

ADITYA

PHARMACY COLLEGE

(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



Ph: 98665 76663

E-mail: office@adityapharmacy.edu.in

Web: www.adityapharmacy.edu.in

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

**List of Students Undertaking Project Work/ Fieldwork/ Internship for the
Academic Year 2024-25.**

1st year M.Pharmacy (Analysis)

S.No.	Reg.No.	Name of the candidate	Project work	Fieldwork	Internship
1	243G1S1601	CHAKKA DIMPULE SRI CHANDRIKA	X	✓	X
2	243G1S1602	INAKOTI SONIYA SANTI	X	✓	X
3	243G1S1603	MOHAMMED TAMEEM RAZA	X	✓	X
4	243G1S1604	THOTAPALLI RAHUL	X	✓	X

PHARMACEUTICAL ANALYSIS PRACTICAL - I (MPA 105PA)

1. Calibration of glasswares
2. Calibration of pH meter
3. Calibration of UV-Visible spectrophotometer
4. Calibration of FTIR spectrophotometer
5. Calibration of GC instrument
6. Calibration of HPLC instrument
7. Cleaning validation of any one equipment
8. Impurity profiling of drugs
9. Assay of official compounds by different titrations
10. Assay of official compounds by instrumental techniques.
11. Estimation of riboflavin/quinine sulphate by fluorimetry
12. Estimation of sodium/potassium by flame photometry
13. Quantitative determination of hydroxyl group.
14. Quantitative determination of amino group
15. Colorimetric determination of drugs by using different reagents


PRINCIPAL
DITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

M. PHARMACY (PHARMACEUTICAL ANALYSIS)

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

Mr./Ms.INAKOTI : SONIYA SANTI.....

with Roll No.243GIS1602..... a student of 1-L.M. PHARMACY Semester

in the ADVANCED PHARMACEUTICAL course during the Academic Year. 2024 - 2025
ANALYSIS - I

No. of Experiments Conducted

19

No. of Experiments Completed

19

Faculty incharge

Principal

Aditya Pharmacy College

Submitted for the practical examination held on 17/3/25 SURAMPALEM-533 437

Examiner - I

Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
	7/11/24	Introduction	1 - 4	2/10	18/11/24
1.	11/11/24	Calibration of Glassware.	5 - 8	2/10	18/11/24
2.	14/11/24	Calibration of UV-Visible Spectrophotometer.	9 - 12	2/10	18/11/24
3.	18/11/24	Assay of Paracetamol using A _{1%} method (or) Specific Absorbance Method.	13 - 14	2/10	28/11/24
4.	21/11/24	Assay of Salicylic acid using Direct Comparison (or) Single point Method	15 - 17	2/10	18/11/24
5.	25/11/24	Assay of Salicylic acid using Double Point standardization method.	18 - 20	2/10	28/11/24
6.	28/11/24	Assay of Sulphacetamide Sodium in Eye drops using BM Reagent	21 - 23	2/10	12/12/24
7.	2/12/24	Assay of Furosemide	24 - 26	2/10	12/12/24
8.	5/12/24	Simultaneous Estimation of Sodium Benzoate & Caffeine By Simultaneous Equation Method	27 - 29	2/10	12/12/24
9.	9/12/24	Assay of Paracetamol using Chemical Derivatization method	30 - 32	2/10	12/12/24
10.	12/12/24	Estimation of Sodium Ion concentration By Flame photometry.	33 - 34	2/10	20/12/24
11.	16/12/24	Estimation of Potassium Ion concentration By Flame photometry.	35 - 36	2/10	20/12/24
12.	30/12/24	Estimation of Riboflavin By Fluorimetry	37 - 38	2/10	30/12/24



PRINCIPAL

ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533 437

INDEX

[illegible]

PHARMACEUTICAL ANALYSIS PRACTICAL - II (MPA 105PB)

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. Determination of total reducing sugar
6. Determination of proteins
7. Determination of saponification value, Iodine value, Peroxide value, Acid value in food products
8. Determination of fat content and rancidity in food products
9. Analysis of natural and synthetic colors in food
10. Determination of preservatives in food
11. Determination of pesticide residue in food products
12. Analysis of vitamin content in food products
13. Determination of density and specific gravity of foods
14. Determination of food additives


PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

M. PHARMACY (PHARMACEUTICAL ANALYSIS)

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

Mr./Ms. INAKOTI SONIYA SANTI

with Roll No. 243G151602 a student of 1-1 M. PHARMACY Semester

in the ADVANCED PHARMACEUTICAL course during the Academic Year 2024-2025
ANALYSIS - II

No. of Experiments Conducted 24

No. of Experiments Completed 22

Faculty incharge

Principal

PRINCIPAL

Aditya Pharmacy College
SURAMPALAM-533 437

Submitted for the practical examination held on

Examiner - I

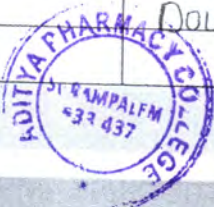
Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
	8/11/24	Introduction	1		
1.	8/11/24	Construction of Linearity curve using Salicylic acid	2 - 3	9	13/11
2.	13/11/24	Assay of Salicylic acid using Direct Comparison method (or) Single Point Method	4 - 6	9	15/11
3.	15/11/24	Estimation of Salicylic acid using Double Point Standardization method.	7 - 9	9	20/11
4.	20/11/24	Assay of Paracetamol using $A_{1cm}^{1\%}$ Method	10 - 11	9	
5.	22/11/24	Assay of Paracetamol using chemical Derivatization method	12 - 14	9	29/11
6.	27/11/24	Assay of Sulphacetamide Sodium in Eye drops using BM Reagent	15 - 17	9	
7.	29/11/24	Determination of Acid Value of Oil.	18 - 20	9	04/12
8.	4/12/24	Determination of Saponification Value of Oil.	21 - 22	9	06/12
9.	6/12/24	Determination of Iodine Value of Oil.	23 - 25	9	
10.	11/12/24	Determination of Peroxide Value of Oil.	26 - 28	9	13/12
11.	13/12/24	Estimation ofrancidity of Edible Oil.	29 - 30	9	
12.	18/12/24	Construction of Calibration Curve for Paracetamol using Double Beam Spectrophotometer	31 - 33	9	20/12



INDEX

[illegible]

PRINCIPAL
ADITYA PHARMACY COLLEGE(A
SURAMPALM-533 437

PHARMACEUTICAL ANALYSIS PRACTICAL - III (MPA 205PA)

1. Comparison of absorption spectra by UV and Wood ward – Fiesure rule
2. Interpretation of organic compounds by FT-IR
3. Interpretation of organic compounds by NMR
4. Interpretation of organic compounds by MS
5. Determination of purity by DSC in pharmaceuticals
6. Identification of organic compounds using FT-IR, NMR, CNMR and Mass spectra
7. Bio molecules separation utilizing various sample preparation techniques and Quantitative analysis of components by gel electrophoresis.
8. Bio molecules separation utilizing various sample preparation techniques and Quantitative analysis of components by HPLC techniques.
9. Isolation of analgesics from biological fluids (Blood serum and urine).
10. Protocol preparation and performance of analytical / Bioanalytical method validation.
11. Protocol preparation for the conduct of BA/BE studies according to guidelines.



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

M. PHARMACY (PHARMACEUTICAL ANALYSIS)

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

Mr./Ms. INAKOTI SONIYA SANTI

with Roll No. 243G1S1602 a student of 1st YEAR IInd Semester

in the ADVANCED PHARMACEUTICAL ANALYSIS - III course during the Academic Year 2024 - 2025

No. of Experiments Conducted 14

No. of Experiments Completed 14

Faculty incharge

Principal

Submitted for the practical examination held on 21/2/25 at Aditya Pharmacy College

Examiner - I

Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
1	14/4/25	Comparison of Absorption Spectra by Woodward - Fieser Rule	1-7	10	[Signature]
2	22/4/25	Comparison of Absorption Spectra by Woodward - Fieser Rule	8-9	10	[Signature]
3	28/4/25	Interpretation of Organic Compounds by FT-IR	10-12	9	[Signature]
4	5/5/25	Interpretation of Organic compounds by ^1H NMR Spectra	13-17	9	[Signature]
5	6/5/25	Interpretation of Organic compounds by ^{13}C NMR Spectra	18-20	10	[Signature]
6	10/6/25	Interpretation of Organic compounds by DEPT Spectra	21-23	10	[Signature]
7	17/6/25	Interpretation of Organic Compounds by Mass Spectra	24-27	10	[Signature]
8	23/6/25	Distinguish of Pentan-2-One and Pentan-3-One compounds by Mass spectrum	28-31	10	[Signature]
9	7/7/25	Identification of Organic molecule using FT-IR, ^1H NMR, ^{13}C NMR and Mass Spectra	32-38	9	[Signature]
10	14/7/25	Determination of purity in DSC By pharmaceuticals	39-41	9	[Signature]
11	21/7/25	Isolation of Analgesics from Biological Fluids (Blood)	42-44	10	[Signature]
12	28/7/25	Protocol Preparation For Analytical Method Validation	45-59	10	[Signature]
13	4/8/25	Designing And protocol of Bioequivalence Studies As per CDSCO	60-65	10	[Signature]



INDEX

[illegible]

PHARMACEUTICAL ANALYSIS PRACTICAL - IV (MPA 205PB)

1. In process and finished product quality control tests for tablets, capsules, parenterals and creams
2. Quality control tests for Primary and secondary packing materials
3. Assay of raw materials as per official monographs
4. Testing of related and foreign substances in drugs and raw materials
5. Preparation of Master Formula Record.
6. Preparation of Batch Manufacturing Record.
7. Quantitative analysis of rancidity in lipsticks and hair oil
8. Determination of aryl amine content and Developer in hair dye
9. Determination of foam height and SLS content of Shampoo.
10. Determination of total fatty matter in creams (Soap, skin and hair creams)
11. Determination of acid value and saponification value.
12. Determination of calcium thioglycolate in depilatories

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

M. PHARMACY (PHARMACEUTICAL ANALYSIS)

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

Mr./Ms. INAKOTI SONIYA SANTI

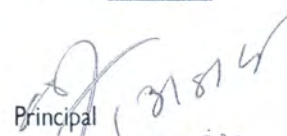
with Roll No. 243G151602 a student of M. PHARMACY I-II Semester

in the ADVANCED PHARMACEUTICAL ANALYSIS - IV course during the Academic Year 2024 - 2025

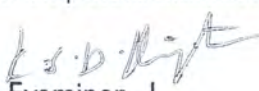
No. of Experiments Conducted 19

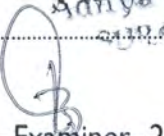
No. of Experiments Completed 19


Faculty incharge


Principal

Submitted for the practical examination held on

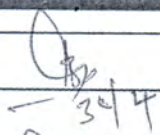
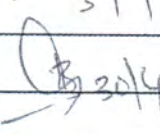
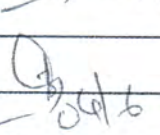
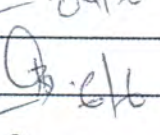
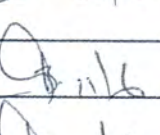
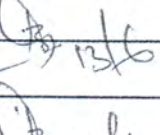
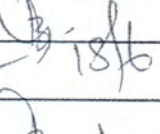
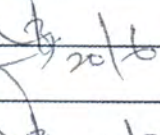
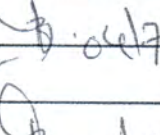
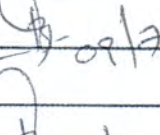
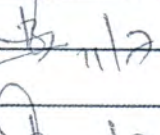
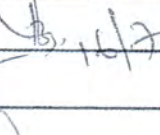
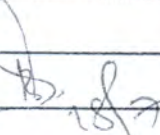
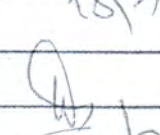

Examiner - I


Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

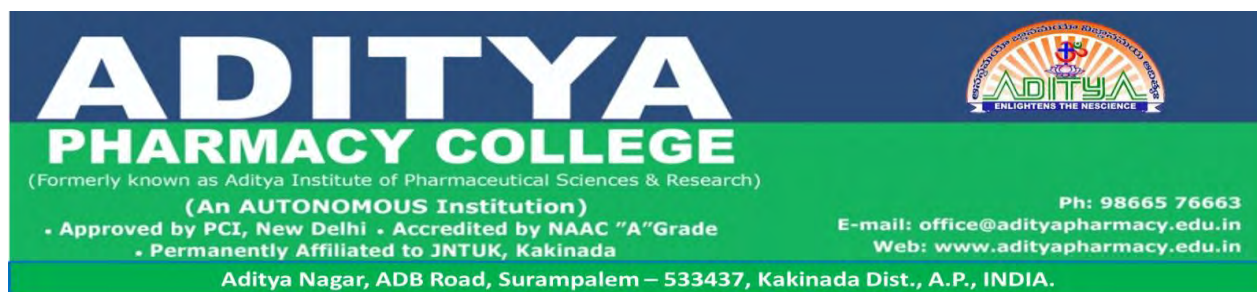
S.No	Date	Name of the Experiment	Page No.	Marks	Signature
1.	23/4/25	Instructions for the preparation of Master Formula Record	1-6		 30/4
2.	25/4/25	Instructions for the preparation of Batch Formula Record	7-9		 30/4
3	30/4/25	Finished product Quality Control tests for Paracetamol Tablets	10-15	Att	 04/6
4	4/6/25	Finished product Quality Control tests for Marketed Capsules.	16-19	Att	 6/6
5.	6/6/25	Determination of Acid value	20-21	Att	 11/6
6.	11/6/25	Determination of Saponification Value.	22-23	Att	 13/6
7	13/6/25	Estimation of Rancidity in Hair oil.	24-25	Att	 18/6
8	18/6/25	Determination of Peroxide Value	26-28	Att	 20/6
9.	20/6/25	Determination of SLS in Shampoo	29-30	Att	 06/7
10	4/7/25	Determination of Foam height in Shampoo	31-32	Att	 09/7
11	9/7/25	Estimation of Sulphanilamide Eye drops by calorimetry.	33-35	Att	 11/7
12.	11/7/25	Determination of Axl Amine content as the active dye in hair dye.	36-37	Att	 16/7
13	16/7/25	Determination of Developer in hair dye.	38-40	Att	 18/7
14	18/7/25	Determination of Total Fatty Substance in Marketed Bath Soap	41-42	Att	 23/7



PRINCIPAL
ADITYA PHARMACY COLLEGE(AI)
SURAMPALAM-533 437

INDEX

PRINCIPAL
DITTA PHARMACY COLLEGE (A)
SURAMPALEM-533 437



**List of Students Undertaking Project Work/ Fieldwork/ Internship for the
Academic Year 2024-25.**

1st year M.Pharmacy (Pharmaceutics)

S.No.	Reg.No.	Name of the candidate	Project work	Fieldwork	Internship
1	243G1S0301	CHINTALAPUDI VARSHINI SAI TEJA	X	✓	X
2	243G1S0302	DEBASHISH GHOSH	X	✓	X
3	243G1S0303	MATTA SUJITHA	X	✓	X
4	243G1S0304	NAIDU YASNASRI SUBHARAO	X	✓	X
5	243G1S0305	PALAPARTHI VEERA GANI LAKSHMI	X	✓	X
6	243G1S0306	SALADI SAI SRIRAM	X	✓	X
7	243G1S0307	SEERAM PRANEETHA	X	✓	X
8	243G1S0308	SUMA LAHARI KANUPURI	X	✓	X
9	243G1S0309	VADAPARTHI MAMATHA SRI	X	✓	X
10	243G1S0310	VELISETTI VENKATA RAMA KRISHNA CHAITANYA	X	✓	X
11	243G1S0311	VEATURI ESWARA DATTA GANESH	X	✓	X

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.


PRINCIPAL
B.DITYA PHARMACY COLLEGE/A,
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

.....*M. Pharmacy (Pharmaceutics)*.....

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

Mr./Ms.*Matta Sujitha*.....

with Roll No.*243G150303*..... a student of*M. Pharmacy, I-I* Semester

in the*Pharmaceutics - I*..... course during the Academic Year.*2024-2025*

No. of Experiments Conducted 17

No. of Experiments Completed 17

T. Odajagani
12/3/24
Faculty incharge

Principal

ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

Submitted for the practical examination held on*20/03/2025*.....

B. K. S.
Examiner - I

W. S.
Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
	07/11/24	Introduction	1-4	9/10	[Signature]
1	11/11/24	Calibration of Glass ware	5-7	9/10	[Signature]
2	14/11/24	Calibration of UV-Visible Spectrophotometer	8-11	9/10	[Signature]
3	18/11/24	Assay of Paracetamol using $A_{1\%}^{1\text{cm}}$ method (or) Specific Absorbance method	12-13	9/10	[Signature]
4	21/11/24	Assay of Salicylic acid using Direct Comparison (or) Single point method	14-16	9/10	[Signature]
5	25/11/24	Assay of Salicylic acid using Double point standardization method.	17-19	9/10	[Signature]
6	28/11/24	Assay of sulphacetamide sodium in eye drops using BM Reagent.	20-22	9/10	[Signature]
7	2/12/24	Assay of Furosemide	23-25	9/10	[Signature]
8	5/12/24	Simultaneous Estimation of Sodium Benzoate & Caffeine by simultaneous equation method.	26-28	9/10	[Signature]
9	9/12/24	Assay of Paracetamol using Chemical Derivatization method.	29-31	9/10	[Signature]
10	12/12/24	Estimation of Sodium Ion Concentration by Flame photometry	32-33	9/10	[Signature]



INDEX

[illegible]

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPalem-533 437

PHARMACEUTICS PRACTICAL - II
(MPH 105PB)

1. To study the effect of particle size on dissolution of a tablet.
2. 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
6. 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.


PRINCIPAL
¹DITYA PHARMACY COLLEGE(A,
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

M. Pharmacy (Pharmaceutics)

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

Mr./Ms. Suma Lahari Kanupuri

with Roll No. 243G150308 a student of M-Pharmacy I-I Semester

in the Pharmaceutics - II course during the Academic Year 2024-2025

No. of Experiments Conducted

9

No. of Experiments Completed

9

Faculty incharge

Principal

Submitted for the practical examination held on 18/03/25

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

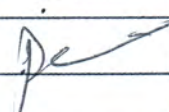
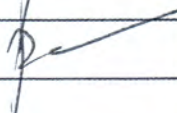
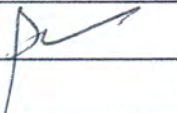
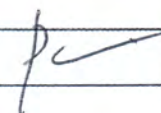
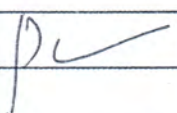
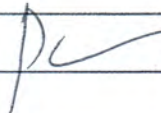
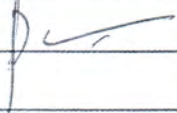
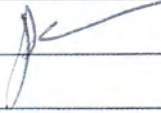
Examiner - I

Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
	6/11/24	INTRODUCTION	1-2		
1.	15/11/24	To study the effect of particle size on Dissolution of a tablet	3-7	A	
2.	29/11/24	To study the effect on Binders on Dissolution of tablets	8-11	B+	
3.	13/12/24	To Plot Higuchi and Peppas Plot and determine similarity factors	12-14	A	
4.	31/1/25	To perform invitro dissolution profile of C.R/S.R Marketed formulation	15-18	A+	
5.	24/1/25	Formulation & Evaluation of Sustained release matrix tablets	19-22	A	
6.	5/2/25	Preparation & Evaluation of Osmotically Controlled drug delivery system	23-26	B	
7.	12/2/25	Preparation & Evaluation of Floating drug delivery system	27-32	A+	



PRINCIPAL

ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533 437

INDEX

[illegible]

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

PHARMACEUTICS PRACTICAL - III

(MPH 205PA)

1. To study the effect of temperature change , non solvent addition, incompatible polymer addition in microcapsules preparation
2. Preparation and evaluation of Alginate beads
3. Formulation and evaluation of gelatin /albumin microspheres
4. Formulation and evaluation of liposomes/niosomes
5. Formulation and evaluation of spherules
6. Improvement of dissolution characteristics of slightly soluble drug by Solid dispersion technique.
7. Comparison of dissolution of two different marketed products /brands
8. Protein binding studies of a highly protein bound drug & poorly protein bound drug
9. Bioavailability studies of Paracetamol in animals.
10. Pharmacokinetic and IVIVC data analysis by Winnoline^R software
11. In vitro cell studies for permeability and metabolism


PRINCIPAL
DITYA PHARMACY COLLEGE(A,
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

.....M. Pharmacy (Pharmaceutics).....

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

Mr./Ms.Matta : Sujitha.....

with Roll No.2436150303..... a student of M. Pharmacy I-II Semester

in thePharmaceutics - III..... course during the Academic Year 2024 - 2025

No. of Experiments Conducted 10

No. of Experiments Completed 10

Faculty incharge

Principal

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

Submitted for the practical examination held on

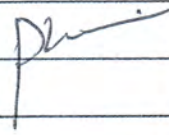
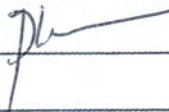
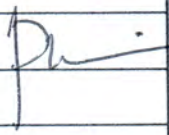
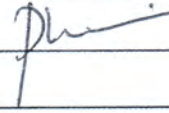
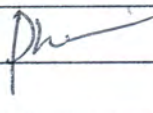
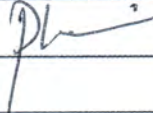
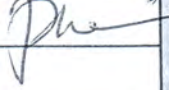
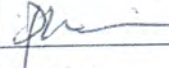
Examiner - I

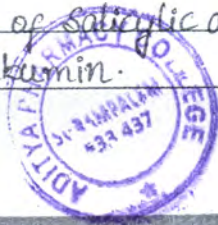
Examiner - 2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
1	16/04/25	Study of the improvement in Dissolution characteristics of salicylic acid by solid dispersion technique - Solvent Evaporation.	1-6		
2	23/04/25	Study the improvement in Dissolution characteristics of salicylic acid by solid dispersion technique - (Co-Grinding).	7-10		
3	30/04/25	Preparation and Evaluation of Ibuprofen Alginate Beads.	11-17		
4	2/05/25	Diffusion studies of salicylic acid from Ointment using a Semi-permeable membrane.	18-21		
5	9/05/25	Formulation and Evaluation of Albumin Microspheres	22-27		
6	14/05/25	Formulation and Evaluation of Cyclohexane Microspheres	28-32		
7	25/06/25	Study of Protein binding of Salicylic acid - A strong protein bound drug.	33-35		
8	2/07/25	Comparative Protein binding studies of salicylic acid with Egg Albumin.	36-39		



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533 437

INDEX

[illegible]

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533 437

PHARMACEUTICS PRACTICAL - IV
(MPH 205PB)

1. DoE Using Design Expert® Software
2. Formulation data analysis Using Design Expert® Software
3. Quality-by-Design in Pharmaceutical Development
4. Computer Simulations in Pharmacokinetics and Pharmacodynamics
5. Computational Modeling Of Drug Disposition
6. To develop Clinical Data Collection manual
7. To carry out Sensitivity Analysis, and Population Modeling.
8. Development and evaluation of Creams
9. Development and evaluation of Shampoo and Toothpaste base
10. Formulation Development of Multi Vitamin Syrup
11. Use of Optimization techniques in Formulation Development of Tablets


PRINCIPAL
DITTA PHARMACY COLLEGE(A,
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

An AUTONOMOUS Institution

Aditya Nagar, ADB Road, Surampalem. Kakinada Dist., A.P.

Program

M. Pharmacy (Pharmaceutics)

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

Mr./Ms. Naidu Yasnawi Subhanga

with Roll No. 2436180304 a student of M. Pharmacy I-II Semester

in the Pharmaceutics - IV course during the Academic Year 2024-2025

No. of Experiments Conducted

11

No. of Experiments Completed

11

T. Uday Kumar
8/8/25
Faculty incharge

[Signature]
Principal

PRINCIPAL

ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

Submitted for the practical examination held on 21/8/25

[Signature]
Examiner -1 22/8/25

[Signature]
Examiner -2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

INDEX

S.No	Date	Name of the Experiment	Page No.	Marks	Signature
1	7/04/25	Overview about "DOE" using Design Expert Software	01-07	(B)	Tw 8/4
2	15/04/25	Formulation Data Analysis using Design Expert Software	08-10	(B)	Tw 17/4
3	22/04/25	Quality by Design in Pharmaceutical Development	11-12	(A)	Tw 28/4
4	29/04/25	Computer simulation Pharmacodynamics using Rota rod Apparatus	13-15	(B)	Tw 20/4
5	6/05/25	Formulation and Evaluation of Cold cream	16-17	(B)	Tw 8/5
6	13/05/25	Formulation and Evaluation of Vanishing cream	18-19	(B)	Tw 15/5
7	31/06/25	Formulation and Evaluation of Shampoo	20-21	(B)	Tw 0/6
8	10/06/25	Formulation and Evaluation of toothpaste	22-23	(B)	Tw 12/6
9	24/06/25	Cosmetic formulation used to Overcome Various medical Condition	24-30	(B)	Tw 26/6

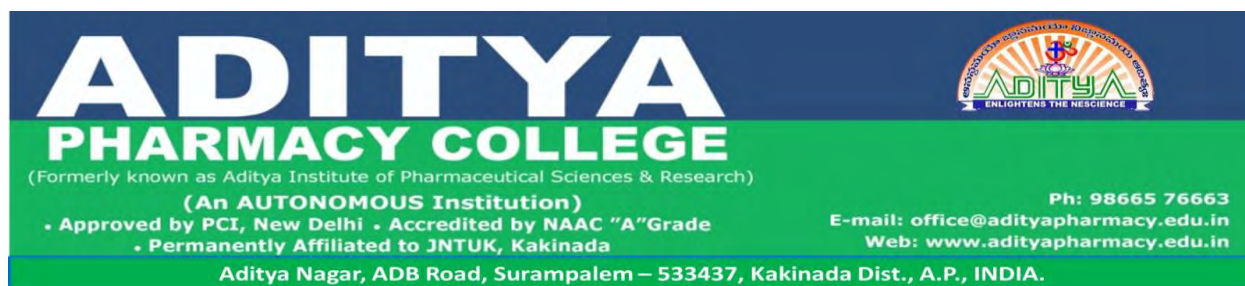


PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALM-533 437

INDEX

[illegible]

2.DITYA PHARMACY COLLEGE(A)
SURAMPalem-533 437



List of Students Undertaking Project Work/ Fieldwork/ Internship for the

Academic Year 2024-25.

2nd year M.Pharmacy (Analysis)

S.No.	Reg.No.	Name of the candidate	Project work	Field work	Internship
1.	233G1S1601	ACHANTA MANEESH KUMAR	X	X	X
2.	233G1S1602	ADAPA ESTHERURANI	✓	✓	X
3.	233G1S1603	MORTHA YAMINI	✓	✓	X
4.	233G1S1604	THOTA SATYASAI	✓	✓	X

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

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

- 1 The analysis of various drugs in single and combination dosage forms
- 1 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. | 10 Hrs |
| | 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. Spectrofluorimetry: Theory of Fluorescence, Factors affecting fluorescence (Characteristics of drugs that can be analysed by fluorimetry), Quenchers, Instrumentation and Applications of fluorescence spectrophotometer. | |
| | d. Flame emission spectroscopy and Atomic absorption spectroscopy: Principle, Instrumentation, Interferences and Applications. | |
| 2 | 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 ¹³ C NMR. Applications of NMR spectroscopy. | 10 Hrs |
| 3 | 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. | 10 Hrs |
| 4 | Chromatography: Principle, apparatus, instrumentation, chromatographic parameters, factors affecting resolution, isolation of drug from excipients, data interpretation and applications of the following: | |


PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437



Statistical optimization and Chiral - Super Critical fluid **Chromatography** method
development of Bupropion and its isomer: 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

A. ESTHERU RANI

(Regd. No. 233GIS1602)

Under the guidance of

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

Principal & Professor

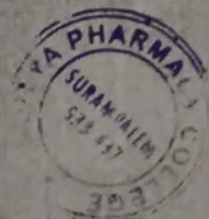


Department of Pharmaceutical Analysis

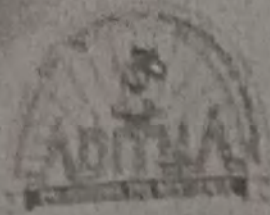
Aditya Pharmacy College

Surampalem - 533 437

2023- 2025



PRINCIPAL
Aditya Pharmacy College
SURAMPATEM-533 437



ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTU K)

Aditya Nagar, ADE Road, Surampalem, P.T. Dist. A.P. 533012

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

CERTIFICATE

This is to certify that the dissertation work entitled "Statistical optimization and Chiral - Super Critical fluid Chromatography method development of Bupropion and its isomer: An ecofriendly estimation by green analytical chemistry" is submitted to the JNTU 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 A.T. Lakshmi Reddy (Regd No: 23361S1602) under the guidance and supervision of Dr. D. Sathis Kumar, Principal & Professor, Department of Pharmaceutical Analysis, Aditya Pharmacy College, Surampalem.

Place: Surampalem

Date:

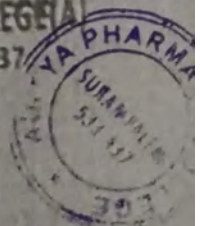
7/7/25

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

Principal and Professor,

Aditya Pharmacy College

PRINCIPAL
ADITYA PHARMACY COLLEGE
SURAMPALEM-533 437



PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533





ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTUK)

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

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

CERTIFICATE

This is to certify that the dissertation work entitled "Statistical optimization and Chiral - Super Critical fluid Chromatography method development of Bupropion and its isomer: An ecofriendly estimation by green analytical chemistry" is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment for the award of the degree of Masters of Pharmacy in Pharmaceutical Analysis. This is a bonafied work carried out by A. Esther Rani (Regd No: 233GIS1602) under my guidance and supervision.

Date: 7/1/25

Place: Surampalem

Dr. D. Sathis Kumar

(Guide)

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533.437



PRINCIPAL
Aditya Pharmacy College
SURAMPALAM





ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTUK)

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

EVALUATION CERTIFICATE

This is to certify that the dissertation work entitled "Statistical optimization and Chiral - Super Critical fluid Chromatography method development of Bupropion and its isomer: An ecofriendly estimation by green analytical chemistry" is submitted to the Jawaharlal Nehru Technological 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 A Estheru Ram (Regd No: 233GIS1602) under the guidance and supervision of Dr. D.Sathis Kumar, Principal & Professor, Aditya Pharmacy College, Surampalem

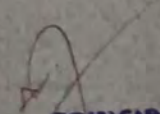
Date: 12/7/25

SIGNATURE OF EVALUATOR 1

Place: Surampalem

SIGNATURE OF EVALUATOR 2




PRINCIPAL
Aditya Pharmacy College
SURAMPATEM-533 437

DECLARATION

I, A. Estheru Rani (Regd No: 233GIS1602), do hereby declare that the dissertation entitled "Statistical optimization and Chiral - Super Critical fluid Chromatography method development of Bupropion and its isomer: 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.

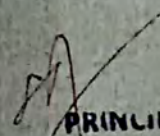
A. Estheru Rani

A. Estheru Rani

Regd no: 233GIS1602

Place: Surampalem

Date: 12/7/25


PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437



ADVANCED PHARMACEUTICAL ANALYSIS (MPA 102T)

Scope

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

Objective

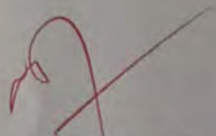
After completion of the course students shall able to know,

- | 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 practical related problems.
- | Analysis of impurities in drugs, residual solvents and stability studies of drugs and biological products

THEORY

- | | | |
|----|--|------------------|
| 1. | Impurity and stability studies:
Definition, classification of impurities in drug Substance or Active 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 | 60 Hrs
10 Hrs |
| 2 | Elemental impurities:
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. | 10 Hrs |


PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437/86



**"ANALYTICAL ENANTIOSELECTIVE SCREENING AND
OPTAMIZATION OF CSP AND MODIFIER IN CHIRAL SUPER
CRITICAL FLUID CHROMATOGRAPHY FOR NEBIVOLOL
ENTANTIOMERS"**

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

MORTHAMINI

(Regd.No.233G1S1603)

Under the guidance of

BALLA SUJIYA M. PHARM.,

Associate Professor



Department of Pharmaceutical Analysis

ADITYA PHARMACY COLLEGE

PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437



Surampalem-533437





ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTUK)

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

CERTIFICATE

This is to certify that the dissertation work entitled "ANALYTICAL ENANTIOSELECTIVE SCREENING AND OPTAMIZATION OF CSP AND MODIFIER IN CHIRAL SUPER CRITICAL FLUID CHROMATOGRAPHY FOR NEBIVOLOL ENTANTIOMERS" 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 MORTHIA YAMINI (Regd No: 233GIS1603) under the guidance and supervision of BALLA SUJIYA., Associate Professor, Department of Pharmaceutical Analysis, Aditya Pharmacy College (A), Surampalem.

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

Principal,

Aditya Pharmacy College (A),

Surampalem - 533437.



Place: SURAMPALEM

Date: 7/7/25

PRINCIPAL
ADITYA PHARMACY COLLEGE (A)
SURAMPALEM - 533 437





ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTUK)

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

CERTIFICATE

This is to certify that the dissertation work entitled "ANALYTICAL ENANTIOSELECTIVE SCREENING AND OPTAMIZATION OF CSP AND MODIFIER IN CHIRAL SUPER CRITICAL FLUID CHROMATOGRAPHY FOR NEBIVOLOL ENTANTIOMERS" is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment for the award of the degree of MASTERS OF PHARMACY IN PHARMACEUTICAL ANALYSIS. This is a bonafied work carried out by MORTHA YAMINI (Regd No: 233G1S1603) under my guidance and supervision.

BALLA SUJIYA.,

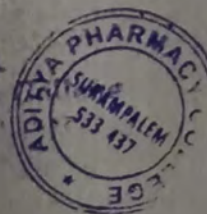
ASSOCIATE PROFESSOR.

[GUIDE]

Place: SURAMPALEM

Date: 12/07/2025

PRINCIPAL
Aditya Pharmacy
SURAMPALEM





ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTU K)

Aditya Nagar, AIB Road, Surampalem, E. G. Dist. A.P-531419

EVALUATION CERTIFICATE

This is to certify that the dissertation work entitled "ANALYTICAL ENANTIOSELECTIVE SCREENING AND OPTAMIZATION OF CSP AND MODIFIER IN CHIRAL SUPER CRITICAL FLUID CHROMATOGRAPHY FOR NEBIVOLOL ENTANTIOMERS" is submitted to the Jawaharlal Nehru Technological 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 MORTHA YAMINI (Regd No: 233GIS1603) under the guidance and supervision of BALLA SUJIYA., Associate Professor, Aditya Pharmacy College (A), Surampalem

Date: 12/07/2025

[Signature]
12/7/25

SIGNATURE OF EVALUATOR - I

Place: Surampalem



[Signature]
PRINCIPAL
Aditya Pharmacy College
SURAMPATEM

DECLARATION

I, MORTHA YAMINI (Regd No: 233GIS1603) do hereby declare that the dissertation entitled "ANALYTICAL ENANTIOSELECTIVE SCREENING AND OPTAMIZATION OF CSP AND MODIFIER IN CHIRAL SUPER CRITICAL FLUID CHROMATOGRAPHY FOR NEBIVOLOL ENTANTIOMERS" is a record of genuine research work carried out by me under the supervision of BALLA SUJIYA., Associate Professor, Aditya Pharmacy College (A), 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.

M Yamini
MORTHA YAMINI,

Regd No: 233GIS1603

Place: SURAMPALEM

Date: 12/07/2025



[Signature]
PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

FOOD ANALYSIS (MPA 104T)

Scope

This course is designed to impart knowledge on analysis of food constituents and finished food products. The course includes application of instrumental analysis in the determination of pesticides in variety of food products.

Objectives

At completion of this course student shall be able to understand various analytical techniques in the determination of

- | Food constituents
- | Food additives
- | Finished food products
- | Pesticides in food
- | And also student shall have the knowledge on food regulations and legislations

THEORY

60 Hrs

1. Carbohydrates: classification and properties of food carbohydrates, General methods of analysis of food carbohydrates, Changes in food carbohydrates during processing, Digestion, absorption and metabolism of carbohydrates, Dietary fibre, Crude fibre and application of food carbohydrates
Proteins: Chemistry and classification of amino acids and proteins, Physico-Chemical properties of protein and their structure, general methods of analysis of proteins and amino acids, Digestion, absorption and metabolism of proteins. 12 Hrs
2. Lipids: Classification, general methods of analysis, refining of fats and oils; hydrogenation of vegetable oils, Determination of adulteration in fats and oils, Various methods used for measurement of spoilage of fats and fatty foods. 12 Hrs
Vitamins: classification of vitamins, methods of analysis of vitamins, Principles of microbial assay of vitamins of B-series.
3. Food additives: Introduction, analysis of Preservatives, antioxidants, artificial sweeteners, flavors, flavor enhancers, stabilizers, thickening and jelling agents. 12 Hrs
Pigments and synthetic dyes: Natural pigments, their occurrence and characteristic properties, permitted synthetic dyes, Non-permitted synthetic dyes used by industries, Method of detection of natural, permitted and non-permitted dyes.

90
PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437



**STEREOSELECTIVE ANALYSIS OF TIMOLOL AND ITS ISOMER BY
SUPER CRITICAL FLUID CHROMATOGRAPHY**

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

THOTA SATYASAI

(Regd.No.233GIS1604)

Under the guidance of

Dr.P.Bhaskara Rao M.Pharm., Ph.D.

Associate Professor

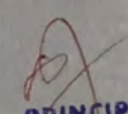


Department of Pharmaceutical Analysis

Aditya Pharmacy College (A)

Surampalem-533437

2023-2025


PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437





ADITYA PHARMACY COLLEGE

(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 "Stereoselective Analysis of Timolol And Its Isomer By Super Critical Fluid Chromatography" 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 Thota Satyasai (Regd No: 233G1S1604) under the guidance and supervision of Dr.P.Bhaskararao, Associate Professor, Department of Pharmaceutical Analysis, Aditya Pharmacy College(Autonomous), Surampalem.

Place: Surampalem

Date: 12/07/25

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

Aditya Pharmacy College

SURAMPALAM-533 437

Principal & Professor

Aditya Pharmacy College (A)

PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437





ADITYA PHARMACY COLLEGE

(Approved by PCI & AICTE, Affiliated to JNTUK)

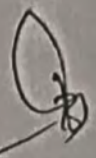
Aditya Nagar, ADB Road, Surampalem, E. G. Dist., A.P-533437.

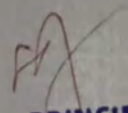
CERTIFICATE

This is to certify that the dissertation work entitled "Stereoselective Analysis of Timolol and Its Isomer By Super Critical Fluid Chromatography" is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment for the award of the degree of Masters of Pharmacy in Pharmaceutical Analysis. This is a bonafied work carried out by Thota Satyasai (Regd No: 233G1S1604) under my guidance and supervision.

Date: 12/07/25

Place: Surampalem


Dr. P. Bhaskara Rao M.Pharm., Ph.D


PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437





ADITYA PHARMACY COLLEGE

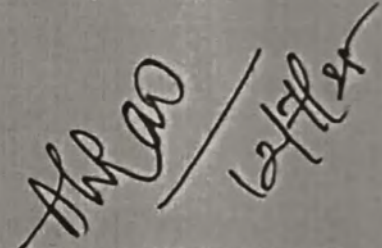
(Approved by PCI & AICTE, Affiliated to JNTUK)

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

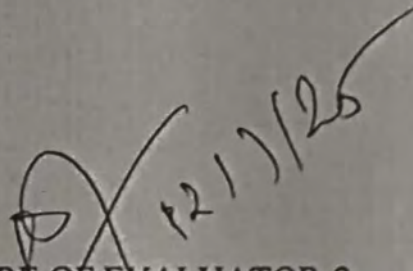
EVALUATION CERTIFICATE

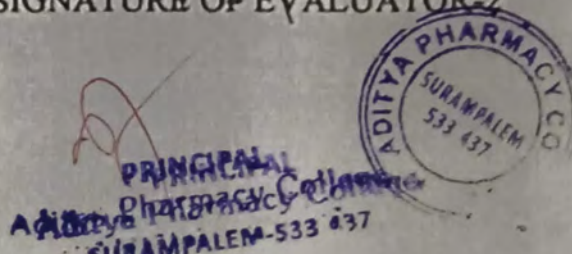
This is to certify that the dissertation work entitled "Stereoselective Analysis of Timolol and Its Isomer By Super Critical Fluid Chromatography" is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment for the award of the degree of Master of Pharmacy in Pharmaceutical Analysis. This is a bonafied work carried out by Thota Satyasai (Regd No: 233G1S1604) under the guidance and supervision of Dr.P.Bhaskara Rao, Associate Professor, Aditya Pharmacy College(A), Surampalem.

Date: 12/07/25


SIGNATURE OF EVALUATOR-1

Place Surampalem


SIGNATURE OF EVALUATOR-2



DECLARATION

I, Thota Satyasai (Regd No: 233G1S1604), do hereby declare that the dissertation entitled "Stereoselective Analysis Of Timolol And Its Isomer By Super Critical Fluid Chromatography" is a record of genuine research work carried out by me under the supervision of Dr. P. Bhaskara Rao, Associate Professor, Aditya Pharmacy College(A), 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.

T. Satyasai
Thota Satyasai

Regdno: 233G1S1604

Place: Surampalem

Date: 12/07/25

RA
PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA

PHARMACY COLLEGE

(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



Ph: 98665 76663
E-mail: office@adityapharmacy.edu.in
Web: www.adityapharmacy.edu.in

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

**List of Students Undertaking Project Work/ Fieldwork/ Internship for the
Academic Year 2024-25.**

2nd year M.Pharmacy (Pharmaceutics)

S.No.	Reg.No.	Name of the candidate	Project work	Fieldwork	Internship
1	233G1S0301	CHALLA SAIKRISHNA	✓	✓	X

ADVANCED BIOPHARMACEUTICS & PHARMACOKINETICS (MPH 202T)

Scope

This course is designed to impart knowledge and skills necessary for dose calculations, dose adjustments and to apply biopharmaceutics theories in practical problem solving. Basic theoretical discussions of the principles of biopharmaceutics and pharmacokinetics are provided to help the students' to clarify the concepts.

Objectives

Upon completion of this course it is expected that students will be able understand,

- 1 The basic concepts in biopharmaceutics and pharmacokinetics.
- 1 The use raw data and derive the pharmacokinetic models and parameters the best describe the process of drug absorption, distribution, metabolism and elimination.
- 1 The critical evaluation of biopharmaceutic studies involving drug product equivalency.
- 1 The design and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
- 1 The potential clinical pharmacokinetic problems and application of basics of pharmacokinetic

THEORY

60 Hrs

1. Drug Absorption from the Gastrointestinal Tract: Gastrointestinal tract, Mechanism of drug absorption, Factors affecting drug absorption, pH-partition theory of drug absorption. Formulation and physicochemical factors: Dissolution rate, Dissolution process, Noyes-Whitney equation and drug dissolution, Factors affecting the dissolution rate. Gastrointestinal absorption: role of the dosage form: Solution (elixir, syrup and solution) as a dosage form, Suspension as a dosage form, Capsule as a dosage form, Tablet as a dosage form, Dissolution methods, Formulation and processing factors, Correlation of in vivo data with in vitro dissolution data. Transport model; Permeability-Solubility-Charge State and the pH Partition Hypothesis, Properties of the Gastrointestinal Tract (GIT), pH Microclimate Intracellular pH Environment, Tight-Junction Complex. 12 Hrs
- 2 Biopharmaceutic considerations in drug product design and In Vitro Drug Product Performance: Introduction, biopharmaceutic factors affecting drug bioavailability, rate-limiting steps in drug absorption, physicochemical nature of the drug formulation factors affecting drug product performance, in vitro: dissolution and drug release testing, compendial methods of dissolution, alternative methods of dissolution testing, meeting dissolution requirements, problems of variable control in dissolution testing performance of drug products. In vitro-in vivo correlation, dissolution profile comparisons, drug product stability, considerations in the design of a drug product. 12 Hrs
- 3 Pharmacokinetics: Basic considerations, pharmacokinetic models, compartment modeling: one compartment model- IV bolus, IV infusion, extra-vascular. Multi compartment model: two compartment - model in brief, non-linear pharmacokinetics: cause of non-linearity, Michaelis-Menten equation, estimation of k_{max} and v_{max} . Drug interactions: introduction, the effect of protein-binding interactions, the effect of tissue-binding interactions, drug interactions linked to transporters, cytochrome p450-based. 12 Hrs

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437



- 4 Drug Product Performance, In Vivo: Bioavailability and Bioequivalence: drug product performance, purpose of bioavailability studies, relative and absolute availability. methods for assessing bioavailability, bioequivalence studies, design and evaluation of bioequivalence studies, study designs, crossover study designs, evaluation of the data, bioequivalence example, study submission and drug review process. biopharmaceutics classification system, methods. Permeability: In-vitro, in-situ and In-vivo methods. generic, biologics (biosimilar drug products), clinical significance of bioequivalence studies, special concerns in bioavailability and bioequivalence studies, generic substitution. 12 Hrs
- 5 Application of Pharmacokinetics: Modified-Release Drug Products, Targeted Drug Delivery Systems and Biotechnological Products. Introduction to Pharmacokinetics and pharmacodynamic, drug interactions. Pharmacokinetics and pharmacodynamics of biotechnology drugs. Introduction, Proteins and peptides, Monoclonal antibodies, Oligonucleotides, Vaccines (immunotherapy), Genetherapies. 12 Hrs

REFERENCES

1. Biopharmaceutics and Clinical Pharmacokinetics by Milo Gibaldi, 4th edition, Philadelphia, Lea and Febiger, 1991
2. Biopharmaceutics and Pharmacokinetics, A. Treatise, D .M. Brahmanekar and Sunil B. Jaiswal., VallabPrakashan, Pitampura, Delhi
3. Applied Biopharmaceutics and Pharmacokinetics by Shargel. Land YuABC, 2nd edition, Connecticut Appleton Century Crofts, 1985
4. Textbook of Biopharmaceutics and Pharmacokinetics, Dr. Shobha Rani R. Hiremath, Prism Book
5. Pharmacokinetics by Milo Gibaldi and D. Perrier, 2nd edition, Marcel Dekker Inc., New York, 1982
6. Current Concepts in Pharmaceutical Sciences: Biopharmaceutics, Swarbrick. J, Lea and Febiger, Philadelphia, 1970
7. Clinical Pharmacokinetics, Concepts and Applications 3rd edition by Malcolm Rowland and Thom~ N. Tozer, Lea and Febiger, Philadelphia, 1995
8. Dissolution, Bioavailability and Bioequivalence, Abdou. H.M, Mack Publishing Company, Pennsylvania 1989
9. Biopharmaceutics and Clinical Pharmacokinetics, An Introduction, 4th edition, revised and expanded by Robert. E. Notari, Marcel Dekker Inc, New York and Basel, 1987.
10. Biopharmaceutics and Relevant Pharmacokinetics by John. G Wagner and M. Pamarowski, 1st edition, Drug Intelligence Publications, Hamilton, Illinois, 1971.
11. Encyclopedia of Pharmaceutical Technology, Vol 13, James Swarbrick, James. G. Boylan, Marcel Dekker Inc, New York, 1996.
12. Basic Pharmacokinetics, 1st edition, Sunil S Jambhekar and Philip J Breen, pharmaceutical press, RPS Publishing, 2009.
13. Absorption and Drug Development- Solubility, Permeability, and Charge State, Alex Avdeef, John Wiley & Sons, Inc, 2003.

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 937



**FORMULATION AND EVALUATION OF KETEROLOC TROMETHAMINE
FAST DISSOLVING TABLETS USING NATURL AND SYNTHETIC
SUPERDISINTEGRANTS**

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

CH. SAI KRISHNA

(Reg NO-233G1S0301)

Under the guidance of

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

Professor



DEPARTMENT OF PHARMACEUTICS

ADITYA PHARMACY COLLEGE (A)

SURAMPALEM-533437

2023-2025

PRINCIPAL

SURAMPALEM-533 437





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

MASTER OF PHARMACY

In

PHARMACEUTICS

By

CHALLA. SAI KRISHNA

(Regd.no - 233G1S0301)

Under the guidance of

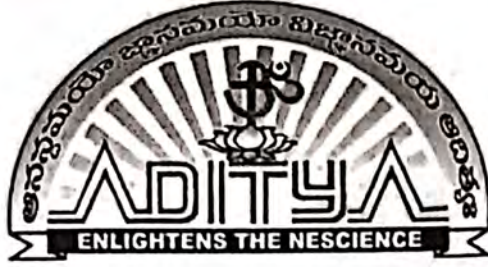
Dr. CH. S. PHANI KUMAR M.pharm Ph.D.

Professor




PRINCIPAL
Aditya Pharmacy College
SURAMPalem-533 017





ADITYA PHARMACY COLLEGE (A)

(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 Ketorolac Tromethamine Fast Dissolving Tablets using Natural and synthetic superdisintegrants**" 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 **CHALLA. SAI KRISHNA (Regd No: 233G1S0301)** 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.

Principal and Professor,
Aditya Pharmacy College,


PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437





ADITYA PHARMACY COLLEGE (A)

(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 Keteroloc Tromethamine Fast Dissolving Tablets using Natural and synthetic superdisintegrants" 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 bonafide work carried out by CHALLA SAI KRISHNA (Regd No: 233G1S0301) under the guidance of Dr. CH.S. PHANI KUMAR, professor Aditya Pharmacy college, Surampalem.

Place: Surampalem

Date:

Guide

Dr. CH.S. PHANI KUMAR

M.PHARM Ph.D

Professor




PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE (A)

(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 the desertion work entitled "Formulation Tromethamine using Natural and synthetic superdisintegrants" is Submitted the Jawaharlal Nehru technological university. Kakinada in award of the degree of MASTER OF PHARMACY IN PHARMACEUTICS. This is bonafide work carried out by CHALLA SAI KRISHNA (REGD: 233GISO301) 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



PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437



DECLARATION

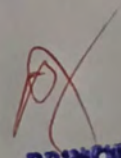
I, **CHALLA SAI KRISHNA** (Regd No: 233G1S0301), do hereby declare that the Dissertation entitled "Formulation and Evaluation of Keteroloc Tromethamine Fast Dissolving Tablets Using Natural and synthetic superdisintegrants is a record of genuine Research work carried out by me under the supervision of **Dr. CH. S. PHANI KUMAR**, Professor, Aditya pharmacy College, Surampalem. The work reported 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:

CHALLA SAI KRISHNA

Regd No-233G1S0301


PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-5

