- 5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
- 6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
- 7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
- 8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger, Philadelphia, 5thedition, 2005
- Drug stability Principles and practice by Cartensen & C.I. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107.



P

"FORMULATION AND EVALUATION OF APIXABAN SUSTAINED RELEASE TRANSDERMAL PATCH BY SOLVENT EVAPORATION METHOD"

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillments of the requirements for the degree of Bachelor of Pharmacy (2023)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

Submitted BY

ASHMAWY SIBERT CHOKUPFEKEDZA	(193G1R0009)
AVASARALA SATWIKA	(193G1R0010)
AVINASH KUMAR SIKRIWAL	(193G1R0011)
LIANG CHUOL LIANG AYOK	(193G1R0012)
BANDARULANKA SAIKIRAN	(193G1R0013)

Under the Guidance of

Mr. DASARI.NAGASEN, M. Pharm., (Ph.D)

Assistant professor



Aditya Pharmacy College

Surampalem - 533437 2019-2023 PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437





This is to certify that the dissertation entitled "FORMULATION AND EVALUATION OF APIXABAN SUSTAINED RELEASE TRANSDERMAL PATCH BY A SOLVENT EVAPORATION METHOD" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of Bachelor of pharmacy is a record of original research work carried out by ASHMAWY SIBERT CHOKUPEEKEDZA (193G1R0009) AVASARALA SATWIKA (193G1R0010) AVINASH KUMAR SIKRIWAL (193G1R0011) LIANG CHUOL LIANG AYOK (193G1R0012) BANDARULANKA SAIKIRAN (193G1R0013)

They have done this research work under the supervision of **Mr. DASARI NAGASEN**, M. Pharm., (Ph. D) and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. D. Sathis kumar, M. Pharm, Ph.D

Principal,

Aditya Pharmacy College,

Surampalem-533437.

Place: Surampalem

Date:

Internal Examiner

Aditya Pharmacy College SURAMPALEM-533 437

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437

External Examiner



This is to certify that the dissertation entitled "FORMULATION AND EVALUATION OF OF APIXABAN SUSTAINED RELEASE TRANSDERMAL PATCH BY SOLVENT EVAPORATION METHOD" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of Bachelor of pharmacy is a record of original research work carried out by ASHMAWY SIBERT CHOKUPEEKEDZA (193G1R0009) AVASARALA SATWIKA (193G1R0010) AVINASH KUMAR SIKRIWAL (193G1R0011) LIANG CHUOL LIANG AYOK (193G1R0012) BANDARULANKA SAIKIRAN (193G1R0013)

Under my supervision and it has not been previously submitted to any other university or academic institution for any higher degree.

D. Nefal

Mr. DASARI NAGASEN, M. Pharm., (Ph. D)

ASST. PROFESSOR,

Aditya Pharmacy College,

Surampalem -533437.

Place: Surampalem

Date: 13/04/13

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437

External Examiner

Internal Examiner



DECLARATION

The project embodied in this thesis entitled "FORMULATION AND EVALUATION OF APIXABANSUSTAINED RELEASE TRANSDERMAL PATCH BY SOLVENT EVAPORATION METHOD" was carried out in the department of Pharmaceutical Technology under the guidance of Mr. DASARI NAGASEN, M.Pharm., (Ph.D) Aditya Pharmacy College, Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

ASHMAWY SIBERT CHOKUPEEKEDZA (193G1R0009)

AVINASH KUMAR SIKRIWAL
(193G1R0011)

SATWILLA

AVASARALA SATWIKA (193G1R0010)

LIANG CHUOL LYANG AYOK
(193G1R0012)

Giriron BANDARULANKA SAIKIRAN (193G1R0013)

> Aditya Pharmacy College SURAMPALEM - 533 437



BP 704T: NOVEL DRUG DELIVERY SYSTEMS (Theory)

45 Hours

Scope: This subject is designed to impart basic knowledge on the area of novel drug delivery systems.

Objectives: Upon completion of the course student shall be able

- 1. To understand various approaches for development of novel drug delivery systems.
- 2. To understand the criteria for selection of drugs and polymers for the development of Novel drug delivery systems, their formulation and evaluation

Course content:

Unit-I 10 Hours

Controlled drug delivery systems: Introduction, terminology/definitions and rationale, advantages, disadvantages, selection of drug candidates. Approaches to design controlled release formulations based on diffusion, dissolution and ion exchange principles. Physicochemical and biological properties of drugs relevant to controlled release formulations

Polymers: Introduction, classification, properties, advantages and application of polymers in formulation of controlled release drug delivery systems.

Unit-II 10 Hours

Microencapsulation: Definition, advantages and disadvantages, microspheres /microcapsules, microparticles, methods of microencapsulation, applications

Mucosal Drug Delivery system: Introduction, Principles of bioadhesion / mucoadhesion, concepts, advantages and disadvantages, transmucosal permeability and formulation considerations of buccal delivery systems

Implantable Drug Delivery Systems: Introduction, advantages and disadvantages, concept of implants and osmotic pump

Unit-III 10 Hours

Transdermal Drug Delivery Systems: Introduction, Permeation through skin, factors affecting permeation, permeation enhancers, basic components of TDDS, formulation approaches

Gastroretentive drug delivery systems: Introduction, advantages, disadvantages, approaches for GRDDS – Floating, high density systems, inflatable and gastroadhesive systems and their applications

Nasopulmonary drug delivery system: Introduction to Nasal and Pulmonary routes of drug delivery, Formulation of Inhalers (dry powder and metered dose), nasal sprays, nebulizers

Unit-IV

08 Hours



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Targeted drug Delivery: Concepts and approaches advantages and disadvantages, introduction to liposomes, niosomes, nanoparticles, monoclonal antibodies and their applications

Unit-V . 07 Hours

Ocular Drug Delivery Systems: Introduction, intra ocular barriers and methods to overcome –Preliminary study, ocular formulations and ocuserts

Intrauterine Drug Delivery Systems: Introduction, advantages and disadvantages, development of intra uterine devices (IUDs) and applications

Recommended Books: (Latest Editions)

- Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.
- Robinson, J. R., Lee V. H. L, Controlled Drug Delivery Systems, Marcel Dekker, Inc., New York, 1992.
- 3. Encyclopedia of Controlled Delivery. Edith Mathiowitz, Published by Wiley Interscience Publication, John Wiley and Sons, Inc, New York. Chichester/Weinheim
- 4. N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, New Delhi, First edition 1997 (reprint in 2001).
- S.P. Vyas and R.K. Khar, Controlled Drug Delivery -concepts and advances, Vallabh Prakashan, New Delhi, First edition 2002.

Journals

- 1. Indian Journal of Pharmaceutical Sciences (IPA)
- Indian Drugs (IDMA)
- 3. Journal of Controlled Release (Elsevier Sciences)
- Drug Development and Industrial Pharmacy (Marcel & Decker)
- 5. International Journal of Pharmaceutics (Elsevier Sciences)



Aditya Pharmacy Colleger

"FORMULATION AND EVALUATION OF TINOXIDE SOLID LIPID NANOPARTICLES"

. Dissertation submitted to the JNTU-k University in partial fulfillment of the requirements for the degree of Bachelor of Pharmacy



Jawaharlal Nehru Technological University, Kakinada, A.P.

SUBMITTED BY:

Shaik Suhan Begam (193G1R0088)

Shamik Mondal (193G1R0089)

Soumik Bose (193G1R0091)

Srikakolapu Lakshmana Naga Kiran (193G1R0093)

Sunday Goch Kur Deng (193G1R0094)

Polisetti Geetha Satya Sri (183G1R0072)



Under the guidance of

Mr.G.Ramakrishna M.Pharm., (Ph.D)

Assistant Professor Department of Pharmaceutics Aditya Pharmacy College, Surrampalem-533437

2019-2023

PRINCIPAL Aditya Pharmacy College SURAMPALEM - 533 437



DECLARATION



The project embodied in this thesis entitled "Formulation and evaluation of solid lipid nanoparticles", was carried out in the Department of Pharmaceutics under the guidance of,

Mr.G.Ramakrishna M.Pharm., (Ph.D) Aditya Pharmacy College,
Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

Shaik Suhan Begam (193G1R0088) 8haik Suhan Begam Shamik Mondal (193G1R0089) Shamih Mondal

Soumik Bose (193G1R0091) Soumik Bose

Srikakolapu Lakshmana Naga Kiran (193G1R0093) 3.1.N. Kiray

Sunday Goch Kur Deng (193G1R0094)

Polisetti Geetha Satya Sri (183G1R0072)

PRINCIPAL
Aditya Pharmacy Colle



BP607P. MEDICINAL CHEMISTRY- III (Practical)

4 Hours / week

- I Preparation of drugs and intermediates
- 1 Sulphanilamide
- 2 7-Hydroxy, 4-methyl coumarin
- 3 Chlorobutanol
- 4 Triphenyl imidazole
- 5 Tolbutamide
- 6 Hexamine
- II Assay of drugs
- 1 Isonicotinic acid hydrazide
- 2 Chloroquine
- 3 Metronidazole
- 4 Dapsone
- 5 Chlorpheniramine maleate
- 6 Benzyl penicillin
- III Preparation of medicinally important compounds or intermediates by Microwave irradiation technique
- IV Drawing structures and reactions using chem draw®
- V Determination of physicochemical properties such as logP, clogP, MR, Molecular weight, Hydrogen bond donors and acceptors for class of drugs course content using drug design software Drug likeliness screening (Lipinskies RO5)

Recommended Books (Latest Editions)

- 1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
- 2. Foye's Principles of Medicinal Chemistry.
- 3. Burger's Medicinal Chemistry, Vol I to IV.
- 4. Introduction to principles of drug design- Smith and Williams.
- 5. Remington's Pharmaceutical Sciences.
- 6. Martindale's extra pharmacopoeia.

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- 7. Organic Chemistry by I.L. Finar, Vol. II.
- 8. The Organic Chemistry of Drug Synthesis by Lednicer, Vol. 1-5.
- 9. Indian Pharmacopoeia.
- 10. Text book of practical organic chemistry- A.I. Vogel.



XX

PRINCIPAL

"MICROWAVE ASSISTED SYNTHESIS & DOCKING STUDIES OF NOVEL DERIVATIVES OF 7-HYDROXY-4-METHYL COUMARIN"

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the degree of *Bachelor of Pharmacy (2023)*



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

Submitted by

SANJEET KUMAR (193G1R0084)

S.J.S.D. ANITHA (193G1R0085)

SARANAN KUMAR (193G1R0086)

S. ANUSHA SNIGDHA (193G1R0087)

T. NAVYA (193G1R00A0)

Under the guidance of

T. SRI SOWKHYA, M.Pharm.

Department of Pharmaceutical chemistry
Assistant Professor



PRINCIPAL Aditya Pharmacy Col 3437 SURAMPALEM - 583 43

Aditya Pharmacy College, Surampalem, Andhra Pradesh, India-533437 SURAMPALEM - 533



BP 507 P. PHARMACOLOGY-II (Practical)

4Hrs/Week

1. Introduction to in-vitro pharmacology and physiological salt solutions.

2. Effect of drugs on isolated frog heart.

Effect of drugs on blood pressure and heart rate of dog.

4. Study of diuretic activity of drugs using rats/mice.

5. QRC of acetylcholine using frog rectus abdominis muscle.

6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus abdominis muscle and rat ileum respectively.

7. Bioassay of histamine using guinea pig ileum by matching method.

8. Bioassay of oxytocin using rat uterine horn by interpolation method.

Bioassay of serotonin using rat fundus strip by three point bioassay.

- 10. Bioassay of acetylcholine using rat ileum/colon by four point bioassay.
- 11. Determination of PA2 value of prazosin using rat anococcygeus muscle (by Schilds plot method).

12. Determination of PD₂ value using guinea pig ileum.

13. Effect of spasmogens and spasmolytics using rabbit jejunum.

- 14. Anti-inflammatory activity of drugs using carrageenan induced paw-edema
- 15. Analgesic activity of drug using central and peripheral methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

- 1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier
- 2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.

3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics

4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.

5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology.

6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.

7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher 8. Modern Pharmacology with clinical Applications, by Charles R.Craig& Robert.

9. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company,

10. Kulkarni SK. Handbook of experimental pharmacology. Vallabh Prakashan.

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ASSESSMENT OF INVITRO ANTI-INFLAMMATORY AND ANTI-OXIDANT ACTIVITY OF HYDRO DISTILLATE OF **CUMINUM CYMINUM**

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the Degree of Bachelor of Pharmacy (2023)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA.

SUBMITTED BY

raj Prasad Yadav (193G1R0068)

P. Muralidhar Raju (193G1R0071)

n Prakash Thakur (193G1R0069)

P. Sharon Priyanka(193G1R0072)

Lakshmi Bhavani(193G1R0070)



UNDER THE GUIDANCE OF

Ch. LAKSHMI MADHAVI, PGDHM, M.Pharm, (Ph.D), Aditya Pharmacy College Assistant Professor ADITYA PHARMACY COLLEGE Surampalem - 533437 2019-2023

SURAMPALEM - 533 437



ASSESSMENT OF INVITRO ANTI-INFLAMMATORY AND ANTI-OXIDANT ACTIVITY OF HYDRO DISTILLATE OF CUMINUM CYMINUM

Dissertation submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the Degree of Bachelor of Pharmacy (2023)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA.

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Lakshmi Bhavani(193G1R0070)



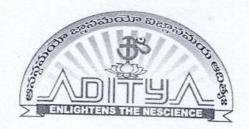
UNDER THE GUIDANCE OF

Ch. LAKSHMI MADHAVI, PGDHM, M.Pharm, (Ph.D),
Assistant Professor
ADITYA PHARMACY COLLEGE
Surampalem – 533437 2019-2023

PRINCIPAL
Aditya Pharmacy Colleg
SURAMPALEM - 533 437



CERTIFICATE



TI-OXIDANT ACTIVITY OF HYDRO DISTILLATE OF CUMINUM CYMINUM "was submitted to Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the award ne Degree of Bachelor of Pharmacy is a record of original research work carried out by Niraj Prasad Yadav 3G1R0068), Om Prakash Thakur (193G1R0069), P.Lakshmi Bhavani (193G1R0070), P.Muralidhar u (193G1R0071), P. Sharon Priyanka (193G1R0072). They have done this research work under the ervision of Ms. Ch. Lakshmi Madhavi, PGDHM, M.Pharm, (Ph.D). and it has not been previously submitted to any r university or academic institution for any higher degree.

Dr.D. Sathis Kumar, M.Pharm, Ph.D, Principal, Aditya Pharmacy College, Surampalem-533437,

Andhra Pradesh.

Aditya Pharmacy Collection SURAMPALEM-539

PRINCIPAL Aditya Pharmacy Col SURAMPALEM - 533 43



CERTIFICATE BY THE GUIDE



s is to certify that the dissertation entitled "ASSESSMENT OF INVITRO ANTI-INFLAMMATORY AND TI-OXIDANT ACTIVITY OF HYDRO DISTILLATE OF CUMINUM CYMINUM" was submitted to Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the award he Degree of Bachelor of Pharmacy is a record of original research work carried out by Niraj Prasad Yadav 3G1R0068), Om Prakash Thakur (193G1R0069), P.Lakshmi Bhavani (193G1R0070), P.Muralidhar ju (193G1R0071), P. Sharon Priyanka (193G1R0072). They have done this research work under the ervision of Ms. Ch. Lakshmi Madhavi, PGDHM, M.Pharm, (Ph.D). and it has not been previously submitted to any er university or academic institution for any higher degree.

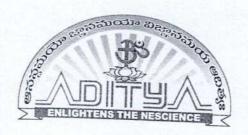
C.L. Macham

Ms. Ch.Lakshmi Madhavi, PGDHM,M.Pharm,(Ph.D) Assistant Professor, Aditya Pharmacy College, Surampalem-533437, Andhra Pradesh.

SURAMPALEM EN S33 A37 Ph

PRINCIPAL Aditya Pharmacy College

CERTIFICATE



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Aditya Pharmacy College, Surampalem- 533437.

Place: Surampalem

Date:

VTERNAL EXAMINER

Aditya Pharmacy Colleg

SURAMPALEM - 533 437

EXTERNAL EXAMINER

DECLARATION

The project embodied in this thesis entitled "ASSESSMENT OF INVITRO ANTI-INFLAMMATORY AND ANTI-OXIDANT ACTIVITY OF HYDRO DISTILLATE OF CUMINUM CYMINUM" was carried out in the department of pharmaceutical analysis under the guidance of Ms. Ch. Lakshmi Madhavi, PGDHM, M.Pharm, (Ph.D), Assistant Professor, Aditya Pharmacy College, Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

NIRAJ PRASAD YADAV (193G1R0068)

P. Muralidhar Alle.
P. MURALIDHAR RAJU (193G1R0071)

OM PRAKASH THAKUR (193G1R0069)

P. L. Bryanka P. SHARON PRIYANKA (193G1R0072)

P. LAKSHMI BHAVANI (193G1R0070)

PRINCIPAL
Aditya Pharmacy College



BP 405 T.PHARMACOGNOSY AND PHYTOCHEMISTRY I (Theory)

45 Hours

Scope: The subject involves the fundamentals of Pharmacognosy like scope, classification of crude drugs, their identification and evaluation, phytochemicals present in them and their medicinal properties.

Objectives: Upon completion of the course, the student shall be able

- 1. to know the techniques in the cultivation and production of crude drugs
- 2. to know the crude drugs, their uses and chemical nature
- 3. know the evaluation techniques for the herbal drugs
- 4. to carry out the microscopic and morphological evaluation of crude drugs

Course Content:

UNIT-I 10 Hours

Introduction to Pharmacognosy:

- (a) Definition, history, scope and development of Pharmacognosy
- (b) Sources of Drugs Plants, Animals, Marine & Tissue culture
- (c) Organized drugs, unorganized drugs (dried latex, dried juices, dried extracts, gums and mucilages, oleoresins and oleo- gum -resins).

Classification of drugs:

Alphabetical, morphological, taxonomical, chemical, pharmacological, chemo and sero taxonomical classification of drugs

Quality control of Drugs of Natural Origin:

Adulteration of drugs of natural origin. Evaluation by organoleptic, microscopic, physical, chemical and biological methods and properties.

Quantitative microscopy of crude drugs including lycopodium spore method, leafconstants, camera lucida and diagrams of microscopic objects to scale with camera lucida.

UNIT-II 10 Hours

Cultivation, Collection, Processing and storage of drugs of natural origin:

Cultivation and Collection of drugs of natural origin

Factors influencing cultivation of medicinal plants.

Plant hormones and their applications.

Polyploidy, mutation and hybridization with reference to medicinal plants

Conservation of medicinal plants

UNIT-III 07 Hours

Plant tissue culture:

Historical development of plant tissue culture, types of cultures, Nutritional requirements, growth and their maintenance.

Applications of plant tissue culture in pharmacognosy.

Edible vaccines

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UNIT IV

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10 Hours

Pharmacognosy in various systems of medicine:

Role of Pharmacognosy in allopathy and traditional systems of medicine namely, Ayurveda, Unani, Siddha, Homeopathy and Chinese systems of medicine.

Introduction to secondary metabolites:

Definition, classification, properties and test for identification of Alkaloids, Glycosides, Flavonoids, Tannins, Volatile oil and Resins

UNIT V

08 Hours

Study of biological source, chemical nature and uses of drugs of natural origin containing following drugs

Plant Products:

Fibers - Cotton, Jute, Hemp

Hallucinogens, Teratogens, Natural allergens

Primary metabolites:

General introduction, detailed study with respect to chemistry, sources, preparation, evaluation, preservation, storage, therapeutic used and commercial utility as Pharmaceutical Aids and/or Medicines for the following Primary metabolites:

Carbohydrates: Acacia, Agar, Tragacanth, Honey

Proteins and Enzymes: Gelatin, casein, proteolytic enzymes (Papain, bromelain, serratiopeptidase, urokinase, streptokinase, pepsin).

Lipids(Waxes, fats, fixed oils): Castor oil, Chaulmoogra oil, Wool Fat, Bees Wax

Marine Drugs:

Novel medicinal agents from marine sources



Aditya Pharmacy College SURAMPALEM-533 437

103

SURVEY ON MEDICINAL PLANTS IN ADITY A CAMPUS

Is a Dissertation Submitted to the

JNT University, Kakinada



In Partial Fulfillment of the Requirements for the Award of the Degree of

BACHELOR OF PHARMACY

Priti Mallik(193G1R0078) Pulugurtha Subhashitha (193G1R0079) Padala Rajani (193G1R0080) Raj Priya Himanshu (193G1R0081) Rani Prasad (193G1R0082)

Under the Guidance of

Dr. D. Sathis Kumar, M.Pharm. Ph.D.,

Professor & Principal





(Approved by AICTE & PCI, Recognized by UGC, Accredited by NAAC (A Grade),
Affiliated to JNT University, Kakinada, Certified by ISO (9001:2015))
Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P. Pin: 533437,

Dr. D.SathisKumar, M. Pharm., Ph. D. Principal& Professor

CERTIFICATE

This is to certify that the dissertation work entitled "Survey on Medicinal Plants in Aditya Campus" is submitted to the JNT University, Kakinada in partial fulfillment for the award of the degree of Bachelor of Pharmacy. This is a bonafied work Carried out by Priti Mallik (193G1R0078), Pulugurtha Subhashitha (193G1R0079), Padala Rajani (193G1R0080), Raj Priya Himanshu (193G1R0081) & Rani Prasad (193G1R0082) under the supervision of Dr.D.Sathis Kumar, Professor, Aditya Pharmacy College, Surampalem.

Place: Surampalem

Date: 15 04 23

Principal

(Dr.D.SathisKumar.)

Aditya Pharmacy College SURAMPALEM-533 437



M



(Approved by AICTE & PCI, Recognized by UGC, Accredited by NAAC (A Grade),
Affiliated to JNT University, Kakinada, Certified by ISO (9001:2015))
Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P. Pin: 533437,

EVALUATION CERTIFICATE

This is to certify that the dissertation work entitled "Survey on Medicinal Plants in Aditya Campus" is submitted to the JNT University, Kakinada in partial fulfillment for the award of the degree of Bachelor of Pharmacy. This is a bonafied work Carried out by Priti Mallik (193G1R0078), Pulugurtha Subhashitha (193G1R0079), Padala Rajani (193G1R0080), Raj Priya Himanshu 193G1R0081) & Rani Prasad (193G1R0082) under the supervision of me.

Date: 15/01/93

SIGNATURE OF EVALUATOR 1

'lace: Gurompolem

SIGNATURE OF EVALUATOR 2



DECLARATION

(193G1R0078), Pulugurtha Mallik Priti Subhashitha We, (193G1R0079), Padala Rajani (193G1R0080), Raj Priya Himanshu 193G1R0081) and Rani Prasad (193G1R0082), do hereby declare that the dissertation entitled "Survey on Medicinal plants in Aditya Campus" is a record of genuine research work carried out by us under the supervision of Dr.D.Sathis Kumar, Professor, Aditya Pharmacy College, Surampalem. The work reported perein has not been previously submitted by other persons for qualifications at any other University or academic institutions unless otherwise referenced or icknowledged.

Place: Surampalem

Priti Mallik (193G1R0078), Posto Mallik

Pulugurtha Subhashitha (193G1R0079), P. subhashitha

Padala Rajani (193G1R0080), P. Rajani

Raj Priya Himanshu (193G1R0081) Raj Priya Himanshu.

Rani Prasad (193G1R0082), Roni Brasad

SURAMPALEM S33 437

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Aditya Pharmacy College
SURAMPALEM - 533 437

BP 307P.PHARMACEUTICAL MICROBIOLOGY (Practical)

4 Hrs/week

- 1. Introduction and study of different equipments and processing, e.g., B.O.D. incubator, laminar flow, aseptic hood, autoclave, hot air sterilizer, deep freezer, refrigerator, microscopes used in experimental microbiology.
- 2. Sterilization of glassware, preparation and sterilization of media.
- 3. Sub culturing of bacteria and fungus. Nutrient stabs and slants preparations.
- 4. Staining methods- Simple, Grams staining and acid fast staining (Demonstration with practical).
- 5. Isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.
- 6. Microbiological assay of antibiotics by cup plate method and other methods
- 7. Motility determination by Hanging drop method.
- 8. Sterility testing of pharmaceuticals.
- 9. Bacteriological analysis of water
- 10. Biochemical test.

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Recommended Books (Latest edition)

- 1. W.B. Hugo and A.D. Russel: Pharmaceutical Microbiology, Blackwell Scientific publications, Oxford London.
- Prescott and Dunn., Industrial Microbiology, 4th edition, CBS Publishers & Distributors, Delhi.
- 3. Pelczar, Chan Kreig, Microbiology, Tata McGraw Hill edn.
- 4. Malcolm Harris, Balliere Tindall and Cox: Pharmaceutical Microbiology.
- 5. Rose: Industrial Microbiology.
- 6. Probisher, Hinsdill et al: Fundamentals of Microbiology, 9th ed. Japan
- 7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
- 8. Peppler: Microbial Technology.
- 9. I.P., B.P., U.S.P.- latest editions.
- 10. Ananthnarayan: Text Book of Microbiology, Orient-Longman, Chennai
- 11. Edward: Fundamentals of Microbiology.
- 12. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi
- 13. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company



PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

MICROBIOLOGICAL ASSAY OF ANTIHISTAMINES USING PROMETHAZINE

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA



In the partial fulfilment of the requirements for the Award of the degree of BACHELOR OF PHARMACY

BY

KALAM SHEKH (193G1R0041)

KAMPA SUDHEER KUMAR (193G1R0042)

KANCHARLA UDAYA BHANU (193G1R0043)

KARRI UMA TRILOKA (193G1R0044)

KATTA VANDANA (193G1R0045)

Under the guidance of
K.PYDIRAJU, M.Pharm.(PhD)
Associate Professor



ADITYA PHARMACY COLLEGE

Surampalem, Andhra Pradesh, India – 533437

Batch: 2019 - 2023

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - \$33 437





ADITYA PHARMACY COLLEGE

(Affiliated to PCI, AICTE & JNTUK)

Surampalem 533437, E.G. District, Andhra Pradesh

CERTIFICATE

This is to certify that the dissertation work entitled a study on "MICROBIOLOGICAL ASSAY OF ANTIHISTAMINES USING PROMETHAZINE" submitted in partial fulfilment of the degree in bachelor of pharmacy of the JNT University, Kakinada for the academic year 2019 – 2023. This is a bonafide work carried out by KALAM SHEKH (193G1R0041), KAMPA SUDHEER KUMAR (193G130042), KANCHARLA UDAYA BHANU (193G1R0043), KARRI UMA TRILOKA (193G1R0044), KATTA VANDANA (193G1R0045), under the direct guidance and supervision of K.PYDIRAJU M.Pharm,(PhD) Associate Professor in Aditya Pharmacy College, surampalem, Andhra Pradesh.

(Internal examiner)

(External examiner)

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437





ADITYA PHARMACY COLLEGE

(Affiliated to PCI, AICTE & JNTUK)

Surampalem 533437, E.G. District, Andhra Pradesh

CERTIFICATE

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K.PYDIRAJU, M.Pharm (PhD)

Associate Professor

Aditya Pharmacy College

Surampalem.





ADITYA PHARMACY COLLEGE

(Affiliated to PCI, AICTE & JNTUK)

Surampalem 533437, E.G. District, Andhra Pradesh

CERTIFICATE

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Date:

(Principal)

Dr.D.Sathis Kumar, M.Pharm, PhD

Principal & Professor

Aditya Pharmacy College

Surampalem

Aditya Pharmacy College SURAMPALEM-533 437

M - 533 437



DECLARATION

We hereby declare that the dissertation work entitled "MICROBIOLOGICAL ASSAY OF ANTIHISTAMINES USING PROMETHAZINE" in partial fulfilment of the degree in Bachelor of Pharmacy of the JNTU, Kakinada for the academic year 2019 – 2023, was carried out by us in the library and laboratories of Aditya Pharmacy college, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision of Mr.K.Pydiraju, M.Pharm (PhD)Associate Professor. We also declare that the matter embodied in it is a genuine work.

KALAMSHEKH

(193G1R0041)

K. Sudheer kuman

(193G1R0042)

L Udaya Chany KANCHARLA UDAYA BHANU

(193G1R0043)

KARRI UMA TRILOKA

(193G1R0044)

KATTA VANDANA

X. Vandana!

(193G1R0045)

PRINCIPAL Aditya Pharmacy College SURAMPALEM - 533 437



BP 506 P. Industrial PharmacyI (Practical)

4 Hours/week

- 1. Preformulation studies on paracetamol/asparin/or any other drug
- 2. Preparation and evaluation of Paracetamol tablets
- 3. Preparation and evaluation of Aspirin tablets
- 4. Coating of tablets- film coating of tables/granules
- 5. Preparation and evaluation of Tetracycline capsules
- 6. Preparation of Calcium Gluconate injection
- 7. Preparation of Ascorbic Acid injection
- 8. Qulaity control test of (as per IP) marketed tablets and capsules
 - 9. Preparation of Eye drops/ and Eye ointments
 - 10. Preparation of Creams (cold / vanishing cream)
 - 11. Evaluation of Glass containers (as per IP)

Recommended Books: (Latest Editions)

- 1. Pharmaceutical dosage forms Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman &J.B.Schwartz
- 2. Pharmaceutical dosage form Parenteral medication vol- 1&2 by Liberman & Lachman
- 3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
- 4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
- 5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
- 6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
- 7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
- 8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger, Philadelphia, 5thedition, 2005
- Drug stability Principles and practice by Cartensen & C.I. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107.



"FORMULATION AND EVALUATION OF HERBAL HAIR GEL"

Dissertation submitted to the JNTU-K University in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy.

(2023)



Jawaharlal Nehru Technological University, Kakinada, A.P

SUBMITTED BY:

Kaustubh Priyanshu (193G1R0046)

Ketha. Lakshmi Bhavani (193G1R0047)

Kilari. Venkata Deepika (193G1R0048)

Vanessa Williams Kisakye (193G1R0049)

Kombathula. Lisa (193G1R0050)



Under the guidance of

Mrs. Gowripattapu Sridevi M.Pharm., (Ph.D)

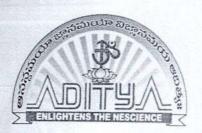
Assoc. Professor

Department of Pharmaceutics Aditya Pharmacy College, Surampalem-533437 2019-2023

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437



CERTIFICATE



This is to certify that the dissertation entitled "Formulation and Evaluation of Herbal hair gel", submitted to the JNTU-K University, Kakinada, in partial fulfilment of the requirements for the award of the degree of Bachelor of Pharmacy is a record of original research work carried out by Kaustubh Priyanshu (193G1R0046), Ketha.LakshmiBhavani (193G1R0047) Kilari Venkata Deepika (193G1R0048), Vanessa Williams Kisakye (193G1R0049), Kombathula. Lisa (193G1R0050) under the supervision of Mrs. Gowripattapu Sridevi, M.Pharm (Ph.D)., and it has been previously not submitted to and other University of Academic Institution for any higher degree.

Place: Surampalem

Date:

Aditya Pharmacy College

Dr.D.Sathis Kumar, M.Pharm., Ph.D

Principal and Professor,

Aditya Pharmacy College.

Internal Examiner

External Examiner

PRINCIPAL Aditya Pharmacy

ege

SURAMP



CERTIFICATE BY THE GUIDE



I hereby declare that this dissertation entitled "Formulation and evaluation of Herbal hair gel" is a original research work carried out by Kaustubh Priyanshu (193G1R0046), Ketha Lakshmi Bhavani (193G1R0047), Kilari. Venkata Deepika (193G1R0048), Vanessa Williams Kisakye (193G1R0049), kombathula Lisa (193G1R0050) under my supervision in partial fulfilment of the requirement for the degree of Bachelor of Pharmacy.

Gi-Saiduri

Mrs. Gowripattapu Sri Devi M.Pharm., (Ph.D)

Assoc. Professor

Department of Pharmaceutics

Aditya Pharmacy College.



PRINCIPAL
Aditva Pharmacy Co

DECLARATION



The project embodied in this thesis entitled "Formulation and Evaluation of Herbal hair gel", was carried out in the Department of Pharmaceutics under the guidance of Mrs.Gowripattapu Sridevi, M.Pharm., (Ph.D) Aditya Pharmacy College, Surampalem. The extent and source of information derived from the existence literature have been indicated throughout thesis of the project work at appropriate places.

Kaustubh Priyanshu (193G1R0046) Kaustubh Priyanshu

Ketha. Lakshmi Bhavani (193G1R0047) K.L. Bhavani

Kilari. Venkata Deepika (193G1R0048) K. V. Deepika.

Vanessa Williams Kisakye (193G1R0049)

Kombathula .Lisa (193G1R0050) とんりa

PRINCIPAL Aditya Pharmacy Colle SURAMPALEM - 533 437



BP 609 P. HERBAL DRUG TECHNOLOGY (Practical)

4 hours/ week

- 1. To perform preliminary phytochemical screening of crude drugs.
- 2. Determination of the alcohol content of Asava and Arista
- 3. Evaluation of excipients of natural origin
- 4. Incorporation of prepared and standardized extract in cosmetic formulations like creams, lotions and shampoos and their evaluation.
- 5. Incorporation of prepared and standardized extract in formulations like syrups, mixtures and tablets and their evaluation as per Pharmacopoeial requirements.
- 6. Monograph analysis of herbal drugs from recent Pharmacopoeias
- 7. Determination of Aldehyde content
- 8. Determination of Phenol content
- 9. Determination of total alkaloids

Recommended Books: (Latest Editions)

- 1. Textbook of Pharmacognosy by Trease & Evans.
- 2. Textbook of Pharmacognosy by Tyler, Brady & Robber.
- 3. Pharmacognosy by Kokate, Purohit and Gokhale
- 4. Essential of Pharmacognosy by Dr.S.H.Ansari
- 5. Pharmacognosy & Phytochemistry by V.D.Rangari
- 6. Pharmacopoeal standards for Ayurvedic Formulation (Council of Research in Indian Medicine & Homeopathy)
- Mukherjee, P.W. Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals. Business Horizons Publishers, New Delhi, India, 2002.



Aditya Pharmacy Colleg

PRELIMINARY PHYTOCHEMICAL SCREENING AND ANTHELMINTIC ACTIVITY OF ETHANOLIC LEAF EXTRACT OF "FICUSNOTA PLANT"

Dissertation submitted to



Jawaharlal Nehru Technological University, Kakinada, A.P. For the award of the degree of

Bachelor of Pharmacy

MOKKAPATI LAHARI(193G1R0062) MOMA YAKUB PETER(193G1R0063) MUCHERLA SRI BHANU RAMA PRAVALLIKA(193G1R0064) JAGADESHWARI(193G1R0065) NIKITA TOPPO(193G1R0067)

Under the guidance of
DR.P.Bhaskara Rao, M.Pharm .,Ph.D
Associate Professor
Department of Pharmaceutical Analysis



Aditya Pharmacy Collage, Surampalem-533437 2019-2023



PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437

DECLARATION

Ve hereby declare that the dissertation work entitled PRELIMINARY PHYTOCHEMICAL CREENING ,ANTHELMINTIC ACTIVITY OF ETHANOLIC LEAF EXTTRACT DEFICUS NOTA PLANT" in partial fulfillment of the degree in Bachelor of Pharmacy of the NT University, Kakinada for the academic year 2019 - 2023, was carried out by us in the brary and laboratories of Aditya Pharmacy College, Surampalem, Andhra Pradesh under the aluable and efficient guidance and supervision of DR.P.Bhaskara Rao, M.Pharm., Ph.D, ssociate Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh. We also declare

okkapati Lahari

Ioma Yakub Peter

at the matter embodied, it is a genuine wok.

udduna Jagadiswari

kita Toppo

(193G1R0062) M. Lahari

(193G1R0063)

ucherla Sri Bhanu Rama Pravallika (193G1R0064) M. &. B. R. Poravallika

(193G1R0065) n. Jagadismari

(193G1R0067)



BP 506 P. Industrial PharmacyI (Practical)

4 Hours/week

- 1. Preformulation studies on paracetamol/asparin/or any other drug
- 2. Preparation and evaluation of Paracetamol tablets
- 3. Preparation and evaluation of Aspirin tablets
- 4. Coating of tablets- film coating of tables/granules
- 5. Preparation and evaluation of Tetracycline capsules
- 6. Preparation of Calcium Gluconate injection
- 7. Preparation of Ascorbic Acid injection
- 8. Qulaity control test of (as per IP) marketed tablets and capsules
- 9. Preparation of Eye drops/ and Eye ointments
- 10. Preparation of Creams (cold / vanishing cream)
- 11. Evaluation of Glass containers (as per IP)

Recommended Books: (Latest Editions)

- 1. Pharmaceutical dosage forms Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman &J.B.Schwartz
- 2. Pharmaceutical dosage form Parenteral medication vol- 1&2 by Liberman & Lachman
- 3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
- 4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
- 5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
- 6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
- 7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
- 8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger, Philadelphia, 5thedition, 2005
- Drug stability Principles and practice by Cartensen & C.J. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107.



EVALUATION OF ANTI ANGIOGENIC ACTIVITY BY LACOSAMIDE USING CHICK CAM ASSAY

A Dissertation Submitted to
JNT UNIVERSITY, KAKINADA



In partial fulfilment for the award of the degree of BACHELOR OF PHARMACY BY

Korasika Alekya (193G1R0051)

Krishna Kunal Singh (193G1R0052)

Kundrapu Varshitha (193G1R0053)

Kushum Paul (193G1R0054)

Kyembe Abel Nkunka (193G1R0055)

Madana Uma Rajeswari (193G1R0056)

Under the esteemed guidance of

Dr.P.S.S.SAI KIRAN M.Pharm, Ph.D.,

Associate Professor



ADITYA PHARMACY COLLEGE

Approved by AICTE & PCI, Affiliated to JNTUK, Kakinada

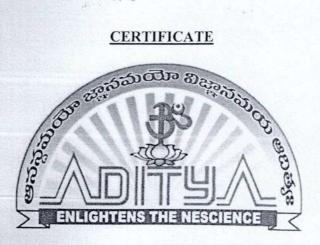
Aditya Nagar, ADB Road, Surampalem - 533437

East Godavari District, Andhra Pradesh

Batch: 2019-2023

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM - 533 437





This is to certify that the dissertation work entitled a study on "EVALUATION OF ANTI ANGIOGENIC ACTIVITY BY LACOSAMIDE USING CHICK CAM ASSAY"submitted in partial fulfilment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023. This is a bonafide work carried out by Korasika Alekya (193G1R0051), Krishna Kunal Singh (193G1R0052), Kundrapu Varshitha (193G1R0053), Kushum Paul (193G1R0054), Kyembe Abel Nkunka (193G1R0055), Madana Uma Rajeswari (193G1R0056) under the direct guidance and supervision of Dr.P.S.S.Sai Kiran M.Pharm., Ph.D., Associate Professor, Aditya Pharmacy College, Surampalem, Andhra Pradesh.

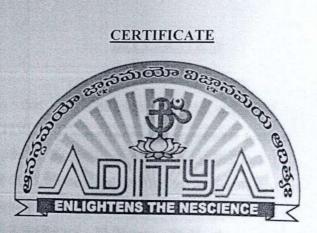
Dr.D.SATHIS KUMAR., M.Pharm., Ph.D

Principal and Professor.

PRINCIPAL Aditya Pharmacy College SURAMPALEM-533 437



CERTIFICATE



This is to certify that the dissertation work entitled a study on "EVALUATION OF ANTI ANGIOGENIC ACTIVITY BY LACOSAMIDE USING CHICK CAM ASSAY"submitted in partial fulfilment of the degree in Bachelor of Pharmacy of the JNT University, Kakinada for the academic year 2019-2023. This is a bonafide work carried out by Korasika Alekya (193G1R0051), Krishna Kunal Singh (193G1R0052), Kundrapu Varshitha (193G1R0053), Kushum Paul (193G1R0054), Kyembe Abel Nkunka (193G1R0055), Madana Uma Rajeswari (193G1R0056), under my direct guidance and supervision.

Dr.P.S.S.SAI KIRAN M.Pharm.. Ph.D

Associate professor.



DECLARATION

We hereby declare that the dissertation work entitled "EVALUATION OF ANTI ANGIOGENIC ACTIVITY BY LACOSAMIDE USING CHICK CAM ASSAY"in partial fulfilment of the degree in Bachelor of pharmacy of the JNT University, Kakinada for the academic year 2019-2023,was carried out by us in the library and laboratories of Aditya Pharmacy College, Surampalem, Andhra Pradesh under the valuable and efficient guidance and supervision of Dr.P.S.S.SaiKiran , M.Pharm., Ph.D,. Associate professor, Aditya Pharmacy college, Surampalem, Andhra Pradesh. We also declare that the matter embodied in it is a genuine work.

> K. Alekya K. Kund Singh K. Varshithe Stepenbe.

Korasika Alekya (193G1R0051)

Krishna Kunal Singh (193G1R0052)

Kundrapu Varshitha (193G1R0053)

Kushum Paul (193G1R0054)

Kyembe Abel Nkunka (193G1R0055)

M. UnaRayeswari Madana Uma Rajeswari (193G1R0056)

Aditya Pharma SURAMPALEM - 53



BP111P.COMMUNICATION SKILLS (Practical)

2 Hours / week

The following learning modules are to be conducted using wordsworth English language lab software

Basic communication covering the following topics

Meeting People

Asking Questions

Making Friends

What did you do?

Do's and Dont's

Pronunciations covering the following topics

Pronunciation (Consonant Sounds)

Pronunciation and Nouns

Pronunciation (Vowel Sounds)

Advanced Learning

Listening Comprehension / Direct and Indirect Speech

Figures of Speech

Effective Communication

Writing Skills

Effective Writing

Interview Handling Skills

E-Mail etiquette

Presentation Skills



Recommended Books: (Latest Edition)

- Basic communication skills for Technology, Andreja. J. Ruther Ford, 2nd Edition, Pearson Education, 2011
- 2. Communication skills, Sanjay Kumar, Pushpalata, 1st Edition, Oxford Press, 2011
- 3. Organizational Behaviour, Stephen .P. Robbins, 1st Edition, Pearson, 2013
- 4. Brilliant-Communication skills, Gill Hasson, 1st Edition, Pearson Life, 2011
- The Ace of Soft Skills: Attitude, Communication and Etiquette for success, Gopala Swamy Ramesh, 5thEdition, Pearson, 2013
- Developing your influencing skills, Deborah Dalley, Lois Burton, Margaret, Green hall, 1st Edition Universe of Learning LTD, 2010
- 7. Communication skills for professionals, Konar nira, 2ndEdition, New arrivals PHI, 2011
- Personality development and soft skills, Barun K Mitra, 1stEdition, Oxford Press, 2011
- Soft skill for everyone, Butter Field, 1st Edition, Cengage Learning india pvt.ltd, 2011
- Soft skills and professional communication, Francis Peters SJ, 1stEdition, Mc Graw Hill Education, 2011
- 11. Effective communication, John Adair, 4th Edition, Pan Mac Millan, 2009
- 12. Bringing out the best in people, Aubrey Daniels, 2ndEdition, Mc Graw Hill, 1999



BP107P. HUMAN ANATOMY AND PHYSIOLOGY (Practical)

4 Hours/week

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject.

- 1. Study of compound microscope.
- 2. Microscopic study of epithelial and connective tissue
- 3. Microscopic study of muscular and nervous tissue
- 4. Identification of axial bones
- 5. Identification of appendicular bones
- 6. Introduction to hemocytometry.
- 7. Enumeration of white blood cell (WBC) count
- 8. Enumeration of total red blood corpuscles (RBC) count
- 9. Determination of bleeding time
- 10. Determination of clotting time
- 11. Estimation of hemoglobin content
- 12. Determination of blood group.
- 13. Determination of erythrocyte sedimentation rate (ESR).
- 14. Determination of heart rate and pulse rate.
- 15. Recording of blood pressure.

Recommended Books (Latest Editions)

- 1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
- Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
- 3. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MIUSA
- 4. Text book of Medical Physiology- Arthur C, Guyton and John E. Hail. Miamisburg, OH, U.S.A.
- 5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.





ADB ROAD, SURAMPALEM, E.G. Dist.

_53)

DEPARTMENT OF

HUMAN ANATOMY AND PHISIOLOGY

Name NAGIREDD	1. GAYATI	RI	PIN No. 2	236	1 R 0 0 6 9	9
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Certified that this is the bonafide record of practical work done by

Mr /Ms	NAGI	REDDY	GAYATI	RI SAT	YA DEV	J
a student	of.B:pha	cmacy	with I	Regd. No.	.24.D.GIIAI	0.69
in the Hu	man anat	omu. & phis	plogueabor	atory duri	ng the year	2022-2023
mme			9			

No. of Experiments Conducted

Signature - Faculty incharge

No. of Experiments Attended

Signature PRead of the Department

Submitted for the Practical examination held on

Ch Taya Sauttes 12/1/23



S.No.	Date {	Name of the Experiment	Page No.	Remarks
1	21/1/23	Study of Compound microscope	i -3	
2.	28 1 23	Microscopic study of epithelial and connective tissue	<u>14-9</u> }	
3:	4 2 23	Microscopic study of muscular and nervous tissue	{ 10 - 13 	2
4	9223	Identification of Axial bones	 14-15 	
5	. 11/2/23	Identification of Appendicular bones	}16-18	
6	. 25 2 23	Determination of Bleeding time	} 19-20	
4	. 413123	Determination of clotting time	} 2 -22	2
8	; q 3 23	Estimation of Haemoglobin content	23-25	
0	1. 11 3 23	Determination of Blood group.	} 26	
	0. 1813 23	Determination of heart rate and pulse rate.		8
	1, 25 3 23	Recording of Blood pressure	29-3	.1 2
	12. 1/4/25	Introduction to hemocytometry.	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	34

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Adityal Pharmacy College SURAMPALEM-533 437

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No. Date {	Name of the Experiment	Page No.	Remarks
3. 814123	Enumeration of total red blood compulscles (RBC) count	35=37	
4. 15 4 23	Enumeration of white blood cell (WBC) count	38-40	
5. 20 4 23	Determination of enythrocyte sedimentation rate (ESR)	} <u>u - u3</u>	
		}	
		}	
		}	
		-	
	Aditya Pharmacy College		

BP108P. PHARMACEUTICAL ANALYSIS (Practical)

4 Hours / Week

I Limit Test of the following

- (1) Chloride
- (2) Sulphate
- (3) Iron
- (4) Arsenic

II Preparation and standardization of

- (1) Sodium hydroxide
- (2) Sulphuric acid
- (3) Sodium thiosulfate
- (4) Potassium permanganate
- (5) Ceric ammonium sulphate

III Assay of the following compounds along with Standardization of Titrant

- (1) Ammonium chloride by acid base titration
- (2) Ferrous sulphate by Cerimetry
- (3) Copper sulphate by Iodometry
- (4) Calcium gluconate by complexometry
- (5) Hydrogen peroxide by Permanganometry
- (6) Sodium benzoate by non-aqueous titration
- (7) Sodium Chloride by precipitation titration

IV Determination of Normality by electro-analytical methods

- (1) Conductometric titration of strong acid against strong base
- (2) Conductometric titration of strong acid and weak acid against strong base
- (3) Potentiometric titration of strong acid against strong base

Recommended Books: (Latest Editions)

- A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London
- 2. A.I. Vogel, Text Book of Quantitative Inorganic analysis
- 3. P. Gundu Rao, Inorganic Pharmaceutical Chemistry
- 4. Bentley and Driver's Textbook of Pharmaceutical Chemistry
- 5. John H. Kennedy, Analytical chemistry principles
- 6. Indian Pharmacopoeia.



Aditya/Pharmacy College SURAMPALEM-533 437

35



ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

ANALYSIS PHARMACEUTICAL

Name NAGIREDDY GAYATRI SATYA DEVI PIN No. 2 2 3 6 1 R 0 0 6 9

Certified that this is the bonafide record of practical work done by

Mr. / Ms. NAGTREDDY: GAYATRI SATYA DEVI a student of 1.B. PHARMACY.... with Regd. No. 223.61R0069 in the Pharmaceutical analysis. Laboratory during the year . 2022-2023

No. of Experiments Conducted 99

No. of Experiments Attended 91

Signature - Head of the Repartment Aditya Pharmacy Colle:

Submitted for the Practical examination held onSURAM

WIKAS, NLR

70.5	Date {	Name of the Experiment	Page No.	Remarks
XI	13/4/23	Introduction to complexometric titrations	49	(B 98)04/0
15.	13/4/23	Introduction to complexometric titrations Assay of calcium gluconate	50-52	B 28/04/8
XII	19/4/23	Introduction of Gravimetry	53 N	B 38/04/
16 '	19/4/23	Gravimethic estimation of Barium	54 -55 	B 100/20
		chloride of Barum sulphate		
XII	2/14/23	Introduction of potentiometry	56	B 98/04/
577-637-710-527-95	-51051374578077777774478786531111	Potentiometric titration of strong and	57-58	Baloulay
		with strong base	}	11 100
XIV.	24 4 23	Introduction of Conductometry	59	(B 28/04)
18 .	24/4/23	conductometric titration of strong add	60-61	98/04/20
		with Strong base.	\	wr II
	25/4/23	Introduction of limit tests	62	(B) (18/04)
	25/4/23	19m9t test for chlorides	63-64	(Barris)
	25 4 23	Lymit test for sulphates	165-66	(Balain)
21,	27/4/23	Limit test for Iron	67-68	8 28 04 12 8 28 04 12
22,	27/4/23	Limit test for Arsenic	\$69-70	8 08 10h 100
			}	18/0A1
			}	

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		} <u>, 0/2,e0</u>		
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BP109P. PHARMACEUTICSI (Practical)

3 Hours / week

- 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

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- a) Calamine lotion
- b) Magnesium Hydroxide mixture
- c) Aluminimum 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)Divded powders
- 8. Suppositories
 - a) Glycero gelatin suppository.
 - b) Coca butter suppository
 - c) Zinc Oxide suppository
- 8. Semisolids
- a) Sulphur ointment
- b) Non staining-iodine ointment with methyl salicylate
- c) Carbopal gel
- 9. Gargles and Mouthwashes
 - a) Iodine gargle
 - b) Chlorhexidine mouthwash

Recommended Books: (Latest Editions)

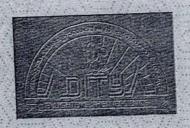
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Hitya Pharmacy Consulting Pharmacy Consulting SURAMPALEM-533 43

- H.C. Ansel et al., Pharmaceutical Dosage Form and Drug Delivery System, Lippincott Williams and Walkins, New Delhi.
- 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.
- E.A. Rawlins, Bentley's Text Book of Pharmaceutics, English Language Book Society, Elsevier Health Sciences, USA.
- Isaac Ghebre Sellassie: Pharmaceutical Pelletization Technology, Marcel Dekker, INC, New York.

- 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.

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ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF PHARMACEUTICS -I.

Name J. Kasi Anna punna	PIN No. 223G1 R0032.
Certified that this is the practical wor	
Mr./Ms. Juyyala Kasz Ann	IAPURNA
a student of R.P.HARMACY w	ith Regd. No 2236 20032
in the PHARMACEUTICS -T Lo	aboratory during the year 202223
No. of Experiments Conducted 96.	No. of Experiments Attended
800	9 59-
Signature - Faculty incharge	Signature - Head of the Department

Submitted for the Practical examination held on

B.W. maluscour EXAMINER-1

EXAMINER-2

Aditya Pharmacy College

Aditya Pharmacy College

WIKAS, NLR

o.	Date { Name of the Experiment	} Pag	e No.	Remarks
	11/01/2023 General Procedure for writin	g the { o	1.	Q
	experimen	it {		9
5	Hollows Symps (Introduction)		2.	600
<u>ا</u> ا	25/01/2023 Simple Syrups		75) 1 (
Д. О	25/01/2023 Ferrous phosphate Syrup	} (57. <u> </u>	γ
2. T	orlor/2013 Flixing (Introduction)		ID.	(0)
2	02/02/2013 Piperazine citrate clixir.		12	10
j,	Orlor 2023 Paracetmol Paediatric Elix	ir. {	14	$\frac{1}{2}$
7:	9/02/2023 Linctus (Introduction)		16.	10
<u>برا</u>	9/02/2023 Terpine Hydrate Linetus		17.	178
').	9/02/2023 Podine Throat point		18	00
α	Islandon (Introduction)		20.	12 _
ע: ב	. 15/02/2023 Strong Solution of Ammonia	um acetate (IP)	21.	1 (ag
2	15/02/2023 Cresol with Soap Solution) (IP).	23	+) (P)
a	1 Inlarboral Aqueous Indine Solution		25.	
 (j)	22/02/2023 Suspensions (Introducti	on)	24.	9
ر <u>ر</u> ۱۲	2) 22/02/2023 Calamine lotion		29.	(P=
11	1. 22/02/2023 Magnesium Hydroxide Miz	ture.	31	1) (B
	2. 22 lorbord Aluminium bydroxide gel		34.	
(I)	1. 15/05/23 Emulsions (Introduction)		36.	LOAC
۱ ۱	3 15/03/23 Liquid Parattin Emulsion)	38.	MOTO A
Ì	14 15/03/23 Turpentine Liniment		40.	
6	10 29/03/23 Powders (Introduction)	42	9
SEELSTIFF	15.29/03/23 ORS Powder (Introdu	uctio .	44.	Pas
	16.29/03/23 Effervescent Granules	e de la companya de l	45	10
	17. 29/03/23/Zinc oxide Storch Dusti	ng Powder	47	7 -
	18. 29/03/23 Divided powders	/	18	Est.
	CVA PUI	PRINCIPAL	<u>}</u>	1

Aditya Pharmacy College SURAMPALEM-533 437

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No.	Date {	Name of the Experiment	Page No.	Remarks
3	19/4/23.	Suppositories (Introduction)	}49. 1	
19	19/4/23.	Glycero-Gelatin Suppository	{50.	806
20.	19/14/23.{	Coca Butter Suppository.	\ 52. \	
91	19/4/23.	Zinc oxide Suppository	354.	9
Z).	21/4/23.	Semi Solids (Introduction)	- {56	J& 81
മാ	91/4/23	Sulphur ointment	₹58.	9
23	21/4/23	Non staining-iodine ointment	60.	1845
		with methyl salicylate.	-{	
24	21/4/23.	Carbopal gel.	_{62_	48000
W.	24/4/23	Gargles and Mouthwashes	{63	\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		(Introduction).	-{	1./2
25	24 4 23	Jodine Gargle	{64. •	(S) AT
26	24/4/23	Chlorhexidine mouthwash.	<u>{</u> 65 ·	γ
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BP110P. PHARMACEUTICAL INORGANIC CHEMISTRY (Practical)

4 Hours / Week

I Limit tests for following ions

Limit test for Chlorides and Sulphates
Modified limit test for Chlorides and Sulphates
Limit test for Iron
Limit test for Heavy metals
Limit test for Lead

Limit test for Arsenic

II Identification test

Magnesium hydroxide

Ferrous sulphate

Sodium bicarbonate

Calcium gluconate

Copper sulphate

III Test for purity

Swelling power of Bentonite
Neutralizing capacity of aluminum hydroxide gel

Determination of potassium iodate and iodine in potassium Iodide

IV Preparation of inorganic pharmaceuticals

Boric acid

Potash alum

Ferrous sulphate

Recommended Books (Latest Editions)

- A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London, 4th edition.
- 2. A.I. Vogel, Text Book of Quantitative Inorganic analysis
- 3. P. Gundu Rao, Inorganic Pharmaceutical Chemistry, 3rd Edition
- 4. M.L Schroff, Inorganic Pharmaceutical Chemistry
- 5. Bentley and Driver's Textbook of Pharmaceutical Chemistry
- 6. Anand & Chatwal, Inorganic Pharmaceutical Chemistry
- 7. Indian

Pharmacopoeia



Aditya Pharmacy College



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Certified that this is the bonafide record of practical work done by

Mr./Ms.	B. Radhi	ka Kinan	mayee	chowday	ω <u>j</u>	
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a student	of	rovinacij.	with K	ega. No	W. W. DIXLIC.	,
in the Ph	rmaceuti	eal Chemis	My Labora	tory durin	g the year	. 2013 23
			V			

No. of Experiments Conducted | 19

No. of Experiments Attended



Signature - Faculty incharge

Signature - Head of the Department

Aditya Pharmacy College

Submitted for the Practical examination held onSURAMPALEM-533 437



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Vo.	Date {	Name of the Experiment	Page No.	Remarks
Ľ.		INTRODUCTION OF THORGANIC CHEMISTRY	01-4	7—
	03/02/23	LIMIT TEST FOR CHLORIDES	0.5	>
	•3 01 23 \	LIMIT TEST FOR SULPHATES	06.	(9
CHIEF	14/02/23 {	LIMIT TEST FOR IRON	07:)
110000	14102 23 {	LIMIT TEST FOR HEAVY METALS	08-10	500
2214-81-9	24/03/23	LIMIT TEST HODIFIEDTION FOR CHLORIDES & SULPHATES.	11-12	50
	{	WITH KMN04 .	}	
6.	14/03/23	LINIT TEST MODIFICATION FOR CHLORIDES AND	}	
		SULPHATES BY NOHCO3.	13-15	
7.	21/02/93	LINIT TEST FOR LEAD	16-17	Sui
	21/02/23	LINIT TEST FOR ARSENIC	18-19	7
9.	21/03/23	PREPARATION OF BORIC ACID	{ 20·	430
10	21/03/23	PREPARATION OF POTASH ALUM	21-20	a Jue
11.	28/03/23	PREPARATION OF FERROUS SOLPHATE	23	7 CSi
12	28/03/23		र वम.	- W
	04/04/83			28:
14	04/04/23	PRESENCE OF IDDINE IN POTASSIUM IDDATE	27	150
		TEST FOR IDENTITY OF PERROUS SULPHATE		
	CONTRACTOR OF THE PARTY OF THE	TEST FOR IDENTITY OF COPPER SULPHATE	30-31	0
01 - 1011		STEST FOR IDENTITY OF CALCIUM GLUCONATE	CANADA STREET	100
		TEST FOR LOENTITY OF SODIUM BICARBONATE		1
19	1. 25/04/23	STEST FOR IDENTITY OF MAGINESIUM HYDROXID	E{36-3	7
			{-	
-		}	1	
		SYA PHAR	1	
		R Salling Co	IPL	
		Aditya Pharma	acy Col	lege

BP112RBP.REMEDIAL BIOLOGY (Practical)

30 Hours

- 1. Introduction to experiments in biology
 - a) Study of Microscope
 - b) Section cutting techniques
 - c) Mounting and staining
 - d) Permanent slide preparation
- 2. Study of cell and its inclusions
- 3. Study of Stem, Root, Leaf, seed, fruit, flower and their modifications
- 4. Detailed study of frog by using computer models
- 5. Microscopic study and identification of tissues pertinent to Stem, Root Leaf, seed, fruit and flower
- 6. Identification of bones
- 7. Determination of blood group
- 8. Determination of blood pressure
- 9. Determination of tidal volume

Reference Books

- 1. Practical human anatomy and physiology. by S.R.Kale and R.R.Kale.
- 2. A Manual of pharmaceutical biology practical by S.B.Gokhale, C.K.Kokate and S.P.Shriwastava.
- 3. Biology practical manual according to National core curriculum .Biology forum of Karnataka, Prof. M.J.H.Shafi



Aditya Pharmacy College Aditya Pharmacy College CURAMPALEM-533 437



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-133}}

DEPARTMENT OF

Remedial biology

Name PUTHIKA PRIVA JASM	1N PIN No. 223 G 1 8 0 0 8 6
practical	s the bonafide record of work done by
Mr. /Ms. PUTHIKA PRIVA J	ASMIN
	earwith Regd. No. 223G-18008G
in the Biology	. Laboratory during the year .2022 - 23
No. of Experiments Conducted	No. of Experiments Attended 1ん
Signature Faculty incharge	Signature - Head of the bepartment Aditya Pharmacy College SURAMPALEM-533 437
Submitted for the Practical e	xamination held on

EXAMINER-1

Aditya Pharmacy College SURAMPALEM-533 437

WIKAS, NLR

lo. Date	Name of the Experiment	Page No.	Remarks
5-02-3	STUDY OF COMPOUND MICROSCOPE	} 01-04 	2/1/2
g- 12-01-	23 STUDY OF CELL AND ITS INCLUSIONS	} 5-10 	R
4. 19-01-	23 STUDY OF DIFFERENT MODIFICATION. OF ROOT	}11-17 }	R
5- 26-01	23 STUDY OF DIFFERENT MODIFICATIONS OF STEM) 18-21 }	9 8
6, 2-02	STUDY OF DIFFERENT MODIFICATION	21-2	3 17
7. 09-0	2-23 STUDY OF PLANT TISSUES] 24 -:	25 8/
& (6-D)	-23 MICROSCOPY A STUDY OF TRANSVERSI	e }26-	30 0
9. 23/0	SECTION OF MONOCOT STEM	C 31-	84 8
10 2/03	\$\langle_23\rangle_MICROSCOPIC STUDY OF TRANSVER. \$\langle_23\rangle_MICROSCOPIC STUDY OF TRANSVER. \$\langle_23\rangle_MICROSCOPIC STUDY OF TRANSVER.	SE 35-	37 19
11. 910	3/23 MICROSCOPIC STUDY OF TRANSVERS SECTION OF MONOCOT ROOT	ϵ $\left. \begin{array}{c} 38 \end{array} \right.$	40 8



Aditya Pharmacy College SURAMPALEM-533 437

WIKAS-NLR

S.No.	Date {	Name of the Experiment	Page No.	Remarks
الكا		STUDY OF EXTERNAL MORPHOLOGY OF FROG	41-43	7
13 ·	23 03/23 }	IDENTIFICATION OF BONES	44-46 }	R
14	6/04/23	DETERMINATION OF BLOOD GROUPS	{47-49 }	8
ls:	13/04/23	DETERMINIATION OF BLOOD PRESSUR	\$50-5)	7
16	20104/23	DETERMINATION OF TIDAL YOUME	}52-56 }	9/
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Aditya Pharmacy College SURAMPALEM-533 443 WIKAS-NLR.

BP 207 P. HUMAN ANATOMY AND PHYSIOLOGY (Practical)

4 Hours/week

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject.

- 1. To study the integumentary and special senses using specimen, models, etc.,
- 2. To study the nervous system using specimen, models, etc.,
- 3. To study the endocrine system using specimen, models, etc
- 4. To demonstrate the general neurological examination
- 5. To demonstrate the function of olfactory nerve
- 6. To examine the different types of taste.
- 7. To demonstrate the visual acuity
- 8. To demonstrate the reflex activity
- 9. Recording of body temperature
- 10. To demonstrate positive and negative feedback mechanism.
 - 11. Determination of tidal volume and vital capacity.
 - 12. Study of digestive, respiratory, cardiovascular systems, urinary and reproductive systems with the help of models, charts and specimens.
 - 13. Recording of basal mass index
 - 14. Study of family planning devices and pregnancy diagnosis test.
 - 15. Demonstration of total blood count by cell analyser
 - 16. Permanent slides of vital organs and gonads.

Recommended Books (Latest Editions)

- 1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
- Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
- 3. Physiological basis of Medical Practice-Best and Pailor. Williams & Wilkins Co, Riverview, MI USA





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DEPARTMENT OF ANATOMY AND PHYSIOLOGY HUMAN



Name MEDAPATI ABHINAYA SAI PIN No. 223 GIRO 0 62

Certified that this is the bonafide record of practical work done by

Mr./Ms. MEDAPATI ABHINAYA SAI

a student of ... B. PHARMACY with Regd. No. .. 223GIROO62.

in the HUMAN ANATOMY. AND... Laboratory during the year .. 2022-2023 PHYSIOLOGY I

No. of Experiments Conducted | 15

No. of Experiments Attended 15

S.rogeras Signature - Faculty incharge 9 10

Signature - Head of the Department Aditya Pharmacy Colles-

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Submitted for the Practical examination held on ...

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S.No.	Date {	Name of the Experiment	Page No. Remarks
	0/16 93	To study the integumentary	1-7-7
1	0616125	And special senses using	Y
		specimen Models.	10911
9	15 12 153	To study the Nervous system	8-13
		using specimen models.	
		To study the endocrine system	14-18
0 1	2016125	using specimen models.	10
	971,102	To pemonstrate the function	19-21 4712
7.	1 2 1101231	of olfactory nerve.	10-
6	417123	To examine different types	22-24
		of tastes.	1-16-
16.	1117123	To demonstrate the visual	25-27 18/0/19
		Activity	1 0 1
1 7	. 18/7/23	To demonstrate the reglex	28-31
		activity.	
8	. 25/1/23	Recording of Body temperatur	e 32-33 18h m
	. 1/8/23	To demonstrate positive ana	34-85 9
		negative feed back mechanism	1-1
lit	o. 818123	Determination of Tidal volume	36-37
		Land vital capacity.	10/-
	1. 11/8/23	Recording of basal mass	38) WKIP
		Index	
	2. 22/8/2	To study the digestive, Respi	i {39~46 ⁵ /
		I ratory, cardiovascular, Repri)
		{-ductive system with charts.	1 16
ı	3. 29/8/2	study of family planning	{47-52 J9/2
		devices and pregnancy	
		diagnosis test.	
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S.No.	Date {	Name of the Experiment	Page No.	Remarks
14		permanent slides of vital organs and gonads. Determination of total blood	53-58 59-61	160
15=	7	count by cell analyser.		
			}	
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Aditya Pharmacy College SURAMPALEM-533 437

WIKAS-NLFI.

BP208P. PHARMACEUTICAL ORGANIC CHEMISTRY -I (Practical)

4 Hours / week

- Systematic qualitative analysis of unknown organic compounds like
 - 1. Preliminary test: Color, odour, aliphatic/aromatic compounds, saturation and unsaturation, etc.
 - 2. Detection of elements like Nitrogen, Sulphur and Halogen by Lassaigne's test
 - 3. Solubility test
 - Functional group test like Phenols, Amides/ Urea, Carbohydrates, Amines, Carboxylic acids, Aldehydes and Ketones, Alcohols, Esters, Aromatic and Halogenated Hydrocarbons, Nitro compounds and Anilides.
 - 5. Melting point/Boiling point of organic compounds
 - 6. Identification of the unknown compound from the literature using melting point/ boiling point.
 - 7. Preparation of the derivatives and confirmation of the unknown compound by melting point/ boiling point.
 - 8. Minimum 5 unknown organic compounds to be analysed systematically.
 - 2. Preparation of suitable solid derivatives from organic compounds
 - 3. Construction of molecular models

Recommended Books (Latest Editions)

- Organic Chemistry by Morrison and Boyd
- 2. Organic Chemistry by I.L. Finar, Volume-I
- 3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.
- 4. Organic Chemistry by P.L.Soni
- 5. Practical Organic Chemistry by Mann and Saunders.
- 6. Vogel's text book of Practical Organic Chemistry
- 7. Advanced Practical organic chemistry by N.K.Vishnoi.
- 8. Introduction to Organic Laboratory techniques by Pavia, Lampman and Kriz.
- 9. Reaction and reaction mechanism by Ahluwaliah/Chatwal.







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DEPARTMENT OF

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Name K.L. N.S. S. Dharani Devi	PIN No. 223 GIRO 047
	the bonafide record of ork done by
Mr./Ms. K.L.N.3.S.Dhonane D a student of Bepharmany	
	Laboratory during the year .2012::2013
No. of Experiments Conducted 16	No. of Experiments Attended
Sui	Signature - Head of the Department
Signature - Faculty incharge Submitted for the Practical exam	ination held on Aditya Pharmacy Colley

Aditya Pharmacy College SURAMPALEM-533 437

EXAMINER-2

lo.	Date {	Name of the Experiment	Page No.	Remarks
		Lab enfatz. En promission	1	Bí
		Lab safety & precaution	೩	S:
		Determination of Melting point	4	ζ,,
2222112	9/6/23	Determination of Balling point	-6	Joseph
	9/6/23	Determination of Boiling point	8	7.
	16/6/23	purification technique	13	(Sui
Ч	16/6/23 }	Systemic procedure for Organic		7
	/}	Compound Analysis	26	(&:
	23/6/23	Sample = 1	ි ප්ර	7
	83/6/23	Sample-9	} 33_	(Si
	30/6/23	Sample-3	} 3≒	
	80/8/23	Sample-4	} 40,4	42
	7/7/23	3ample -5&6	} ५४	78
	14/7/23	Sample -7 Sample -4 Sample	} 50	18
5	81/#/93	preparation of Dibenzylidene Acetone -from benzaldehyde & duetone	}	
	10.1.1.0	preparation of Autonilide from	} 52	Sú
<i>ا</i> فا	28/7/23	oniline.	}	
	4/8/23	preparation of Benzoic acid from	} 53	Sú
4	1418/62		}	
	10/03	Benzaldehyde of parabroma acetanilide	} 54	Sú
CHILDREN.	11/8/23	preparation of parabromo acetanilide preparation of picric acid from phenol	} 55	Si Si
	1. 18/8/83 0. 25/8/23	preparation of meta dinitro benzene	} 56	Si
16	مرالالعر	from benzene,	}	
		{ (1011) DOTTES (}	
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		Aditya Pharmacy Collegian Aditya Pharmacy Co	50	

Enzymes

Introduction, properties, nomenclature and IUB classification of enzymes
Enzyme kinetics (Michaelis plot, Line Weaver Burke plot)
Enzyme inhibitors with examples
Regulation of enzymes: enzyme induction and repression, allosteric enzymes regulation

Therapeutic and diagnostic applications of enzymes and isoenzymes

Coenzymes –Structure and biochemical functions

BP 209 P. BIOCHEMISTRY (Practical)

4 Hours / Week

- Qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Maltose, Sucrose and starch)
- 2. Identification tests for Proteins (albumin and Casein)
- Quantitative analysis of reducing sugars (DNSA method) and Proteins (Biuret method)
- 4. Qualitative analysis of urine for abnormal constituents
- 5. Determination of blood creatinine
- 6. Determination of blood sugar
- 7. Determination of serum total cholesterol
- 8. Preparation of buffer solution and measurement of pH
- Study of enzymatic hydrolysis of starch
- 10. Determination of Salivary amylase activity
- 11. Study the effect of Temperature on Salivary amylase activity.
- 12. Study the effect of substrate concentration on salivary amylase activity.



Recommended Books (Latest Editions)

1. Principles of Biochemistry by Lehninger.

2. Harper's Biochemistry by Robert K. Murry, Daryl K. Granner and Victor W. Rodwell.

3. Biochemistry by Stryer.

4. Biochemistry by D. Satyanarayan and U.Chakrapani

5. Textbook of Biochemistry by Rama Rao.

6. Textbook of Biochemistry by Deb.

7. Outlines of Biochemistry by Conn and Stumpf

8. Practical Biochemistry by R.C. Gupta and S. Bhargavan.

- 9. Introduction of Practical Biochemistry by David T. Plummer. (3rd Edition)
- 10. Practical Biochemistry for Medical students by Rajagopal and Ramakrishna.

11. Practical Biochemistry by Harold Varley.

BP 204T.PATHOPHYSIOLOGY (THEORY)

45Hours

Scope: Pathophysiology is the study of causes of diseases and reactions of the body to such disease producing causes. This course is designed to impart a thorough knowledge of the relevant aspects of pathology of various conditions with reference to its pharmacological applications, and understanding of basic pathophysiological mechanisms. Hence it will not only help to study the syllabus of pathology, but also to get baseline knowledge required to practice medicine safely, confidently, rationally and effectively.

Objectives: Upon completion of the subject student shall be able to -

- 1. Describe the etiology and pathogenesis of the selected disease states;
- 2. Name the signs and symptoms of the diseases; and
- 3. Mention the complications of the diseases.

Course content:

Unit I

10Hours

Basic principles of Cell injury and Adaptation:

Introduction, definitions, Homeostasis, Components and Types of Feedback systems, Causes of cellular injury, Pathogenesis (Cell membrane damage, Mitochondrial damage, Ribosome damage, Nuclear damage), Morphology of cell injury – Adaptive changes (Atrophy, Hypertrophy, hyperplasia, Metaplasia, Dysplasia), Cell swelling, Intra cellular accumulation, Calcification, Enzyme leakage and Cell Death Acidosis & Alkalosis, Electrolyte imbalance





ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF BUSCHEMUSTRY

Name Bandanu Satya Sao Mauesavas	PIN No. 223612R0010
Certified that this is th	e bonafide record of
practical wo	rk done by
Mr./Ms. Bandaru Eatua Bao C	JOHES COM.
a student of 15t. B. Pharmacu w	oith Regd. No. 2239180010
in the BrochemetryL	aboratory during the year 2022-2025
No. of Experiments Conducted	No. of Experiments Attended
Signature Faculty incharge	Aditya Pharmacy/College Signature Head of the Department SURAMPALEM-533 4-97 artment
Submitted for the Practical exami	nation held on
S. Nouve STRAP	College EXAMINER-2

Aditya Phate

S.No.	Date {	Name of the Experiment	Page No.	Remarks
01,	05[06[23]	General procedure for adentorication	01-05	26/6/23
		of carbohydrates		
O2.	12106123	carbohydrate (sample-1)	06-08	19/6/e3
ე ვ	12106123	carbohydrate (sample-2)	09-11	1/19/6/2
	19106153	carbohydrate (sample-3)	12-14	13 86/6/83
25-	19106123	carbohydrate (3ample-9)	15-17	16 86/6/2
36.	26106123	carbohydrate (sample-5)	(18	3/7/2
54.	26106123	carbofydrate (sample-6)	19-20	1 3 7 les
08.	03107123	Procedure for the systematic qualitatore	21-23	18 3/7/23
		analysis of govern proteon sample	(
09.	0310.4153	To odentify the given scimple-20fan	24-26	224/7/2
		unknown proteon by systematic		
		qualitative analysis.	4	1 201-1
10.	ত্যাহ্যাহর	to identify the given sample -2 of an	24-30	XD 41 1/1
		unknown protein by systematic	4	
		Quautative analysis	1	021/2
b.	8410#153	petection of abnormal constituents	√ 31-33	231/7/
		present in the whine sample Centraludo	a)	
12	3tl0±153	to detect the abnormalities present on	(Ooulal
		the govern gample (sample-A)	.}3H≥35	18/18/
13,	31104123	To detect the abnormalatives present or	4	gilala
		the goon whome (sample-13)	36-34	P 4/8/18
[9.	31107123	to detect the abnormalities possent in	4	. 101101-
		the given wrone coample-co	38-39	क्षाश्र
15	21108123	Cstomation of glucuse by colonimetry	-	7001
		by using DNSA method	340-41	1958/8/
16	20108123	quantitative determination of	{	169 h)
		creatonine un serion	142-93	3 20141

Aditya Pharmacy College

WIKAS-NLR.

S.No.	Date {	Name of the Experiment	Page No.	Remarks
14.	2elog[53	Quantitative estimation of Choleston	} ! !	2 19/9/2
		on sexum	}	
к .	। हाल्स २३	Preparation of buffer solution for		la
		measurement of pH.	H5	19/9/2
ાવ	18109123	Study of enzymatic hydrolysis	{	0.17
		of Stanch	\ H6	13/9/8
2 0:	হত।তথ্যয়ে	study of effect of temperature on	}	
		Salviary amiliare activity	44	H 21/9
2 1	20109123	Study of effect of substracte concentrata	d	
		of saucery aminare activity.	{ H8	10 21/9
27.	2019123	Study of sauvery amylax actourty.	149	13 82/9
			}	

Aditya (Pharmacy College SURAMPALEM-533 437

WIKAS-NLR.

BP210P. COMPUTER APPLICATIONS IN PHARMACY (Practical)

- 1. Design a questionnaire using a word processing package to gather information about a particular disease.
- 2. Create a HTML web page to show personal information.
- Retrieve the information of a drug and its adverse effects using online tools
- 4 Creating mailing labels Using Label Wizard, generating label in MS WORD
- 5 Create a database in MS Access to store the patient information with the required fields Using access
- 6. Design a form in MS Access to view, add, delete and modify the patient record in the database
- 7. Generating report and printing the report from patient database
- 8. Creating invoice table using -MS Access
- 9. Drug information storage and retrieval using MS Access
- 10. Creating and working with queries in MS Access
- 11. Exporting Tables, Queries, Forms and Reports to web pages
- 12. Exporting Tables, Queries, Forms and Reports to XML pages

Recommended books (Latest edition):

- Computer Application in Pharmacy William E.Fassett –Lea and Febiger, 600 South Washington Square, USA, (215) 922-1330.
- Computer Application in Pharmaceutical Research and Development –Sean Ekins Wiley-Interscience, A John Willey and Sons, INC., Publication, USA
- Bioinformatics (Concept, Skills and Applications) S.C.Rastogi-CBS Publishers and Distributors, 4596/1- A, 11 Darya Gani, New Delhi – 110 002(INDIA)
- Microsoft office Access 2003, Application Development Using VBA, SQL Server, DAP and Infopath — Cary N.Prague — Wiley Dreamtech India (P) Ltd., 4435/7, Ansari Road, Daryagani, New Delhi - 110002



Aditya Aharmacy College



ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF
COMPUTER APPLICATIONS

Name R Mary chanding	PIN No. 22361 RO 089
Certified that this is the bo	onafide record of
practical work d	one by
Mr./Ms. Ramaju Mary Char	dioi
a student of . 1st B. pharm with.	Regd. No223011R0089
in the computer application about	
No. of Experiments Conducted	No. of Experiments Attended
	40g-
Signature - Faculty incharge	Signature - Head of the Department
	Aditya Pharmacy College
Submitted for the Practical examination	on held on
EXAMINER-1 SUR	NPHarmacy College

WIKAS, NLR

S.No.	Date {	Name of the Experiment	Page No.	Remarks
1-	9-6-23	An Example of patient questionaire	ı	19
۵.	16 -6-23	creation of webpage (biodata) using HTMIL	2-4	6
3.	23-6-23	Retaieval of Drug Interaction	5	8
4.	30-6-23	Mailing labels in Ms-word.	6-7	19
5.	7-7-23	patient database	8	8
g.	14-7-23	patient Information Form in Ms-Access.	9	19
۲.	28-7-23	patient Information Reports in Ms-Access.	10	4
8.	3-8-23	invoice table	{ { (A
9.	4-8-23	Drug Information Storage & Reboieval	{ !&	6
10.	10-8-23	potiont information quovies in Ms-Access	{ 13	4
11.	11-8-23	Expositing batabase to webpage	{14	6
12.	18-8-23	Exposting Catabase to XIVI pages	{ 15	6
13.	. 25-8-23	Gieneration of student Marks list	{16-17	6
14	1- 423	Creating power point present ation Aditya Pharmacy College	{ 18	16

WIKAS NLR

BP305P. PHARMACEUTICAL ORGANIC CHEMISTRY -II (Practical)

4 Hrs/week

- I Experiments involving laboratory techniques
 - Recrystailization
 - Steam distillation
- II Determination of following oil values (including standardization of reagents)
 - Acid value
 - · Saponification value
 - · Iodine value

III Preparation of compounds

- Benzanilide/Phenyl benzoate/Acetanilide from Aniline/ Phenol /Aniline by acylation reaction.
- 2,4,6-Tribromo aniline/Para bromo acetanilide from Aniline/
- Acetanilide by halogenation (Bromination) reaction.
- 5-Nitro salicylic acid/Meta di nitro benzene from Salicylic acid / Nitro benzene by nitration reaction.
- Benzoic acid from Benzyl chloride by oxidation reaction.
- Benzoic acid/ Salicylic acid from alkyl benzoate/ alkyl salicylate by hydrolysis reaction.
- 1-Phenyl azo-2-napthol from Aniline by diazotization and coupling reactions.
- Benzil from Benzoin by oxidation reaction.
- Dibenzal acetone from Benzaldehyde by Claison Schmidt reaction
- · Cinnammic acid from Benzaldehyde by Perkin reaction
- P-lodo benzoic acid from P-amino benzoic acid

Recommended Books (Latest Editions)

- 1. Organic Chemistry by Morrison and Boyd
- 2. Organic Chemistry by I.L. Finar, Volume-I
- 3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.
- 4. Organic Chemistry by P.L.Soni
- 5. Practical Organic Chemistry by Mann and Saunders.
- 6. Vogel's text book of Practical Organic Chemistry
- 7. Advanced Practical organic chemistry by N.K. Vishnoi.



Aditya Pharmacy College SURAMPALEM-533 437



ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF



Name K. Tejaswini PIN No. 213G1 ROO29 Certified that this is the bonafide record of practical work done by Mr./Ms. K. Tefaswini a student of 2nd B. pharmacy with Regd. No. 213G180029 in the ... Dh. Organic Chemistry Laboratory during the year ... 22 - 23 No. of Experiments Attended 10 No. of Experiments Conducted

Signature - Faculty incharge

Signature - Head of the Department

nditya Pharmacy College

Pharmacy College SURAMPALEM-533 437 EXAMINER-2

Date {	Name of the Experiment Page No. Remarks
. 15 - 11-22	Basic Paberatory technique used for 1-3 & Separation and purification of Organic Compounds.
22-11-22	Steam distillation.
3. 29-11-22	Synthesis of phenyl Azobeta Napholf6-7 7
4. 6-12-22	Dieparation of dibenzalidene Acetone 8-9 from Benzaldehyde.
5. 13-12-2	2) preparation of Acetanilide from {10-11-7}
	Determination of acid value. \$12-14
4-10-1-	23 Determination of Saponification 15-17 7
8. २५-1-	23 Synthesis of p. Jodobenzoic Acid. 20-22
9.7-2-	23 Synthesis of Meta dinitro benzenc. 23-24
	23 Synthesis of Benzoic acid. 25-26
	Aditya Pharmacy College

BP306P. PHYSICAL PHARMACEUTICS - I (Practical)

4 Hrs/week

- 1. Determination the solubility of drug at room temperature
- 2. Determination of pKa value by Half Neutralization/ Henderson Hasselbalch equation.
- 3. Determination of Partition co-efficient of benzoic acid in benzene and water
- 4. Determination of Partition co- efficient of Iodine in CCl4 and water
- 5. Determination of % composition of NaCl in a solution using phenol-water system by CST method
- 6. Determination of surface tension of given liquids by drop count and drop weight method
- 7. Determination of HLB number of a surfactant by saponification method
- 8. Determination of Freundlich and Langmuir constants using activated char coal
- 9. Determination of critical micellar concentration of surfactants
- Determination of stability constant and donor acceptor ratio of PABA-Caffeine complex by solubility method
- 11. Determination of stability constant and donor acceptor ratio of Cupric-Glycine complex by pH titration method

Recommended Books: (Latest Editions)

- 1. Physical Pharmacy by Alfred Martin
- 2. Experimental Pharmaceutics by Eugene, Parott.
- 3. Tutorial Pharmacy by Cooper and Gunn.
- 4. Stocklosam J. Pharmaceutical Calculations, Lea & Febiger, Philadelphia.
- 5. Liberman H.A, Lachman C., Pharmaceutical Dosage forms, Tablets, Volume-1 to 3, MarcelDekkar Inc.
- 6. Liberman H.A, Lachman C, Pharmaceutical Dosage forms. Disperse systems, volume 1, 2, 3. Marcel Dekkar Inc.
- 7. Physical Pharmaceutics by Ramasamy C and ManavalanR.
- 8. Laboratory Manual of Physical Pharmaceutics, C.V.S. Subramanyam, J. Thimma settee
- 9. Physical Pharmaceutics by C.V.S. Subramanyam
- 10. Test book of Physical Phramacy, by Gaurav Jain & Roop K. Khar



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Aditya Pharmacy College SURAMPALEM-533 437



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-39% ESS-

DEPARTMENT OF PHYSICAL PHARMACEUTICS -I



Name D.LIKHITHA PIN No. 2 1 3 G 1 R 0 0 1 6 Certified that this is the bonafide record of practical work done by Mr. / Ms. D. LIKHITHA a student of I-I-B PHARMACY with Regd. No. 213G1R0016 in the Physical Pharmaceutics-ILaboratory during the year 2022 - 2023 No. of Experiments Attended No. of Experiments Conducted 12 Signature - Head of the Department Signature - Faculty incharge Aditya Pharmacy College

> Aditya Pharmacy College SURAMPALEM-533 437

WIKAS, NLR

S.No.	Date {	Name of the Experiment	Page No.	Remarks
1.	 	Determination Of solubility of drug at room temperature.	} 01-02 	
2.	15 11 22 { 	Determination of PKa Value by half neutralisation method	}03-05 }	
3.	22 22 	Determination of Partition co-efficient of Benzoic acid in benzene and water	132222333223333333333333333333333333333) 201
Ц.	2911122	Determination Of Surface tension of gruen of liquid by using drop count method.	08-10	
Ş.	6 12 22	Determination of surface tension of given siquid by using drop weight method	THE STREET	J. Elis
6.	3 12 22	Determination Of Composition Of Nacl in a solution using Phenol water syst m by CST method.	and the second	
파.	20 12 22	Determination Of Critical miscellular Co Centration [CMC] Of Surfactants.	n 17-12	V / W
8	24112123	Determination Of partition Coefficient Coe		3 2
		{	} = -	

PRINCIPAL

Aditya Pharmacy College SURAMPALEM-532 437

S.No.	Date	Name of the Experiment	Page No.	Remarks
9.	3/11123	Determination of HLB number of a surfaction method.	24-27	7
10-	7/2/23	Determination Of freundlich and langm- luir constants using activated charcoal		lia -
11).	1312123	Determination of stability Constant and donar-Acceptor ratio of PABA-Caffeing Complex by Solubility method		
	13 2 23.	Determination of Stability Constant and donar - Acceptor ratio of Cupric - complex by PH -titration method.		
		SURAMPAIEN COLLEGE Aditya Pharmacy College		WIK

Aditya Pharmacy College SURAMPALEM-533 437

BP 307P.PHARMACEUTICAL MICROBIOLOGY (Practical)

4 Hrs/week

- 1. Introduction and study of different equipments and processing, e.g., B.O.D. incubator, laminar flow, aseptic hood, autoclave, hot air sterilizer, deep freezer, refrigerator, microscopes used in experimental microbiology.
- 2. Sterilization of glassware, preparation and sterilization of media.
- 3. Sub culturing of bacteria and fungus. Nutrient stabs and slants preparations.
- 4. Staining methods- Simple, Grams staining and acid fast staining (Demonstration with practical).
- Isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.
- 6. Microbiological assay of antibiotics by cup plate method and other methods
- 7. Motility determination by Hanging drop method.
- 8. Sterility testing of pharmaceuticals.
- 9. Bacteriological analysis of water
- 10. Biochemical test.

Recommended Books (Latest edition)

- 1. W.B. Hugo and A.D. Russel: Pharmaceutical Microbiology, Blackwell Scientific publications, Oxford London.
- Prescott and Dunn., Industrial Microbiology, 4th edition, CBS Publishers & Distributors, Delhi.
- 3. Pelczar, Chan Kreig, Microbiology, Tata McGraw Hill edn.
- 4. Malcolm Harris, Balliere Tindall and Cox: Pharmaceutical Microbiology.
- 5. Rose: Industrial Microbiology.
- 6. Probisher, Hinsdill et al: Fundamentals of Microbiology, 9th ed. Japan
- 7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
- 8. Peppler: Microbial Technology.
- 9. I.P., B.P., U.S.P.- latest editions.
- 10. Ananthnarayan: Text Book of Microbiology, Orient-Longman, Chennai
- 11. Edward: Fundamentals of Microbiology.
- 12. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi
- 13. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company



Aditya Pharmacy College



ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

Programaceutical Microbiology.

Name J. JAYA SREE	PIN No. 213611 RO025
Certified that this is the practical wo	
Mr./Ms. J. JAYA SRE	<u>e</u>
a student of2-1 B PHARMACY w	ith Regd. No. 213GIR0025
	aboratory during the year 202.3
No. of Experiments Conducted 22	No. of Experiments Attended 22
M. Soul le Signature - Faculty incharge	Signature - Hand of the Department Aditya Pharmacy College CURAMPALEM-533.437
Submitted for the Practical exami	
Cl. Jaya Southod	H. Sayke-

WIKAS, NLR

S.No.	Date {	Name of the Experiment	Page No.	Remarks
01.	10/11/2022	Introduction	1-3	
02.	10 11 2022 {	common Regulations for safety.	4-5	8
03.	10 11 2022	Study of Apparatus and equipments used in experimental microbiology.	6-14	2
04.	17/11/2022	preparation and sterilization of nutrient broth.	} 15 -\6 	8
051	17 11 2 022	preparation and Sterilization of nutrient agar	 1 9 18	W/
06.	24/11/2022	Sterilization of Glassware.	} -21	
<i>0</i> 7 .	24 11 2022	Aseptic transfer (subculturing) of bacteria and tungi into different media.	} } <u>22-2</u> 2	8
08+	1/12/2022	preparation and subculturing of nutrient agos	} }24•	
09.	1/12/2022	Isolation of pure culture,	\ 25 - 2=	
to.	8/12/2022	staining techniques.	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1
	. 8 φ ₂ 2023		30 -3	
	, 15/12/2022	Gram staining	32-34	1 8

S.No.	Date {	Name of the Experiment	Page No.	Remarks
13.	22/12/22	Acid fast Staining	35	\$
υ.	29/12/22	Motility of bacteria by hanging drop method.	36-38	
151	5 01 23	Microbiological assay of antibiotics by using cup plate method.	} }39-41 }	2
И,	19/01/23	Microbial assay of antibiotic by using Twibidmetric method.	} }42-44	V
Ľ۱	24/11/23	Test for storility for water for Injection.	} } } }	
18.	31/1/23	Test for sterility for solids.	{48-50	
19,	02/02/23	Microbial examination of water:	S1-52	
20.		Biochemical Tests for the identification of Micro organisms - Methyl Red Test.	} }53-54	9
alı.	06 02 23	Biochemical Test for the identification of Micro organisms - voges proskauer Test	} }55-54	, 9
22.	9/02/23	Blochemical Test for the identification of micro-organisms-Indole production Tests.	} }54-58 }	8
		SURAMPALEN IN SPINCIPAL Aditya Pharmacy College Aditya Pharmacy College SURAMPALEM-533 437	}	WIKA

BP308P - PHARMACEUTICAL ENGINEERING (Practical)

4 Hours/week

- I. Determination of radiation constant of brass, iron, unpainted and painted glass.
- II. Steam' distillation To calculate the efficiency of steam distillation...
- III. To determine the overall heat transfer coefficient by heat exchanger.
- IV. Construction of drying curves (for calcium carbonate and starch).
- V. Determination of moisture content and loss on drying.
- VI. Determination of humidity of air i) From wet and dry bulb temperatures -use of Dew point method.
- VII. Description of Construction working and application of Pharmaceutical Machinery such as rotary tablet machine, fluidized bed coater, fluid energy mill, de humidifier.
- VIII. Size analysis by sieving To evaluate size distribution of tablet granulations Construction of various size frequency curves including arithmetic and logarithmic probability plots.
- IX. Size reduction: To verify the laws of size reduction using ball mill and determining Kicks, Rittinger's, Bond's coefficients, power requirement and critical speed of Ball Mill.
- X. Demonstration of colloid mill, planetary mixer, fluidized bed dryer, freeze dryer and such othermajor equipment.
- XI. Factors affecting Rate of Filtration and Evaporation (Surface area, Concentration and Thickness/viscosity
- XII. To study the effect of time on the Rate of Crystallization.
- XIII. To calculate the uniformity Index for given sample by using Double Cone Blender.

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ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF

PHARMACEUTICAL ENGINEERING



(a)	了。 第20年後後的無人對於實際
Name D. LIKHITHA	PIN No. 213G1R0016
Certified that this is the	e bonafide record of
practical wor	k done by
Mr. /Ms, D:LIKHITHA	
a student of II-I-B. PHARMACY. wi	ith Regd. No213G1R0016
in the Pharmaceutical Enginee. La	boratory during the year 2022-2023
No. of Experiments Conducted [1구.	No. of Experiments Attended
Carlonin 10/03	96%
G. Soideur 17/2/23 Signature - Faculty incharge	Signature - Head of the Department
Submitted for the Practical examin	Aditya Pharmacy Collegenation held onSURAMPALEM-533 437

G-Saidur 1/3/23 EXAMINER-1 21/3/23 R. Suidharamfur EXAMINER-2 51/3/23

Aditya Pharmacy College
Aditya Pharmacy College

WIKAS, ILL

S.No.	Date {	Name of the Experiment	Page No.	Remarks
1.	1411122	· INTRODUCTION	01-04 }	28 122
2.	1411122	DETERMINATION OF RADIATION CONSTANT OF TRON	- 	2811/22
3.	<u>1</u> 4 11 22	DETERMINATION OF RADIATION CONSTANT OF BRASS	} 08 - 10 }	30/1/29
g.	28/11/12/2	DETERMINATION OF RADIATION CONSTANT OF UNPAINTED GLASS:	} - 3_ 	5/2
\ S.	30111/22	DETERMINATION OF RADIATION CONSTANT OF PAINTED GLASS	} 14 - 16 }	85/2
6.	5 12 22	CONSTRUCTION OF DRYING RATE CURVE OF CACO.	3 17-19	12/12
4	7112122	CONSTRUCTION OF DRYING RATE CURVE OF STARCE	7H 20 ~ 22	R19/12
8	12/12/22	DETERMINATION OF ABSOLUTE AND RELATIVE HUMIDITY BY DEW POINT METHOD.	} 23-2	2 12
L a	. 19/12/22	DETERMINATION OF OVERALL HEAT TRANSFE	 	25/12
	0. 21112122	EVALUATION OF VARIOUS FACTORS AFFECTIVE ON RATE OF FILTRATION ON CACO3 SUSPENS	101/ ₃₀ - 5	14 0 1 12
	11. 23/12/12	EVAPORATION.	OF } 35-	37 A 12
		MACY SONCIPAL COLLEGE		

Aditya Phakmacy College SURAMPALEM-533 437

POINT

Vo. Date {	Name of the Experiment	Page No.	Remarks
2. 26 12 22	PARTICLE SIZE DISTRIBUTION OF A POWDER BY SIEVING METHOD.	38 - 4 2	B 1/23 30/1/23
3 · 2001123	DETERMINATION OF SIZE REDUCTION	43 -4 4	B-1223
ly. 1 02 23	DETERMINATION OF CRYSTALUSATION OF KNO3- BY SHOCK COOLING TECHNIQUE.	45-48	8/2/2
15. 6107133	DETERMINATION OF MIXING TNDEX OF BLENDER FOR SAUCYLIC ACID AND LACTUSE	} }49-51 }	13/2/23
16. 0812123	DETERMINATION OF EFFICIENCY OF STEAM DISTILLATION USING TURPENTINE OIL.	} 52 – 54 	8 13/2/23
H 312123	DEMONSTRATION OF PHARMA CEUTICAL COMPANS 1. COULOID MILL 2. PLANETARY MIXER 3. FLUIDISED BED DRYER. 4. FREEZE DRYER 5. BALL MILL (OT) PERBLE MILL.	55 -56 57 58 - 59 60 - 6 63 - 64	2 15/4
18: 13 2 23	DEMONSTRATION OF PHARMACEUTICAL EQUIPMENT G. MULTIPLE EFFECT EVAPORATOR. FLUID ENERGY MILL (O1) JET MILL. 8. ROTATORY TABLET: 9. FLUID BED COATER. 10. DEHUMIDIFER.	65 = 6 41-: 67-6 69- 73-	8 A A A A A A A A A A A A A A A A A A A

BP406P. MEDICINAL CHEMISTRY - I (Practical)

4 Hours/Week

- I Preparation of drugs/intermediates
- 1 1,3-pyrazole
- 2 1,3-oxazole
- 3 Benzimidazole
- 4 Benztriazole
- 5 2,3- diphenyl quinoxaline
- 6 Benzocaine
- 7 Phenytoin
- 8 Phenothiazine
- 9 Barbiturate
- II Assay of drugs
- 1 Chlorpromazine
- 2 Phenobarbitone
- 3 Atropine

)

- 4 Ibuprofen
- 5 Aspirin
- 6 Furosemide
- III Determination of Partition coefficient for any two drugs

Recommended Books (Latest Editions)

- 1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
- 2. Foye's Principles of Medicinal Chemistry.
- 3. Burger's Medicinal Chemistry, Vol I to IV.
- 4. Introduction to principles of drug design- Smith and Williams.
- 5. Remington's Pharmaceutical Sciences.
- 6. Martindale's extra pharmacopoeia.

Aditya Pharmacy College SURAMPALEM-533 437



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MEDICINAL CHEMISTRY - I



Name CH. LAKSHMI GEETHIKA PIN No. 2 1 3 G 1 R 0 0 1 4

Certified that this is the bonafide record of practical work done by

Mr. / Ms. CH. LAKSHMI GEETHIKA

a student of 3.3. 8. PHARMACY..... with Regd. No. 213G1R0014

in the MERICINAL CHEMISTRY .- I Laboratory during the year 2022-2023

No. of Experiments Conducted 13

No. of Experiments Attended 15

Signature - Faculty incharge

Signature - Head of the Department PRINCIPAL

Aditya Pharmacy College

Submitted for the Practical examination held on ... SURAMPALEM-533 437

S.No.	Date {	Name of the Experiment	Page No.	Remarks
01.	<u>24-3-23</u>	Preparation of Benzimidazole	1-2	286
02.	31-04-23	Preparation of Benzotriazole	3-4	
03.	10-04-23	Preparation of 2,3 Diphenyl Quinoxaline	} 5-6 }	28
04,	17-04-23	Preparation of Benzocaine	{ { ¬-8 }	
05.	24-04-23	Preparation of 5-5- Diphenyl hydantion (Phenytoin)	{ 9-10 	26
D6	1-05-23	Determination of partition coefficient of Benzoic Acid	} 	
07,	8-5-23	Assay of Chlorpromazine	14-15	Zes .
08.	15-5-23	Assay of Atropine	16-17	5
09.	5-6-23	Assay of Fuxosemide	18-19	Je -
10.	15-06-53	Assay of Ibuprofen	{ 20 - 21	3
 \u.	19-6-23	Assay of Aspivin	\{\begin{align*} \begin{align*} \beg	Jes .
12.	26-06-23	Preparation of phenothiazine	{ 24 - 25	3.
13.	2 G-06-23	Preparation Barbituric Acid Barbiturate. Aditya Pharmacy College SURAMPALEM-533 437	} } } }	3€.

BP 407P. PHYSICAL PHARMACEUTICS- II (Practical)

3 Hrs/week

- 1. Determination of particle size, particle size distribution using sieving method
- 2. Determination of particle size, particle size distribution using Microscopic method
- 3. Determination of bulk density, true density and porosity
- 4. Determine the angle of repose and influence of lubricant on angle of repose
- 5. Determination of viscosity of liquid using Ostwald's viscometer
- 6. Determination sedimentation volume with effect of different suspending agent
- Determination sedimentation volume with effect of different concentration of single suspending agent
- 8. Determination of viscosity of semisolid by using Brookfield viscometer
- 9. Determination of reaction rate constant first order.
- 10. Determination of reaction rate constant second order
- 11. Accelerated stability studies

Recommended Books: (Latest Editions)

- 1. Physical Pharmacy by Alfred Martin, Sixth edition
- 2. Experimental pharmaceutics by Eugene, Parott.
- 3. Tutorial pharmacy by Cooper and Gunn.
- 4. Stocklosam J. Pharmaceutical calculations, Lea & Febiger, Philadelphia.
- Liberman H.A, Lachman C., Pharmaceutical Dosage forms, Tablets, Volume-1 to 3, Marcel Dekkar Inc.
- Liberman H.A, Lachman C, Pharmaceutical dosage forms. Disperse systems, volume 1, 2, 3. Marcel Dekkar Inc.
- 7. Physical Pharmaceuties by Ramasamy C, and Manavalan R.





ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

PHYSICAL PHARMACEUTICS - II

Name Adhikati Varsha Anupama PIN No. 20391R0003

Certified that this is the bonafide record of practical work done by

Mr. /Ms. ADHIKARI	VARSHA ANUPAMA
	armacywith Regd. No. 2036 1R0003
	Ceutics -2 Laboratory during the year .2021-22
No. of Experiments Conducted	No. of Experiments Attended
7. Uday as Carpart.	969
Signature - Faculty incharge	Signature - Nendon the Department
Signature - Lacuty menange	Aditya Pharmacy College SURAMPAIEM 533 437
Submitted for the P	ractical examination held on
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EXAMINER-1	EXAMINER-2

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SURAMPALEM-533 437

S.No.	Date {	Name of the Experiment	Page No.	Remarks
	07-3-22	Determination of viscosity by Brookfield viscometer	1-4-	
2	14-3-29	betermination of particle size, size	5-9	
3.	20-3-22	distribution using sieving Method , Determination of particle size, size, distribution (slotule gize) in an	10-13	02/3
14	28-3-29	distribution (globule gze) in an Emulsion by Microscopy Estimation of true density of	14-15	
5	4-4-22	Zinc oxide powder Estimation of Rulk density and	{ 16 - 17 	
6.	6-4-22	percentage parasity Determination of viscosity using ostwald viscometer	 18 – 19 	14/01
	11-4-22	reflect of Glidant flow properties of Given samples granules	}20 -25 }	
8	<u>18-4-22</u> }	petermination of sedimentation vol c Effect of diff conc ^{ns} of single Suspending Agent	} 23-25 } }	
9	2-5-22	Determination of sedimentation vol & Effect of diff suspending	Classic Property Control	
10	93-5-22	Agents Determination of Reaction Rate constant of pseudo 1st order Reaction Of Acid Hydrolysis of Ester	29-31	2111
h	30-5-22	betermination of Reach Rate constant of 2nd order Reach of Alk. Hydrolysis of Alk. Hydrolysis	\ \t32-3 \ \	3

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SURAMPALEM-533 437

SURAMPALEM 538 437

BP 408 P.PHARMACOLOGY-I (Practical)

4Hrs/Week

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- Introduction to experimental pharmacology.
- 2. Commonly used instruments in experimental pharmacology.
- 3. Study of common laboratory animals.
- 4. Maintenance of laboratory animals as per CPCSEA guidelines.
- 5. Common laboratory techniques. Blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies.
- 6. Study of different routes of drugs administration in mice/rats.
- 7. Study of effect of hepatic microsomal enzyme inducers on the phenobarbitone sleeping time in mice.
- 8. Effect of drugs on ciliary motility of frog oesophagus
- 9. Effect of drugs on rabbit eye.
- 10. Effects of skeletal muscle relaxants using rota-rod apparatus.
- 11. Effect of drugs on locomotor activity using actophotometer.
- 12. Anticonvulsant effect of drugs by MES and PTZ method.
- 13. Study of stereotype and anti-catatonic activity of drugs on rats/mice.
- 14. Study of anxiolytic activity of drugs using rats/mice.
- 15. Study of local anesthetics by different methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

- Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's 1. Pharmacology, Churchil Livingstone Elsevier
- Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc 2. Graw-Hill
- Goodman and Gilman's, The Pharmacological Basis of Therapeutics 3.
- Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins
- Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-5. Pharmacology



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ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

PHARMACOLOGY-1

Name JV: 16105W1711	PIN No. 2113 GI [HO 0 2 9]
Certified that this is the practical wor	
Mr./Ms. K.: Tejaswini	
a student of 2. I. B. p. box.m wi	th Regd. No. 213G.120029
in the pharmacology - L. La	and the first control of the control
No. of Experiments Conducted 12	Ng of Experiments Attended 12
Signature - Faculty incharge	Signature - Head of the Department
Signature - racuity monarge	

Submitted for the Practical examination held onsuraMPALEM

Aditya Pharmacy Gold

EXAMINER-1

SURAMPALEM-533 437

PRINCIPAL Aditya Pharmacy College

EXAMINER 2

		POMIEK	Page No. Remarks
.No.	Date {	Name of the Experiment	Page No. Remarks
J.	24-3-23	Introduction to Experimental] A \cap
		Pharma cology.	
2.	31-3-28	Commonly used instruments in	2-8 A+
		experimental phormacology	}/~,
2.	14-4-28	Experimental pharmacology Study of Common Laboratory	19-16 A D
		Animals.	}
4.	21-4-23	Maintanance of Laboratory Animals	{17-22 A+)
		As per croseA Guidlines.	
5.	28-4-23	Common Laboratory Pegneniques	23-28 A
		Study of different routes of	29-34 Ath
		Administration in MICE/RAIS.	1 / 2
١у,	12-5-23	Study of Effect of hepatic microso	35-36 AT
		Study of Effect of hepatic microso -mal enzyme induces on the	}
		phenobarbitone Sleeping time in	<u>}</u>
		mice.	}
8	. 19-5-23	Effect of Arugs on Ciliary	37-38 AT
		I motifity of frog ocsophagus	
9.	. 26-5-23	Effect of drugs on rabbit eye.	39-40 At /
		(Mydriatic and Miotic effect)	1 1 1
10	. d-6-23	Skeletal muscle Relaxant properts	1/41-42 A+
		of Diatepum using Rota-Rod	}
		Apparatus.	1 1
11.	9-6-23	Evaluation of CNS Depressant proper	fy 43-44 At
		of chloropromatine on Locomotory	}
		activity of Miceday using	{
		SURAMPAREM Soctophotometer.	{
		Aditya Pharmacy College	{
		SURAMPALEM 533 437]

Page No. Remarks Name of the Experiment Date S.No. 12. 16-6-23 - Inticonvulsant effect of drugs by 45-48

MES and PEZ Method. Aditya Pharmacy College SURAMPALEM-533 437

BP408 P. PHARMACOGNOSY AND PHYTOCHEMISTRY I (Practical)

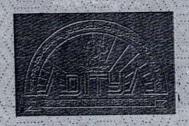
4 Hours/Week

- 1. Analysis of crude drugs by chemical tests: (i)Tragaccanth (ii) Acacia (iii)Agar (iv) Gelatin (v) starch (vi) Honey (vii) Castor oil
- 2. Determination of stomatal number and index
- 3. Determination of vein islet number, vein islet termination and paliside ratio.
- 4. Determination of size of starch grains, calcium oxalate crystals by eye piece micrometer
- 5. Determination of Fiber length and width
- 6. Determination of number of starch grains by Lycopodium spore method
- 7. Determination of Ash value
- 8. Determination of Extractive values of crude drugs
- 9. Determination of moisture content of crude drugs
- 10. Determination of swelling index and foaming

Recommended Books: (Latest Editions)

- W.C.Evans, Trease and Evans Pharmacognosy, 16th edition, W.B. Sounders & Co., London, 2009.
- 2. Tyler, V.E., Brady, L.R. and Robbers, J.E., Pharmacognosy, 9th Edn., Lea and Febiger, Philadelphia, 1988.
- 3. Text Book of Pharmacognosy by T.E. Wallis
- Mohammad Ali. Pharmacognosy and Phytochemistry, CBS Publishers & Distribution, New Delhi.
- Text book of Pharmacognosy by C.K. Kokate, Purohit, Gokhlae (2007), 37th Edition, Nirali Prakashan, New Delhi.
- Herbal drug industry by R.D. Choudhary (1996), Ist Edn, Eastern Publisher, New Delhi.
- Essentials of Pharmacognosy, Dr.SH.Ansari, IInd edition, Birla publications, New Delhi, 2007
- 8. Practical Pharmacognosy: C.K. Kokate, Purohit, Gokhlae
- 9. Anatomy of Crude Drugs by M.A. Iyengar





ADB ROAD, SURAMPALEM, E.G. Dist.

-33 to 5

DEPARTMENT OF

PHARMACOGNOSY AND PHYTOCHEMISTRY-I

Name	
Certified that this is	the bonafide record of
practical w	ork done by
Mr./Ms. CH.MARGR	EAT HELEENA
a student of IIIB.Phormoc	
in the t. Carried Collos J. 4. Collos J. 4.	Laboratory during the year 20.222023
No. of Experiments Conducted W	No. of Experiments Attended
C.C. Medber.	90g
Signature - Faculty incharge	Signature - Head of the Department PRINCIPAL
Submitted for the Practical exam	Aditya Pharmacy College mination held SNRAMPALEM-533 437
Rosindhovanjin	C. C. Medhan'

nacy Col

EXAMINER-2

EXAMINER-1 2/1/23 Adity

.No.	Date {	Name of the Experiment	Page No.	Remarks
1.	{	ANALYSIS OF CRUDE DRUGS BY		
		CHEMICAL TESTS.		Λ.
	28-03-23	A. CHEMICAL TESTS FOR TRAGACANTH	01-03	
	ACTUAL DESCRIPTION OF THE PARTY		04-05	
	********************		06-09	
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	0+05210000000000000000000000000000000000	생활한 그는 아이들은 사람들이 얼마나 하는 것이 아이들은 사람이 되는 것이 되는 것이 되는 것이 없는 것이 없다.	10-11	00 N
	11-04-23	F. CHEMICAL TEST FOR GELATIN	12-13	
	11-04-23		14	- نال -
2.	18-04-23		15-16	بلتر
3.	18-04-23	DETERMINATION OF MOISTURE CONTENT	12E045544644544164445516	
ψ,	25-04-23	DETERMINATION OF FORMING INDEX.	19-20	
5.	And the second s	DETERMINATION OF EXTRACTING VALUE	 21-23	
		OF CRUDE DRUGS.		N
6.	02-05-23	DETERMINATION OF TOTAL ASH CONTEN	24-25	يل ا
4.	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	DETERMINATION OF STOMATAL NUMBER	111111111111111111111111111111111111111	_لل .
		AND STOMATAL INDEX OF DATURA LEAF	110000000000000000000000000000000000000	
g.	06-06-23	DETERMINATION OF VEIN-ISLETS AND		
	l-	VEIN-TERMINATION NUMBERS OF		بيلا
		DATURA - LEAF	\	
9.	13-06-23	DETERMINATION OF SIZE OF STARCH		
		GRAINS BY USING EYE PIECE	31-33	
		{ MICROMETER.	1	
10	. 20-06-2	DETERMINATION OF LENGTH AND	34-31	بالجار الم
		WIDTH OF CINCHONA FIBERS.	}	
11	, 24-06-23	DETERMINATION OF NUMBER OF	}	
		STARCH GRAINS BY LYCOPODIUM	}34-40	عل ا
		SPORE METHOD.	}	

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BP 506 P. Industrial PharmacyI (Practical)

4 Hours/week

- 1. Preformulation studies on paracetamol/asparin/or any other drug
- 2. Preparation and evaluation of Paracetamol tablets
- 3. Preparation and evaluation of Aspirin tablets
- 4. Coating of tablets- film coating of tables/granules
- 5. Preparation and evaluation of Tetracycline capsules
- 6. Preparation of Calcium Gluconate injection
- 7. Preparation of Ascorbic Acid injection
- 8. Qulaity control test of (as per IP) marketed tablets and capsules
 - 9. Preparation of Eye drops/ and Eye ointments
 - 10. Preparation of Creams (cold / vanishing cream)
 - 11. Evaluation of Glass containers (as per IP)

Recommended Books: (Latest Editions)

- 1. Pharmaceutical dosage forms Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman &J.B.Schwartz
- Pharmaceutical dosage form Parenteral medication vol- 1&2 by Liberman & Lachman
- 3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
- 4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
- 5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
- 6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
- 7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
- 8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger, Philadelphia, 5thedition, 2005
- Drug stability Principles and practice by Cartensen & C.I. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107.





ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF
Tradustail phaamacy

Name Ch. Goyathai Manisha PIN No. 20391R0016 Certified that this is the bonafide record of practical work done by Mr. /Ms. Shintha: Gayathan Manisha a student of .3.1...B. Phonmacy with Regd. No. .. 203. GIRCOL6...... in the .. Industrial pharmacy Laboratory during the year . 2022 - 2023 No. of Experiments Attended No. of Experiments Conducted 16 Signature - PRINCIPAL
Aditya Pharmacy - 133 437 Signature. Faculty incharge Submitted for the Practical examination held on .

S.No.	Date {	Name of the Experiment	Page No.	Remarks
	{	Introduction to pharmaceuticas formulations	1-4	Dur
1	23 7 22 } { 	Formulation of paracetmol tablet by wetgranulation method.	5-1	Phi
શ	30 1 82	Formulation of soluble Acetyl salicylic acid tablets	, , ,8-10	pe
3	ଧେଷ୍ଟ	Evaluation of formulated passarma	11 ~15 }	pr
4	ıзोह्य <u> </u>	Evaluation of formulated acetyl salicylicacid tablets.	 	Phi
5	ଅତ୍ୟକ୍ଷୟ <mark>,</mark>	proposation & Evaluation of a Tetracycline capsules	 19-88 	pr
6	27 8 22	Evaluation of a marketed paraetmol. Tablet8.	{ 2 3-25 	ple
7	3 9 28	Evaluation of a Marked Loposamiole capsules	} } } } }	pl
8	10 9 22	Formulation of Ascombic acid	}30-39	pu
9	17/9/20	Aditya Pharmacy SURAMPALEM-533 437	} } 33-3!	5 PWIK

S.No.	Date	Name of the Experiment	Page No.	Remarks
10_	2419/02	proposation and Evaluation of Chlorom - phenical Eyeointment.	36-37 }	
11	1 16 22	Film cooting of proposed tablets	38 - 43	pi
	}	Introduction to cosmotics	} 44-46	Pi
19	12/10/88	preparation o feold encom	} 44 }	D'
		preparation of varishing coreans	} 4.8 }	pi.
		proposation of face pouders.	49-50	PL
15	18]II 8a	priparation and Evoluationof priocarpine eyedrops	51-53 	pr
16	19/11/22	Evaluation of Glau containen	}54 <i>-5</i> 6	PV
			}	
			{	
			{	
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		SURAMPALEM TO PHOTOM 533 437	}	

BP 507 P. PHARMACOLOGY-II (Practical)

4Hrs/Week

1. Introduction to in-vitro pharmacology and physiological salt solutions.

2. Effect of drugs on isolated frog heart.

)

)

3. Effect of drugs on blood pressure and heart rate of dog.

Study of diuretic activity of drugs using rats/mice.

5. DRC of acetylcholine using frog rectus abdominis muscle.

6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus abdominis muscle and rat ileum respectively.

7. Bioassay of histamine using guinea pig ileum by matching method.

8. Bioassay of oxytocin using rat uterine horn by interpolation method.

9. Bioassay of serotonin using rat fundus strip by three point bioassay.

10. Bioassay of acetylcholine using rat ileum/colon by four point bioassay.

11. Determination of PA₂ value of prazosin using rat anococcygeus muscle (by Schilds plot method).

12. Determination of PD2 value using guinea pig ileum.

13. Effect of spasmogens and spasmolytics using rabbit jejunum.

- 14. Anti-inflammatory activity of drugs using carrageenan induced paw-edema model.
- 15. Analgesic activity of drug using central and peripheral methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

- Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier
- Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.

3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics

4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.

 Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology.

 K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.

7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher

 Modern Pharmacology with clinical Applications, by Charles R.Craig& Robert.
 Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kallata

10. Kulkarni SK. Handbook of experimental pharmacology. Vallabh Prakashan.

Aditya Pharmacy College SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF
Pharmacology-II

Name 61. Amurtho PIN No. 2 03 G 1 R 0 0 2 4 Certified that this is the bonafide record of practical work done by Mr. /Ms. ... Gr. Amuktha. a student of .3-1.8. pharmacy... with Regd. No. 2036120024...... in the ... pharmacology - I.... Laboratory during the year 2022 - 2023 No. of Experiments Attended 79 No. of Experiments Conducted 15 PRINCIPAL Aditya Pharmacy College SURAMPALEM-533 437 Signature - Head of the Department Signature - Faculty incharge Submitted for the Practical examination held on Ch. Taya Saultoshi EXAMINER-1 EXAMINER-2

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S.No. Date {	Name of the Experiment	Page No.	Remarks
1. 261=182	Introduction to In-vitro phanmacology and physiological soft solutions	157	28
a. a18laa.	Effect of durings on isolated prog	8-12 -	16/8
	Effect of Various durings on Blood pressure and heart rate of dag	 13-16 	96 618
4 16[8]33	study of diwietic activity of durings using rots/mice	 	3018
5 3018122	Lose response anive of a cetylcholine lusing trad rectal abandinal muscle	} 19 <i>-8</i> 8	300
6 30 8 8	Effect of physostigmine and atropine of long of Ach using trag xectus abdominal muscle and xat ileum.	183- 25 1	9/6/9.
4 6 9 8 9 8 9 8 9 8 9 8 9 8 9 9 8 9	Bioassay of histomine using guniea pig iteum by motching method	86-3= }	13/9
8 13 9 9	bioassay of oxytocin using xat utering	e}	مالان م
9 11/10/29	Strip by the repoint Bioassay	(M ₃₁ - 3	3
	Aditya Pharmacy College Aditya Pharmacy SURAMPALEM-533 437		WIKA:

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es Bioassay of aretyloboline using sat- liteum 31 colon by past point Bicassay less retermination of pas value of prozosin using stats 122 retermination of pas value using 123 retermination of pas value using 134 retermination of pas value using	{) Mg
22 Inetermination of pay value using		13
	} 20-11	DESCRIPTION OF THE PERSON NAMED IN COLUMN
{ ' '		
29 report of spasmoners and spasmaly ferenum.	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
ilss fanti-inflammatily activity of downs of the law of	45-47	199
Itentral and penipheral method	4-8-49 	
TACY CO.		
	-tics using xabbit fesenum. I parti-insparamatally activity of drugs of the cell of the control of the cell of th	-tics using xabbit felenum. 192 Anti-inflammatoly activity of downs 45-47 Lusing correspond induced paw Column 192 Analogesic activity of drug using 48-49

BP 508 P. PHARMACOGNOSY AND PHYTOCHEMISTRY II (Practical) 4 Hours/Week

- Morphology, histology and powder characteristics & extraction & detection of: Cinchona, Cinnamon, Senna, Clove, Ephedra, Fennel and Coriander
- 2. Exercise involving isolation & detection of active principles
 - a. Caffeine from tea dust.
 - b. Diosgenin from Dioscorea
 - c. Atropine from Belladonna
 - d. Sennosides from Senna
- 3. Separation of sugars by Paper chromatography
- 4. TLC of herbal extract
- 5. Distillation of volatile oils and detection of phytoconstitutents by TLC
- 6. Analysis of crude drugs by chemical tests: (i) Asafoetida (ii) Benzoin (iii) Colophony (iv) Aloes (v) Myrrh

Recommended Books: (Latest Editions)

- W.C.Evans, Trease and Evans Pharmacognosy, 16th edition, W.B. Sounders & Co., London, 2009.
- Mohammad Ali. Pharmacognosy and Phytochemistry, CBS Publishers & Distribution, New Delhi.
- Text book of Pharmacognosy by C.K. Kokate, Purohit, Gokhlae (2007), 37th Edition, Nirali Prakashan, New Delhi.
- 4. Herbal drug industry by R.D. Choudhary (1996), Ist Edn, Eastern Publisher, New Delhi.
- Essentials of Pharmacognosy, Dr.SH.Ansari, IInd edition, Birla publications, New Delhi, 2007
- 6. Herbal Cosmetics by H.Pande, Asia Pacific Business press, Inc, New Delhi.
- 7. A.N. Kalia, Textbook of Industrial Pharmacognosy, CBS Publishers, New Delhi, 2005.
- 8. R Endress, Plant cell Biotechnology, Springer-Verlag, Berlin, 1994.
- 9. Pharmacognosy & Pharmacobiotechnology. James Bobbers, Marilyn KS, VE Tylor.
- 10. The formulation and preparation of cosmetic, fragrances and flavours.
- 11. Remington's Pharmaceutical sciences.
- 12. Text Book of Biotechnology by Vyas and Dixit.
- 13. Text Book of Biotechnology by R.C. Dubey.



Aditya Pharmacy College SURAMPALEM-533 437

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ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF Pharmacognasy and phytochemistry -II



Name ch. Gayathri Manisha PIN No. 20391 ROO16

Certified that this is the bonafide record of practical work done by

Mr. / Ms. Chintha. Gayathni Manisha a student of .3-1. B: pharmacy with Regd. No. 20351ROOL6.... in the pharmacognesy... Laboratory during the year 2012-23 Phytochemistry -II

No. of Experiments Conducted | 19

No. of Experiments Attended

Signature - Faculty incharge

Signature - Head of the Department

Submitted for the Practical examination held on

Aditya Pharmacy College

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WIKAS, NLR

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S.No.	Date {	Name of the Experiment	Page No.	Remarks
1	ब्ह्र न २२ {	Morphology Histology and powden characteristics detection of	1-4	Aggialos.
್ರಿ	29 7 22 	cinchona. Morphology microscopy and powden { Microscopy of cassia cinnamon	5-8	15/8/22
3	5 8 22	Morphology, Miczoscopy and powden Microscopy of clove	9-11 [Lugar
4.	13 8 22	Morphology, histology and powerler microscopy of senna] 2-15 	A 29802
		Morphology and microscopy of fennel	 	12/1/12
6.	25 8 22	Morphology, microscopy, powden microscopy of Ephedro TMO-HUNGT	} } } } } }	James
7	. 219 22	Morphology thistology, pocaden characteristics of comianden] 29-23 	A919122
8,	9 9 92	Teologian and detection of coffeine from Teadost	{ 24-26 	Lione
9	· G 9 &&	Tsolation & detection of disagnin from dios coorea	{ 87-98 	Luttope
		Aditya Pharmacy College Aditya Pharmacy College GURAMPALEM-533	}	WIKAS

WIKAS-NLR.

S.No.	Date	Name of the Experiment	} Page No.	Remarks
10	14 10 92 [°] .	replation and detection of atropine from bolladonna	[29-30]	BAIN!
11.	14 16 22 	asolation and detection of Sennosides from senna	 3 -30 	
18.	@1\(0 22 ¹	TLC of Hembal Extract.	{ 33-34 	
		octection of phytoconstituents by	 35-3 1 	1-1201012
14.	<u>න 8 10 2 2</u> } }	Separation of Sugar by papers chromatography	38-40 }	AHIAL
15.	4-111/22	Distillation of volatile oil	41-49	1111120
IG.] 	Analysis of Asafoetida by chemical Test	43	Apple
17.	11 11 22 }	Analysis of Benzoin by chemical Test	- 44 4 5	
18•	18 11 22 	Analysis of colopbony by chemical test	46	7,
19.	8 11 22 	Analysis of Aloeby chemical Test	47-48	Azhr
		LY CO		
A10.000.000		Aditya Pharmacy College SURAMPALEM-533 437		WIKAS-NLR.

BP607P. MEDICINAL CHEMISTRY- III (Practical)

4 Hours / week

- I Preparation of drugs and intermediates
- 1 Sulphanilamide

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- 2 7-Hydroxy, 4-methyl coumarin
- 3 Chlorobutanol
- 4 Triphenyl imidazole
- 5 Tolbutamide
- 6 Hexamine
- II Assay of drugs
- 1 Isonicotinic acid hydrazide
- 2 Chloroquine
- 3 Metronidazole
- 4 Dapsone
- 5 Chlorpheniramine maleate
- 6 Benzyl penicillin
- III Preparation of medicinally important compounds or intermediates by Microwave irradiation technique
- IV Drawing structures and reactions using chem draw®
- V Determination of physicochemical properties such as logP, clogP, MR, Molecular weight, Hydrogen bond donors and acceptors for class of drugs course content using drug design software Drug likeliness screening (Lipinskies RO5)

Recommended Books (Latest Editions)

- 1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
- 2. Foye's Principles of Medicinal Chemistry.
- 3. Burger's Medicinal Chemistry, Vol I to IV.
- 4. Introduction to principles of drug design- Smith and Williams.
- 5. Remington's Pharmaceutical Sciences.
- 6. Martindale's extra pharmacopoeia.





ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



Certified that this is the bonafide record of
practical work done by

Mr. / Ms. A. Madhuri Devi

a student of 3-2 B. phanmay, with Regd. No. 2036 120004
in the Medianal Clamity III Laboratory during the year 2022-23

No. of Experiments Conducted

Signature - Head of the Department Aditya Pharmacy
Surampalem-533 437
Submitted for the Practical examination held on 206-2023

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Aditya Pharmacy Coness
Aditya Pharmacy Coness

Page No. Remarks Name of the Experiment Date S.No. 14. 27/4/231 Microwave assisted synthesis of 7-hydroxy 4-methyl coumanin. 15. 27/4/22 Microwave assisted synthesis of 21415 triphenylimidazole. Aditya Pharmady Col. ... SURAMPALEM-533 437

BP 608 P. PHARMACOLOGY-III (Practical)

4Hrs/Week

- 1. Dose calculation in pharmacological experiments
- 2. Antiallergic activity by mast cell stabilization assay
- Study of anti-ulcer activity of a drug using pylorus ligand (SHAY) rat model and NSAIDS induced ulcer model.
- 4. Study of effect of drugs on gastrointestinal motility
- 5. Effect of agonist and antagonists on guinea pig ileum
- 6. Estimation of serum biochemical parameters by using semi- autoanalyser
- 7. Effect of saline purgative on frog intestine
- 8. Insulin hypoglycemic effect in rabbit
- 9. Test for pyrogens (rabbit method)

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- 10. Determination of acute oral toxicity (LD50) of a drug from a given data
- 11. Determination of acute skin irritation / corrosion of a test substance
- 12. Determination of acute eye irritation / corrosion of a test substance
- 13. Calculation of pharmacokinetic parameters from a given data
- 14. Biostatistics methods in experimental pharmacology(student's t test, ANOVA)
- 15. Biostatistics methods in experimental pharmacology (Chi square test, Wilcoxon Signed Rank test)
- *Experiments are demonstrated by simulated experiments/videos

Recommended Books (Latest Editions)

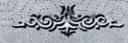
- Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier
- Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill
- Goodman and Gilman's, The Pharmacological Basis of Therapeutics
- Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs. The Point Lippincott Williams & Wilkins
- Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology
- 6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
- 7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher Modern Pharmacology with clinical Applications, by Charles R.Craig& Robert,
- 8. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata,
- 9. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan,
- 10. N.Udupa and P.D. Gupta, Concepts in Chronopharmacology.





ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

PHARMACOLOGY - 3

Name Adhikari Varsha Anupama PIN No. 20391 RO003

Certified that this is the bonafide record of practical work done by

Mr./Ms.	Adhikari	Varisho	. Anupa	ıma		
					O 3 C IDA	007
	of 3-2					
in the	Pharmacol	094-3	Laborator	ry during t	he year .?	022-23

No. of Experiments Conducted

No. of Experiments Attended

Signature - Faculty incharge

Aditya Pharmacy College

Signature R Head of the Department

Submitted for the Practical examination held on

Aditya Pharm

		POINTER		
S.No.	Date {	Name of the Experiment	Page No.	Remarks
	20-1-23	pose calculation in pharmacological	1-4	8/123
		Experiments		22111
2	27-1-23	Anti-allergic activity by Mast	5-7	2/12
		cell stabilization assay	.	3\21
3.	3-2-23	study of Anti-vicer activity of a	8-11	8/2/23
	1311001100110011000110001100121012101	drug using pylorous ligand (shay)		6/2/2
		Rat model & NSAID's induced		
	\	ulcer Model		0 .
4	10-2-23	study of Effect of drugs on	12-14	012/2
		gostro intestinal motility		PHP.
5.	17-2-23	Effect of agonist & antagonist	15-18	24/2/23
		on guinea pig Ileum	}	29(20
6.	24 - 2 - 23	Effect of saline purgative on	19-21	81,3
		Frog intestine	<u> </u>	33
7	3-3-23	Estimation of serum Biochemical	<u> 22 - 25</u>	8/2/2
		parameters by using semiauto	(lolsin
12.0		analyser	<u> </u>	a . 1
8	10-3-23	Test for pyrogens (Rabbit Method)	26-29	\$ 430
19	17-3-23	petermination of Acute oral Toxic	¥ 30-3	2 8 13
		(LD) 50 of a drug from a given data	<u> </u>	1 and
10	24-3-23	Determination of Acute skin Irrita?	<u> 33 - 3</u> 0	3/3/
		corrosion of a rest substance	}	
11.	24-3-23	potermination of Acute eye	40 - 4	2 \$ (3)
		mita / comosion a rest substance	olles	8
12_	31 - 3 - 23	colculation of phorma colimation-533	43 - 4	3/2/2
-		parameters afrom a given data	Į.	5"
13	31-3-23	Biostatic Methods in Experimental	${45 - 5}$	o Sala
		Pharmacology (student + - test Ano	WA)	2

POINTER

Date {	Name of the Experiment		Remarks
2 -4-23	Biostatis Method in Experimental Pharmacology (CHI square, Wilcoxon)	бI-53	28/4/2
28-4-23	insulin Hypoglycemic Effect in Rabbit.	54-5 6 }	& July &
		} }	
		}	
		}	
		}	
	Aditya Pharmacy SIIRAMPALEM-53	Coll 6 3 437	
	21-4-23	Planacology (CHT square, wilcoxon) Signed Rank test) 28-4-23 Insulin Hypoglycemic Effect in Rabbit.	Date Name in the Experimental 51-53. Pharmacology (cHT square, Wilcoxon signed Rank tost) 28-4-23 Insulin Hypoglycemic Effect in Rabbit 54-50.

BP 609 P. HERBAL DRUG TECHNOLOGY (Practical)

4 hours/ week

- To perform preliminary phytochemical screening of crude drugs.
- 2. Determination of the alcohol content of Asava and Arista
- 3. Evaluation of excipients of natural origin
- 4. Incorporation of prepared and standardized extract in cosmetic formulations like creams, lotions and shampoos and their evaluation.
- 5. Incorporation of prepared and standardized extract in formulations like syrups, mixtures and tablets and their evaluation as per Pharmacopoeial requirements.
- 6. Monograph analysis of herbal drugs from recent Pharmacopoeias
- 7. Determination of Aldehyde content
- 8. Determination of Phenol content
- 9. Determination of total alkaloids

Recommended Books: (Latest Editions)

- Textbook of Pharmacognosy by Trease & Evans.
- Textbook of Pharmacognosy by Tyler, Brady & Robber.
- Pharmacognosy by Kokate, Purohit and Gokhale 3.
- Essential of Pharmacognosy by Dr.S.H.Ansari 4.
- Pharmacognosy & Phytochemistry by V.D.Rangari 5.
- Pharmacopoeal standards for Ayurvedic Formulation (Council of Research in 6. Indian Medicine & Homeopathy)
- Mukherjee, P.W. Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals. Business Horizons Publishers, New Delhi, India, 2002.





ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEFARIM	ENIOF
Herbal dainy t	echnology
Name D. Sai Deep thi Rari	PIN No. 2 0 3 G 1 R 0 0 8 7
Cariffed that divisit d	
Certified that this is the	e bonajiae recora oj
practical wor	rk done by
Mr./Ms. D. Sai Deepthi Rani	
a student of 3 year 2 d Sem wi	th Regd. No 2.03(a) \$.00.27
in the Hubal drug technology La	howatomy during the year 2012-2023
in the	outaiory uniting the year Ruzzkxk3
No. of Experiments Conducted	No. of Experiments Attended 17
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	909
Signature - Faculty incharge	Signature - Head of the Department
18:04:2023	
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Submitted for the Practical examina	Aditya Pharmacy Co
oublinated for the Fractical examina	ation held on
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DASC EXAMINER-2

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POINTER

.No.	Date {	Name of the Experiment	Page No.	Remarks
,	24-1-23 {	Priliminary phytochemical Screening of the houbal brude drug powder/ houbal extracts.	1-9	*
۵.	24-1-23	Philiminary phytochemical screening of horbal extract (vinca alkaloids).	[10-1]: }	OD (R)
3.	***********************	Poiliminary phytochemical screening of horbal extract (Sennosides).	}	P
ч,	31-1-23	Priliminary phytochemical Screening of herbal Invoke drug digitalis.	} 13-14. 	₽
5.	7-2-23	Evaluation of natural excipients - Starch	{ 15 -lb.	4 (4)
6:	7-2-23	Monograph analysis of hurbal drug-Acacia.	17-18	& C
		Evaluation of natural excipient again	}19-21.	
8	· 14-2-23	Evaluation of a natural excipient - tragacantly	, }22-23 }	DE (
9	1. 21-2-23	Preparation and evaluation of housal	}24-25	
10	21-2-23	Determination of the alcoholic present in the given Asval arrista ayrevedic formulation	}26-2: }	1 + 6
	28.3-2	3 Formulation of Hujbal Syrup.	} 29-3	o & A
		Aditya Pharmacy Colleges SURAMPALEM-533 437		WIKAS

POINTER

No. Date	Name of the Experiment		Remarks
12. 28-3-23	Determination of aldehyde lontene.	} 31	b (b)
13. 4-4-23	Determination of Phenoe Lontent:	32· <u> </u>	O R
14. 4-4-2;	Attennination of total alkaloids.	33	6
		}	
		}	
		}	
		}	
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BP705P. INSTRUMENTAL METHODS OF ANALYSIS (Practical)

4 Hours/Week

- Determination of absorption maxima and effect of solvents on absorption maxima of organic compounds
- 2 Estimation of dextrose by colorimetry
- 3 Estimation of sulfanilamide by colorimetry
- 4 Simultaneous estimation of ibuprofen and paracetamol by UV spectroscopy
- 5 Assay of paracetamol by UV- Spectrophotometry
- 6 Estimation of quinine sulfate by fluorimetry
- 7 Study of quenching of fluorescence
- 8 Determination of sodium by flame photometry
- 9 Determination of potassium by flame photometry
- 10 Determination of chlorides and sulphates by nephelo turbidometry
- 11 Separation of amino acids by paper chromatography
- 12 Separation of sugars by thin layer chromatography
- 13 Separation of plant pigments by column chromatography
- 14 Demonstration experiment on HPLC
- 15 Demonstration experiment on Gas Chromatography

Recommended Books (Latest Editions)

- 1. Instrumental Methods of Chemical Analysis by B.K Sharma
- 2. Organic spectroscopy by Y.R Sharma
- 3. Text book of Pharmaceutical Analysis by Kenneth A. Connors
- 4. Vogel's Text book of Quantitative Chemical Analysis by A.I. Vogel
- 5. Practical Pharmaceutical Chemistry by A.H. Beckett and J.B. Stenlake
- 6. Organic Chemistry by I. L. Finar
- 7. Organic spectroscopy by William Kemp
- 8. Quantitative Analysis of Drugs by D. C. Garrett
- 9. Quantitative Analysis of Drugs in Pharmaceutical Formulations by P. D. Sethi
- 10. Spectrophotometric identification of Organic Compounds by Silverstein



Aditya Pharmacy College SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

PHARMACEUTICAL ANALYSIS



Name BOKKA NAGA SRAVYA PIN No. 1 9 3 6 1 Certified that this is the bonafide record of practical work done by Mr. / Ms. BOKKA NAGA SRANYA a student of IV. B. pharmacy San Iwith Regd. No. .. 193618.0017 ... in the Instrumental Method of Analysis Laboratory during the year . 2022 - 23 No. of Experiments Attended 90 No. of Experiments Conducted 20

Signature - Head of the Department

Submitted for the Practical examination held on

POINTE

s.No.	Date {	Name of the Experiment	Page No.	Remarks
	04/7/22	INTRODUCTION	01-02	B 13/19/19/19
1.	11/4/22	CAUBRATION OF UV-VISIBLE SPECTROSCO.	03-06	B 13/17 9892
9.	18/7/22	DETERMINATION OF ABSORPTION MAXIMA FOR POTASSIUM PERMANGANATE		30(08)
3,	25 7 22	OF PHENOL USING UN-VISIBLE SPECTROPHOTOMET	08-09 R	B Towns
<u>н</u>	25/7(22	ASSAY OF PARACETAMOL BY USING SPECIFIC ABSORBANCE [A")	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	-12/04/00 D
5	01/8/22	ASSAY OF PARACETAMOL BY CHEMICAL DERIVITIZATION METHOD	\	B Control of the cont
6	08/8/22	ESTIMATION OF SULPHANILAMIDE EYE DROPS BY COLOURIMETRY	14-18	Ballylon
 	· H108/22	ESTIMATION OF QUININE SULPHATE BY FLOURIMETRY	17-18	12/18/9092
5	3. 22/08/22	EY COLL	}	22. 3208/002
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.No.	Date	Name of the Experiment	Page No.	Remarks
		BY COLORIMETRY.	at	
0-	12 09 2020	DETERMINATION OF SODIUMION CONCENTRATION IN	25-26	(B) 19/09/09
		UNKNOWN SAMPLE BY FLAME PHOTOMETRY.	~*	
11.	19/09/2022	DETERMINATION OF POTASSIUM ION CONC ^M IN	97-28	B 19/19/19
		UNKNOWN SAMPLE BY FLAME PHOTOMETRY		B-1.0
	16 109 2022	INTRODUCTION TO CHROMATOGRAPHY	29-32	19/09/20
12.	160912022	TOENTIFICATION OF AMINOACIOS BY ASCENDING PAPER	33-36	10/10/2012
		CHROMATOGRAPHY	~	&Oliol _e
13.	16 10912022	TDENTIFICATION OF AMINOACIDS BY RADIALCHROMATION	37 - 48	Bioligion
		IDENTIFICATION OF METRONIDATOLE IN GIVEN SAMPLE	41 -43.	B 15/1
		BY USING ASCENDING PAPER CHROMATOGRAPHY		10/10/2
15.	2010912022	PREPARATION OF TLC PLATES	-45 -A	(B) 10/10/12
16.	23 09/2022	IDENTIFICATION AND SEPARATION OF SUGIARS	H6-H8	Ballohow
		BY TLC	*	131.1
14.	23/09/2022	SEPARATION AND TDENTIFICATION OF SULPHA NILA	H9 - 50	Birologa
		-MIDE BY TLC.	<u>}</u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
18.	26/01/2022	COLUMN CHROMATOGRAPHY.	51-52	(B 2010)
19.	10 10 2022	DEMO ON HPLC [Agilend & Compact LC]	53-54	OB apple
90.	14/10/2022	DEMO ON GAS CHROMATOGRAPHY.	55-56	Baholu
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DRUG DELIVERY SYSTEMS (MPH 102T)

SCOPE

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This course is designed to impart knowledge on the area of advances in novel drug delivery systems.

OBJECTIVES

Upon completion of the course, student shall be able to understand

- The various approaches for development of novel drug delivery systems.
- The criteria for selection of drugs and polymers for the development of delivering system
- The formulation and evaluation of Novel drug delivery systems..

THEORY 60 Hrs

- Controlled Release (CR) Sustained Release(SR) and 1. 10 formulations: Introduction & basic concepts, advantages/ disadvantages, factors influencing, Physicochemical & biological approaches for SR/CR Hrs Mechanism of Drug Delivery from SR/CR formulation. formulation, definition, classification, properties and introduction. Polymers: Medicine: Introduction, application Dosage Forms for Personalized Definition, Pharmacogenetics, Categories of Patients for Personalized Medicines: Customized drug delivery systems, Bioelectronic Medicines, 3D printing of pharmaceuticals, Telepharmacy.
- Rate Controlled Drug Delivery Systems: Principles & Fundamentals, Types, Activation; Modulated Drug Delivery Systems; Mechanically activated, pH activated, Enzyme activated, and Osmotic activated Drug Delivery Systems; Principles & Fundamentals.
- Gastro-Retentive Drug Delivery Systems: Principle, concepts advantages and disadvantages, Modulation of GI transit time approaches to extend GI transit. Buccal Drug Delivery Systems: Principle of muco adhesion, advantages and disadvantages, Mechanism of drug permeation, Methods of formulation and its evaluations.
- 4 Occular Drug Delivery Systems: Barriers of drug permeation, Methods to overcome barriers.





FORMULATION AND EVALUATION OF CONTROLLED RELEASE TABLETS OF PREGABALIN BY USING ARAUCARIA HETEROPHYLLA GUM

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada, A.P.



In Partial Fulfillment of the Requirement for the Award of the Degree of

MASTER OF PHARMACY

IN PHARMACEUTICS By

RASAMSETTI. D.V.A.

LAKSHMI

(Reg NO-213G1S0303)

Under the guidance of

DR.CH. S. PHANI KUMAR M. Pharm Ph.D.

Professor



DEPARTMENT OFPHARMACEUTICS ADITYA PHARMACY COLLEGE SURAMPALEM-533437 2021-2023



In Partial Fulfillment of the Requirement for the Award of the Degree of

MASTER OF PHARMACY

In

PHARMACEUTICS By

RASAMSETTI. D.V.A. LAKSHMI

(Regdno-213G1S0303)

Under the guidance of

DR.CH. S. PHANI KUMAR M. Pharm Ph.D.

Professor





ADITYA PHARMACY COLLEGE (Approved by AICTE and affiliated to JNT University, Kakinada) Aditya Nagar, ADB Road, surampalem,

E.G.Dist., A.P

Pin: 533437, Ph: 08852 200005

CERTIFICATE

This is to certify that the dissertation work entitled "Formulation and evaluation of controlled release tablets of pregabalin by using araucaria heterophylla gum" is submitted to the JNTUK University, Kakinada in partial fulfillment for the award of the degree of Master of Pharmacy in Pharmaceutics. This is a bonafied work carried out by RASAMSETTLD.V.A. LAKSHMI (Regd No: 213G1S0303) under the guidance of DR, CH. S. PHANI KUMAR, Professor Aditya Pharmacy College, Surampalem.

Place: Surampalem

Date:

Dr. D. SATHIS KUMAR M. Pharm, Ph. D. Prince of the prince



ADITYA PHARMACY COLLEGE
(Approved by AICTE and affiliated to JNT University,
Kakinada) Aditya Nagar, ADB Road, surampalem,
E.G.Dist., A.P
Pin: 533437, Ph: 08852 200005

CERTIFICATE

This is to certify that the dissertation work entitled "FORMULATION AND EVALUATION OF CONTROLLED RELEASE TABLETS OF PREGABALIN BY USING ARAUCARIA HETERPHYLLA GUM" is submitted to the JNTUK

University, Kakinada in partial fulfillment for the award of the degree of MASTER OF PHARMACY IN PHARMACEUTICS. This is a bonafied work carried out by RASAMSETTI.D.V.A. LAKSHMI (Regd No: 213G1S0303) under the guidance of DR. CH.S. PHANI KUMAR, Professor Aditya Pharmacy College, Surampalem.

Place: Surampalem

Date:

DR. CH.S. PHANI KUMAR

M. PHARM Ph. D Professor



ADITYA PHARMACY COLLEGE (Approved by AICTE and affiliated to JNT University, Kakinada) Aditya Nagar, ADB Road, surampalem, E.G.Dist., A.P.

Pin: 533437, Ph: 08852 200005

EVALUATION CERTIFICATE

This is to certify that the desertion work entitled "FORMULATION AND EVALUATION OF CONTROLLED RELEASE TABLETS OF PREGABALIN BY USING ARAUCARIA HETEROPHYLLA GUM" is submitted to the Jawaharlal Nehru technological university, Kakinada in partial fulfillment for the award of the degree of MASTER OF PHARMACY IN PHARMACEUTICS. This is bonafied work carried out by RASAMSETTLD.V.A. LAKSHMI (REGD: 213G1S0303) under the guidance and supervision of DR.CH. S. PHANI KUMAR professor, Aditya Pharmacy College, surampalem.

Place: Surampalem

Date:

SIGNATURE OF EVALUATOR 1

SIGNATURE OF EVALUATOR 2

DECLARATION

I, RASAMSETTI.D.V.A. LAKSHMI (Regd No: 213G1S0303), do hereby declare that the dissertation entitled "FORMULATION AND EVALUATION OF CONTROLLED RELEASE TABLETS OF PREGABALIN BY USING ARAUCARIA HETEROPHYLLA GUM" is a record of genuine research work carried out by me under the supervision of DR. CH. S. PHANI KUMAR, Professor, Aditya Pharmacy College, Surampalem. The work reported herein has not been previously submitted by other persons for qualifications at any other University or academic institutions unless otherwise referenced or acknowledged.

Place: Surampalem

Date:

R. D.V. A. Latshma

RASAMSETTI.D.V.A. LAKSHMI Regd No - 213G1S0303 By constructing the standard Fig 7.0 calibration curve for pregabalin in pH 6.8 phosphate By construction 2-10mg/ml it was observed that the analytical method use was buffer at concentration 2-10mg/ml it was observed that the analytical method use was buffer at concert analytical method use was obeying beers lambert's law by showing R² VALUE= 0.999 as shown in hence the analytical obeying beers used to determine that concentration present in various solutions used for

prug and excipient compatibility studies to choose various excipients along with drug, the drug excipient compatibility was performed and found all the excipients involved in these studies have passed compatibility studies hence all the excipients can be considered for the preparation of various pregabalin controlled release tablets. The drug-excipient compatibility studies were performed for pregabalin, araucaria heterophylla gum, HPMC and araucaria heterophylla and HPMC at their highest concentrations at a ratio how the used in designing of tablet formulations.

The flow properties for pregabalin were conducting and found pregabalin with good flow properties by having angle of repose at 25. 73°, bulk density at 0.370 g/ml, tapped density at 0.410 g/ml, Carr's index at 5.99% and Hauser's ratio at 1.11 as shown in the Table 7.2 hence pregabalin can be tableted by direct compression method because of its flow properties.

The tablets were designed by considering 10%w/w, 20%w/w, and 30%w/w with the help of araucaria heterophylla gum, HPMC plus araucaria heterophylla and HPMC and all the formulations were subjected to the pre compression studies and found all formulations with good flow properties. Hence all formulations can be tableted by using direct compression method because of their good flow property.

All the formulations were tableted with the help of direct compression method and evaluated for post compressional parameters. All the formulations are showing post compression parameters as follows hardness at 3.5 to 4.6 Kgs, thickness between 3.4 to 4.3 mm, friability at between 0.51 to 0.558% and average weight of tablet ranges between 245 to 252 mg from the observations it was shown that all the formulations are with in the post compressional

FI, F2, and F3 were prepared with the help of araucaria heterophylla gum at 10%w/w, 20%w/w and 30%w/w per tablet. The rate release retardation is high for F3 formulation and the rate release retardation for araucaria heterophylla gum formulations were in the following order.

F3 > F2 > F1

F1, F2, and F3 were prepared with the help of araucaria heterophylla gum at 10%w/w, 20%w/w and 30%w/w per tablet. The rate release retardation is high for F3 formulation and By constructing the standard Fig 7.0 calibration curve for pregabalin in pH 6.8 phosphate By constitue 2-10mg/ml it was observed that the analytical method use was buffer at the analytical method use was been been lambert's law by showing R² VALUE= 0.999 as shown in hence the analytical obeying was used to determine that concentration present in various solutions used for analysis.

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The flow properties for pregabalin were conducting and found pregabalin with good flow properties by having angle of repose at 25. 730, bulk density at 0.370 g/ml, tapped density at 0.410 g/ml, Carr's index at 5.99% and Hauser's ratio at 1.11 as shown in the Table 7.2 hence pregabalin can be tableted by direct compression method because of its flow properties.

The tablets were designed by considering 10%w/w, 20%w/w, and 30%w/w with the help of araucaria heterophylla gum, HPMC plus araucaria heterophylla and HPMC and all the formulations were subjected to the pre compression studies and found all formulations with good flow properties. Hence all formulations can be tableted by using direct compression method because of their good flow property.

All the formulations were tableted with the help of direct compression method and evaluated for post compressional parameters. All the formulations are showing post compression parameters as follows hardness at 3.5 to 4.6 Kgs, thickness between 3.4 to 4.3 mm, friability at between 0.51 to 0.558% and average weight of tablet ranges between 245 to 252 mg from the observations it was shown that all the formulations are with in the post compressional

F1, F2, and F3 were prepared with the help of araucaria heterophylla gum at 10%w/w, 20%w/w and 30%w/w per tablet. The rate release retardation is high for F3 formulation and the rate release retardation for araucaria heterophylla gum formulations were in the following order.

F3 > F2 > F1

F1, F2, and F3 were prepared with the help of arancaria heterophylla gum at 10%w/w, 20%w/w and 30%w/w per tablet. The rate release retardation is high for F3 formulation and the rate release retardation for araucaria heterophylla gum formulations were in the following order F4 > F5 > F6

F1. F2, and F3 were prepared with the help of araucaria heterophylla gum and HPMC at F1. F2, and 10% w/w and 30% w/w per tablet. The rate release retardation is high for F3 10% W/W. and the rate release retardation for araucaria heterophylla gum formulations were in the following order F7 > F8 > F9

Out of all pregabalin controlled release formulations invitro dissolution studies it was found Out of the F3, F6, and F9 formulations has shown promising rate release retardation a rate release retardation among these formulations as follows F9 > F6 > F3

Finally, it was found that F9 formulation is best formulation among all pregabalin controlled release formulations for its high-rate release retardation. It was compared with marketed product (PG-CO-M) (MB/96/5) and found F9 is having nearer invitro drug release profile to the marketed formulation

The pharmacokinetic profile for all pregabalin controlled release formulation were performed and the order of release for all formulations was following zero order kinetics. The mechanism of release for all formulations were following non-fickian diffusion as shown in

Finally, it was concluded that F9 formulation is best formulation among all pregabalin controlled release tablet formulations because of its high-rate release retardation.

These formulations were prepared with the help of 30%w/w per tablet of araucaria heterophylla gum and HPMC and this is the indication of combining natural gum and synthetic gum combinedly having great capability of rate retardation invitro drug release

The accelerated stability studies for the best formulation were performed by following ICH guidelines for 3months and found the F3 formulation is stable.

MODERN PHARMACEUTICS (MPH 103T)

Scope

Course designed to impart advanced knowledge and skills required to learn various aspects and concepts at pharmaceutical industries

Objectives

Upon completion of the course, student shall be able to understand

- The elements of preformulation studies.
- The Active Pharmaceutical Ingredients and Generic drug Product development
- Industrial Management and GMP Considerations.
- Optimization Techniques & Pilot Plant Scale Up Techniques
- Stability Testing, sterilization process & packaging of dosage forms.

THEORY 60 HRS

- 1. a. Preformation Concepts Drug Excipient interactions different methods, kinetics of stability, Stability testing. Theories of dispersion and pharmaceutical Dispersion (Emulsion and Suspension, SMEDDS) preparation and stability; Large and small volume parental physiological and formulation consideration, Manufacturing and evaluation.
 - b. Optimization techniques in Pharmaceutical Formulation: Concept and parameters of optimization, Optimization techniques in pharmaceutical Hrs formulation and processing. Statistical design, Response surface method, Contour designs, Factorial designs and application in formulation
- Validation: Introduction to Pharmaceutical Validation, Scope & merits of Validation, Validation and calibration of Master plan, ICH & WHO guidelines for calibration and validation of equipments, Validation of specific dosage form, Types of validation. Government regulation, Manufacturing Process Model, URS, DQ, IQ, OQ & P.Q. of facilities.
- 3 cGMP & Industrial Management: Objectives and policies of current good manufacturing practices, layout of buildings, services, equipments and their maintenance Production management: Production organization, materials management, handling and transportation, inventory management and control, production and planning control, Sales forecasting, budget and cost control, industrial and personal relationship. Concept of Total Quality Management.





FORMULATION, EVALUATION AND IN-VITRO CHARACTERIZATION OF BERBERINE LOADED CHITOSAN NANO PARTICLES FOR LUNG CANCER TREATMENT

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada, A.P



In Partial Fulfilment of the Requirement for the Award of the Degree of

MASTER OF PHARMACY In

PHARMACEUTICS

Submitted by

RATNALA SHARMILA

(Regd no-213G1S0304)

Under the guidance of

Mr. G. Rama Krishna M. Pharm., (Ph. D) Assoc. professor



Department of Pharmaceutics

Aditya Pharmacy College

Surampalem-533437

2021-2023



ADITYA PHARMACY COLLEGE

(Approved by AICTE and affiliated to JNTU university, Kakinada)

Aditya Nagar, ADB Road, Surampalem, E.G.Dist., A.P Pin: 533437, Ph.: 08852 200005

CERTIFICATE

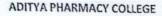
This is to certify that the dissertation work entitled "FORMULATION, EVALUATION AND IN-VITRO CHARACTERIZATION OF BERBERINE LOADED CHITASON NANO PARTICLES FOR LUNG CANCER TREATMENT." is submitted to the JNTU university, Kakinada in partial fulfilment for the award of the degree of Master of Pharmacy in Pharmaceutics. This is a benefited work carried out by RATNALA SHARMILA (Regd No: 213G1S0304) under the guidance of Mr. G. Rama Krishna, M.Pharm (Ph.D), Associate Professor Aditya PharmacyCollege, Surampalem.

Place: Surampalem

Date:

Dr. D. SATHIS KAPPTANEW Pharm, Ph. D.

Reincularand Professor, Aditya Pharmacy College.





(Approved by AICTE and affiliated to JNTU university, Kakinada) Aditya Nagar, ADB Road, surampalem, E.G.Dist., A.P

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Place: surampalem.

Date:

Guide

Mr. G. Rama Krishna M. Pharm., (Ph. D)

Associate professor



(Approved by AICTE and affiliated to JNT University, Kakinada) Aditya Nagar, ADB Road, Surampalem, E.G.Dist., A.P

EVALUATION CERTIFICATE

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Place: Surampalem

Date:

SIGNATURE OF EVALUATOR 1

SIGNATURE OF EVALUATOR 2

DECLARATION

I, RATNALA SHARMILA (Regd No:213G1S0304), do here by declare that the

dissertation entitled "FORMULATION, EVALUATION AND IN-VITRO

CHARACTERIZATION OF BERBERINE LOADED CHITASON NANO PARTICLES

FOR LUNG CANCER TREATMENT." is a record of genuine research work carried out by

me under the supervision of Mr. G. Rama Krishna, M.Pharm (Ph.D), Associate Professor,

Aditya Pharmacy College, Surampalem. The work reported here in has not been previously

submitted by other persons for qualifications at any other University or academic institutions

unless otherwise referenced or acknowledged.

Place: Surampalem

Date:

RATNALA SHARMILA Regd No-213G1S0304

SUMMARY AND CONCULSION

Intravenous drug delivery system enhances the permeability of the drug molecules. Thus, by incorporating of drug into nanoparticles and delivery through the intravenous route by significantly improve the bioavailability of berberine loaded chitosan nano particles.

- From the present study, standard calibration curve was plotted shows best fit line with regression (R²)0.9947 which obeys Beer's lambert law.
- The FT-IR studies was carried out and results shown that there is no interaction pf API with excipients used in formulations.
- The zeta sizer shoes particle size of BBR -Ch-NPs formulation shows greater transmittance indicate smaller particle size was found to 136.4nm.
- The percentage drug content of BBR-Ch -NPs was found to be 32.5%.
- The entrapment efficiency of BBR-Ch-NPs was found to be 73.22%.
- In present study the drug release studies were carried out by dialysis membrane. The
 drug release of BBR-Ch-NPs formulation gave better release than pure BBR.

The formulation that shows 80-90% of drug release in 24hrs and it shows more impact in endocytosis.

- In XRD diffraction pattern of BBR shows as crystalline nature with sharp intense peak value of 2θ was found to be 28.1°.
- The DSC thermogram of BBR shows crystalline and sharp endothermic peak at melting point of 180°c-190°c.

- The effect of BBR and BBR-Ch-NPs treatment on CELL TOXICITY OF IC 50 of BBR-Ch-NPs shows more potential activity as compared to BBR.
- The effect of ROS and MITOCHONDRIAL membrane potential of A549 treatment this study shows that significant decrease in fluorescence intensity after BBR and BBR-Ch-NPs treatment as compared to control the cell death.
- Cell uptake assay result specified that BBR-Ch-NPs has more endocytosis capacity as compared to BBR dye.

PHARMACEUTICS PRACTICAL - I (MPH 105PA)

1. Analysis of pharmacopoeial compounds and their formulations by UV Vis spectrophotometer

2. Simultaneous estimation of multi component containing formulations by UV

spectrophotometry

3. Experiments based on HPLC

4. Experiments based on Gas Chromatography

5. Estimation of riboflavin/quinine sulphate by fluorimetry 6. Estimation of sodium/potassium by flame photometry

7. To carry out preformulation studies of tablets.

8. To study the effect of compressional force on tablets disintegration time.

9. To study Micromeritic properties of powders and granulation.

PHARMACEUTICS PRACTICAL - II

(MPH 105PB)

To study the effect of particle size on dissolution of a tablet.
 To study the effect of binders on dissolution of a tablet.

3. To plot Heckal plot, Higuchi and peppas plot and determine similarity factors.

4. To perform In-vitro dissolution profile of CR/SR marketed formulation

5. Formulation and evaluation of sustained release matrix tablets

Formulation and evaluation osmotically controlled DDS

7. Preparation and evaluation of Floating DDS- hydro dynamically balanced DDS

8. Formulation and evaluation of Muco adhesive tablets.

9. Formulation and evaluation of trans dermal patches.





Statistical optimization and RP- HPLC method development of Paracetamol, Diclofenac sodium and Eperisone hydrochloride: An ecofriendly estimation by green analytical chemistry

is a dissertation submitted to the



Jawaharlal Nehru Technological University, Kakinada, A.P in partial fulfillment of the requirements for the degree of

MASTER OF PHARMACY

In

PHARMACEUTICAL ANALYSIS

Ву

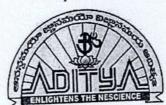
KATE.BHAVITHA

(Regd. No. 213G1S1602)

Under the guidance of

Dr. D. SathisKumar M. Pharmacy., Ph.D.

Principal & Professor



Department of Pharmaceutical Analysis

Aditya Pharmacy College

Surampalem - 533 437

2021-2023



(Approved by PCI & AICTE, Affiliated to JNTUK)

Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

Dr.D.SATHISKUMAR, M.Pharm., Ph.D., Principal & Professor

CERTIFICATE

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Place: Surampalem

Date:

Dr. D.Saninskumary, College Aditya Pharma FM-533 437 Surandparand Professor,

Aditya Pharmacy College



(Approved by PCI & AICTE, Affiliated to JNTUK)
Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

Dr.D. Sathis Kumar, M.Pharm., Ph.D., Principal& Professor

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Date:

Place: Surampalem

Dr. Bannis Kumar

Guide



(Approved by PCI & AICTE, Affiliated to JNTUK)

Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

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Date:

SIGNATURE OF EVALUATOR 1

Place:

SIGNATURE OF EVALUATOR 2

DECLARATION

I,Kate Bhavitha(Regd No: 213G1S1602), do hereby declare that the dissertation entitled

"Statistical optimization and RP- HPLC method development of Paracetamol,

Diclofenac sodium and Eperisone hydrochloride: An ecofriendly estimation by green

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Surampalem. The work reported here in has not been previously submitted by other persons

for qualifications at any other University or academic institutions unless otherwise referenced

or acknowledged.

K. Bhavitha (KATE BHAVITHA)

Regd no: 213G1S1602

Place: Surampalem

Date:

7. CONCLUSION AND SUMMARY:

The developed method is optimized by manual optimized method. It is validate by several parameters like accuracy, precision, linearity, specificity, stability, assay, ruggedness, system suitability, LOD and LOQ. The validated method was evaluated by DOE on robustness and it has shown that the DOE optimized method is coincidental to the manual optimized method. By using different Green Chemistry Analytical software, the method was evaluated and it was shown to be eco-friendly. The result of analytical parameters was found to be precise, accurate, rugged, robust and eco-friendly.

PHARMACEUTICAL ANALYSIS (MPA)

SEMESTER - I

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES (MPA 101T)

Scope

This subject deals with various advanced analytical instrumental techniques for identification, characterization and quantification of drugs. Instruments dealt are NMR, Mass spectrometer, IR, HPLC, GC etc.

Objectives

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After completion of course student is able to know about chemicals and excipients

- The analysis of various drugs in single and combination dosage forms
- Theoretical and practical skills of the instruments

THEORY 60 Hrs

- 1. a. UV-Visible spectroscopy: Introduction, Theory, Laws, Instrumentation associated with UV-Visible spectroscopy, Choice of solvents and solvent effect and Applications of UV-Visible spectroscopy, Difference/
 Derivative spectroscopy.
 - b. IR spectroscopy: Theory, Modes of Molecular vibrations, Sample handling, Instrumentation of Dispersive and Fourier Transform IR Spectrometer, Factors affecting vibrational frequencies and Applications of IR spectroscopy, Data Interpretation.
 - c. Spectroflourimetry: Theory of Fluorescence, Factors affecting fluorescence (Characterestics of drugs that can be analysed by flourimetry), Quenchers, Instrumentation and Applications of fluorescence spectrophotometer.
 - d. Flame emission spectroscopy and Atomic absorption spectroscopy: Principle, Instrumentation, Interferences and Applications.
- NMR spectroscopy: Quantum numbers and their role in NMR, Principle, Instrumentation, Solvent requirement in NMR, Relaxation process, NMR signals in various compounds, Chemical shift, Factors influencing chemical shift, Spin-Spin coupling, Coupling constant, Nuclear magnetic double resonance, Brief outline of principles of FT-NMR and 13C NMR. Applications of NMR spectroscopy.

 10 Hrs
- Mass Spectroscopy: Principle, Theory, Instrumentation of Mass Spectroscopy, Different types of ionization like electron impact, chemical, field, FAB and MALDI, APCI, ESI, APPI Analyzers of Quadrupole and Time of Flight, Mass fragmentation and its rules, Meta stable ions, Isotopic peaks and Applications of Mass spectroscopy.

SURAMPALE

Chromatography: Principle, apparatus, instrumentation, chromatographic parameters, factors affecting resolution, isolation of drug from excipients, data interpretation and applications of the following:

Aditya Pharmacy College

	a. b. c. d. e. f.	Thin Layer chromatography High Performance Thin Layer Chromatography Ion exchange chromatography Column chromatography Gas chromatography High Performance Liquid chromatography Ultra High Performance Liquidchromatography	10 Hrs		
	h.				
5	i. Gel Chromatography a. Electrophoresis: Principle, Instrumentation, Working conditions, factors affecting separation and applications of the following: a) Paper electrophoresis b) Gel electrophoresis c) Capillary electrophoresis d) Zone electrophoresis e) Moving boundary electrophoresis f) Iso electric focusing b. X ray Crystallography: Production of X rays, Different X ray methods, Bragg's law, Rotating crystal technique, X ray powder technique, Types of crystals and applications of X-ray diffraction Potentiometry: Principle, working, Ion selective Electrodes and Application of potentiometry. Thermal Techniques: Principle, thermal transitions and Instrumentation (Heat flux and power-compensation and designs), Modulated DSC, Hyper (DSC, experimental parameters (sample preparation, experimental conditions, calibration, heating and cooling rates, resolution, source of errors) and their influence, advantage and disadvantages, pharmaceutical applications. Differential Thermal Analysis (DTA): Principle, instrumentation and advantage and disadvantages, pharmaceutical applications, derivative differential thermal analysis (DDTA). TGA: Principle, instrumentation, factors affecting results, advantage and disadvantages, pharmaceutical applications. REFERENCES				
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	2 I	Principles of Instrumental Analysis - Doglas A Skoog, F. James Holler, Timothy A. Nieman, 5 th edition, Eastern press, Bangalore,			
	2 1	Instrumental methods of analysis – Willards, 7th edition, CBS publishers.			
	4.	Practical Pharmaceutical Chemistry – Beckett and Stellake, vol 11, 4th edition, CBS Publishers, New Delhi, 1997.			
	5	Organic Spectroscopy - William Kemp, 3rd edition, ELBS, 1991.			
	6	Quantitative Analysis of Drugs in Pharmaceutical formulation - P D Sethi 3rd Edition CBS Publishers, New Delhi, 1997.			
	7	Pharmaceutical Analysis - Modern Methods - Part B - J W Munson,			

Wiley & Sons, 1982.

7.

Ltd., Delhi.

Aditya Pharmacy College SURAMPALEM: 533 437-

Pharmaceutical Analysis - Modern Methods - Part B - J W Munson, Vol 11, Marcel. Dekker Series

Textbook of Pharmaceutical Analysis, KA. Connors, 3rd Edition, John

Spectroscopy of Organic Compounds, 2nd edn., P.S/Kalsi, Wiley estern

Statistical optimization and RP-HPLC method development of Escitalopram and Duloxetine: An ecofriendly estimation by green analytical chemistry

is a dissertation submitted to the



Jawaharlal Nehru Technological University, Kakinada, A.P in partial fulfillment of the requirements for the degree of

MASTER OF PHARMACY

In

PHARMACEUTICAL ANALYSIS

By

KAKARLA DEVI LALITHA SRI

(Regd. No. 213G1S1601)

Under the guidance of

Dr. D. SathisKumar M. Pharmacy., Ph.D.

Principal & Professor



Department of Pharmaceutical Analysis

Aditya Pharmacy College

Surampalem - 533 437

2021-2023



(Approved by PCI & AICTE, Affiliated to JNTUK)

Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

Dr.D.SATHISKUMAR, M.Pharm., Ph.D., Principal & Professor

CERTIFICATE

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Place: Surampalem

Date:

Dr. D. Sathiskumar M. Pharm., Ph. D

Aditya Pharmacy College



(Approved by PCI & AICTE, Affiliated to JNTUK)
Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

Dr.D. Sathis Kumar, M.Pharm., Ph.D., Principal& Professor

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Date:

Place: Surampalem

Dr. D. Sathis Kumar

(Guide)



(Approved by PCI & AICTE, Affiliated to JNTUK)
Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

EVALUATION CERTIFICATE

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Date:

SIGNATURE OF EVALUATOR 1

Place:

SIGNATURE OF EVALUATOR 2

DECLARATION

I,Kakarla Devi Lalitha Sri (Regd No: 213G1S1601), do hereby declare that the dissertation

entitled "Statistical optimization and RP- HPLC method development of Escitalopram

and Duloxetine: An ecofriendly estimation by green analytical chemistry" is a record of

genuine research work carried out by me under the supervision of Dr. D.SathisKumar,

Principal & Professor, Aditya Pharmacy College, Surampalem. The work reported here in has

not been previously submitted by other persons for qualifications at any other University or

academic institutions unless otherwise referenced or acknowledged.

K Dur Lalitha St.)
(KAKARLA DEVI LALITHA SRI)

Regd no: 213G1S1601

Place: Surampalem

Date:

1. CONCLUSION AND SUMMARY:

Thedeveloped method is optimized by manual optimized method. It is validate by several parameters like accuracy, precision, linearity, specificity, stability, assay, ruggedness, system suitability, LOD and LOQ. The validated method was evaluated by DOE on robustness and it has shown that the DOE optimized method is coincidental to the manual optimized method. By using different Green Analytical Chemistry software, the method was evaluated. It was shown that method is ecofriendly. The result of analytical parameters were found to be precise, accurate, rugged, robust and eco-friendly.

SALES AND SALES

1.0000

ADVANCED PHARMACEUTICAL ANALYSIS (MPA 102T)

This subject deals with the various aspects of Impurity, Impurities in new drug products, in residual solvents, Elemental impurities, Impurity profiling and characterization of degradents, Stability testing of phytopharmaceuticals and their protocol preparation. It also covers the biological testing of various vaccines and their principle and procedure.

After completion of the course students shall able to know,

Appropriate analytical skills required for the analytical method development.

Principles of various reagents used in functional group analysis that renders necessary support in research methodology and demonstrates its application in the

Analysis of impurities in drugs, residual solvents and stability studies of drugs and 60 Hrs

biological products THEORY 10

Impurity and stability studies:

Definition, classification of impurities in drug Substance or Active Hrs Pharmaceutical Ingredients and quantification of impurities as per ICH guidelines

Impurities in new drug products:

Rationale for the reporting and control of degradation products, reporting degradation products content of batches, listing of degradation products in specifications, qualification of degradation products

Impurities in residual solvents:

General principles, classification of residual solvents, Analytical procedures, limits of residual solvents, reporting levels of residual solvents

Elemental impurities: 2

Element classification, control of elemental impurities, Potential Sources of elemental Impurities, Identification of Potential Elemental Impurities, analytical procedures, instrumentation & C, H, N and S analysis

Stability testing protocols:

Selection of batches, container orientation, test parameters, sampling frequency, specification, storage conditions, recording of results, concept of stability, commitment etc. Important mechanistic and stability related information provided by results of study of factors like temperature, pH, buffering species ionic strength and dielectric constant etc. on the reaction rates. With practical considerations.



Aditya Pharmacy College APALEM-533 437

10

Hrs

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3	Impurity profiling and degradent characterization: Method development, Stability studies and concepts of validation accelerated stability testing & Shelf life calculation, WHO and ICH stability testing guidelines, Stability shelf life calculation, who are practical considerations. Basics of impurity	10 Hrs
	profiling and degradent characterization	
4	Stability testing of phytopharmaceuticals: Stability testing of phytopharmaceuticals: Regulatory requirements, protocols, HPTLC/HPLC finger printing, interactions	10 Hrs
5	and complexity. Biological tests and assays of the following: a. Adsorbed Tetanus vaccine b. Adsorbed Diphtheria vaccine c. Human anti haemophilic vaccine d. Rabies vaccine e. Tetanus Anti toxin f. Tetanus Anti serum g. Oxytocin h. Heparin sodium IP i. Antivenom. PCR, PCR studies for gene regulation, instrumentation (Principle and Procedures)	10 Hrs
6	Immunoassays (IA) Basic principles, Production of antibodies, Separation of bound and unbound drug, Radioimmunoassay, Optical IA, Enzyme IA, Fluoro IA, Luminiscence IA, Quantification and applications of IA.	10 Hrs
RE	PEDENCES	
-1.	Vogel's textbook of quantitative chemical analysis - Jeffery J Bassett, J.	4
	Mendham, R. C. Denney, 5 th edition, ELBS, 1991. Reckett and Stenlake, Vol II, 4th Edition,	
	by I Discussional Chemistry - Beckett and Stelliake, Vol II, 4th Edition,	

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- Practical Pharmaceutical Chemistry Beckett and Stenlake, Vol II, 4th Edition, CBS publishers, New Delhi, 1997.
- 3 Textbook of Pharmaceutical Analysis K A Connors, 3rd Edition, John Wiley & Sons, 1982.
- 4 Pharmaceutical Analysis Higuchi, Brochmman and Hassen, 2nd Edition, Wiley Inter science Publication, 1961.
- Quantitative Analysis of Drugs in Pharmaceutical formulation PD Sethi, 3rd Edition, CBS Publishers New Delhi, 1997.
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- 8 Indian Pharmacopoeia Vol I, II & III 2007, 2010, 2014.
- Methods of sampling and microbiological examination of water, first revision, BIS
- Practical HPLC method development Snyder, Kirkland, Glajch, 2nd edition, John Wiley & Sons.
- ll. Analytical Profiles of drug substances Klaus Florey, Volume 1-20, Elsevier, 2005
- Analytical Profiles of drug substances and Excipients Harry G Brittan, Volume 21 – 30, Elsevier, 2005.
- B. The analysis of drugs in biological fluids Joseph Chamberlain, 2nd edition, CRC press, London.
- 14. ICH Guidelines for impurity profiles and stability studies.



87

SENSITIVE METHOD DEVELOPMENT AND VALIDATION FOR SELECTED DRUGS BY LC-MS/MS TECHNIQUE.

Is a Dissertation Submitted to the



Jawaharlal Nehru Technological University, Kakinada, A.P in partial fulfillment of the requirements for the degree of

MASTER OF PHARMACY

In

PHARMACEUTICAL ANALYSIS

By

POLIMERA SRI CHANDANA

(Regd. No. 213G1S1603)

Under the guidance of

Dr. P. Bhaskar M. Pharmacy., Ph.D.

Professor



Department of Pharmaceutical Analysis

Aditya Pharmacy College

Surampalem - 533 437

2021-2023



(Approved by PCI & AICTE, Affiliated to JNTUK)

Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

Dr. D. SATHISKUMAR, M. Pharm., Ph.D., Principal & Professor.

CERTIFICATE

This is to certify that the dissertation work entitled "Sensitive method development and validation for selected drugs by LC-MS/MS technique" is submitted to the JNT University, Kakinada in partial fulfillment for the award of the degree of Master of Pharmacy in Pharmaceutical Analysis. This is a bonafied work carried out by Polimera Sri Chandana (Regd No: 213G1S1603) under the supervision of Dr. D. Sathis Kumar, Principal & Professor, Department of Pharmaceutical Analysis, Aditya Pharmacy College, Surampalem.

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Place: Surampalem

Dr. P. Bhaskar, M. Pharm., Ph.D.,

(Guide)



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EVALUATION CERTIFICATE

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Date:

SIGNATURE OF EVALUATOR 1

Place:

SIGNATURE OF EVALUATOR 2

DECLARATION

I, Polimera Sri Chandana (Regd No: 213G1S1603), do hereby declare that the dissertation

entitled "Sensitive method development and validation for selected drugs by LC-MS/MS

technique" is a record of genuine research work carried out by me under the supervision of

Dr. P. Bhaskar, Professor, Aditya Pharmacy College, Surampalem. The work reported here in

has not been previously submitted by other persons for qualifications at any other University

or academic institutions unless otherwise referenced or acknowledged.

P. CRI CHANDANA

(POLIMERA SRI CHANDANA)

Regd no: 213G1S1603

Place: Surampalem

Date:

8.SUMMARY AND CONCLUSION

The overall results obtained for the proposed method validation were tabulated in

Table 13. Results and validated method

arameter	Paracetamol	Dicyclomine hydrochloride	
System suitability	Pass	Pass	
Selectivity	No interference from phase components	excipients and mobile	
Linearity (PPb)	50-2000	5-200	
Regression equation	Y= 1194.7x-44767	Y= 1304.9x-25757	
Regression coefficient (R^2)	0.9999	0.9999	
LOD (ppb)	39.65	4.64	
100 (vl)	120.15	14.07	
LOQ (ppb) Precision (%RSD)	0.91%	0.71%	
Accuracy (%Recovery)	99.82%	100.67%	
Robustness	Passed all system deliberately cha		
200	conditions	87.86%	
% Assay in tablets			

A simple, quick, accurate, selective, and sensitive LC-MS technique for simultaneous analysis of paracetamol and dicyclomine hydrochloride in API and fixed finished dosage unit forms was developed in the current work. The technique was approved in compliance with the rules. The developed method's key characteristics are its affordability, short runtime, selectivity, robustness, sensitivity, and acceptable precision and accuracy and overall method is very sensitive than other techniques. As a result, quality control laboratories can employ the suggested LC-MS approach to simultaneously quantify paracetamol and dicyclomine hydrochloride.

4.6 CLINICAL TOXICOLOGY (THEORY)

Theory: 2 Hrs. /Week

- 1. General principles involved in the management of poisoning
- 2. Antidotes and the clinical applications.
- 3. Supportive care in clinical Toxicology.
- 4. Gut Decontamination.
- 5. Elimination Enhancement.
- 6. Toxicokinetics.
- 7. Clinical symptoms and management of acute poisoning with the following agents
 - a) Pesticide poisoning: organophosphorous compounds, carbamates, organochlorines, pyrethroids.
 - b) Opiates overdose.
 - c) Antidepressants
 - d) Barbiturates and benzodiazepines.
 - e) Alcohol: ethanol, methanol.
 - f) Paracetamol and salicylates.
 - g) Non-steroidal anti-inflammatory drugs.
 - h) Hydrocarbons: Petroleum products and PEG.
 - i) Caustics: inorganic acids and alkali.
 - j) Radiation poisoning
- 8. Clinical symptoms and management of chronic poisoning with the following agents Heavy metals: Arsenic, lead, mercury, iron, copper
- Venomous snake bites: Families of venomous snakes, clinical effects of venoms, general management as first aid, early manifestations, complications and snake bite injuries.
- 10. Plants poisoning. Mushrooms, Mycotoxins.
- 11. Food poisonings
- 12. Envenomations Arthropod bites and stings.

Substance abuse:

Signs and symptoms of substance abuse and treatment of dependence

- a) CNS stimulants :amphetamine
- b) Opioids
- c) CNS depressants
- d) Hallucinogens: LSD
- e) Cannabis group
- f) Tobacco

References:

- a. Matthew J Ellenhorn. ELLENHORNS MEDICAL TOXICOLOGY DIAGNOSIS AND TREATMENT OF POISONING. Second edition. Williams and Willkins publication, London
- V V Pillay. HANDBOOK OF FORENSIC MEDICINE AND TOXICOLOGY. Thirteenth edition 2003 Paras Publication, Hyderabad



Aditya Pharmaey College SURAMPALEM 533 437 nalysis of various risk factors in patients with Diabetic nephropathy and observation of their treatment plan

Dissertation submitted to



Jawaharlal Nehru Technological University,

KAKINADA.

In the partial fulfilment of the award of the degree

DOCTOR OF PHARMACY

Submitted by,

B. CHANDANA DIVYA

(Reg.No.183G1T0005)

G. VINEESHA

(Reg.No.183G1T0009)

ARITRA PAL

(Reg.No.183G1T0002)

ASISH BHANJA

(Reg.No.183G1T0003)

P. WILLIAMS

(Reg. No.183G1T0019)

Under the guidance of,

Clinical guide

Dr. PRAVEEN SANA

MRCP (UK), CCT (Nephrology)

Senior consultant nephrologist

Trust multispecialty hospital, Kakinada.

Academic guide

P. RATNA KUMARI, M PHARM

Associate professor,



Department of Pharmacy Practice and Pharm D

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Surampalem-533437, Andhra PradeshpRINCIPAL

2022-2023 Aditya Pharmacy

SURAMPALEM-533 437

External examiner

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Dano 1 - 2.

ANALYSIS OF VARIOUS RISK FACTORS IN PATIENTS WITH DIABETIC NEPHROPATHY AND OBSERVATION OF THEIR TREATMENT PATTERN

Dissertation submitted to



Jawaharlal Nehru Technological University,

KAKINADA.

In the partial fulfilment of the award of the degree

DOCTOR OF PHARMACY

Submitted by,

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Dr. D. SATHIS KUMAR(M. Pharm., Ph. D).

Principal

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This is to certify that the work embodied in this dissertation entitled "Association of various risk factors in patients with Diabetic nephropathy and observation of their treatment plan" submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the tward of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, B.CHANDANA DIVYA Reg.No.183G1T0005), G. VINEESHA(183G1T0009), ARITRA PAL(183G1T0002), ASISH BHANJA 183G1T0003), P. WILLIAMS (Reg. No.183G1T0019), during the academic year 2022-2023, under the guidance and direct supervision of RATNA KUMARI, M PHARM, Assistant Professor, Department of 'harmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem.

Date: 14-8-2003
Place: Suranipalents

(Dr. D. Sathiskumar)

principal Adinya Pharmacy Colle
SURAMPALEM-533 437

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Aditya Nagar, ADB Road, Surampalem, EG District

P. RATNA KUMARI, M PHARM

Associate Professor

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Association of various risk factors in patients with Diabetic nephropathy and observation of their treatment plan" submitted to 'Jawaharlal Nehru Technological University', Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by B.CHANDANA DIVYA (Reg.No.183G1T0005), G. VINEESHA(183G1T0009), ARITRA PAL(183G1T0002), ASISH BHANJA (183G1T0003), P. WILLIAMS (Reg. No.183G1T0019), during the academic year 2022-2023, under my guidance and direct supervision in the Department of Pharmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem.

Date: 4-5-2023

Place: Surampa

P. RATNA KUMARIJE 15/23.

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Date: 29-5-2023

Place: Surampalem

SIGN OF THE EVALUATOR

26 July

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Date:

Place: Kakinada

Dr. PRAVEEN SANA

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Dr. PRAVEEN SANA



(Approved by AICTE and affiliated to JNTUK University.)

Aditya Nagar, ADB Road, Surampalem, EG District

DATE:

Place: Surampalem

DECLARATION

We, B.CHANDANA DIVYA(183G1T0005), G. VINEESHA(183G1T0009), ARITRA PAL(183G1T0002), ASISH BHANJA(183G1T0003), P. WILLIAMS(183G1T0019), do hereby declare that the work embodied in this dissertation entitled "Association of various risk factors in patients with Diabetic nephropathy and observation of their treatment plan" submitted to 'Jawaharlal Nehru Technological University', Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out during the academic year 2021-2022, under the guidance and direct supervision of, Ratna Kumari, M PHARM, Associate Professor, Department of Pharmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem. We do further declare that this work is original and has not been submitted previously for award of any other degree or similar title. The information furnished in this dissertation is genuine to the best of our knowledge.

B.CHANDANA DIVYA(183GIT0005) B. Chandana.

ARITRA PAL(183GIT0002) A with for.

P.WILLIAMS (183G1T0019) D. williams.

G. VINEESHA(183G1T0009)

ASISH BHANJA(183G1T0003)

Anih konja



Aditya Pharmacy College SURAMPALEM-533 437

CONCLUSION

- 1. Hyperglycemia and hypertension are the main risk factors which is found in each and every patient of the whole case sample size where pre diabetes patient and having family history of diabetes also plays a major role in the diabetic nephropathy patient.
- 2. Most of the patients who are prone to diabetic nephropathy are aged between 40-70 years of age.
- 3. Coming to gender wise classification, males are having greater incidence than the female as mentioned above 80 % males are prone to diabetic nephropathy and 20 % female are having DN.
- 4. While coming to class of drugs where 97 % of the patients are prescribed with the oral hypoglycemic agents and calcium channel blockers with the 50 % patients who are having the hypertension.
- 5. While coming to Direct Renin Inhibitors 13 patients were prescribed . On our studies 18% patients are on DRIs .
- 6.34 patients are prescribed with mineralocorticoid receptor antagonist for the treatment of diabetic nephropathy . Where 48% patients are on MRA s.
- 7. 100% of the patients were diagnosed with Hypertension which is a poor cogostic factor.



APPENDIX-A

(See regulation 8) PHARM.D. SYLLABUS

First Year

1.1 HUMAN ANATOMY & PHYSIOLOGY (THEORY)

Theory: 3 Hrs. /Week

1. Scope and Objectives: This course is designed to impart a fundamental knowledge on the structure and functions of the human body. It also helps in understanding both homeostasis mechanisms and homeostatic imbalances of various body systems. Since a medicament, which is produced by pharmacist, is used to correct the deviations in human body, it enhances the understanding of how the drugs act on the various body systems in correcting the disease state of the organs.

2. Upon completion of the course the student shall be able to:

- describe the structure (gross and histology) and functions of various organs of the human body;
- b. describe the various homeostatic mechanisms and their imbalances of various systems;
- c. identify the various tissues and organs of the different systems of the human body;
- d. perform the hematological tests and also record blood pressure, heart rate, pulse and Respiratory volumes;
- e. appreciate coordinated working pattern of different organs of each system; and
- f. appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body

3. Course materials:

Text books

- a. Tortora Gerard J. and Nicholas, P. Principles of anatomy and physiology Publisher Harpercollins college New York.
- b. Wilson, K.J.W. Ross and Wilson's foundations of anatomy and physiology. Publisher: Churchill Livingstone, Edinburg.

Reference books

- a. Guyton arthur, C. Physiology of human body. Publisher: Holtsaunders.
- b. Chatterjee, C.C. *Human physiology*. Volume 1&11. Publisher: medical allied agency, Calcutta.
- c. Peter L. Williams, Roger Warwick, Mary Dyson and Lawrence, H.
- d. Gray's anatomy. Publisher: Churchill Livingstone, London.





4. Lecture wise program:

Topics

- 1 Scope of anatomy and physiology, basic terminologies used in this subject (Description of the body as such planes and terminologies)
- 2 Structure of cell its components and their functions.
- 3 Elementary tissues of the human body: epithelial, connective, Muscular and nervous tissues-their sub-types and characteristics
- 4 a) Osseous system structure, composition and functions of the Skeleton. (done in practical classes 6hrs)
 - b) Classification of joints, Types of movements of joints and disorders of joints (Definitions only)

5 Haemopoetic System

- a) Composition and functions of blood
- b) Haemopoesis and disorders of blood components (definition of disorder)
- c) Blood groups
- d) Clotting factors and mechanism
- e) Platelets and disorders of coagulation

6 Lymph

- a) Lymph and lymphatic system, composition, formation and circulation.
- b) Spleen: structure and functions, Disorders
- c) Disorders of lymphatic system (definition only)

7 Cardiovascular system

- a) Anatomy and functions of heart
- b) Blood vessels and circulation (Pulmonary, coronary and systemic circulation)
- c) Electrocardiogram (ECG)
- d) Cardiac cycle and heart sounds
- e) Blood pressure its maintenance and regulation
- f) Definition of the following disorders
 Hypertension, Hypotension, Arteriosclerosis, Atherosclerosis, Angina,
 Myocardial infarction, Congestive heart failure, Cardiac arrhythmias

8 Respiratory system

- a) Anatomy of respiratory organs and functions
- b) Mechanism / physiology of respiration and regulation of respiration
- c) Transport of respiratory gases
- d) Respiratory volumes and capacities, and Definition of: Hypoxia, Asphyxia, Dybarism, Oxygen therapy and resuscitation.

9 Digestive system

- a) Anatomy and physiology of GIT
- b) Anatomy and functions of accessory glands of GIT
- c) Digestion and absorption
- d) Disorders of GIT (definitions only)



TO STUDY THE DEMOGRAPHIC PROFILES, ECG CHARACTERISTICS AND ECHOFINDINGS OF CARDIAC IMPLANTABLE ELECTRONIC DEVICE (CIED) PATIENTS

Dissertation submitted to



Jawaharlal Nehru Technological University, Kakinada. In partial fulfilment of the award of the degree of

DOCTOR OF PHARMACY

Submitted by.

ALEENA ROY (Reg.No.183G1T0001)

KASTURI DE (Reg. No. 183G1T0014)

P. NANDINI (Reg.No.183G1T0018)

P. JESSI (Reg.No.183G1T0020)

ANURAG RAJKONWAR (Reg. No. 173G1T0002)

Under the Guidance of

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Dr. CHANDRAMOULI, S. MANTRAVADI MD., DM, IDCC, PDF(EP)

Consultant cardiologist Electrophysiologist,

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2022 - 2023



TO STUDY THE DEMOGRAPHIC PROFILES, ECG CHARACTERISTICS AND ECHOFINDINGS OF CARDIAC IMPLANTABLE ELECTRONIC DEVICE (CIED) PATIENTS

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Academic Guide

Dr. CHANDRAMOULI. S. MANTRAVADI

Ms. P. RATNA KUMARI, M. Pharm

MD., DM, IDCC, PDF(EP)

Associate professor

Consultantcardiologist&Electrophysiologist,

Trust hospital, Kakinada



Department of Pharmacy Practice and Pharm. D

Aditya Pharmacy College,

Surampalem-533437, Andhra Pradesh.

2022 - 2023

INTERNAL EXAMINER

EXTERNAL EXAMINER



Appeared by MCTL and PCL Affiliated to INTUR University) Aditya Nagar, ADI Road, Surampalem, L. & District., A.P. 445437.

Dr. D. SATISH KUMAR M. Pharm., Ph. D., Principal.

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "To study the demographic profiles, ecg characteristics and echofindings of Cardiac Implantable Electronic Device (CIED) patients", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, ALEENA ROY (Reg.No.183G1T0001),,KASTURI DE (Reg. No. 183G1T0014),

P.NANDINI(Reg.No.183G1T0018), P.JESSI(Reg.No.183G1T0020),

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P. RATNA KUMARI M Pharm.,

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ALEENA ROY (Reg.No.183G1T0001),,KASTURI DE (Reg. No. 183G1T0014), ,P.NANDINI(Reg.No.183G1T0018),P.JESSI(Reg.No.183G1T0020),

ANURAG(Reg. No173G1T0002) during the academic year 2022-2023, under my guidance and direct supervision.

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TRUST HOSPITAL

Absolute Health Care

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Date:

Place: Surampalem

DECLARATION

We, Aleena Roy, Kasturide, P. Nandini, P. Jessi, Anurag, do hereby declare that the work embodied in this dissertation entitled "To study the demographic profiles, ecg characteristics and echo findings of Cardiac Implantable Electronic Device (CIED) patients.", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out during the academic year 2022-2023, under the guidance and direct supervision of P. Ratna Kumari, M. pharm Associate Professor, Department of Pharmacy Practice., Aditya Pharmacy College, Surampalem.

We do further declare that this work is original and has not been submitted previously for award of any other degree or similar title. The information furnished in this dissertation is genuine to the best of our knowledge.

ALEENA ROY (Reg.No.183G1T0001)KASTURI DE (Reg. No. 183G1T0014)
P. NANDINI (Reg.No.183G1T0018)P. JESSI (Reg.No.183G1T0020)
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Chapter 5

CONCLUSION

Advances in pacemaker have led to their widespread use to treat patients with bradycardias and congestive heart failure. A basic understanding of their function troubleshooting and management at the time of surgery or imaging enhances patient care.

Complication and incidence in modern pacing therapy is stillsubstantial. Most complications occur after pacemaker implantation. Although various patient and procedure related characteristics are independent predictors for every late complications. Their ability to identify predictors for early and late complications, their ability to identify the patient at high risk is rather poor. This relatively high incidence of pacemaker complications and their poor prediction underscores the confusion of current guidelines for regular followup of patients with pacemaker.

From the demographic study, one can conclude that more number of males underwent CIED implantation than females. Males and females underwent pacemaker implantation at similar age the use of dual chamber pacemaker was higher than single chamber. Degenerative complete heart block was the major cause for pacemaker implantation followed by sick sinus syndrome. A significant volume of patients received financial aids from various health schemes by central and state government.

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2.6 PHARMACOTHERAPEUTICS - I (THEORY)

Theory: 3 Hrs. /Week

- 1. Scope of the Subject: This course is designed to impart knowledge and skills necessary for contribution to quality use of medicines. Chapters dealt cover briefly pathophysiology and mostly therapeutics of various diseases. This will enable the student to understand the pathophysiology of common diseases and their management.
- 2. Objectives: At completion of this subject it is expected that students will be able to understand
 - a. the pathophysiology of selected disease states and the rationale for drug therapy;
 - b. the therapeutic approach to management of these diseases;
 - c. the controversies in drug therapy;
 - d. the importance of preparation of individualised therapeutic plans based on diagnosis;
 - e. needs to identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects);
 - f. describe the pathophysiology of selected disease states and explain the rationale for drug therapy;
 - g. summarise the therapeutic approach to management of these diseases including reference to the latest available evidence;
 - h. discuss the controversies in drug therapy;
 - i. discuss the preparation of individualised therapeutic plans based on diagnosis; and
 - j. identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects).

Text Books

- a. Clinical Pharmacy and Therapeutics Roger and Walker, Churchill Livingstone publication.
- Pharmacotherapy: A Pathophysiologic approach Joseph T. Dipiro et al. Appleton & Lange.

Reference Books

- a. Pathologic basis of disease Robins SL, W.B.Saunders publication.
- Pathology and therapeutics for Pharmacists: A Basis for Clinical Pharmacy Practice -Green and Harris, Chapman and Hall publication.
- c. Clinical Pharmacy and Therapeutics Eric T. Herfindal, Williams and Wilkins Publication.
- d. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA
- e. Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.
- f. Relevant review articles from recent medical and pharmaceutical literature.



3. Detailed syllabus and lecture wise schedule:

Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases

Title of the topic

- 1 Cardiovascular system: Hypertension, Congestive cardiac failure, Angina Pectoris, Myocardial infarction, Hyperlipidaemias, Electrophysiology of heart and Arrhythmias
- 2 Respiratory system: Introduction to Pulmonary function test, Asthma, Chronic obstructive airways disease, Drug induced pulmonary diseases Endocrine system: Diabetes, Thyroid diseases, Oral contraceptives, Hormone replacement therapy, Osteoporosis
- 3 General prescribing guidelines for
 - a. Paediatric patients
 - b. Geriatric patients
 - c. Pregnancy and breast feeding
- 4 Ophthalmology: Glaucoma, Conjunctivitis- viral & bacterial
- 5 Introduction to rational drug use Definition, Role of pharmacist Essential drug concept Rational drug formulations

2.6 PHARMACOTHERAPEUTICS - I (PRACTICAL)

Practical: 3 Hrs./Week

Practicals:

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation. A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments:

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 - 2000 words] should be submitted for evaluation.





CLINICAL PHARMACOEPIDEMIOLOGY STUDY OF ANTIHYPERTENSIVE AND ANTDIABETEIC DRUGS IN DIABETES – HYPERTENSIVE OUTPATIENTS

Dissertation submitted to



Jawaharlal Nehru Technological University, Kakinada.

In partial fulfilment of the award of the degree of DOCTOR OF PHARMACY
Submitted by

CH.LAKSHMI RENUKA K. PRIYANKA NARUTTAM DEBNATH BIPIN SAH

(Reg.no.183G1T0006)

(Reg. No.183G1T0013)

(Reg. No.183G1T0017)

(Reg. No.183G1T0024)

Under the Guidance of

Clinical Guide

DR. M. PHANI RAMANA BHUSHAN

MBBS, MD (General physician)

Trust Hospital, Kakinada.

Academic Guide
P. RATNA KUMARI, M. PHARM

Associate Professor,



Department of Pharmacy Practice and Pharm. D

Aditya Pharmacy College,

Surampalem-533437, Andhra Pradesh

2022-2023

CLINICAL PHARMACOEPIDEMIOLOGY STUDY OF ANTIHYPERTENSIVE AND ANTDIABETEIC DRUGS IN DIABETES -HYPERTENSIVE OUTPATIENTS

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P. RATNA KUMARI, M. PHARM
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Aditya Pharmacy College,

Surampalem-533437, Andhra Pradesh

2022-2023

INTERNAL EXAMINER

EXTERNAL EXAMINER

MAY DIMBY AND HER RAY RAY MAY (COYM CO) DIM D (C) D



(Approved by AICTE and PCI, Affiliated to INTUK University)

Aditya Nagar, ADB Road, Surampalem, A.P. 533437

Dr. D. SATHISKUMAR

M. Pharm, PhD.

Principal

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Clinical pharmacoepidemiology study of antihypertensive and antidiabetic drugs in diabetes-hypertensive outpatients", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, Ch Lakshmi Renuka (183G1T0006), k Priyanka (183G1T0013), NaruttamDebnath (183G1T0017), Bipin Sah (183G1T0024) during the academic year 2022-2023, under my guidance and direct supervision of P. Ratna Kumari, Associate professor I the department of pharmacy Practice and M. Pharm., Aditya Pharmacy College, Surampalem.

ADITAME: 16 5 23

(Dr.D.Sathiskumar)

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P. Ratna kumari M.Pharm Associate professor

CERTIFICATE

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Date: 4 /5/23

P. Ratna kumari)

Place :Surampalem

Academic Guide





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EVALUATION CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Clinical pharmacoepidemiology study of antihypertensive and antidiabetic drugs in diabetes hypertensive outpatients", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, Ch. Lakshmi Renuka (183G1T0006), k. Priyanka (183G1T0013), Naruttam Debnath (183G1T0017), Bipin Sah(183G1T0024) during the academic year 2022-2023, under the guidance and direction supervision of P. Ratna kumari, Associate professor Department of Pharmacy Practice and M.Pharm, Aditya Pharmacy College, Surampalem.

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Place: Suramplaem

SIGNATURE OF EVALUATOR

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TRUST HOSPITAL

Absolute Health Care

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Clinical pharmacoepidemiology study of antihypertensive and antidiabetic drugs in diabetes-hypertensive outpatients", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by Ch.LakshmiRenuka(183G1T0006),k.Priyanka(183G1T0013),NaruttamDebnath(183G1T0017),BipinSah(183G1T0024) during the academic year 2022-2023, under my guidance and direct supervision.

Date: 4/5/23

Place: Kakinada

(Dr. M.Phani Ramana Bhushan)

Clinical Guide

Cell: 99515 6444, 9935942412





DECLARATION

We, Ch.LakshmiRenuka, k.Priyanka, NaruttamDebnath ,BipinSah, do hereby declare that the work embodied in this dissertation entitled "Clinical pharmacoepidemiology study of antihypertensive and antidiabetic drugs in diabetes-hypertensive outpatients", submitted to "Jawaharlal Nehru

Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out during the academic year 2022-2023, under the guidance and direct supervision of P.Ratnakumari, Associate professor Department of Pharmacy Practice and M.Pharm, Aditya Pharmacy College, Surampalem.

We do further declare that this work is original and has not been submitted previously for award of any other degree or similar title. The information furnished in this dissertation is genuine to the best of our knowledge.

Ch. Lakshmi Renuka

(183G1T0017)

(183G1T0006)

K. Priyanka (183G1T0013)

. Poriyouks

Naruttam Debnath

Bipin Sah

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CHAPTER 5

CONCLUSION

In this prospective observational study, diabetes and hypertension were most observed in the age group of 51-60 years and followed by age group 61-70 years. The males are prone to develop hypertension and diabetes when compared to females due to various socio-economic factors and disease condition.

Antidiabetic and anti-hypertensive class drugs that are most used in outpatients' hypertensive diabetic patients in trust hospital are betablockers (25.30%), diuretics (18.50%), ARB'S (16.40%), biguanides (11.62%), DPP4inhibitors (13.17%), SGLT2inhibitors. Mostly in diabetic hypertensive patients' combination therapy is prescribed. The combination therapy was prescribed in diabetic hypertension patients, antihypertensive drugs were given in 33.02% and anti-diabetic drugs were given in 58.10%.

Thus, there is a relationship between anti-diabetic and anti-hypertensive therapy with clinical outcomes of normal blood pressure, but there is no correlation with the blood sugar levels in diabetic hypertensive outpatients.

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Dept. of Pharmacy Practice and Pharm.D.

PRINCIPAL Aditya Pharmacy College SURAMPALEM-533-437 Page | 63

APPENDIX-A

(See regulation 8) PHARM.D. SYLLABUS

First Year

1.1 HUMAN ANATOMY & PHYSIOLOGY (THEORY)

Theory: 3 Hrs. /Week

1. Scope and Objectives: This course is designed to impart a fundamental knowledge on the structure and functions of the human body. It also helps in understanding both homeostasis mechanisms and homeostatic imbalances of various body systems. Since a medicament, which is produced by pharmacist, is used to correct the deviations in human body, it enhances the understanding of how the drugs act on the various body systems in correcting the disease state of the organs.

2. Upon completion of the course the student shall be able to:

- a. describe the structure (gross and histology) and functions of various organs of the human body;
- b. describe the various homeostatic mechanisms and their imbalances of various systems;
- c. identify the various tissues and organs of the different systems of the human body;
- d. perform the hematological tests and also record blood pressure, heart rate, pulse and Respiratory volumes;
- e. appreciate coordinated working pattern of different organs of each system; and
- f. appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body

3. Course materials:

Text books

- a. Tortora Gerard J. and Nicholas, P. Principles of anatomy and physiology Publisher Harpercollins college New York.
- b. Wilson, K.J.W. Ross and Wilson's foundations of anatomy and physiology. Publisher: Churchill Livingstone, Edinburg.

Reference books

- a. Guyton arthur, C. Physiology of human body. Publisher: Holtsaunders.
- b. Chatterjee, C.C. *Human physiology*. Volume 1&11. Publisher: medical allied agency, Calcutta.
- c. Peter L. Williams, Roger Warwick, Mary Dyson and Lawrence, H.
- d. Gray's anatomy. Publisher: Churchill Livingstone, London.

4. Lecture wise program:

Topics

- 1 Scope of anatomy and physiology, basic terminologies used in this subject (Description of the body as such planes and terminologies)
- 2 Structure of cell its components and their functions.
- 3 Elementary tissues of the human body: epithelial, connective, Muscular and nervous tissues-their sub-types and characteristics
- 4 a) Osseous system structure, composition and functions of the Skeleton. (done in practical classes 6hrs)
 - b) Classification of joints, Types of movements of joints and disorders of joints (Definitions only)

5 Haemopoetic System

- a) Composition and functions of blood
- b) Haemopoesis and disorders of blood components (definition of disorder)
- c) Blood groups
- d) Clotting factors and mechanism
- e) Platelets and disorders of coagulation

6 Lymph

- a) Lymph and lymphatic system, composition, formation and circulation.
- b) Spleen: structure and functions, Disorders
- c) Disorders of lymphatic system (definition only)

7 Cardiovascular system

- a) Anatomy and functions of heart
- b) Blood vessels and circulation (Pulmonary, coronary and systemic circulation)
- c) Electrocardiogram (ECG)
- d) Cardiac cycle and heart sounds
- e) Blood pressure its maintenance and regulation
- f) Definition of the following disorders
 Hypertension, Hypotension, Arteriosclerosis, Atherosclerosis, Angina,
 Myocardial infarction, Congestive heart failure, Cardiac arrhythmias

8 Respiratory system

- a) Anatomy of respiratory organs and functions
- b) Mechanism / physiology of respiration and regulation of respiration
- c) Transport of respiratory gases
- d) Respiratory volumes and capacities, and Definition of: Hypoxia, Asphyxia, Dybarism, Oxygen therapy and resuscitation.

9 Digestive system

- a) Anatomy and physiology of GIT
- b) Anatomy and functions of accessory glands of GIT
- c) Digestion and absorption
- d) Disorders of GIT (definitions only)

ALYSIS OF SYMPTOMS & SURGICAL PROCEDURES AND RISK FACTORS RRELATION IN ACUTE CORONARY SYNDROME AFFECTED INPATIENTS

Dissertation submitted to



Jawaharlal Nehru Technological University,

KAKINADA.

In the partial fulfilment of the award of the degree

DOCTOR OF PHARMACY

Submitted by,

KUMAR SANU

(Reg.No.183G1T0015)

R S N VINAY

(Reg.No.183G1T0021)

SUMAN SASMAL

(Reg.No.183G1T0022)

Under the guidance of,

Clinical guide

Dr. B. DURGA PAVAN KUMAR

MBBS, MD, DM

Interventional cardiologist

Trust Multispecialty Hospital, Kakinada.

Academic guide

Ms. P. RATNA KUMARI, M. Pharm

Associate professor,

Aditya Pharmacy Adluga Pharmacy College Surampalem-533437, Andhra Pradesh 533 437 2022-2023

ALYSIS OF SYMPTOMS & SURGICAL PROCEDURES AND RISK FACTORS RRELATION IN ACUTE CORONARY SYNDROME AFFECTED INPATIENTS

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Interventional cardiologist

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Academic guide

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artment of Pharmacy Practice and Pharmacy College
Aditya Pharmacy college, SURAMPALEM-533 437

Surampalem-533437, Andhra Pradesh 2022-2023

1) a 29/5/23



ADITYA PHARMACY COLLEGE (Approved by AICTE and affiliated to JNTUK University)

Aditya nagar, ADB road, Surampalem, EG District

Dr. D. SATATS KUMAR M. Pharm, Ph. D.
Principal

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Analysis of symptoms & surgical procedures and risk factors correlation in acute coronary syndrome affected in patients" submitted to Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the vard of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, Kumar Sanu (183G1T0015), S N Vinay (183G1T0021), Suman Sasmal (183G1T0022), during the academic year 2022-2023, under guidance and direct supervision of Ms. P. Ratna Kumari, Sascie Le Professor, Department of Pharmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem.

(Dr. D. Saths Kumar)

Date: 29.5. 3

Place: Surampalem

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Aditya Pharmacy College SURAMPALEM-533 437



(Approved by AICTE and affiliated to JNTUK University.)

Aditya Nagar, ADB Road, Surampalem, EG District

Ms. P. Ratna Kumari, M.Pharm

CERTIFICATE

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Date: 23.5.23

Place: Surampalem

f. Rehlumari Ms. P. Ratna Kumari

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EVALUATION CERTIFICATE

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Date: 29.5.23

Place: Surampalem

SIGN OF THE EVALUATOR

Ш



MULTISPECIALITY HOSPITALS

ABSOLUTE HEALTH CARE

Dr. B DURGA PAVAN KUMAR MBBS, MD, DM Interventional cardiologist

CERTIFICATE

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Date: 29.5-23

Place: Kakinada

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Trust Multispeciality Hospitals
Dr. DURGA PAVAN KUMAR
M.D., DM (NIMS)

Interventional Cardiologist Regd. No. 57444

Dr. B DURGA PAVAN KUMAR

Clinical guide

IV



(Approved by AICTE and affiliated to JNTUK University.)

Aditya Nagar, ADB Road, Surampalem, EG District

DATE: 29.5.23

Place: Surampalem

DECLARATION

We, Kumar Sanu, R S N Vinay, Suman Sasmal, do hereby declare that the work embodied in this dissertation entitled "Analysis of symptoms & surgical procedures and risk factors correlation in acute coronary syndrome affected in patients" submitted to 'Jawaharlal Nehru Technological University', Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out during the academic year 2022-2023, under the guidance and direct supervision of Dr. P. Ratna Kumari, Academic Professor, Department of Pharmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem. We do further declare that this work is original and has not been submitted previously for award of any other degree or similar title. The information furnished in this dissertation is genuine to the best of our knowledge.

Kumar Sanu

rman Sasmar Suman Sasmal

(183G1T0022)

(183G1T0015)

R S N Vinay

(183G1T002)

Chapter 5

CONCLUSION

The occurrence and effect of risk factors differ by type of ACS. Type-II DM & hypertension are the major risk factors for ACS. Patients with hypertension & smoking is more likely to develop NSTEMI where patient with type-II DM & alcohol abuse is more likely to develop STEMI. Chest pain, SOB, palpitations are the major risk factors. Surgical procedures like PTCA & CAG were done in 41.25% & 46.25% of patients respectively. More studies are required to understand epidemiology, presentation and risk factors of ACS particularly in regional levels as they can differ from one region to the other. This understanding would help to implement preventive measures including lifestyle modification and drug treatment optimizing risk factors.



Second year

2.1 PATHOPHYSIOLOGY (THEORY)

Theory: 3 Hrs. /Week

- 1. Scope of the Subject: This course is designed to impart a thorough knowledge of the relevant aspects of pathology of various conditions with reference to its pharmacological applications, and understanding of basic Pathophysiological mechanisms. Hence it will not only help to study the syllabus of pathology, but also to get baseline knowledge of its application in other subject of pharmacy.
- 2. Objectives of the Subject: Upon completion of the subject student shall be able to
 - a. describe the etiology and pathogenesis of the selected disease states;
 - b. name the signs and symptoms of the diseases; and
 - c. mention the complications of the diseases.

Text books (Theory)

- a. Pathologic basis of disease by- Cotran, Kumar, Robbins
- b. Text book of Pathology-Harsh Mohan
- c. Text book of Pathology- Y.M. Bhinde

Reference books (Theory)

- Clinical Pharmacy and Therapeutics; Second edition; Roger Walker; Churchill Livingstone publication
- 3. Detailed syllabus and lecture wise schedule:

Chapter

- Basic principles of cell injury and Adaptation
 - a) Causes, Pathogenesis and morphology of cell injury
 - b) Abnormalities in lipoproteinaemia, glycogen infiltration and glycogen infiltration and glycogen infiltration and glycogen storage diseases

2 Inflammation

- Pathogenesis of acute inflammation, Chemical mediators in inflammation, Types of chronic inflammation
- b) Repairs of wounds in the skin, factors influencing healing of wounds

3 Diseases of Immunity

- a) Introduction to Tand B cells
- b) MHC proteins or transplantation antigens
- c) Immune tolerance
 - Hypersensitivity
 Hypersensitivity type I, II, III, IV, Biological significance, Allergy due to food, chemicals and drugs
 - Autoimmunity
 Criteria for autoimmunity, Classifications of autoimmune diseases in man, mechanism of autoimmunity, Transplantation and immunologic tolerance, allograft rejections, transplantation antigens, mechanism of rejection of allograft.
 - Acquired immune deficiency syndrome (AIDS)



ASSESSMENT OF PHARMACOLOGICAL TREATMENT IN PATIENTS WITH ACUTE PANCREATITIS

Dissertation submitted to



Jawaharlal Nehru Technological University,

Kakinada.

In partial fulfillment of the award of the degree of

DOCTOR OF PHARMACY

Submitted by.

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G. NAVYA MANASA

(Reg. No.183G1T0010)

D. SRI SATYA SIRISHA

(Reg. No.183G1T0007)

Under the Guidance of

Clinical Guide

Academic Guide

DR. R. SRINIVASA MURTY

Ms P. RATNA KUMARI, M. Pharm

MBBS, MD (AIIMS), DM (AIIMS)

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Department of Pharmacy Practice and Pharm. D

Aditya Pharmacy College,

Surampalem-533437, Andhra Pradesh.

2022 - 2023

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EXTERNAL EXAMINER

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Aditya Pharmacy College

SURAMPALEM-533 437

ASSESSMENT OF PHARMACOLOGICAL TREATMENT IN PATIENTS WITH ACUTE PANCREATITIS

Dissertation submitted to



Jawaharlal Nehru Technological University,

Kakinada.

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Submitted by

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G. NAVYA MANASA (Reg. No.183G1T0010)

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Sr. Consultant Gastroenterologist

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DIT Pepartment of Pharmacy Practice and Pharm. D

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Surampalem-533437, Andhra Pradesh.

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Aditya Nagar, ADB Road, Surampulem, E.G District., A.P - 533437.

Dr. D. SATHIS KUMAR

M. Pharm., Ph. D,

Principal.

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Assessment of pharmacological treatment in patients with acute pancreatitis", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfillment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, Arka Ghosh (173G1T0019), B. Marwein (183G1T0004), G. Navya Manasa (183G1T0010),

D. Sirisha (183G1T0007), during the academic year 2022-2023, under the guidance and direct supervision of Ms P. Ratna Kumari, Associate Professor, Department of Pharmacy Practice and M. Pharm, Aditya Pharmacy College, Surampalem.

Date: 16-5-2023

Place: Surampalem.

SURAMPALEM CO

(Dr. D. Sathis kumar)

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Aditya Nagar, ADB Road, Surampalem, E.G District., A.P - 533437.

Ms P. RATNA KUMARI

M. Pharm,

Associate Professor.

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Date: 4-5-2023

Place: Surampalem.

P. Rathalamari)

Academic Guide



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EVALUATION CERTIFICATE

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G. Navya Manasa (183G1T0010), D. Sirisha (183G1T0007), during the academic year 2022-2023, under the guidance and direct supervision of Ms P. Ratna Kumari, Associate Professor, Department of Pharmacy Practice and M. Pharm, Aditya Pharmacy College, Surampalem.

Date: 29 - 5 - 2023

Place: Surampalem.

SIGNATURE OF EVALUATOR

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III PRINCIPAL
Aditya Pharmacy College



TRUST HOSPITAL

Absolute Health Care

DR. R. SRINIVASA MURTY

MBBS, MD (AHMS), DM (AHMS),

Sr. Consultant Gastroenterologist

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G. Navya Manasa (183G1T0010), D. Sirisha (183G1T0007), during the academic year 2022-2023, under my guidance and direct supervision.

Dr.R.SRINIVASA MURTHY
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Regd.No. 30833
Consultant Gastroentrology & Hapatalog

Consultant Quistroentrology & TRUST HOSPITAL.
Serpeverem Jr., Kektrade.

(Dr. R Srinivasa Murty)

Clinical Guide

Place: Kakinada

Date: 4-5-2023

IV PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437



(Approved by AICIE and PCI, Affiliated to INIUK University)

Aditya Nagar, ADB Road, Surampalem, E.G District, A.P -533437.

Date:

Place: Surampalem

DECLARATION

We, Arka Ghosh, B. Marwein, G. Navya Manasa, D. Sirisha, do hereby declare that the work embodied in this dissertation entitled "Assessment of pharmacological treatment in patients with acute pancreatitis", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfillment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out during the academic year 2022-2023, under the guidance and direct supervision of Ms P. Ratna Kumari, Associate Professor, Department of Pharmacy Practice and M. Pharm, Aditya Pharmacy College, Surampalem.

We do further declare that this work is original and has not been submitted previously for award of any other degree or similar title. The information furnished in this dissertation is genuine to the best of our knowledge.

ARKA GHOSH A. Colook (173G1T0019)

B. MARWEIN O (183G1T0004)

G. NAVYA MANASA

D. SIRISHA

GroHanasa (183G1T0010)

(183G1T0007)



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CONCLUSION

- Our study emphasized role of standard supportive, intensive care with monitoring in patients with pancreatitis.
- Improvement of SIRS at 48 hours after admission with fluid resuscitation is good prognostic marker.
- Most of our patients recovered with early moderate fluid resuscitation.
- Study concluded that injection Tramadol is first choice analgesic and injection fentanyl for refractory pain.
- Judicious use of antibiotics is also highlight of this study (only 30% required antibiotics)
- Early enteral nutrition in all patients prevented them from developing major local complications.
- Even though the sample size is small, our study emphasized the role of standard case in pancreatitis.





STUDY OF ANALGESIA AND ROLE OF ANTIBIOTICS IN POST OPERATIVE ABDOMINAL SURGERY AND ITS EFFECTIVENESS IN TERITARY CARE HOSPITAL

Dissertation submitted to



Jawaharlal Nehru Technological University, Kakinada.

In partial fulfilment of the award of the degree of

DOCTOR OF PHARMACY

Submitted by,

GARAGA BHARGAVI (Reg. no. 183G1T0008)

GOGULAMANDA RUPA LAVANYA (Reg. no. 183G1T0011)

KANDAVALLI HARITHA (Reg. no. 183G1T0012)

NALLI MINISHA (Reg. no. 183G1T0016)

YARRA HEMALATHA (Reg. no. 183G1T0023)

Under the Guidance of

Clinical Guide

Dr. BORRA SURENDRA NATH

M.S., M.Ch. (Plastic Surgery),

General, Laparoscopic and Plastic Surgeon,

Trust Hospital, Kakinada.

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P. RATNA KUMARI, M. PHARM

Assistant Professor,



Department of Pharmacy Practice and Pharm. D

Aditya Pharmacy College,

Surampalem-533437, Andhra Pradesh.

2022 - 2023 Aditya Pharmacy College SURAMPALEM-583 437

STUDY OF ANALGESIA AND ROLE OF ANTIBIOTICS IN POST OPERATIVE ABDOMINAL SURGERY AND ITS EFFECTIVENESS IN TERITARY CARE HOSPITAL

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Dr. BORRA SURENDRA NATH

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Surampalem-533437, Andhra Pradesh.

ENTERNIAL ENAMINE

2022 - 2023

INTERNAL EXAMINER



Approved by AICTE and PCI, Affiliate to INTUK University

Aditya Nagar, ADB Road, Surampalem, E.G District., A.P - 533437

Dr. D. SATHIS KUMAR

M. Pharm., Ph. D.,

Principal.

CERTIFICATE

This is to certify that the work embodied in this dissertation entitled "Study of analgesia and role of antibiotics in post operative abdominal surgery and its effectiveness in teritary care hospital", submitted to "Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out by, Garaga Bhargavi (183G1T0008), Gogulamanda Rupa Lavanya (183G1T0011), Kandavalli Haritha (183G1T0012), Nalli Minisha (183G1T0016), and Yarra Hemalatha (183G1T0023) during the academic year 2020-2021, under the guidance and direct supervision of P. Ratna Kumari, Assistant Professor, Department of Pharmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem.

Date: 1.6 - 5 - 23

Place: Surampalem.

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(Dr. D. Sathiskumar)

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SURAMPALEM-533 437



Approved by AICTE and PCL Affiliate to JNTUK University

Aditya Nagar, ADB Road, Surampalem, E.G District., A.P - 533437

P. RATNA KUMARI M. PHARM., Assistant professor.

Associle

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Date: 4-5-23

Place: Surampalem.

(P. Ratna Kumari)

Academic Guide

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Date: 29-5-93

Place: Surampalem.

SIGNATURE OF EVALUATOR

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-Absolute Health Care

Dr. BORRA SURENDRA NATH

M.S., M.Ch. (Plastic Surgery)

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Date:

1-5-

Place: Kakinada.

Aditya Pharmacy College SURAMPALEM-533 437

Dr. B. SURENDRANATH, M.S.MCH (Dr. Bgritto Surendlese Noth) TRUST HOSPITAL-KAKINADA

Clinical Guide



Approved by AICTE and PCI, Affiliate to JNTUK University

Aditya Nagar, ADB Road, Surampalem, E.G District., A.P - 533437

Date:

Place: Surampalem

DECLARATION

We, Garaga Bhargavi, Gogulamanda Rupa Lavanya, Kandavalli Haritha, Nalli Minisha, Yarra Hemalatha, do hereby declare that the work embodied in this dissertation entitled, "Study of analgesia and role of antibiotics in post operative abdominal surgery and its effectiveness in tertiary care hospital", submitted to " Jawaharlal Nehru Technological University", Kakinada, in partial fulfilment to the requirement for the award of Degree of 'Doctor of Pharmacy', is a bonafide work carried out during the academic year 2022-2023, under the guidance and direct supervision of P. Ratna Kumari, Assistant Professor, Department of Pharmacy Practice and Pharm. D., Aditya Pharmacy College, Surampalem.

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GARAGA BHARGAVI

(183G1T0008)

KANDAVALLI HARITHA

(183G1T0012) K. Horika.

GOGULAMANDA RUPA LAVANYA

(183GIT0011) Glapatovorga

NALLI MINISHA (183GIT0016) N. Minishe

YARRA HEMAI

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Chapter 5

CONCLUSION

- This study was conducted to understand, the patients who were undergone abdominal laparoscopic surgery of Open Inguinal Hernia and Cholelithiasis, mostly in hernia males are affected and cholelithiasis females are affected.
- Mostly in the age group of 50-70 years old patients are having this problem.
- According to ASA grade, the patients who are having co morbid conditions like
 DM & HTN (ASA2) are recorded and most of the patients are in normal conditions (ASA1).
- Spinal anaesthesia is preferred in most of the cases, which is given as subarachnoid block (0.5% bupivacaine 4ml heavy) and general anaesthesia were given with pre-medication of antibiotics (Injection. CEFOPERAZONE AND SULBACTAM) anaesthesia (Injection. FENTANYL CITRATE), and other muscle relaxants (MIDAZOLAM, VECORONIUM BROMIDE, THIOPENTANE SODIUM, SUCCINYLCHOLINE CHLORIDE).
- Based on pain score (UPAT) most of the pain is moderate (3to 6) after an abdominal surgery.
- In hernia, mostly inguinal and umbilical hernia, as it is considered as minor abdominal surgery, single antibiotic was given as prophylaxis. In cholelithiasis combinational therapy is given.



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1.1 HUMAN ANATOMY & PHYSIOLOGY (PRACTICAL)

Practical: 3 Hrs/Week

General Requirements: Dissection box, Laboratory Napkin, muslin cloth, record, Observation book(100pages), Stationary items, Blood lancet.

Course materials:

Text books

Goyal, R. K, Natvar M.P. and Shah S.A, Practical anatomy, physiology and biochemistry, latest edition, Publisher: B.S Shah Prakashan, Ahmedabad.

Reference books

Ranade VG, Text book of practical physiology, Latest edition, Publisher: PVG, Pune Anderson Experimental Physiology, Latest edition, Publisher: NA

List of Experiments:

- 1. Study of tissues of human body
 - (a) Epithelial tissue.
 - (b) Muscular tissue.
- 2. Study of tissues of human body
 - (a) Connective tissue.
 - (b) Nervous tissue.
- 3. Study of appliances used in hematological experiments.
- Determination of W.B.C. count of blood.
- 5. Determination of R.B.C. count of blood.
- 6. Determination of differential count of blood.
- 7. Determination of
 - (a) Erythrocyte Sedimentation Rate.
 - (b) Hemoglobin content of Blood.
 - (c) Bleeding time & Clotting time.
- 8. Determination of
 - (a) Blood Pressure.
 - (b) Blood group.
- 9. Study of various systems with the help of charts, models & specimens
 - (a) Skeleton system part I-axial skeleton.
 - (b) Skeleton system part II- appendicular skeleton.
 - (c) Cardiovascular system.
 - (d) Respiratory system.



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- (e) Digestive system.
- (f) Urinary system.
- (g) Nervous system.
- (h) Special senses.
- (i) Reproductive system.
- 10. Study of different family planning appliances.
- 11. To perform pregnancy diagnosis test.
- 12. Study of appliances used in experimental physiology.
- 13. To record simple muscle curve using gastroenemius sciatic nerve preparation.
- 14. To record simple summation curve using gastroenemius sciatic nerve preparation.
- 15. To record simple effect of temperature using gastroenemius sciatic nerve preparation.
- 16. To record simple effect of load & after load using gastroenemius sciatic nerve preparation.
- 17. To record simple fatigue curve using gastroenemius sciatie nerve preparation.

Scheme of Practical Examination:

	Sessionals	Annual! !
Identification	04	10 1: 10
Synopsis :	04 .	10
Major Experiment	07	20 4 5
Minor Experiment	. 03	15 1 14 14
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).

1.2 PHARMACEUTICS (THEORY)

Theory: 2 Hrs. /Week





ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

Human Anatomy and Physiology



Name G. Sai vara Pooja PIN No. 223G1 T0013 Certified that this is the bonafide record of practical work done by Mr. /Ms. GOPI SAI VARA POOJA a student of _____TSE_ PHARM.D ____ with Regd. No. 223GIT0013 _____ in the Human Anatomy & Physiology Laboratory during the year 2022-23 No. of Experiments Attended 2) No. of Experiments Conducted 22 Signature - Faculty incharge

Submitted for the Practical examination held on



Vo.	Date {	Name of the Experiment	Page No.	Remarks
1) 24	4-01-23	Compound Microscope	1-3	C. 191.01.01
5) 3	i-01-23 {	Estimation of Bleeding Time	4-5	W 7 12
s, 7	-02-23	Determination of clotting Time	6-7	Wy.
2) 4) [4	1-02-23	Determination of Breath Holding Time	8	W A
5) 14	1-02-23	Determination of Rate of Respiration	9	Wha.
61 91	1-01-23	Determination of Blood Group	10-11	wy.
7) 29	8-02-23	Estimation of Haemoglobin Content	12-13	My
		Study of Haemocytometry	14-16	Colon
		Enumeration of Red Blood cells	17-19	
101 1	1-04-23	Enumeration of white Blood Cells	20-22	WW 8.
(11) 18	8-04-23	Determination of Enythrocyte	23-25	1 1 18
		Sedimentation Rate	\	
(12) 6	Q-5-23	Determination of Blood Pressure	26-28	CAME
	1-5-23	Identification of slides	29-33	L(M)
	16-5-23	Nervous System	34	1 1 Jbl
	23-5-23	Male Reproductive System	35	
	6-6-23	Female Reproductive System	36	I COM
	13-6-23	Organs of Special Senses	37-39	> "Va)
2012	20-6-23	Contraceptives	40-43	19 10
	4-7-23		} 44 - 47	
	11 - 7-23		48-49	
2207734443554855	18 -7-23	[HE NOTE OF COLUMN STATE OF S	50-51	11ay
	25-7-23		52-53	P Jell
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Biphasic dosage forms: Suspensions and emulsions, Definition, advantages and disadvantages, classification, test for the type of emulsion, formulation, stability and evaluation.

Suppositories and pessaries: Definition, advantages and disadvantages, types of base,

method of preparation, Displacement value and evaluation.

Galenicals: Definition, equipment for different extraction processes like infusion, Decoction, Maceration and Percolation, methods of preparation of spirits, tinctures and extracts.

Pharmaceutical calculations. 10

Surgical aids: Surgical dressings, absorbable gelatin sponge, sutures, ligatures and medicated bandages.

Incompatibilities: Introduction, classification and methods to overcome 12 incompatibilities.

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1.2 PHARMACEUTICS (PRACTICAL)

Practical: 3 Hrs / Week

List of Experiments:

1. Syrups

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a. Simple Syrup I.P

b. Syrup of Ephedrine Hcl NF

c. Syrup Vasaka IP

d. Syrup of ferrous Phosphate IP

e. Orange Syrup

2. Elixir

a. Piperizine citrate elixir BP

b. Cascara elixir BPC

c. Paracetamol elixir BPC

3. Linctus

a. Simple Linctus BPC

b. Pediatric simple Linctus BPC

4. Solutions

a. Solution of cresol with soap IP

b. Strong solution of ferric chloride BPC

Aqueous Iodine Solution IP

d. Strong solution of lodine IP

e. Strong solution of ammonium acetate IP



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5. Liniments

- a. Liniment of turpentine IP*
- b. Liniment of camphor IP

6. Suspensions*

- a. Calamine lotion
- b. Mågnesium Hydroxide mixture BP

7. Emulsions*

- a. Cod liver oil emulsion
- b. Liquid paraffin emulsion

8. Powders*

- a. Eutectic powder
- b. Explosive powder
- c. Dusting powder
- d. Insufflations

9. Suppositories*

- a. Boric acid suppositories
- b. Chloral suppositories

10. Incompatibilities

- a. Mixtures with Physical
- b. Chemical & Therapeutic incompatibilities
- * colourless bottles required for dispensing * Paper envelope (white), butter paper and——white paper required for dispensing.

Scheme of Practical Examination:

1 11	Sessionals	Annual
Synopsis ,	05	15
Major Experiment	10.	25
Minor Experiment	03 -	15
Viva	02.	15
Max Marks	20	70
Duration /	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF PHARMACEUTICS

Name B. Asha Jyothi	PIN No. 223G 170007
Certified that this is the b	onafide record of
practical work	done by
Mr./Ms. BOMMETI. ASHA JYOTHI	
a student of I Pharma - D with	Regd. No. 223G T0007
6	ratory during the year 2022-23
No. of Experiments Conducted ਤਿ।	No. of Experiments Attended 31
Man	904
Signature Faculty incharge	Signature - Head of the Department
Submitted for the Practical examination	Aditya Pharmacy Collegen held on
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S.No.	Date {	Name of the Experiment	Page No.	Remarks
I	31/12/22	General Procedure for writing	}	ρ
		Experiments & Introduction	1-2	Pheir
Î	31 12 22	SYRUPS	3-5	phe
1.	31 12 22	Simple Syrup I.P.	6-7	phor
2.	21/01/23	Vasaka Syrup I.P.	8-9	phi
3.	28/01/23	Drange Syrup	10-11	Phi
4.	4/02/23	Compound Ferrous Phosphate Syrup	}	
		(B.P.c)	12-14	phi
5.	4 02 23	Ephedrine Hydrochloride (I.P.)	15-16	phor
ŢII	11/02/23	ELIXIRS	17-18	phi
6.	11 02 23	Paracetamol Pediatric Elixir (B.P.C)	19-20	phi
	11/02/23	Piperazine citrate Elixir (B.P.C)	21-22	phot
-	25 02 23	Cascara Elizir (B.P.C)	23-24	pho
1V	25 02 23	LINCTUS	25	pho
9.	25/02/23	Simple Linctus B.P.C. (25m1)	26	phai
	4/03/23	Pediatric Simple Linctus	27	Phor
	25 03 23	SOLUTIONS	28	gre-
	25/03/23	Aqueous Jodine solution I.P.	29-30	phe
12.	25 03 23	Strong Jodine solution I.P	31-32	pher
	08 04 23		33-34	phoi
0	08/04/23		35-36	pro
	15/04/23	LINIMENTS	37	Pho
1	15/04/23	Camphor Liniment I.P.	38	phei
	29/04/23	Turpentine Liniment I.P.	39-40	
	06 05 23	SUSPENSIONS	41-42	
	06/05/23	Calamine Lotion	43-44	Phoi
18.	06 05 23	Magnesium Hydroxide Mixture	45-46	pho
_		Aditya Pharmacy Cones	}	
		Aditya Pharmacy Cones- SURAMPALEM-533 437	}	-

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S.No.	Date {	Name of the Experiment	} Page No.	Remarks
Δıπ·	20 05 23	EMULSIONS	} 47-46	Phai
19.	20 05 23	Liquid Paraffin Emulsion	}49-50	Phei
20.	24/06/23	God Liver Oil Emulsion	\right\{ 51-52	pho.
Ĵχ.	01/07/23	POWDERS	} ₅₃₋₅₄	The
21.	01/07/23	Zinc Oxide Starch Dusting Powder	3 55	pho
		(NFI)	}	
22.	08/07/25	Eutectic Powder	}56-5 1	Dhei
23.	08 07/23	Explosive Powder	58-59	Dhei
X.	15/07/23	SUPPOSITORIES	80-61	Dhei
24.	15 07 23	Boric Acid Suppositories	82-63	Dire
	22 07 23	Chloral Hydrate Suppositories	} ₆₄₋₆₅	Phe
ह्याः	22 07 25	INCOMPATIBILITY	} 66	Dhe
26.	22 07 25	Emulsion	} 67	Dho
27.	05 08 23	Mixture - I	} 68	Dasi
28.	12/08/23	Mixture - II	} 69	Dhe
29.	12 08 23	Mixture - îii	} = 10	Dho
30.	12 08 23	Spray Solution	} =1	Dhai
3).	12/08/23	The Powder.	} = 12	Sho
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1.3 MEDICINAL BIOCHEMISTRY (PRACTICAL)

Practical: 3 Hrs./Week

Title of the Experiment:

- 1 Qualitative analysis of normal constituents of urine.*
- 2 Qualitative analysis of abnormal constituents of urine.*
- 3 Quantitative estimation of urine sugar by Benedict's reagent method.**
- 4 Quantitative estimation of urine chlorides by Volhard's method.**
- 5 Quantitative estimation of urine creatinine by Jaffe's method.**
- 6 Quantitative estimation of urine calcium by precipitation method.**
- 7 Quantitative estimation of serum cholesterol by Libermann Burchard's method.**
- 8 Preparation of Folin Wu filtrate from blood.*
- 9 Quantitative estimation of blood creatinine.**
- 10 Quantitative estimation of blood sugar Folin-Wu tube method:**
- 11 Estimation of SGOT in serum. **
- 12 Estimation of SGPT in serum.**
- 13 Estimation of Urea in Serum. **
- 14 Estimation of Proteins in Serum.**
- 15 Determination of serum bilirubin**
- 16 Determination of Glucose by means of Glucoseoxidase.**
- 17 Enzymatic hydrolysis of Glycogen/Starch by Amylases.
- 18 Study of factors affecting Enzyme activity. (pH & Temp!)
- 19 Preparation of standard buffer solutions and its pH measurements (any two)*
- 20 Experiment on lipid profile tests**
- 21. Determination of sodium calcium and potassium in serum i**
- ** indicate major experiments & * indicate minor experiments

Assignments:

Format of the assignment

- 1. Minimum & Maximum number of pages.
- 2. It shall be computer draft copy.
- 3. Reference(s) shall be included at the end.
- 4. Name and signature of the student.
- 5. Assignment can be a combined presentation at the end of the academic year.
- 6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual:
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
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Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



Aditya Pharmacy College SURAMPALEM-533 437

Charanteja



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.

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DEPARTMENT OF

Medicinal Biochemistry

Name B. Charan Jeja PIN No. 2239170004

Submitted for the Practical examination held on .

Signature Faculty incharge

practical wor	k done by
Mr./Ms. Backala. Charat	
a student of Aditya.pharmory. Ig with	
in the Medicinal Biochemistral	poratory during the year ふのんだん
No. of Experiments Conducted [2]	No. of Experiments Attended
	DO37

Certified that this is the bonafide record of

Signature - Head of the Department Aditya Pharmacy College

€ ∠ EXAMINER-2

POINTER

S.No.	Date {		Page No.	Remarks
10	06-1-23	Introduction of wrine Analysis	3-5	M23 (P)
2.	2-0-1-2-3	Quantitative Analysis of Abnormal	Contact the second	
		Constituents of wrine.		9 (N)
3.	27-1-23	Estimation of reducing Sugar	11-13	3 (1) (A) (A)
		715ing Benedict's method.		
Ц,	3-2-23	Quantitative Estimation of Unine	ામ-15	1
		Chlorides by Vohlard's method		(XX)
5.	3-2-23	Quantitative Estimation of	16-14	7 51 21 25 (4)
		Urine Creatinine by Jaffe's method		
G.	10-2-23	Quantitative Estimation of wine	18-19	
		Calcium precipitate method		9
17.	17-2-23	Quantitative Fistimation of Serum	_ <u> </u>	100
		By Libermann Burchard's method.	21-2	124/3/23
8	0 24 3 22	preparation of protein-free	إعاتع	
		filtrate	} 23-2	5
19	25 2 2	Quantative Estimation of	111111111111111111111111111111111111111	
		Glucose in Blood By Folin-klu mets	}26-2	17
10	24/3/2	3 Quantative Estimation of Blood Creatinine	}	Die
			128-3	0 (31/3/23)
177	0 31 3 23	Estimation of SGOTIN Serum	31-3	3
la	0 21 14 12	3 Estimation of SGPT inserum 5 Estimation of urea in serum	34-3	56)
1 K	2. 26/1/2	Estimation of proteins in	37-	38 7
1,	1 20 4 12	Somme Somm	}	1/2
13	5. B	3 Determination of serum	}39-1	10 23/6/23
I	2 MA	E. J. M. E. D	}	
		(College	}	
		CONFESSION AND ALEM-533 431	}	
		Adity Adity AMPAL		WIKAS-NLR.

POINTER

S.No.	Date {	Name of the Experiment	Page No. Remarks
16-	30/6/23	Determination of Glucose By means of Glucose Oxidase	30/6/23
Iゴ·	20/6/23	Entrumatic Fridge lysis of	43-45
15.	14/4/23	Glycogen / Starch by Amylase: Study of temperature	}46-48) (44)
190	7 7 23	affecting Entryme activity. (preparation of standard Fuffer solutions and its	149-51 10 5/7/23 A)
ನಿರ್	28/4/23	1 pt measurements. 1 Determination of Calicum 1 in Sexum	52-53 22 21 7/2 Ay
	- 1 Al	Determination of sodium	} 54-55 D 247/23
<u>ar/6</u>	CH 18 23	and potassium in serum	A+)
		Aditya Phatmacy College Aditya Phatmacy College Strands Aditya	1 }
		AMPAIL AMPAIL AND	WIKAS-

Mechanism of aldol condensation, claisen condensation, cannizzaro reaction, crossed aldol condensation, crossed cannizzaro reaction, benzoin condensation, perkin condensation. Knoevenagel, Reformatsky reaction, Wittig reaction,

Michael addition.

. 12

Hoffman rearrangement: Migration to electron deficient nitrogen, Sandmeyer's reaction, basicity of amines, diazotisation and coupling, acidity of phenols.

Williamson synthesis, Fries rearrangement, Kolbe reaction, Reimer tieman's reactions.

Nucleophilic aromatic substitution: Bimolecular displacement mechanisms, orientation: comparison of aliphatic nucleophilic substitution with that of aromatic.

15 Oxidation reduction reaction.

Study of the following official compounds- preparation, test for purity, assay and medicinal uses of Chlorbutol, Dimercaprol, Glyceryl trinitrate, Urea, Ethylene diamine dihyrate, Vanillin, Paraldehyde, Ethylene chloride, Lactic acid, Tartaric

acid, citric acid, salicylic acid, aspirin, methyl salicylate, ethyl benzoate, benzyl benzoate, dimethyl pthalate, sodium lauryl sulphate, saccharin sodium, mephensin.

1.4 PHARMACEUTICAL ORGANIC CHEMISTRY (PRACTICAL)

Practical: 3 Hrs./Week

- I. Introduction to the various laboratory techniques through demonstration involving synthesis of the following compounds (at least 8 compounds to be synthesised):
 - 1. Acetanilde / aspirin (Acetylation)
 - 2. Benzanilide / Phenyl benzoate (Benzoylation)
 - 3. P-bromo acetanilide / 2,4,6 tribromo aniline (Bromination)
 - 4. Dibenzylidene acetone (Condensation)
 - . 5. I-Phenylazo-2-napthol (Diazotisation and coupling)
 - 6. Benzoic acid / salicylic acid (Hydrolysis of ester)
 - 7. M-dinitro benzene (Nitration)
 - 8. 9. 10 Antharaquinone (Oxidation of anthracene) / preparation of benzoic acid from toluene or benzaldehyde
 - 9. M-phenylene diamine (Reduction of M-dinitrobenzene) / Aniline from nitrobenzene
 - 10. Benzophenone oxime
 - 11. Nitration of salicylic acid
 - 12. Preparation of picric acid
 - 13. Preparation of O-chlorobenzoic acid from O-chlorotolune
 - 14. Preparation of cyclohexanone from cyclohexanol





II. Identification of organic compounds belonging to the following classes by: Systematic qualitative organic analysis including preparation of derivatives Phenols, amides, carbohydrates, amines, carboxylic acids, aldehyde and ketones, Alcohols, esters, hydrocarbons, anilides, nitrocompounds.

III. Introduction to the use of stereo models:

3

Methane, Ethane, Ethylene, Acetylene, Cis alkene, Trans alkene, inversion of configuration.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	:15
Major Experiment	10	25
Minor Experiment	03	15,
Viva	. 02	15
Max Marks	20	70
Duration	. 03hrs	04hrs :

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).







ADB ROAD, SURAMPALEM, E.G. Dist.

PHARMACEUTICAL ORG	
Name Saranya Balla	PIN No. 2 23 G I T 0 0 0 5
Certified that this is the	bonafide record of
practical wor	k done by
Mr./Ms. Saranza Bolla	
a student of!st Pharm. D wi	th Regd. No. 223G.IT.0005
in the Ph. Organic Chemistry Lat	boratory during the year . 2022-2023
No. of Experiments Conducted	No. of Experiments Attended 23
	PO 07 -
Signature Faculty incharge	Signature Head of the Department

Aditya Pharmacy College SURAMPALEM-533 437

Submitted for the Practical examination held on

EXAMINER-1

EXAMINER-2

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S.No.	Date {	Name of the Experiment	Page No.	Remarks
01	04/01/23	Chemistry Laboratory Kules and Safety	01)
		-precautions.		(R
02	04/01/23	Basic Laboratory Techniques for	02-09)
		Separation and purification		7
03	11/01/23	Acetylation	. 10	SR 1
04	11/01/23	preparation of Aspirin	11-12	اــــــــــــــــــــــــــــــــــــــ
05	18/01/23	preparation of Acetanilide	13-14	7
06	25/01/23	Benzoylation	15	78
07	25/01/23	preparation of Benzanilide	16-19	
08	01/02/23	preparation of Bensophenone Oxime	18-19	Ce 1
09	08/02/23	Bromination	<u> </u>	
10	08/02/23	Preparation of p-Bromo Acetanilide	21-22	0
(I	15/02/23	Nitration of Aromatic Hydrocarbons.	23	SE
12	15/02/23	preparation of NitroBenzene	24-25	
13			26	9
		Benzanilide	}	(B
14	01/03/23	preparation of phenyl Azo-B-	27-280	<u> </u>
		napfhol.	}	9
15	29/03/23		29-30	Ç
		Acefone	}	(4)
16	12/04/23	Systematic Qualifative Analysis	31-66	9
		of Organic Compounds.	}	9
IA.	31/05/23	Sample-I	67-69	58
18	07/06/23	Sample-I	76-71	1
19	14/06/23	Sample - TI	72-73	9
20	21/06/23	Sample - IV	74-76	CA
21	05/07/23	Sample - V	77-78	
		JoinCIPAL Callege	}	
		Aditya Pharmacy College Aditya Pharmacy Adity		WIKAS

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.No.	Date {	Name of the Experiment	Page No.	Remarks
ય	1900123	Sample VI	} } 79-80	ງ
શુંધ	02/08/23 {	Sample VII	81-83	48
24	19/03/23 02/08/23 09/08/23	Sample vī Sample vīi Sfereom oclels	} 79-80 } 81-83 } 84-86	
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		Aditya Pharmacy College	}	



ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF PHARMACEUTICAL INORGANIC CHEMISTRY



Name G. Sai vara Pooja PIN No. 22361T0013

Certified that this is the bonafide record of practical work done by

Mr. /Ms. GOPI. SAI VARA POOJA

a student of Ist PHARM.D with Regd. No. 223G1T0013

in the INORGANIC CHEMISTERY Laboratory during the year 2022-23

No. of Experiments Conducted



Signature - Faculty incharge

No. of Experiments Attended

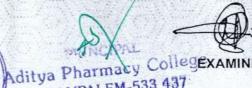


Signature - Head of the Department

Aditya Pharmacy College

Submitted for the Practical examination held on SURAMPALEM-

EXAMINER-1



POINTER

lo.	Date {	Name of the Experiment	Page No.	Remarks
0	/1/23 }	Apparatus used in volumetric Analysis	1-5	At 7. (1)
		Calibration of Analytic Apparatus	6-7	ALJ 79/11/2
	7-1-23	Standardisation of Hydro chloric acid	8-9	At 7 m
	7-1-23	Assay of Borax	10-11	At] [23/1]
		Standardisation of Sodium Hydroxide	12	At) Con Ctal
	23-1-23	Assay of Ammonium chloride	13	A+ J 430/123
	30-1-23	Assay of Sodium Bicarbonate	14-15	pt)
- 20		Assay of Boric acid	16-17	nt 440
	30-1-23	Assay of Calcium Carbonate	18-19	AJ 1612
	6-2-23	Non - Aqueous Titrations	20	pt)
El St	6-2-83	Standardisation of O.IM Perchloric Acid	21-22	pt (m)
rad I	6-2-23	Assay Of Sodium Benzoate	23-24	pt 1713/25
	13-2-23	Complexometric Titrations	25	Aty
11	13-2-23	Standardisation of Ethylene Di-Amine	26-2	At Con
		Tetra Acetic Acid	}	[20]
12	13-2-23	The second secon	28-20	a ne '
	20-2-23		30	pt7 (p)
13	20-2-23		31-33	3 AT YET
Life)	27-2-23) 01.00 - 11.00	34-3	5 At) (a)
14	The second secon	Standardisation of kmno4	36_	A 1 720
		Assay of Hydrogen Peroxide	37-3	8 Atu '
	20-3-23		39	At 7
16		Standardisation of Cerric Ammonium	40-1	42 At 40
		Sulphate	1	P 12
17	20-3-23	Assay of Ferrous Sulphate	43-	44 9+)
		I Todimetry BRINCIPAL College	45	At) Co
18	27-3-23	Standardisation of Anotym Pharmacy College AS2 03 STYAP	46-4	17 AT 1931
		AS2 03 OTYA PA	}	

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No.	Date {	Name of the Experiment	Page No. Remarks
19	27-3-23	Assay of Sodium Thiosulphate	} 48-49 At Palas
		Standardisation of Sodium Thiosulphate	50-51 AT
		Assay of Copper Sulphate	52-53 A+ 1 4101412
		Potassium - Iodate Titrations	54 Aty
22		Standardisation of kTo3 Solution	55-56 A (W)
23	10-4-23	Assay of Potassium Iodide	57-58 AL 11742
24	17-4-23	Gravimetric Estimation of Barium as	\$59-60 At (P)
		Barium Sulphate	} -111
	24-4-23	Limit Tests	61-62 A+ 20)
25	24-4-23	Limit Test for chlorides	63-64 AT 115
26	1-5-23	Limit Test for Sulphotes	65-66 Al () n.1612
27	The second secon	Limit Test for Iron	67-68 AL 0 1961
28		Limit Test for Heavy Metals	169-72 AT W
29	26-6-23	^ .	73-74 At (1) At
30	3-7-23	Limit Test for Arsenic	} 75-77 At) (3) Hz
31	10-7-23		18 At-540101
	10-7-23		79-80 A+ 16
		Hydroxide Gel	} / SS N: J W
33	17-7-23	Identification of Barium Sulphate	81-82 P
34	24-7-23	Identification of Ferrous Sulphate	83-84 AL (1)
35	31-7-23	Identification of Potassium chloride	85-86 A 6 11
36	7-8-23	Preparation of Potash Alum	87 B+ 100 1
37	14-8-23	Preparation of Boric Acid	\$88 pt 61191
			1 2 18
		ENITYA PAR TO MACY College	

1.5 PHARMACEUTICAL INORGANIC CHEMISTRY (PRACTICAL)

Practical: 3 Hrs./Week

(I)(I)

- 1: Limit test (6 exercises)
 - a. Limit test for chlorides
 - b. Limit test for sulphates
 - c. Limit test for iron
 - d. Limit test for heavy metals
 - e. Limit test for arsenic
 - f. Modified limit tests for chlorides and sulphates
- 2. Assays (10 exercises)
 - a. Ammonium chloride- Acid-base titration
 - b. Ferrous sulphate- Cerimetry
 - c. Copper sulpahte- lodometry
 - d. Calcilugluconate-Complexometry
 - e. Hydrogen peroxide Permanganometry
 - , f. Sodium benzoate Nonaqueous titration
 - g. Sodium chloride Modified volhard's method
 - h. Assay of KI KIO3 titration
 - i. Gravimetric estimation of barium as barium sulphate
 - j. Sodium antimony gluconate or antimony potassium tartarate
- 3. Estimation of mixture (Any two exercises)
 - a. Sodium hydroxide and sodium carbonate
 - b. Boric acid and Borax
 - c. Oxalic acid and sodium oxalate
- 4: Test for identity (Any three exercises)
 - a. Sodium bicorbonate
 - b. Barium sulphate
 - c. Ferrous sulphate
 - d. Potassium chloride



Aditya Pharmacy College SURAMPALEM-533 437

1.6 BIOLOGY (PRACTICAL)

Practical: 3 Hrs./Week

Title:

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to

- Introduction of biology experiments
- 1. Study of cell wall constituents and cell inclusions 2.
- Study of Stem modifications 3.
- Study of Root modifications 4.
- Study of Leaf modifications . 5.
- Identification of Fruits and seeds 6.
- Preparation of Permanent slides 7.
- T.S. of Senna, Cassia, Ephedra, Podophyllum. 8.
- Simple plant physiological experiments 9.
- Identification of animals 10.
- Detailed study of Frog 11.
- Computer based tutorials 12.

Scheme of Practical Examination:

	Sessionals	Annual
11 - L'Eastion	04	. 10
Identification	04 -	10
Synopsis	. 07	- 20
Major Experiment	03 .	15
Minor Experiment	02	15
Viva :		70
Max Marks	03hrs	04hrs
Duration.	00110	

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance.



Aditya Pharmacy College SURAMPALEM-538 437



ADB ROAD, SURAMPALEM, E.G. Dist.



PIN No. 2236170001
afide record of
ie by
gd. No2236all.0007
ory during the year 2022-23.
No. of Experiments Attended
202
Signature - Head of the Department
Aditya Pharmacy College neld on
neld on HAMPALEM-533 437 College EXAMINER-2

WIKAS, NLR

1) 1/oi/23 Some Common Instrument 1-5 2) 5/11/23 Section Cutting Technique 6-9 V 3) 28/01/23 Study of Cell Wall Constituent 10-12 V 4) 04/02/23 Morphology of Stem 13-14 V 5) 18/02/23 Morphology of Stem 13-14 V 5) 18/02/23 Morphology of Root 15-16 V 6) 1/o3/23 Morphology of Forwit 18 V 8/2/4/23 Macroscopy of Forwit 18 V 8/2/4/23 Macroscopy of Forwit 19 V 9) 15/4/23 Macroscopy of Conjander 20 V 10> 20/4/23 Macroscopy of Conjander 20 V 10> 20/4/23 Macroscopy of Conjander 20 V 8 Wide 12 C Macroscopy Microscopy, Pawdered 24-25 V 8 Wide 12 C Macroscopy Microscopy, Pawdered 24-25 V Microscopic Study of Cinna Epchedria 13 W Macroscopy Microscopy, Powdered 26-27 Microscopic Study of Cinna Epchedria 13 W Macroscopy Microscopy, Powdered 28-30 Microscopic Study of Senna leaf 14 Macroscopic Study of Senna leaf 15 Macroscopy, Microscopy, Powdered 31-32 Microscopic Study of Podophyllum 15 Macroscopic Study of Podophyllum 16 15/06/23 Jehrification of Animals 33-36 V 17 17/05/23 Detailed Study of Forog 37-40 V	S.No.	Date {	Name of the Experiment	Page No. Rema	rks
2) 5/11/23 Section Cutting Technique 6-9 \ 3) 28/01/23 Study of Cell Wall Constituent 10-12 \ 4) 04/02/23 Mossiphology of Stem 13-14 \ 5/18/02/23 Mossiphology of Root 15-16 \ 6/11/63/23 Mossiphology of Fosicit 18 \ 8/2/4/23 Macsioscopy of Fosicit 18 \ 8/2/4/23 Macsioscopy of Containdesi 20 \ 10/20/4/23 Macsioscopy of Containdesi 20 \ 10/20/4/23 Posepasiation of Perimanent 22-23 \ 11/25/4/23 Posepasiation of Perimanent 22-23 \ 80'de \ 12/25/4/23 Posepasiation of Perimanent 22-23 \ 80'de \ 13/2 Macsioscopy Micsioscopy, Powderied 24-25 \ Micsioscopic Study of Ginnar Epchedia \ 13/2 Micsioscopy Micsioscopy, Powderied 28-30 \ Micsioscopic Study of Senna leaf \ 156 Macsioscopy Micsioscopy, Powderied 31-32 \ Micsioscopic Study of Poclophyllum \ 156 Macsioscopic Study of Poclophyllum \ 156 Macsioscopic Study of Poclophyllum \ 157 Micsioscopic Study of Poclophyllum \ 158 Micsioscopic Study of Poclophyllum \ 159 Micsioscopic Study of Poclophyllum	17	1/01/23	Some Common Instrument	1-5	
3/28/07/23 Study of Cell Wall Constituent 10-12 \ 4/04/02/23 Moonphology of Stem 13-14 \ 5/18/02/23 Moonphology of Root 15-16 \ 6/11/63/23 Moonphology of Root 15-16 \ 6/11/63/23 Moonphology of Leaf 17 \ 7/25/03/23 Dentification of Forwit 18 \ 8/2/4/23 Maconoscopy of Coniander 20 \ 0>/15/4/23 Maconoscopy of Coniander 20 \ 10>/20/4/23 Dentification of Seeds 21 \ 11\25/4/23 Penepasiation of Penmanent 22-23 \ 11\25/4/23 Penepasiation of Penmanent 22-23 \ 11\25/4/23 Penepasiation of Penmanent 22-23 \ 12\25/4/23 Penepasiation of Penmanent 22-23 \ 13\25/4/23 Penepasiation of Penmanent 22-23 \ 15\25/4/23 Penepasiation of	17514 Laborate 9 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	LAG 6344446659959999999988888	Section Cutting Technique		
4 12 Maconoscopy, Miconoscopy, Powdened 28-30 Miconoscopic study of Stern 13-14 15-16 15-16 17 18 18 18 18 19 19 10 20 10 20 11 25/4/23 Maconoscopy of Fernel 19 10 20/4/23 Adentification of Seeds 21 11 25/4/23 Poseparation of Persmanent 22-23 80 12 Miconoscopy, Miconoscopy, Powdened 12-25 Miconoscopic study of Cinnamon Basik			Study of Cell Wall Constituent		
6/11/63/23 Mosiphology of leaf 17 V T/25/03/23 Dentification of Foruit 18 V 8/2/4/23 Macsioscopy of Foruit 18 V 9/15/4/23 Macsioscopy of Continues 20 V 10/20/4/23 Dentification of Seeds 21 11/25/4/23 Posepasiation of Seeds 21 11/25/4/23 Posepasiation of Perimanent 22-23 V 8lide 12/ Macsioscopy Microscopy Powdered 24-25 V Microscopic study of Cinnamon Basik V 13/ Macsioscopy of Study of Cinna Epchedid V 14/ Macsioscopic study of Cinna Epchedid V 14/ Macsioscopic study of Cinna Epchedid V 15/ Macsioscopic study of Cinna Epchedid V 14/ Macsioscopic study of Cinna Epchedid V 15/ Macsioscopic study of Senna leaf V 15/ Macsioscopic study of Podophyllum V 15/ Macsioscopic study of Podophyllum V 15/ Macsioscopic study of Podophyllum V	47	04/02/23	10011101011	Y Y	
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S/ 14/23 Macroscopy of Conjunctor 20 10/20/4/23 Adentification of Seeds 21 11/25/4/23 Poseparation of Personament 22-23 V 80'de 12/ Macroscopy, Microscopy, Powdered 24-25 V Microscopic study of Cinnamon Bank 13/ M Macroscopy, Microscopy, Powdered 26-27 13/ M Macroscopy, Microscopy, Powdered 26-27 13/ Microscopic study of Ginna Epchedrid 14/ Macroscopy, Microscopy, Powdered 28-30 14/ Macroscopy study of Senna leaf 15/ Macroscopy Study of Senna leaf 15/ Macroscopy Study of Poclophyllum				í	
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Macoroscopy, Micoroscopy, Powdened 28-30 Micoroscopy & Senna leaf Micoroscopy, Micoroscopy, Powdened 31-32 Micoroscopic Study of Podophyllum			Micoroscopic study of Ginna Epchedon	4-1	
Macoroscopy, Micoroscopy, Powdered 31-32 Micoroscopic Study of Podophyllum	St.	(Q) /		98	
Macoroscopy, Micoroscopy, Powdered 31-32 Micoroscopic Study of Podophyllum	145	$ \downarrow \qquad $	Macoro Scopy, Micoroscopy, Powdenec	1/28-30	
Macoroscopy, Micoroscopy, Powdered 31-32 Micoroscopic Study of Podophyllum			Micoroscopie Study of Senna leaf	+	
Micoroscopic study of Podophyllum				*****************************	
	15	4 (Macoroscopy, Macoroscopy, owerse	}	
15/06/23 Identification at Animals 33-36 V 17/17/05/23 Detailed Study of Forog 37-40			(1-u(stoscop) C Study of 1000phyllon)	}	
17/17/06/28 Detailed Study of Forog 37-40	16	>15/06h	3 Adentification at Animals	33-36	
	17	17/06/	3 Detailed Study of Forca	}37-40	
		1 1/5-1		}	Y
			{	}	



3. Detailed syllabus and lecture wise schedule :

Title of the topic

Introduction to the science of microbiology. Major divisions of microbial world and Relationship among them.

Different methods of classification of microbes and study of Bacteria, 2

Fungi, virus, Rickettsiae, Spirochetes.

Nutritional requirements, growth and cultivation of bacteria and virus. Study of different important media required for the growth of aerobic and anaerobic bacteria & fungi. Differential media, enriched media and selective media, maintenance of lab cultures.

Different methods used in isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions.

Counting of bacteria - Total and Viable counting techniques.

Detailed study of different methods of sterilization including their merits and demerits. Sterilization methods for all pharmaceutical products. Detailed study of sterility testing of different pharmaceutical preparations : Brief information on Validation.

Disinfectants- Study of disinfectants, antiseptics, fungicidal and virucidal agents factors affecting their activation and mechanism of action. Evaluation of bactericidal, bacteristatic, , virucidal activities, evaluation of

preservatives in pharmaceutical preparations.

Immunology- Immunity, Definition, Classification, General principles of natural immunity, Phagocytosis, acquired immunity(active and passive). Antigens, chemical nature of antigens structure and formation of Antibodies, Antigen-Antibody reactions. Bacterial exotoxins and endotoxins. Significance of toxoids in active immunity: Immunization programme, and importance of booster dose.

Diagnostic tests: Schick's Test, Elisa test, Western Blot test, Southern Blot PCR Widal, QBC, Mantaux Peripheral smear. Study of inalarial parasite.

Microbial culture sensitivity Testing: Interpretation of results Principles and methods of different microbiological assays, microbiological assay of Penicillin, Streptomycin and vitamin B2 and B12. Standardisation of vaccines and sera.

Study of infectious diseases: Typhoid, Tuberculosis, Malaria, Cholera, 10

Hepatitis, Meningitis, Syphilis & Gonorrhea and HIV.

2.2 PHARMACEUTICAL MICROBIOLOGY (PRACTICAL)

Practical: 3 Hrs / Week

Title of the Experiment:

Study of apparatus used in experimental microbiology*.

Sterilisation of glass ware's. Preparation of media and sterilisation.*

Staining techniques - Simple staining.; Gram's staining; Negative staining**

Study of motility characters*.

Enumeration of micro-organisms (Total and Viable)*

Study of the methods of isolation of pure culture.*

Bio chemical testing for the identification of micro*-organisms.



- 8 Cultural sensitivity testing for some micro-organisms.*
- 9 Sterility testing for powders and liquids.*
- 10 Determination of minimum inhibitory concentration.*
- 11 Microbiological assay of antibiotics by cup plate method.*
- 12 Microbiological assay of vitamins by Turbidometric method**
- 13 Determination of RWC.**
- 14 Diagnostic tests for some common diseases, Widal, malarial parasite.**
- * Indicate minor experiment & ** indicate major experiment

Assignments

- I Visit to some pathological laboratories & study the activities and equipment/instruments used and reporting the same.
- Visit to milk dairies (Pasturization) and microbial laboratories (other sterization methods) & study the activities and equipment/instruments used and reporting the same.
- 3. Library assignments.
 - a. Report of recent microbial techniques developed in diagnosing some common
 - b. Latest advancement developed in identifying, cultivating & handling of microorganisms.

Format of the assignment:

- 1. Minimum & Maximum number of pages.
- 2. It shall be computer draft copy.
- 3. Reference(s) shall be included at the end.
- 4. Name and signature of the student.
- 5. Assignment can be a combined presentation at the end of the academic year.
- 6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration .	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).





ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF
Pharmaceutical Microbiology

Name J. Kouya Naga Praveena PIN No. 2136170014
Certified that this is the bonafide record of
practical work done by
Mr./Ms. J. Kavya Naga Praveena
a student of Ind Phanim D. with Regd. No. 136170014
in the Micro biology Laboratory during the year 2.022,-2023
No. of Experiments Conducted 99 No. of Experiments Attended 90
Signature - Faculty incharge SURAMPALEM 533 437
Submitted for the Practical examination held on91107 2023
EXAMINER-1 EXAMINER-2 SIGNES
PHARM SURAMPALEM-533 437 WIKAS

.No.	Date {	Name of the Experiment	Page No.	
T.	n8/11/22 {	Introduction to Microbiology	1-4	B 92/12 00
î N	15/11/22 {	Common laboratory rules and {	ระจ	(B 97)4
HER THE PARTY OF				
u	22/11/22	Study of apparatus used in experim	8-14	93/12/
		-enta minorougy	P,	(0, 50)
1,	29/11/22	Preparation and sterilization of	15-16	(B 97/12 Par
	*	alutifient broth		000
∂ .	01/12/22	Preparation and sterilisation of Nutrient	17-18	AB
		Agar	H-1101115171115301901	09-33
3.	08/12/22	attentisation of glassware	[19-21]	(B)
4,	15/12/22	Inoculation of culture into different	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	120/08
		media	{	00 -139
W.	22/12/22	Staining Pechniques	134-31	(B 22/07/9
<u>6.</u>	29/12/22	Simple staining	16-F6	(B 99/09/901
*****	03/01/23	Gram staining		B 92/08/202
4	7/2/23	Motility of Bacteria		B 98/03/90
8,	14/2/23	Enumeration of Bacteria		B 98/18/109
9,	21/2/23	Enumeration of bacteria by direct MCM.		1 B 18/09/208
(D)	28/2/23	I Inlation of pure culture	134-4	1 B 98/05/90
[1]	7 3 23	Test for sterility for sterile water	142-00	1 B 98/03/209
		for injection.	₹ B	+ B 0/03/90
1.8	14/3/23	Pest for stenlity for solids	145-4	# B 98/03/90
13	21/3/23	Determination of minimum unhibitory	148-4	1 00/10
		I concentration of thenol		Company of the control of the contro
11	1. 28 3 2	Microbiological Array of Antibiothers by	150-1	1 B 11/04/2013
		1 cup plate Method.	$\left\{ \mathcal{A}_{\mathcal{B}}\right\}$	+ B 11/00/10
10	5. 04/2/23	Microbiological Assay of Antibiotic by	1550	albalin G



Aditya Pharmacy College SIRAMPALEM-533 437

i.No.	Date {	Name of the Experiment	Page No.	Remarks
16,	11/23	using Turbidimetric Method Biochemical texting for the identification of microorganisms - fermentation of	6-57	B support
13-	&5 4 23	Biochemical testing for the identification of microorganisms—starch hydrolysis	68-69 }	Chapplor 3
		Biochemical texting for the identification of microorganisms-Methyl Red text		
	100	Brochemical testing for the identification	6 12222 Land Land Land Land Land	Baylot 1983
		Determination of Rideal Walker co-efficient	}	,
	00/07/23	blidal test Biagnostic test for Malaria /	66-68 69-78	1 B 08/03/40
		Let	}	
		Comba		/
		Joseph Crippe of	1.5	
			}	
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2.3 PHARMACOGNOSY & PHYTOPHARMACEUTICALS (PRACTICAL)

Practical: 3 Hrs./Week

General Requirements: Laboratory Napkin, Observation Book 150 pages Zero brush, Needle, Blade, Match-box.

List of experiments:

- Introduction of Pharmacognosy laboratory and experiments.
- Study of cell wall constituents and cell inclusions.
- Macro, powder and microscopic study of Datura.
- Macro, powder and microscopic study of Senna.
- Macro, powder and microscopic study of Cassia cinnamon.
- Macro, powder and microscopic study of Cinchona.
- Macro, powder and microscopic study of Ephedra.
- Macro, powder and microscopic study of Quassia.
- 9 Macro. powder and microscopic study of Clove
- 10 Macro, powder and microscopic study of Fennel.
- 11 Macro, powder and microscopic study of Coriander.
- 12 Macro, powder and microscopic study of Isapgol.
- 13 Macro, powder and microscopic study of Nux vomica.
- 14 Macro, powder and microscopic study of Rauwolfia.
- 15 Macro, powder and microscopic study of Liquorice.
- 16 Macro, powder and microscopic study of Ginger.
- 17 Macro, powder and microscopic study of Podophyllum.
- 18 Determination of lodine value.
- 19 Determination of Saponification value and unsaponifiable matter.
- 20 Determination of ester value.
- 21 Determination of Acid value.
- 22 Chemical tests for Acacia.
- 23 Chemical tests for Tragacanth.
- 24 Chemical tests for Agar.
- 25 Chemical tests for Starch.
- 26 Chemical tests for Lipids (castor oil, sesame oil, shark liver oil, bees wax)
- 27 Chemical tests for Gelatin.

Scheme of Practical Examination:

Scheme of Tractical 25	Sessionals	Annual
Identification	04	10 -
Synopsis	04	. 10
Major Experiment	07,	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

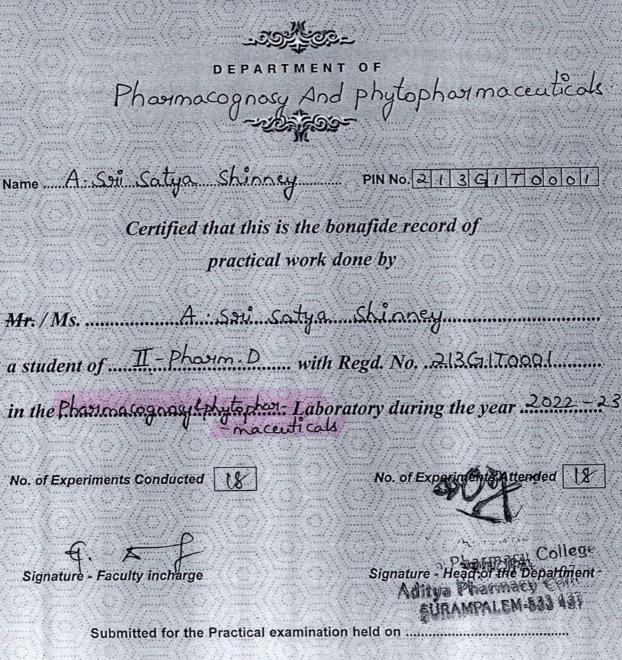
Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance.



Aditya Pharmacy College RINCIPAL SURAMPALEM-533 437



ADB ROAD, SURAMPALEM, E.G. Dist.



EXAMINER-1

Aditya Pharmacy 33 43 Aditya Pharmacy 33 43

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.No.	Date {	Name of the Experiment }	Page No.	Remarks
		Tto best to the symposphere and }	1_4	CP
		Introduction to phormacognosy and { Phytophormaceuticals		
<u></u>	20/11/22	Macroscopy, microscopy and powdered	5 - 7	OD (A
		mired Cropic Clied of Tenne:	THE PROPERTY OF THE PARTY OF TH	Control of the Contro
3.	3/12/22	Macencropy, microscopy and powdered	8-11	
	1	microscopic study of "clove"		
y .	10/12/22	Macroscopy, microscopy and powdered	12 -15	
		microscopic study of Cinnamon"		
5	17/12/22	Macroscopy, microscopy and powdered	16-19	1 P
		microscopic study of "Datura"		
6	31/12/22	Macroscopy, microscopy and poundered	20-23	
1000		microscopic study of "Senna"		1 0
7	7/1/23	Macroccopy nicroscopy and powdered	<u>24-2</u> }	
	, 1, 1, 5	microscopic study of Ephedra"		1/8
8	4/2/25	Macroscopy microscopy and powdered		
a	5/2/23	Macroscopy microscopy and poudered	30-3	2 / 8
	19/4/83	microscopic study of "Nux-Vonica"		
, (O	11/8/23	Macroscopy, nicroscopy and powdered	33 - 3	5 \ B
Ĭ		microscopic study of "Rauwolfia"	\	_ \
11.	25/3/23	Determination of saponification value of	36-3	7 \ \ (1)
		Saponification number of given oil	\	1 68
12	. 14/23	Determination of acid value of	38	V
-		coconit oil	{	1 3
	. 13/5/23		39	- (A)
	1. 20 (5/23		{40	1 Y @
	10/6/2		{ 41 42	Va
L16	17/6/23	Chemical test for "Aarch") 70	

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ditya Pharmacy College

s.No.	Date {	Name of the Experiment	Page No.	Remarks
17. 18.	24/6/23 1	chemical test for "Gelatin"	43-44 45 	
			}	
		Aditya Pharmacy Aditya Pharmacy SURAMPALEM-533 437		
		Aditya Pharmas 437 Aditya Pharmas 533 437		WIKA

3. Detailed syllabus and lecture wise schedule :

Etiopathogenesis and pharmacotherapy of diseases associated with following

Title of the topic

Cardiovascular system: Hypertension, Congestive cardiac failure, Angina Pectoris, Myocardial infarction, , Hyperlipidaemias .

1 Electrophysiology of heart and Arrhythmias

Respiratory system: Introduction to Pulmonary function test, Asthma, Chronic obstructive airways disease, Drug induced pulmonary diseases Endocrine system: Diabetes, Thyroid diseases, Oral contraceptives, Hormone replacement therapy, Osteoporosis

General prescribing guidelines for

a. Paediatric patients

b. Geriatric patients

c. Pregnancy and breast feeding.

Ophthalmology: Glaucoma, Conjunctivitis- viral & bacterial-

Introduction to rational drug use

Definition, Role of pharmacist Essential drug concept Rational drug formulations

2.6 PHARMACOTHERAPEUTICS - I (PRACTICAL)

Practical: 3 Hrs./Week

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation. A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments:

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 - 2000 words] should be submitted for .



Aditya Pharmacy College GURAMPALEM-533 437

Format of the assignment:

- 1. Minimum & Maximum number of pages.
- 2. Reference(s) shall be included at the end.
- 3. Assignment can be a combined presentation at the end of the academic year.
- 4. It shall be computer draft copy. .
- 5. Name and signature of the student.
- 6. Time allocated for presentation may be 8+2 Min.

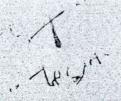
Scheme of Practical Examination:

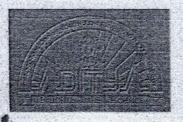
	Sessionals	Annual
Synopsis	.05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20 .	70.
Duration	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



Aditya Pharmacy Colles





ADB ROAD, SURAMPALEM, E.G. Dist.

Name A: Sxi Satya Shinney PIN No. 21361

DEPARTMENT OF Pharmacy practice

Certified that this is t	the bonafide record of
practical w	ork done by
Mr./Ms. A. Sxi Sat	ya Shinney
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in the Phasmacathena pential	aboratory during the year .a.a.a.a2023
No. of Experiments Conducted 20	No. of Experiments Attended 20
	Va

Signature - Faculty incharge

Signature - Head of the Department

Aditya Pharmacy College

Submitted for the Practical examination held on SIJRAMPALEM-533 437

Pharmacy College Pharmacy College Coll

EXAMINER-2

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	1/12/2022	Hypothysioidism	}1-6	
<u>ا</u> ھ.	8 12 2022	Cerebrovasculai Accident - Arterio)	
		Ischemic stroke Hemiparesis	}	
3.	22/12/202	Acute pancieatitistius. Tomiratorila	13-18	
<u> </u>	93/12/3035	Diabetic Nepheropothy	19-24)
1	21112023	Derque v	25-30	los a
6.	2/2/2013	Haemorrhagic stroke	31-36	FH
ユ.	9/2/2013	left ventricular dysfunction, inferior	37-40	
		wall myo cardial infaction, Acute		
		Colonary syndrone.		
_8.	16/2/2013	chronic obstructive pulmonary disease	43-48	
-		with Human Immunodeficiency limin	}	
9.	23/2/2023	Unary tract injection.	149-54	
10.	2/3/2013	Colonary anterydisease, Moderate left	55-60	
		ventucular distunction	}	
LI.	9/3/2013	septic shock, Diabetic foot ulcer	61-66	
12.	931215053	Colorary artery disease	67-70	7
13.	6/4/2023	Col-pulmonal, Moderate arterial	8F-EF	las A
		rypertension		Pak
14.	77/1/2013	Acute Repositis	79-84	
15.	45/2013	cheonic hidneydiseane, Diabetic Nephropath	.850	
THE REPORT OF THE PERSON NAMED IN COLUMN TWO IN COLUMN TO THE PERSON NAMED IN COLUMN TO THE PERS		famile with intitular of	4 91-96	
1.1.	18 5 2023	Chanic liver disease	97-102/	
18.	8612013	cheronic Rheumatic heart disease	103-108	
19.	12/6/2013	Tuberculosis Heningites	109-114	100
20.	22/6/2023	Myasthania gyavis. Pharmacy Pharmacy Admys Pharmac	115-120	Pok
		Aditys Pharma 533 45		
		Winw 1		and the second

3.1 PHARMACOLOGY - II (PRACTICAL)

Practical: 3 Hrs./Week

List of Experiments:

- Study of laboratory animals and their handling (a. Frogs, b. Mice, c. Rats, d. Guinea pigs, e. Rabbits).
- Study of physiological salt solutions used in experimental pharmacology.
- Study of laboratory appliances used in experimental pharmacology. 2.
- 3. Study of use of anesthetics in laboratory animals.
- To record the dose response curve of Ach using isolated ileum/rectus abdominis 4. 5.
- To carry out bioassay of Ach using isolated ileum/rectus abdominis muscle 6. preparation by interpolation method.
- To carry out bioassay of Ach using isolated ileum/rectus abdominis muscle 7. preparation by three point inethod. .
- To record the dose response curve of Histamine using isolated guinea-pig ileum 8.
- Study of agonistic and antagonistic effects of drugs using isolated guinea-pig ileum 9.
- To carry out bioassay of Histamine using isolated guinea-pig ileum preparation by .10. interpolation method.
- 11. To carry out bioassay of Histamine using guinea-pig ileum preparation by three
- To study the routes of administration of drugs in animals (Rats, Mice, Rabbits).
- 13. Study of theory, principle, procedure involved and interpretation of given results for the following experiments:
 - a) Analgesic property of drug using analgesiometer.
 - b) Antiinflammatory effect of drugs using rat-paw edema method.
 - c) Anticonvulsant activity of drugs using maximal electroshock and pentylene tetrazole methods.
 - d) Antidepressant activity of drugs using pole climbing apparatus and pentobarbitone induced sleeping time methods.
 - e) Locomotor activity evaluation of drugs using actophotometer and rotorod.
 - Cardiotonic activity of drugs using isolated frog heart and mammalian heart preparations.

Scheme of Practical Examination:

cheme of Practical Examination:	Sessionals	Annual
	02	10
Identification	04	10
Synopsis	08	30
Major Experiment (Bioassay)	-	10
Minor Experiment (Interpretation of given Graph or simulated experiment)	04	10
	02	10
Viva	20	70
Max Marks	3hrs	4hrs
Duration ,		- al plus 10 marks fo

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, romptness, viva-vace and record maintenance).





ADB ROAD, SURAMPALEM, E.G. Dist.



~201	
Name G. Shreya Raj.	PIN No. 203417000 F.
Certified that this is the b	oonafide record of
practical work	done by
Mr./Ms. G. Shoreya Raj	
a student of 3rd Pharm P with	Regd. No. 2039170007.
	oratory during the year 2022-28
No. of Experiments Conducted 2	No. of Experiments Attended
polici	90x
Signature - Faculty incharge	Signature - Head of the Department PRINCIPAL
Submitted for the Practical examinat	Aditya Pharmacy Colleg : SURAMPALEM - 533 437
EXAMINERLY CO. THE PROPERTY OF	EXAMINER-2 EXAMINER-2
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TOW * COURT	

s.No.	Date {	Name of the Experiment Pag	je No.	Remarks
	2-1-22.	Immoduction		
1.	2-8-22	study of laboratory animal and their 2.	1.	
2.	09-8-22	Study of physiological salt solution } 8	- 10 _.	18
		used in the pharmaclegical experiment	19,	10
3,	16-8-22	Study of use of Anaestholic in Lab- 11-		1
۹.		study of Applicances in experimental) 15	. (म.	B
5,	6-9-22	vose response and	c= 19,	B
6.	20-9-22	rotentiation of then of	0-21	18
7.	1-1-9-22-	frog nectu abdoninds muscle. Inhibition of Acetylcholine by Lidocaine 2 one chick ileum.	2-53	lh.
8.	11-10-22		4- 25	· B
q .	18-10-22	The state of the s	16 - 27	· W
10.	28-10-22		94 - 31	s B
11.	4-11-22		31 - 32	· W
. 12	. 11-11-22		33-3	5. k
13	. 19-11-22	{ Evaluation of muscle reloxant property of}	36-3	57. V2
14	1. 25.11-2	The state of the s	38 - 1	39
		Adity Pharmacy Coll Pharmacy Adity Pharmacy SIRAMPALEM-533 437		WIKA

.No.	Date {	Name of the Experiment	Page No.	Remarks
15.	15/11-22	chloropromazine winy Actophotometer Analgerie effect of Rentazocine on mice	40-41	u
۱۴.	C-12-22.	ung eddy's plate method. Antinglammatory effect using nat- paw edema method.	} \ \ \ \	12
13.	20-12-23	Anticonvulsant activity of phonytoin against maximal electroshock induced cavulti	C. C	K
は.	27-12-23.	Anticonvultant activity of diazepam again Pentyone tetrazole induced choice couldin	,}чт-ч8-, .}	B
19.	(0.1.23	Company of the second	}49-51 }	B
90.	21-2-23	Complete inhibition of Ach nespoux by Panculonuim on check cleum.	}52-53 }	· L
21,	7-3-23	Cardiotonic acthuity of drugs wing Iso lated progs weart preparellin.	} 54 -59 }	5. 12
			}	
			}	
			}	
			}	
			}	
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		CYCOL CONTRAC	}	WIF
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- Fluorimetric Analysis: Theory, luminescence, factors affecting fluorescence, quenching. Instrumentation, Applications, fluorescent indicators, study of pharmaceutically important compounds estimated by fluorimetry.
- b. Flame Photometry: Theory, nebulisation, flame and flame temperature, interferences, flame spectrometric techniques and instrumentation and pharmaceutical applications.
- c. Atomic Absorption Spectrometry: Introduction, Theory, types of electrodes, instrumentation and applications.
- d. Atomic Emission Spectroscopy: Spectroscopic sources, atomic emission spectrometers, photographic and photoelectric detection.
- e. NMR & ESR (introduction only): Introduction, theoretical aspects and applications.
- f. Mass Spectroscopy: (Introduction only) Fragmentation, types of ions produced mass spectrum and applications.
- g. Polarimetry: (Introduction only) Introduction to optical rotatory dispersion, circular dichroism, polarimeter.
- h. X-RAY Diffraction: (Introduction only) Theory, reciprocal lattice concept, diffraction patterns and applications.
- i. Thermal Analysis: Introduction, instrumentation, applications, and DSC and DTA.

3.2 PHARMACEUTICAL ANALYSIS (PRACTICAL)

Practical: 3 Hrs./Week

List of Experiments:

- 1. Separation and identification of Amino Acids by Paper Chromatography.
- 2. Separation and identification of Sulpha drugs by TLC technique.
 - 3. Effect of pH and solvent on the UV spectrum of given compound.
 - 4. Comparison of the UV spectrum of a compound with that of its derivatives.
 - 5. Determination of dissociation constant of indicators using UV-Visible spectroscopy.
 - 6. Conductometric titration of mixture of acids with a strong base.
 - 7. Potentiometric titration of a acid with a strong base.
 - 8. Estimation of drugs by Fluorimetric technique.
 - 9. Study of quenching effect in fluorimetry.
 - 10. Colourimetric estimation of Supha drugs using BMR reagent.



- 11. Simultaneous estimation of two drugs present in given formulation.
- 12. Assay of Salicylic Acid by colourimetry.
- 13: Determination of Chlorides and Sulphates in Calcium gluconate by Nepheloturbidimetric Method.
- 14. Determination of Na/K by Flame Photometry.
- 15. Determination of pKa using pH meter.
- 16. Determination of specific rotation.
- 17. Comparison of the IR spectrum of a compound with that of its derivatives.
- 18. Demonstration of HPLC.
- 19. Demonstration of HPTLC.
- 20. Demonstration of GC-MS.
- 21. Demonstration of DSC.
- 22. Interpretation of NMR spectra of any one compound.

Reference Books:

- 1. Text Book of Pharm. Analysis by Higuchi. T and Hasen. E. B., New York Inter Science Publishers.
- 2. Quantitative Pharma. Analysis by Jenkins, The Blakiston division, New York.
- 3. Quantitative Drug Analysis, by Garrot. D, Chapman & Hall Ltd., London.
- 4. Undergraduate Instrumental Analysis by James. E., CBS Publishers.
- 5. Instrumental Analysis by Willard and Merritt, EWP, East West Press Ltd.; Delhi/Madras.
- 6. Pharm, Analysis by Skoog and West, Sounders Manipal College Publishing.
- 7. Text Book of Chemical Analysis, by A.I. Vogel, ELBS with Macmillan
- press, Hampshire. 8. Textbook of Pharm. Analysis by K.A.Connors, John Wiley & Sons, New
- York, Brisbane, Singapore. 9. Textbook of Pharm. Analysis (Practical) by Beckett & Stenlake, CBS Publishers, Delhi.
- 10. Textbook of Drug Analysis by P.D. Sethi., CBS Publishers, Delhi.
- 11. Spectroscopy by Silverstein, John & Wiley & Sons. Inc., Canada & Singapore.
- 12. How to practise GMP-A Plan for total quality control by P.P. Sharma, Vandana Publications, Agra.
- 13. The Science & Practice of Pharmacy by Remington Vol-I & II, Mack Publishing Co. Pennsylvania.
- 14. TLC by Stahl, Spring Verlay.
- 15. Text Book of Pharm. Chemistry by Chatten, CBS Publications.
- 16. Spectroscopy by William Kemp, ELBS with Macmillan Press, Hampshire.
- 17. I.P.-1996. The Controller of Publications, New Delhi.
- 18. BPC- Dept. of Health, U.K. for HMSO.
- 19. USP Mack Publishing Co., Easton, PA.
- 20. The Extra Pharmacopoeia The Pharm. Press. London.





ADB ROAD, SURAMPALEM, E.G. Dist.

EPARTMENT OF



PIN No. 2 0 3 G 1 T 0 0 0 3

	the bonafide record of vork done by
Mr./Ms. B. Mounika	
a student of Phomp	with Regd. No 203G 170003
in theph: Analysis	Laboratory during the year .2022202
No. of Experiments Conducted 23	No. of Experiments Attended 23
C.C. Mudhami	909
Signature - Faculty incharge	Signature - Head of the Department Aditya Pharmacy College mination held ShJRAMPALEM-533 437
	Pharmacy Colles EXAMINER-2

Name B. Mounika

Vo.	./	Date {	Name of the Experiment	Page No.	Remarks
ر. ا	2G- 2-0	8-22 { 1-22 {	TUTLOGUETION CO CHOMICA J. C.	1- 4 5- 8	J.
			ascending paper chromatography Identification of amino acids by radial	q_ 12	J.
		9-22	paper chromatography Identification of Metronidazole in a given sample by using ascending	13- 15	j
ዓ)	2.3		Preparation of thin layer chromato-	16- 17	1
5)	lu	-10-22	Jennification of sulphonamide by	 18 - 19 	
 (ي ح) 18	-11-22 5-11-22	Thin layered chromatography Introduction to U.V Visible spectroscopy Determination of Absolption maxima of	\{\begin{aligned} \cdot 20 - 2 \\ \cdot 26 - 2 \end{aligned} \]	5 1
8			Potassium permanganate Estimation of Salicytic acid by	28 - 20	1
9) 9	-12-22	Assay of Paracetamol using Air Specific	30-3	2
Lu	5) \	6-12-2	2 According to paracetamol by Chemical	33-3	5
	j) 2	13-12-2	Dervatization method 2 Assay of paracetamol by using	}36 - 3	38 1
-	2)	30-12-5	Direct comparision method 22 Effect of PH on absorbance spectrum	39-4	10
	(3)	6-1-2	of Sulfanilamide Calibration of pokutionately colles	}41-1	13 J
		6-1-2	by the state of th	}44~'	45

S.No.	Date {	Name of the Experiment	Page No.	Remarks
		calibration of conductivity meter	46-48	
15)	3 - 2 - 23	conductimetric titration of Strong acid	TAXABLE DATE OF THE PARTY OF THE	
16)	3-2-22	Us strong base	***************************************	
ra.)	10 -2 - 23	Determination of PKO of Aspirin by	51 - 62	J.
		PH moter	/	
18)	17-2-23	Determination of puinine Sulphate by	53-54	J.,
		Augrimetry	4	
19)	24 - 2-23	Estimation of sulphate ions by using	<u>{55−58</u>	100
		Nephelometry	1	
20)	3-3-23	Determination of Nat, K+ concentration	\$ 59-60	
		in unknown sample by using flame	\	
		photometry	} ₆₁₋₆₂	
	1110 1210 1210 1210 1210 1210 1210 1210	Interpretation of IR spectra	}63-61	
22) 17-3-2	3 column chromatography		1 1
23	24-3-23	Standard operating procedure for HPLC	3-13	8
24) 31-3-23	Standard operating procedure for GC		
			\	
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		College College	\dashv	
L		Aditya Marmacy College SURAMPALEM-533 437)	SAME THE PROPERTY OF THE PROPE
		Adity		Wił

Oncology: Basic principles of Cancer therapy, General introduction to cancer 4 chemotherapeutic agents. Chemotherapy of breast cancer, leukemia. Management of chemotherapy nausea and emesis

Dermatology: Psoriasis. Scabies. Eczema. Impetigo

3.3 PHARMACOTHERAPEUTICS - II (PRACTICAL)

Practical: 3 Hrs./Week

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation.

The student shall be trained to understand the principle and practice involved in selection of drug therapy including clinical discussion.

A minimum of 20 cases should be presented and recorded covering most common diseases.

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 - 2000 words] should be submitted for evaluation.

Format of the assignment:

- 1. Minimum & Maximum number of pages,
- 2. Reference(s) shall be included at the end. 3. Assignment can be a combined presentation at the end of the academic year.
- 4. It shall be computer draft copy.
- 5. Name and signature of the student.
- 6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

cheme of Practical E	Sessionals	Annual
	05	13
Synopsis	10 ·	.23
Major Experiment	03	,15 !
Minor Experiment	02	115
Viva		70 :
Max Marks	20	04hrs
Duration	03hrs	. July 1

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



Aditya Pharmacy Colles SURAMPALEM-533 437



ADB ROAD, SURAMPALEM, E.G. Dist.



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Subrivited for the Practical examination held on

No. of Experiments Attended

No. of Experiments Conducted

Signature the beginnent

Signature - Faculty incharge

EXAMINER-2

S Aditya Pharmacy College



Name of the Experiment

Page No.

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18-8z	core study of CKDy, vaginal warm	86-1-t	81
1 /tt-12	0	31/11/18	+1
	new range row or for paragraph	12/11/32	.91
ot-89	रेगु-		
29-59	Core study of Bilabal HIP ostwarthul	72/21/61	<u>.</u> 51
19-59	1 0- 0-	1.060 181	61 E1
1) res-15	Boux study of CXA with ble Hemipossis!	\ \(\circ\n\gamma\circ}	19
1 09-EI	- Colh Septuenia	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	11
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be-9	0 0 0	र्गिवीय राजिस	
10-6	Case study of Exgens	ररीठान	
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h1-0	Ease study of Phoumatoid dethrite ?	125/8/10	
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ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF

Name B. Mounika	PIN No. 203G1T0003
Certified that this is the l	
practical work	done by
Mr./Ms. B. Mouniko	
a student of N. Pharm - D. with	Regd. No. 203G1T0003
in the Medicinal Chemistry Labo	pratory during the year 2022 - 2023
No. of Experiments Conducted 2	No. of Experiments Attended
T8840000	400
Signature - Faculty incharge	Signature - Head of the Department PRINCIPAL
	Aditya Pharmacy College
Submitted for the Practical examinati	on held on SURAMPALEM-533 437
EXAMINER-1 Aditya	Pharmacy College Pharmacy College

WIKAS, NLR

S.No.	Date {	Name of the Experiment	Page No.	Remarks
1)	25 /08/22	Synthesis of Benzocaine	1-2	7—
		Preparation of 7-hydroxy 4-methyl	3-4	(8)
		Coumarin		_ ال
3)	15 9 22	Preparation of Benzimidazole	5-6	7—
4)	29 A/22	Preparation of Benzotriazole	7-8	182
5)	13/10/22	synthesis of Benzilic acid	9-10	J ^o _
		Preparation of fluorescein	11-15	7
7)	27/10/22	Preparation of 55-Diphenyl Hydantoin	13-14	40
8)	10/11/22	Preparation of 2,3-Diphenyl quinoxoline	15-16	Jon
		Assay of Ascorbic acid	81-17	2
10)	17/11/22	Assay of sulphanilamide	19-20	(0.
11)	24/11/22	Assay of Metronidazole	21-22	78~
12)	8/12/22	Assay of Benzocaine	23-24	
13)	15/12/22	Assay of Isoniazid	25-26	7
		Assay of Diclotenac Sodium	27-28	78
15)	29/11/22	Assay of Oapsone	29-30	٥ .
16)	2/02/23	Assay of Chloroquine phosphate	31-32	
17)	16 02/23	Identification test for sulfanilamide	33	7 &
18)	23/02/23	Identification test for Isoniazid	34	ں
19)	9/03/23	Identification test for metronidazole	35	17
20)	1110	Identification test for Assobic acid	36-37	78
21)	10010010	Identification test of Benzocaine	38	0
22)	23/03/23	PSAR studies.	39-48	38,
		\	}	100
		}	{	
		} (COL)	{	
		Aditya Pharmacy Co	olles-	
		Aditya Pharmacy SURAMPALEM-533	437	

3.5 MEDICINAL CHEMISTRY (PRACTICAL)

Practical: 3 Hrs./Week

1. Assays of important drugs from the course content.

 Preparation of medicinally important compounds or intermediates required for synthesis of drugs.

3. Monograph analysis of important drugs.

4. Determination of partition coefficients, dissociation constants and molar refractivity of compounds for QSAR analysis.

Reference Books:

a. Wilson and Gisvold's Text book of Organic, Medicinal and Pharmaceutical Chemistry, Lippincott-Raven Publishers-New York, Philadelphia.

 William.O.Foye, Principles of Medicinal Chemistry, B.I. Waverly Pvt. Ltd., New Delhi.

c. Burgers, Medicinal Chemistry, M.E., Welly Med. Chemistry M.E. Walffed Johnwilley and Sons, Wiley-interscience Publication, New York, Toranto.

d. A Text Book of Medicinal Chemistry Vol. I and II by Surendra N. Pandeya, S.G. Publisher, 6, Dildayal Nagar, Varanasi -10.

e. Indian Pharmacopoeia 1985 and 1996. The Controller of Publications, Civil Lines, Delhi - 54.

f. Current Index of Medical Specialities (CIMS) and MIMS India, MIMS, A.E. Morgan Publications (I) Pvt. Ltd, New Delhi-19.

g. Organic Drug Synthesis-Ledniser Mitzsher Vol. I and II.

h. Pharmaceutical Chemistry drug Synthesis Vol. I and II by H. J. Roth and A. Kleemann.

i. The Science and Practice of Pharmacy Vol. I and 2, Remington, MACK Publishing Company, Easton, Pennsylvania.



Aditya Pharmacy College

3.6 PHARMACEUTICAL FORMULATIONS (PRACTICAL)

Practical: 3 Hrs./Week

List of Experiments:

- Manufacture of Tablets
 - a. Ordinary compressed tablet-wet granulation
 - b. Tablets prepared by direct compression.
 - c. Soluble tablet.
 - d. Chewable tablet.
- Formulation and filling of hard gelatin capsules
- 3. Manufacture of parenterals
 - a. Ascorbic acid injection
 - b. Calcium gluconate injection
 - c. Sodium chloride infusion.
 - d. Dextrose and Sodium chloride injection/infusion.
- Evaluation of Pharmaceutical formulations (QC tests)
 - a. Tablets
 - b. Capsules.
 - c. Injections
- Formulation of two liquid oral preparations and evaluation by assay
 - a. Solution: Paracetamol Syrup
 - b. Antacid suspensions- Aluminum hydroxide gel
- 6. Formulation of semisolids and evaluation by assay
 - a. Salicyclic acid and benzoic acid ointment
 - b. Gel formulation Diclofenac gel
- Cosmetic preparations
 - a. Lipsticks
 - b. Cold cream and vanishing cream
 - c. Clear liquid shampoo
 - d. Tooth paste and tooth powders.
- Tablet coating (demonstration)

Scheme of Practical Examination:

7,	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25:
Minor Experiment	03	15:
Viva	02	15
Max Marks	20	70:
Duration	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity. promptness, viva-voce and record maintenance).



Aditya Pharmacy College SURAMPALEM-533 437



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Pharmaceutical Formulations

Certified that this is the bonafide record of practical work done by	
Mr./Ms. Mercy: pinipe	••••
in the ph. Jornalalions. Laboratory during the year 2022.2	 023
No. of Experiments Conducted 20 No. of Experiments Attended 2	
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Signature - Faculty incharge

Signature - Head of the Department Aditya Pharmacy College

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S.No.	Date {	Name of the Experiment	Page No.	Remarks
	22 8 29	Introduction	01-03	C/8102
1.	29/8/22	Journalation of paracelamal fablets	04-07	21912)
	_, _ \	by wet granulation Method.	}	2(11)
2.	5/09/22	Formulation of Dichofenac Sodium	108-10	12/9/2
		fabless by Wirect Compression Method.	}	prace
3.	12/9/22	Formulation of Soluble Acetyl-Salicylic	11-12	en
		- acid fables	}	19/9/22
4	19/9/22	preparation of chemable Laxofive feebless	13-14	2019122
5.	26/9/22	Formulation and Filling of Hard	15-18	C.
		-Gelatia Capsules	}	7/10/2
115	3/10/22	Infroduction to parentrals	19-20	Patroler
6.	10/10/22	Formulation of Ascorbic acid Injection	21-23	PAINIEL
7.	17/10/22	Formulation of calcium Gluconate Injection	124-26	9 mil
8.	7/11/22	Formulation of Sodium chloride griection	27	e HINIZL
9.	14/11/22	formulation of Dectrose and	28	em
		Sodium chloride Infusion	}	21/11/12
10.	2/11/22	Evaluation of formulated.	29-33	28/11/21
		paracefamol fables	}	2000
11.	28/11/22	Formulation of paracetama surup	34-37	(1)111
		and Fualuation	}	ے روز
12.	5/12/22	formulation of Aluminium Hydroxide	38-40	211421
		Gel Antacid Suspension	}	
13.	12/12/22	- Tormulation of Salicylic boid and	<u>}41-42</u>	19/14/1
		Benzoic acid oinfiment.	}	1711101
14.	19/12/22	Formulation of Diclofenac socium	43-45	0
		- Gel and Evaluation by Assay	}	26/12/26
			}	
		Aditya Pharmacy College Aditya Pharmacy College SURAMPALEM-533 439	}	
		Aditya Pharmacy College Aditya		WIKA

S.No.	Date {	Name of the Experiment	Page No.	Remarks
15. 16. 9 17. 18.	Date { 26 12 22 9 61 23 9 62 23 13 24 23 24 2 23 3 3 3 4 2 3 3 4 4 3 4 4 5 6 6 6 6 6 6 7 6 6 7 7 8 9 6 6 9 6 6 9 7 9	Introduction to Cosmetics preparation of cold creams preparation of Danishing Cream preparation of Tooth powder preparation of Liquid Sharopoo preparation of Lipstick preparation of Toothpaste	}46-47 } 48 } 49 } 50-51	2/11/12/ 2/11/2/ 2/11/2/ 2/11/2/
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SURAMPALEM-533 437

4.1 PHARMACOTHERAPEUTICS - III (PRACTICAL)

Practical: 3 Hrs./Week

Practicals:

Hospital postings for a period of at least 50 hours is required to understand the principles and practice involved in ward round participation and clinical discussion on selection of drug therapy. Students are required to maintain a record of 15 cases observed in the ward and the same should be submitted at the end of the course for evaluation. Each student should present at least two medical cases they have observed and followed in the wards.

Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases:

Title of the topic

Gastrointestinal system: Peptic ulcer disease, Gastro Esophageal Reflux Disease, Inflammatory bowel disease, Liver disorders - Alcoholic liver disease, Viral hepatitis including jaundice, and Drug induced liver disorders.

Haematological system: Anaemias, Venous thromboembolism, Drug induced blood disorders.

Nervous system: Epilepsy, Parkinsonism, Stroke, Alzheimer's disease,

Psychiatry disorders: Schizophrenia, Affective disorders, Anxiety disorders, Sleep disorders, Obsessive Compulsive disorders

Pain management including Pain pathways, neuralgias, headaches.

Evidence Based Medicine

Assignments:

Students are required to submit written assignments on the topics given to them. Topicsallotted should cover recent developments in drug therapy of various diseases. A minimum of THREE, assignments [1500 - 2000 words] should be submitted for evaluation.

Format of the assignment:

- 1. Minimum & Maximum number of pages
- 2. Reference(s) shall be included at the end.
- 3. Assignment can be a combined presentation at the end of the academic year
- 4. It shall be computer draft copy
- 5. Name and signature of the student
- 6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals .	Annual
Synopsis	05.	15
Major Experiment	10	25'
Minor Experiment	03	15
Viva	02 .	13
Max Marks	2.0	13
Duration	03hrs	04hrs

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity. promptness, viva-voce and record maintenance).



Aditya Pharmacy College SURAMPALEM-533 437



ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF Pharmacotherapy

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Name B. PradeepThi	PIN No. 1 9 3 5 1 T 0 0 0 4			
Certified that this is the	bonafide record of			
practical work done by				
Mr./Ms. B. Pradeepthi				
a student of IV Pharm D wit	h Regd. No. 1939170004			
in the Pharmacotherapeutics - II Laboratory during the year 2022-2023				
No. of Experiments Conducted 12-	No. of Experiments Attended			
1. feiff g. 2. 023	46%			
Signature - Faculty incharge	Signature - Head of the Department PRINCIPAL			
lack	Aditya Pharmacy College			
EXAMINER-1	tion held on SURAMPATEM 333 437. EXAMINER-2			
SURAMPALEM CO	Aditya Pharmacy College WIKAS, I			

No.	Da	te {	Name of the Experiment	Page No.	Remarks
*	25 7	22	Introduction to the SOAP format	1-5	W
١	8 8	22	CaseStudy of Peptic ulcer disease	6-10	up
2_	29 8	3 22	Case Study of Gastroesophageal	11-14	ugu
			reflux disease		
3	12/9	22	Case study of Anaemia	15-23	ar
4	10 10	22	Case Study of Alcoholic liver Disease	24-30	CM
			with upper GI bleeding	<u> </u>	1
5	24/10	122	Case study of Deep Vein Thrombosis	31-36	M
6	5 11	22	Case Study of epilepsy with recurrent Seizures	37-44	Chr
7	2 11	23	Case Study of Schizophrenia	} 45 - 52	- ar
8	13/2	23	Case study of OCD	53-56	0 1
9	201	2 23	Case Study of BPAD	\$57-61	
10	6 3	News to the state of	Case study of Generalised Anxiety disorder	}62-66	
11		123	Case Study of Primary Insomnia	}67-70	11 11 11 11 11 11 11 11 11 11 11 11 11
12	13/3			}71-74	99
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Aditya Pharmacy College SURAMPALEM-533 437

WIKAS-NLR.

5 Hospital pharmacy services

- a) Procurement & warehousing of drugs and Pharmaceuticals
- b) Inventory control
 Definition, various methods of Inventory Control
 ABC, VED, EOQ, Lead time, safety stock
- c) Drug distribution in the hospital
 - i) Individual prescription method
 - ii) Floor stock method
 - iii) Unit dose drug distribution method
- d) Distribution of Narcotic and other controlled substances
- e) Central sterile supply services Role of pharmacist

6 Manufacture of Pharmaceutical preparations

- a) Sterile formulations large and small volume parenterals
- b) Manufacture of Ointments, Liquids, and creams
- c) Manufacturing of Tablets, granules, capsules, and powders
- d) Total parenteral nutrition
- 7 Continuing professional development programs
 Education and training
- 8 Radio Pharmaceuticals Handling and packaging
- 9 Professional Relations and practices of hospital pharmacist

4.2 HOSPITAL PHARMACY (PRACTICAL)

Practical: 3 Hrs./Week

- 1. Assessment of drug interactions in the given prescriptions
- 2. Manufacture of parenteral formulations, powders.
- 3., Drug information queries.
- 4. Inventory control

List of Assignments:

- 1. Design and Management of Hospital pharmacy department for a 300 bedded hospital.
- 2: Pharmacy and Therapeutics committee Organization, functions, and limitations.
- 3. Development of a hospital formulary for 300 bedded teaching hospital
- 4. Preparation of ABC analysis of drugs sold in one month from the pharmacy.
- 5. Different phases of clinical trials with elements to be evaluated.
- 6. Various sources of drug information and systematic approach to provide unbiased drug information.
- Evaluation of prescriptions generated in hospital for drug interactions and find out the suitable management.



Aditya Pharmacy College SURAMPALEM-533 437

Special requirements:

- 1. Each college should sign MoU with nearby local hospital having minimum 150 beds for providing necessary training to the students' on hospital pharmacy activities.
- 2. Well equipped with various resources of drug information.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05.	15
Major Experiment	10	25
Minor Experiment	03	15
	02	. 15
Viva	20	70
Max Marks	. 03hrs	04hrs
Duration.	. 05,1113	

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



Aditya Pharmacy College STIRAMPALEM-533 437



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF PHARMACY PRACTICE

	93-
Name K. Sunanda	PIN No. 1936170026
Certified that this is the	e bonafide record of
practical wor	k done by
Mr./Ms. Kie elumanda	X
a student of IV - phanmD wi	ith Regd. No. 1936/JT0026
in the Hospital phannacy La	boratory during the year 2012, 2023
No. of Experiments Conducted 11	No. of Experiments Attended 18
Signature - Faculty incharge	Signature - Head of the Department SQUNCIPAL Aditya Pharmacy College

Submitted for the Practical examination held on SURAMPALEM-533 437

EXAMINER-1

EXAMINER

.No.	Date {	Name of the Experiment	Page No.	Remarks
(]	12-8-22	Interoduction	1-3	E11814
	26-8-22 }	Deug perofile-1	4-6	9/9/22
2047	9-9-22	Deug profile-2	7-9	15/9/22
	23-9-22	Interoduction to powertuals	12-14	in lating
	124-10-22	sodium chloride injection	10	31710/21
1 .	ai-10-32	Desteuse and Sodium Bhloride infinon	[11	CLICATIVESCENCE CONTRACTORS
ĸ.	11-11-22	Interoduction to the powders	15-17	** ***********************************
5	18-11-22	Oral relightation salt	18	Eshin
6	95-11-92	Medicated dustring powder	19-20	
	9-12-22	Introduction to dung information query	81-85	16/14/1
0.1	16-12-22	Deug information query case	186-28	Blues
*	23-12-22	Introduction to deing interactions		e shiz
8	6-1-23	Deing interaction & are study -1	<i>35-36</i>	312/2)
*	3-2-23	I sementary control interoduction		101212
9	10-2-23	I smentary case study -1		July
10	94-2-23	I smentary case-study-2	{43-44	30/3/6
11.	10-3-23	I Inventory case study-3	\$45-46	- Furesti
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4.3 CLINICAL PHARMACY (PRACTICAL)

Practical: 3 Hrs./Week

Students are expected to perform 15 practicals in the following areas covering the topics

- a. Answering drug information questions (4 Nos)
- b. Patient medication counselling (4 Nos)
- c. Case studies related to laboratory investigations (4 Nos)
- d. Patient medication history interview (3 Nos)

Assignment:

Students are expected to submit THREE written assignments (1500 - 2000 words) on the topics given to them covering the following areas dealt in theory class.

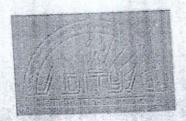
Drug information, Patient medication history interview, Patient medication counselling, Critical appraisal of recently published articles in the biomedical literature which deals

Format of the assignment:

- 1. Minimum & Maximum number of pages.
- 2. Reference(s) shall be included at the end.
- 3. Assignment can be a combined presentation at the end of the academic year.
- 5. Name and signature of the student.
- 6. Time allocated for presentation may be 8+2 Min.







ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



Name K. Bunanda PIN No. 1936170026	
Certified that this is the bonafide record of	
practical work done by	
Mr./Ms. Kaligithi asunanda	
a student of	
in the ralinual phonocy Laboratory during the year \$0222023	
No. of Experiments Conducted	
No. of Experiments Conducted . No. of Experiments Attended 23 No. of Experiments Attended 23 Signature - Head of the Department	
Signature - Faculty Incharge Aditya Pharmacy College Supampalem - 533 431	
Submitted for the Practical examination held on	
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Name of the Experiment Page No.	
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3-8-20 Dang information query-3	
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12-9-22 Sering information query-6	13/9/
19-9-22 Drug information green = 7	
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2 3-10-22 potient connelling care study-2	
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15. 24-10-20 portient councilling care study-5	
16. 31-10-22 Medication history inturiew form-1	
18. 7-11-22 Medication history interview fam- 2	
19. 21-11-22 medication history interview form-3	(Core
20 5-12-22 Medication history internew form-4	1 1 1911
2) 12-12-22 Medication history structure form-5	
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4.5 BIOPHARMACEUTICS AND PHARMACOKINETICS (PRACTICAL)

Practical: 3 Hrs/Week

- 1. Improvement of dissolution characteristics of slightly soluble drugs by some methods.
- Comparison of dissolution studies of two different marketed products of same drug.
- 3. Influence of polymorphism on solubility and dissolution.
- 4. Protein binding studies of a highly protein bound drug and poorly protein bound drug.
- 5. Extent of plasma-protein hinding studies on the same drug (i.e. highly and poorly protein bound drug) at different concentrations in respect of constant time.
- 6. Bioavailability studies of some commonly used drugs on animal/human model.
- 7. Calculation of Ka, Ke, t₁/2, Cmax, AUC, AUMC, MRT etc. from blood profile data.
- 8. Calculation of bioavailability from urinary excretion data for two drugs.
- 9. Calculation of AUC and bioequivalence from the given data for two drugs.
- 10. In vitro absorption studies.
- 11. Bioequivalency studies on the different drugs marketed (eg) Tetracycline, Sulphamethoxzole, Trimethoprim, Aspirin etc., on animals and human volunteers.
- 12. Absorption studies in animal-inverted intestine using various drugs.
- 13. Effect on contact time on the plasma protein binding of drugs.
- 14. Studying metabolic pathways for different drugs based on elimination kinetics data.
- 15. Calculation of elimination half-life for different drugs by using urinary elimination data and blood level data.
- 16. Determination of renal clearance.

References:

- a. Biopharmaceutics and Clinical Pharmacokinetics by, Milo Gibaldi
- b. Remington's Pharmaceutical Sciences, By Mack Publishing Company, Pennsylvnia.
- c. Pharmacokinetics: By Milo Glbaldi Donald, R. Mercel Dekker Inc.
- d. Hand Book of Clinical Pharmacokinetics, By Milo Gibaldi and Laurie Prescott by ADIS Health Science Press.
- e. Biopharmaceutics and Pharmacokinetics; By Robert F Notari
- f. Biopharmaceutics; By Swarbrick
- g. Bio pharmaceutics and Pharmacokinetics A Treatise, By D. M. Brahmankar and Sunil B.Jaiswal, Vallabh Prakashan Pitampura, Delhi '
- h. Cilincal Pharmacokinetics, Concepts and Applications: By Malcolm Rowland and Thomas, N. Tozen, Lea and Febrger, Philadelphia, 1995.
- i. Dissolution, Bioavailability and Bioequivalence, By Abdou H.M., Mack, Publishing Company, Pennsylvania 1989.
- Biopharmaceutics and Clinical Pharmacokinetics-An introduction 4th edition Revised and expanded by Rebort F Notari Marcel Dekker Inn, New York and Basel, 1987.
- k. Encyclopedia of Pharmaceutical Technology. Vol 13, James Swarbrick, James, C. Roylan, Marcel Dekker Inc. New York 1996.



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Name B PRADEEPTHI	PIN No. 1939170004
Certified that this is the	e bonafide record of
practical wor	k done by
Mr./Ms. B. PRADEEPTHI	
a student of IV PHARM D wi	th Regd. No. 1939170004
in the BIOPHARMACEUTICS & La	boratory during the year 2022-2023
No. of Experiments Conducted 17	No. of Experiments Attended 17
Q.A.	468
Signature - Faculty incharge	Signature - Head of the Department PRINCIPAL
Submitted for the Breatical examin	Aditya Pharmacy College

.No.	Date {	Name of the Experiment	Page No.	Remarks
*	26-08-22	INTRODUCTION }	1-2	Red
1.	02-9-22	Evaluation of dissolution rate of	3-6	PoluA
	1	commercial brands of PCM tablets.		
2	16-09-22	Effect of binder on dissolution rate	7-10	R.A
	1	. of paracetamol		
3	23-09-22	Effect of diluent on dissolution rate	11-14	@A
	{	of paracetamol		
4	14-10-22	Effect of disintegrant on dissolution	15-18	Ren
	1	rate of paracetamol		
5	21-10-22	Evaluation of hypothetical dissolution of	19-21	R
		two brands of Paracetamol tablets		
6	28-10-22	study of protein binding of nimesulide	22-24	Rom
	1 2 2 2 2	using of Semi permeable membrane		- 00
٦	11-11-22	Evaluation of dissolution rate of	25-28	R
		dichofenac Sustained release tablet and		
	11202	diclofenac Conventional tablet		
8	25-11-22	Effect of solubility enhancer on	29-32	Ra
		dissolution rate of Paracetamol		
*	09-12-22	Introduction to pharmacokinetics	33-34	R
9	16-12-22	Estimation of different pharmacokinetic	35-37	R
		Parameters by enlarging one compartment		
		Open model IV bolus data		
10	23-12-22	Estimation of pharmacokinetic parameters	38•	Rose
11		Determination of Mean Residence Time	39-40	R
12	27-01-23	Analysis of pharmacokinetic data after	41-46	Ru
		Extravascular administration [one compartment	S	
- September 1		. 7		
13	03-2-23	Determination of absorption rate Constant SURAMPALEM S Aditya Pha CIRAMPALEM S Aditya Pha CIRAMPALEM S CIRAMPALEM S ACIRAMPALEM S ACIRAMPALEM S ACIRAMPALEM S ACIRAMPALEM S CIRAMPALEM S CIR	CONTESTUA	RA

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		by wagner Nelson method.		
14,	17-02-23	Determination of elimination rate Constant	50-52	Bank
		by rate excretion method	}	
15.	03-3-23	Estimation of pharmacokinetic parameters	53-58	BUA
		of one compartment model wrine data	}	
		by Sigma ninus method	}	
16	17-3-23	Determination of renal clearance of	}59-61	BUA
		riboflavin using urinary excretion data	}	
17	24-03-23	Determination of renal clearance	}G2-G4	BUL
		of ascorbic acid using Sigma	}	
		ninus method	}	
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9		SISURAMPALEM IN STANDARD PHOTOLOGICAL PARTIES	337	