A Study on the Quality control of raw materials

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : KEERTHANA.M

REG.NO : C21UG152CHE020

Under the Supervision of

DR.S.MURALIDHARAN

Myrtace, Healthcare, Private Limited, Hosur.

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affliated to Periyar University , Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	**Keerthana.M**
2.	University Examination Registration Number	**C21UG152CHE020**
3.	Name of the college	**St. Joseph's College of Arts and science for women , Hosur**
4.	Name of the Department/Degree	**Chemistry/ B.sc chemistry**
5.	Name of the industry/ Institute in which for internship Training Undergone	**Mytrace Health care Private Limited , Hosur.**
6.	Guide / Supervisor under whom the training undertaken	**Dr. s.Muralidharan (R and D Manager)**
7.	Title of the Training	**Examing Quality control of Raw materials**
8.	Brief output training (not more than 2 Pages)	**Annexure Enclosed**
9.	Conclusion	**For determining the amount of organic substance obtained**
10.	Outcome of the training	**To ensure that the service Provided met the specification**

Submitted for B.Sc., Internship Examination held on 14.11.2023 at the Department of chemistry ,St.joseph's college of Arts and science for women, Hosur

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri Dist.

Keerthana.M
Signature of the Student

C. myth
Signature of the Guide

S.V. Thangaraj
Head of the Department

Principal

Examiner:

1.

2.

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri Dt
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. M. Keerthana, B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES - THE CLAISEN-SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan

Manager - R&D

Quality control of raw materials :

Introduction:

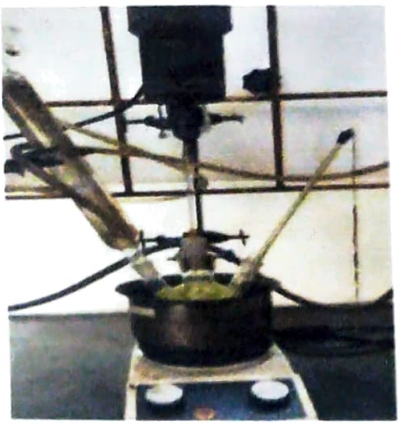
I attended my internship program in Myrtace healthcare private limited. There I learned the working and production of their products in large industrial scale.

Abstract:

The various pharmaceutical and medical relate products are being produced in the company. Most of the products are related to tablets, capsules, ointments etc., which makes them one of the largest manufacturer in it. I have learned about the various packing methods, few steps in Quality control. The manufacturing unit was maintained with good condition.

The faculties and the staffs working there were Kind and didn't hesitate when asked about their products and other information regarding their production

We were given internship program for two weeks. They gave demonstration on the working of instruments used for sampling.



Methodology:

They first equipped us with safety equipment and then allowed into the package area. They explained about various packing methods like strip packing, bulk packing , Alu alu packing. It involves 3 stages like primary, secondary and tertiary. They used plastics like pvc , PE ,PET.

In case of quality control ,the uv spectroscopy Which measures and interprets the electromagnetic spectra that result from the interaction between Electromagnetic radiation and matter. It consists of a light source , dispersion element, sample and a detector to analyze the sample.

Discussion:

I have learned about the primary sampling of compounds and it's bulk production. Various instruments like Uv spectrometer and primary, secondary and tertiary sectors had their own machineries to pack the products.

Conclusion:

My overall experience in the internship program in Myrtace private health care private limited, helped me to gain new experience and gain more knowledge about the testing and manufacturing of pharmaceutical products . The staffs were so helpful and taught us about the overall industrial and have an idea on how Pharma companies function and produce their products.

A Study on the Synthesis of Disubstituted Chalcone

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

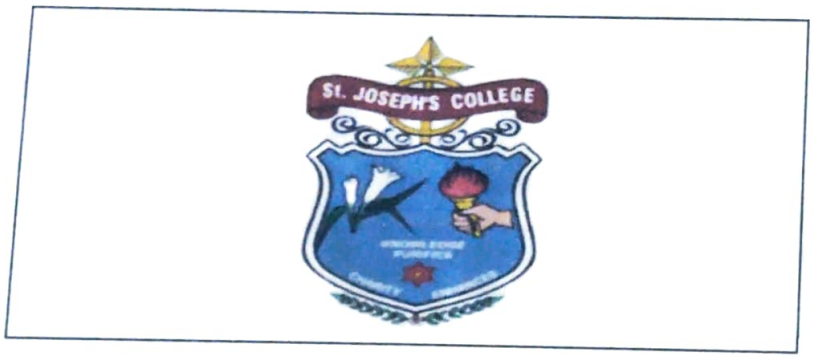
NAME : KIRUTHIKA. R

REG.NO : C21UG152CHE021

Under the Supervision of

Dr. S. Muralidharan

Myrtace healthcare Pvt Ltd, Hosur.



DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affliated to Periyar University , Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	**Kiruthika. R**
2.	University Examination Registration Number	**C21UG152CHE021**
3.	Name of the college	**St. Joseph's College of Arts and Science for Women, Sipcot, Hosur -635126**
4.	Name of the Department/Degree	**Chemistry/B.Sc, chemistry**
5.	Name of the industry/ Institute in which for internship Training Undergone	**Myrtace Health care pvt. Ltd , Hosur.**
6.	Guide / Supervisor under whom the training undertaken	**Dr. Muralidharan, manager of Myrtace healthcare pvt. Ltd, hosur.**
7.	Title of the Training	**Preparation of Chalcone**
8.	Brief output training (not more than 2 Pages)	**Annexure Enclosed**
9.	Conclusion	**Determining the completion of an organic reaction by TLC technique**
10.	Outcome of the training	**To ensure that the product manufactured is standard and the yield obtained is maximum.**

Submitted for B.Sc., Internship Examination held on 14.11.2023 at the Department of chemistry, st. Joseph's College of Art's and Science for Women, Hosur-635126

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

Kiruthika.R
Signature of the Student

Signature of the Guide

Head of the Department

Principal

Examiner

1.

2.

MYRTACE

Myrtace Healthcare Private Limited

Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri - Dt
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. R. Kiruthika , B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES - THE CLAISEN-SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

04/02/2023

Dr. S. Muralidharan

Manager – R&D

SYNTHESIS OF DI SUBSTITUTED CHALCONES

NTRODUCTION :-

Established in 2017 . Myrtace Healthcare Pvt. Ltd. has made a name for itself in he list of top supplier company is located in Chennai, Tamil Nadu and is one of the leading ellers of listed products.

Myrtace healthcare pvt. Ltd. is trade India's list of verified sellers offering supreme quality of etc. Buy in bulk from us for the best quality products and services.

ABSTRACT :

The various pharmaceutical and medical related products are being produced in the company. Most of their products are based on the chemical, which is to be used in main production.. The manufacturing unit and other places were maintained with contamination.

- The Facilities and staffs working there were kind and didn't sitate to teach us when asked about their products and other information regarding the production and company.
- We were given internship program for two weeks . They gave demonstration on the working of instruments used for sampling. A representation of bulk production was also explained.

METHODOLOGY ;

The primary health check was done before entering the laboratory. Then they about their sampling techniques in small quantities. If the samples passed the quality assurance then it would reach the bulk production in the industry. They have several equipments which are used for different types of combination of supplements. The samples are tested which should be within the guidelines to be implemented in further production.

- The QA is done for mostly all samples for obtaining the pure and correct combination of compounds to form the desired products.
- We were taught to do the sampling by various chromatographic methods. e. g. TLC (thin layer chromatography).

DISCUSSION :

I have learned about the primary sampling of compounds and the bulk production to give the end products, sampling instruments including TLC plates, uv chamber, iodine mixture, etc.. and many other are being used. It helps in obtaining the exact amount of metals in a sample by systematic methods.

The process of production was also taught by the staff.

- It involves the raw materials used for desired products along with water is heated in reactor for 24 hrs at 100°C.
- Then the PH value is noted and acetone is added on further filtration.
- The separation method used to separate the organic and aqueous solution.
- The quality check is done with the pharmacopoeia and GC/MS, elemental analysis etc. to check it's composition of chemicals and check impurities in them.

CONCLUSION :

My overall experience in the internship program in Myrtace healthcare pvt. Ltd. helped me to gain new things, knowledge about the testing and manufacturing of the extracting products. The staff were so helpful and taught about their overall working in the industrial gave an idea about how pharma related companies function and produce their products. It was a new learning and would be helpful for my future career development.

A STUDY ON THE SYNTHESIS OF DISUBSTITUTED CHALCONES

Report on Internship Training submitted to Periyar University, Salem in partial fulfillment

of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : NIVEDHITHA N

REG.NO : C21UG152CHE027

Under the Supervision of

Dr.MURALIDHARAN S

Myrtace Healthcare Pvt Ltd, Hosur.

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affiliated to Periyar University, Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	**Nivedhitha N**
2.	University Examination Registration Number	**C21UG152CHE027**
3.	Name of the college	**St. Joseph's College of Arts and Science for Women, Hosur**
4.	Name of the Department/Degree	**Chemistry/B.Sc Chemistry**
5.	Name of the industry/ Institute in which for internship Training Undergone	**Myrtace Healthcare Pvt Ltd, Hosur**
6.	Guide / Supervisor under whom the training is undertaken	**Dr.Muralidharan S(Manager of R&D)**
7.	Title of the Training	**Synthesis of Disubstituted Chalcones**
8.	Brief output training (not more than 2 Pages)	**Annexure Enclosed**
9.	Conclusion	**For determining the amount of organic substance obtained**
10.	The outcome of the training	**To ensure the completion of the reaction by TLC method**

Submitted for B.Sc., Internship Examination held on 14-11-2023 at the Department of Chemistry, St. Joseph's College of Arts and Science For Women, Hosur-635126

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR-635 126, Krishnagiri-Dist.

Nivedhitha. N
Signature of the Student

C. myth
Signature of the Guide

Head of the Department

Principal

Examiner:

1.

2.

MYRTACE

Myrtace Healthcare Private Limited

Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri - Dt.
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. N. Nivedhitha, B.Sc., Chemistry student of St Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES - THE CLAISEN-SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan

Manager - R&D

Reg. Office: 35A, Basement, Rahat Plaza, No. 172, Arcot Road, Vadapalani, Chennai - 600026
Web: [illegible] **E-mail:** [illegible]

SYNTHESIS OF DISUBSTITUTED CHALCONES

RODUCTION:

Myrtace Healthcare Private Limited is a pharmaceutical Research and Development organization using on the process development of advanced intermediates, reference standards, impurity standards, abolites, labeled standards, etc., Research and Development(R&D) includes activities that companies ertake to innovate and introduce new products and services. It is often the first stage in the development ess. The goal is typically to take new products and services to market and add to the company's bottom

The term R&D is widely linked both in the corporate and government sectors. R&D allows a company ay ahead of its competition. Without an R&D program, a company may not survive on its own and may to rely on other ways to innovate such as engaging in mergers and acquisitions (M&A) or partnerships.

TRACT:

First of all this practical training has given me a very big exposure to the Research and Development of pounds. I have undergone training in the Myrtace Healthcare Private Limited., for a period of 14 days. This t throws light on the aspect of preparing organic compounds that I dealt with during the 14 days of training. report deals with the preparation, chromatography, purification methods, working, and principles of the ry evaporator. Although there, I was exposed to a good number of equipment which were not seen before. s easy for me to know them one by one. All the staff working in the company were helpful in improving nowledge in the respective sections. At last, the training made me understand the synthesis aspects and epts practically.

ISEN-SCHMIDT REACTION:

The aldol condensation of ketones with aryl aldehydes to form alpha,beta-unsaturated derivatives is **Claisen Schmidt** reaction. This reaction was named after two pioneering investigators Rainer Ludwig en and J.G.Schmidt.

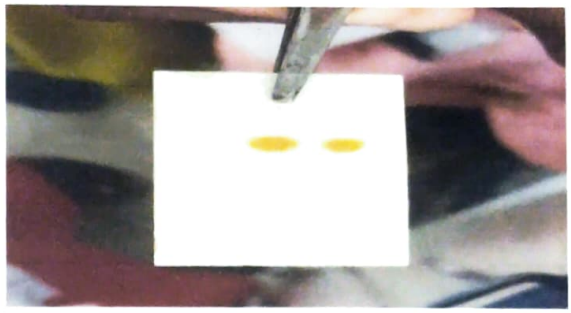
ples:

- Synthesis of Dibenzylacetophenone.
- Synthesis of Dibenzylideneacetone.
- Synthesis of beta-Hydroxypropionaldehyde..

NTHESIS OF DIBENZYL ACETOPHENONE:

0.2mole of acetophenone is treated with equimolar of benzaldehyde 0.2mole in the presence of dium hydroxide of 2.4mole in water ethanolic medium at ambient temperature for 24hrs to give a desired oduct.

0.2mole of acetophenone 50ml of ethanol,100ml of water were taken in the 500ml of beaker spectively.2.4mole of NaOH was added to the reaction mixture. Then the beaker was kept on the magnetic irrer along with the ice bath. Stirring of this mixture proceeds for 15 minutes. After that 0.2mole of enzaldehyde was added slowly to the mixture at room temperature. After 20hrs the reaction is monitored by LC.



From the TLC we came to understand that the product is present in the solid mixture. Then the ltration is done for the removal of the salt, which is our required product. The reaction mass was filtered and ashed with a cold ethanol-water mixture. The obtained product was allowed to dry for one and a half an hour the rotary evaporator.

After drying the product was confirmed by the melting point. Our product Dibenzylacetophenone is a melting point of 57°C. The yield of the product is 48.47g.

ONCLUSION:

In conclusion through the internship training at Myrtace Healthcare Private Limited, sipcot phase-2, osur. I gained a lot of knowledge about the preparation of organic compounds. It was indeed a fascinating and teresting training to attend. It gave me a lot of practical knowledge during the process of training. I believe at the training would definitely help me to lead a better future.

A Study on the Synthesis of Disubstituted Chalcones

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : REENA ROSHINI C

REG.NO : C21UG152CHE029

Under the Supervision of

Dr. MURALIDHARAN S

Myrtace Healthcare Pvt Ltd, Hosur.

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affiliated to Periyar University , Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	**Reena Roshini C**
2.	University Examination Registration Number	**C21UG152CHE029**
3.	Name of the college	**St. Joseph's College of Arts and Science for Women, Sipcot, Hosur-635126.**
4.	Name of the Department/Degree	**Chemistry / B.Sc Chemistry**
5.	Name of the industry/ Institute in which for internship Training Undergone	**Myrtace Healthcare Pvt Ltd, Hosur.**
6.	Guide / Supervisor under whom the training undertaken	**Dr. Muralidharan S (Manager of R&D)**
7.	Title of the Training	**Synthesis of Disubstituted Chalcones**
8.	Brief output training (not more than 2 Pages)	**Annexure Enclosed**
9.	Conclusion	**Determining the amount of organic substance obtain by TLC technique**
10.	Outcome of the training	**To Ensure that the raw materials are properly tested and exported**

Submitted for B.Sc., Internship Examination held on 14.11.2023 at the Department of Chemistry, St.Joseph's College of Arts and Science for Women, Hosur-635126.

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR-635 126, Krishnagiri-Dist.

Reena Roshini C
Signature of the Student

C. myth
Signature of the Guide

S.V. Thangaraj
Head of the Department

Principal

Examiner:

1.

2.

MYRTACE

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur – 635109, Krishnagiri – Dt
Tamil Nadu, India

Date. February 04, 2023

CERTIFICATE

This is to certify that Ms. C. Reena Roshini, B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on **"SYNTHESIS OF DISUBSTITUTED CHALCONES – THE CLAISEN-SCHMIDT CONDENSATION"** in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan

Manager – R&D

SYNTHESIS OF DISUBSTITUTED CHALCONES

TRODUCTION

An internship is an experiential learning opportunity that offers an invaluable chance for dents to network and build crucial professional connections before they even graduate.

And I am glad that I have got the opportunity to learn new things from Myrtace Healthcare ltd which is known for its preparation and supplying of raw materials. The R&D lab in the mpany is the place where the raw materials for pharmaceutical products is tested and exported. ave learnt how some raw materials are tested and few organic preparation of Chalcone and its ivatives.

STRACT

Myrtace Healthcare Pvt. Ltd. is listed in Trade India's list of verified sellers as they are ofessional in the production of various kinds of preparation of raw materials. It has made a name itself in the list of top suppliers of in India. Many pharmaceutical products and raw materials t serves as the starting points for chemical reactions and processes are carefully tested and ported by them to pharmaceutical companies that are in the production line of medications.

ETHODOLOGY

Research & Development is essential in all industries. And, when it comes to the opharmaceutical research industry, R&D services not only generates income for the companies volved in the research but it often brings results in lives being saved, or at least enhancement in tient's lives.

Thin layer chromatography plays a major role in R&D lab.**Thin layer chromatography** LC) is a chromatographic technique that separates the components of a mixture. It is incredibly eful and cheap. It is used in many industries for quality control purposes. TLC is normally used an analytical technique either to assess the purity of a sample or follow a chemical reaction. t's me give some introduction about Chalcone and steps involved in preparation of one its rivative that I have learnt and done in my internship period.

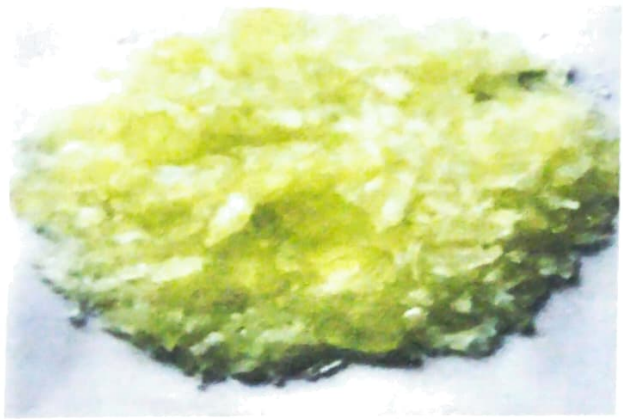
TRODUCTION TO CHALCONE

Chalcone (Dibenzyl Acetophenone) is an α,β-unsaturated ketone. It is being used in edicinal chemistry as antioxidants, anticancer agents, diabetes medications, antiviral agents and ore. The synthesis of Chalcone from benzaldehyde and Acetophenone in the presence of base is e of the examples of Claisen Schmidt condensation. Chalcone derivatives like dibenzylacetone synthesized in the same way but acetone is used in place of Acetophenone and the synthesis of s elaborated in the following topic.

PREPARATION OF DIBENZYLACETONE

Steps to get dibenzylacetone from acetone and benzaldehyde in the presence of sodium hydroxide:

- Take 0.1 mole of acetone and add it to a 500ml 3-necked RB flask.
- Place the RB flask with a magnetic pellet inside in the magnetic stirrer and make sure the RB flask is placed in an ice bath setup before placing it in stirrer.
- Now add ethanol and water which is made up into solution to the mixture.
- Add solid sodium hydroxide of 11g slowly. After 15 minutes, add 0.2 mole of benzaldehyde drop wise. Make sure it maintains room temperature and the stirring is continued for at least 20 hrs.
- The next day as the stirring takes place, yellow colored colloidal solution can be noticed. The magnetic stirrer is then switched off and the solution is taken for TLC and is transferred to separating funnel.
- To the solution add 20ml of ether and stir nicely. Remove the obtained organic layer and repeat the process twice. Keep the mixture in cooling condition, preferably ice water, as a result of which Dibenzyl acetone will separate as a fine emulsion and will form yellow crystals.
- Filter and dry the crystals using filter paper.



CONCLUSION

My time at Myrtace Healthcare Pvt ltd has been an incredibly rewarding & enriching experience. During my internship, I not only gained some experience but also knowledge about R&D and its role in the field of pharmaceutical products. I have also made some lasting connections that will be of great value in my professional life. Overall, I have learned so much from this experience, which will benefit me immensely in future.

A STUDY ON THE SYNTHESIS OF DISUBSTITUTED CHALCONES

Report on Internship Training submitted to periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : VANDANA T

REG NO : C21UG156CHE060

Under the guidance of

Dr. S. MURALIDHARAN

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN

(Affiliated to Periyar University, Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1	Name of the candidate	**Vandana T**
2	University Examination Registration Number	**C21UG156CHE060**
3	Name of the College	**St. Josephs college of Arts and Science for Women, Hosur**
4	Name of the Department / Degree	**Chemistry / B.Sc., Chemistry**
5	Name of the Industry/Institute in which for Internship Training Undergone	**Myrtace Healthcare Pvt Ltd, Hosur**
6	Guide/ Supervisor under whom the training undertaken	**Dr. S. Muralidharan**
7	Title of the Training	**A study on the synthesis of disubstituted chalcones**
8	Brief output of training (not more than 2 pages) – Attach Annexure – 1	**(Annexure enclosed)**
9	Conclusion	**The reaction progress is identified by the TLC method**
10	Outcome of the Training	**To ensure that a product manufactured (or) service provided met the specification**

Submitted for B.Sc., Internship Examination held on 14.11.2023 at the Department of Chemistry, St. Joseph's College of Arts and Science for Women, Hosur-635126

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

Signature of the student	Signature of the guide	Head of the department	Principal

Examiner:

1.

2.

MYRTACE

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri - Dt.
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. T. Vandana, B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "SYNTHESIS OF DISUBSTITUTED CHALCONES - THE CLAISEN-SCHMIDT CONDENSATION" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan

Manager - R&D

THIN LAYER CHROMOTOGRAPHY

INTRODUCTION

In today's world the education is not adequate to enable the student to complete with confidence and reach the goal without having practical experience. I the student of chemistry of St. Joseph's college of arts and science for women, Hosur has undertaken 15 days of internship program at Myrtace Health care private limited.

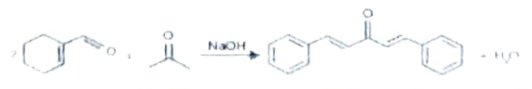
ABSTRACT

Thin layer chromatography is used by synthetic chemists to monitor chemical reaction and purification it is extremely useful in biochemical analysis such as separation of biochemical metabolites from its blood plasma, urine, body fluids, serum etc. It is widely used in separating multicomponent pharmaceutical formulations and also used in cosmetic industry.

- I have learned about the preparation of organic compound dibenzo lactone from benzaldehyde and acetone in the presence of sodium hydroxide.
- The faculties and staff working there were kind and didn't hesitate to teach us when asked about their information regarding the researches and developments.
- They gave demonstration on the working of instruments used for sampling and a representation of bulk production was also explained.

METHODOLOGY

Aromatic aldehyde undergoes condensation reaction with aldehyde or ketone which contain alpha hydrogen atoms in the presence of an alkali. This reaction is called Claisen-Schmidt reaction. According to Claisen aldehydes in the presence of sodium hydroxide can condense with another aldehyde or ketone eliminating a water molecule. Thus, moles of benzaldehyde condense with one mole of acetone to give Dibenzyl acetone.

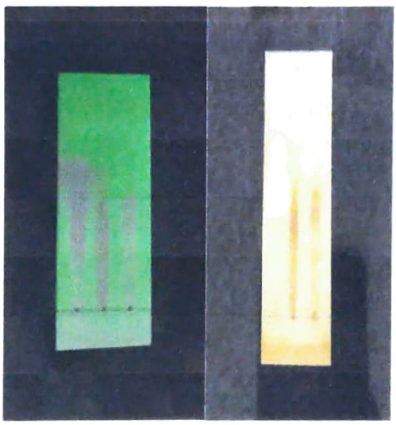


1. In monitoring the progress of the reactions.
2. Identifying the compounds present in the given mixture.
3. Determine the purity of a substance.

DISCUSSION

I have learned how to monitor the progress of the reaction through Thin Layer Chromatography (TLC). The reaction is commonly used to produce solvents such as alcohol isophorone and diacetone. It works as an intermediate for perfume production. It is used in pharmaceutical manufacturing, unsaturated ketones, acetone and chalcones known as aromatic ketones.

Take 10ml of freshly distilled benzaldehyde and 20ml of acetone add it to a conical flask. Place the conical flask in the cooling condition and then add NaOH with constant stirring. The temperature should be in 30^0 C. Keep stirring the solution until NaOH is completely soluble. Add HCL to the reaction and transfer it to a 250ml funnel and remove the organic layer and repeat the process. Keep the mixture in cooling condition as a result of which dibenzyl acetone will separate as a crystal, filter and dry the crystal using filter paper. Place the TLC plate in the TLC chamber and close it with the lid. Take TLC plate from the TLC chamber and put it in the beaker containing iodine salt and shake it for few seconds. AT last, take another TLC plate which is dipped in KMnO4 solution and this TLC plate kept in UV chamber after heating it.



CONCLUSION

My overall experience in the internship program in Myrtace Health care private limited helped me to gain new things, Knowledge about the researchers and developments. The staffs were so helpful and thought about their overall working in the research and gave an idea about inventing a new chemical in the field pf pharmaceutical manufacturing. It was a new learning and would be helpful for my further career development.

A Study on the synthesis of Disubstituted Chalcones

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment

of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : JAFRIN.T

REG.NO : C21UG152CHE015

Under the Supervision of

DR.S.MURALIDHARAN

Myrtace, Healthcare, Private Limited, Hosur.

DEPARTMENT OF CHEMISTRY

ST. Joseph's College of Arts and Science for Women, Hosur.

(Affliated to Periyar University , Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	**Jafrin.T**
2.	University Examination Registration Number	**C21UG152CHE015**
3.	Name of the college	**ST.JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR**
4.	Name of the Department/Degree	**Chemistry/Bsc.Chemistry..,**
5.	Name of the industry/ Institute in which for internship Training Undergone	**Myrtace Healthcare Private Limited, Hosur.**
6.	Guide / Supervisor under whom the training undertaken	**Dr.S.Muralidharan (Manager of R and D)**
7.	Title of the Training	**Examining the quality control of raw materials**
8.	Brief output training (not more than 2 Pages)	**Annexure Enclosed**
9.	Conclusion	**For determining the amount of organic substance obtained.**
10.	Outcome of the training	**To ensure that the service provided met the specifications**

Submitted for B.Sc., Internship Examination held on 14.11.2023 at the Department of chemistry, St Joseph's College of arts and science for women, Hosur.

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

T Jafrin
Signature of the Student

Signature of the Guide

Head of the Department

Principal

Examiner:

1.

2.

MYRTACE

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri Dt
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. T. Jafrin, B.Sc., Chemistry student of St Joseph's College of Arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES - THE CLAISEN-SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

04/02/2023

Dr. S. Muralidharan

Manager - R&D

SYNTHESIS OF DISUBSTITUTED CHALCONES

INTRODUCTION:

Myrtace Healthcare Private Limited is a 6 years 7 months old Private Limited company incorporated on 17-Mar-2017, having its registered office located at Chennai, Tamil Nadu.

The major activity of Myrtace Healthcare Private Limited is manufacturing, sub-classified into scientific research and development and is primarily engaged in the Research and experimental development on natural sciences and engineering. Manufacturing of intermediates, synthesis of impurities, key raw materials, specialty reagents, and specialty chemicals are among the services provided by them.

ABSTRACT:

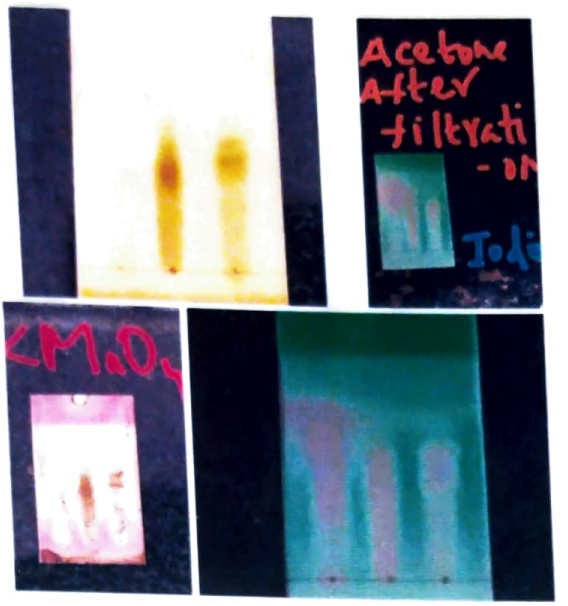
The report entitled to "A study on synthesis of disubstituted chalcones " in Myrtace Healthcare Private Limited, Hosur. It has provided various knowledge about the Research and development of some organic compounds. The main aspect of preparing organic compounds by using number of equipments which were not seen before. Finally the training made me understand the preparation and properties of organic compounds.

SYNTHESIS OF DIBENZYLIDENEACETONE:

0.2 mole of acetone is treated with equimolar of benzaldehyde 0.2 mole in the presence of sodium hydroxide of 0.5 mole in water ethanolic medium at ambient temperature for 24hrs to give a desired product.

Reaction was monitored by TLC method. From the TLC we came to understand that the product is formed then the mixture is allowed to concentration in the Rota evaporator until the solvent was completely collected in the receiving flash, then it was dissolved with methyl tertiary butyl ether. Then it was transferred to the separating funnel for the separation of organic solvent by using the MTBE 200ml three times, after collecting the organic solvent, again it was treated with water then the pH of the water was checked .

The water has the pH of 7. Finally the melting point of the obtained product is 57°C. The yield of the obtained product is 30.15g.



CONCLUSION:

We can conclude that the role of R&D plays an important role in the field of pharmaceutical industries so that we can get efficient amount of new products of given raw materials. We can get to know about greater features of components.

A Study on the synthesis of organic compounds

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : DEVI SHAKTHI PRIYA. G

REG. NO: C21UG152CHE010

Under the Supervision of

Dr. S. MURALIDHARAN

Myrtace Healthcare Pvt Ltd, Hosur.

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affliated to Periyar University, Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

Name of the Candidate	Devi Shakthi Priya. G
University Examination Registration Number	C21UG152CHE010
Name of the college	St. Joseph's College of Arts and Science for Women, Hosur
Name of the Department/Degree	Chemistry / B. Sc chemistry
Name of the industry/ Institute in which for internship Training Undergone	Myrtace Healthcare Private Limited, Sipcot-2
Guide / Supervisor under whom the training undertaken	Dr. S. Muralidharan (Manager of R&D)
Title of the Training	Synthesis of Organic Compounds
Brief output training (not more than 2 Pages)	Annexure enclosed
Conclusion	To determine the amount of the organic compounds obtained
Outcome of the training	To ensure that the completion of the reactions by TLC method

Submitted for B.Sc., Internship Examination held on .21..11..2023 at the Department of nistry, St. Joseph's College of Arts and Science for Women, Hosur.

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

Signature of the Student	Signature of the Guide	Head of the Department	Principal
Devi Shakthi Priya			

niner:

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur – 635109, Krishnagiri – Dt.
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. G. Devi Shakthi Priya , B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES – THE CLAISEN-SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan

Manager – R&D

SYNTHESIS OF ORGANIC COMPOUNDS

ITRODUCTION:

I attended my internship training in Myrtace Healthcare pvt ltd, Sipcot-2. There, I have learned working and production of their products.

BSTRACT:

Manufacturing of intermediates, synthesis of impurities, key raw materials, specialty reagents and ecialty chemicals are among the services provided by Myrtace Healthcare pvt ltd. The R & D are great ıy to gain work experience and improve your soft and technical skills before entering a full-time job in : field which was done in the Myrtace Healthcare pvt ltd.

- The faculties and staffs working there were kind and didn't hesitate to teach us when we asked about their products and other information regarding the production and the company.
- We were given internship training for two weeks. They gave demonstration on the working of instruments used for sampling. A representation of bulk products was also explained.

HE CLAISEN-SCHMIDT REACTION:-

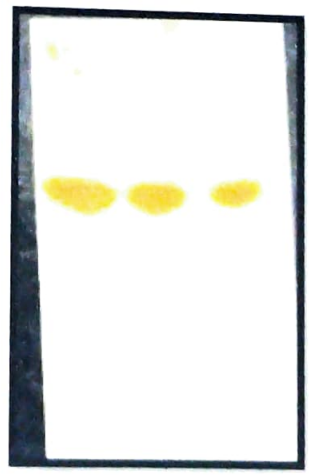
The claisen- Schmidt condensation is the reaction between an aldehyde or ketone having an alpha- /drogen with an aromatic carbonyl compound lacking an alpha-hydrogen. This reaction is named after /o of its pioneering investigators Rainer Ludwig Claisen- and J.G.Schmidt,who independently published ı this topic in 1880 and 1881.

XAMPLES:-

1. Synthesis of dibenzylacetophenone
2. Synthesis of dibenzylideneacetone.

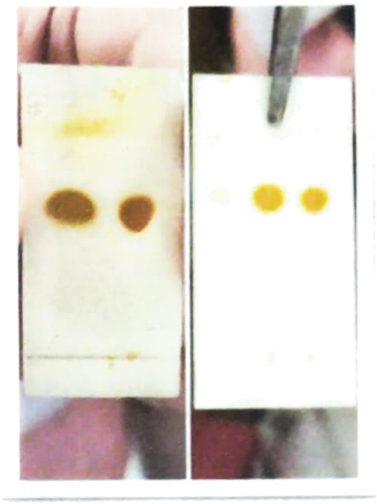
. SYNTHESIS OF DIBENZYLACETOPHENONE:-

25.8g of acetophenone and 50ml of ethanol+100ml of water was taken in the 500ml beaker and 11g f NaOH was added to the reaction mixture. Then the beaker was kept on the magnetic stirrer along with ıe ice bath and then 22.79g of benzaldehyde was added in dropwise. The reaction was stirred at ambient emperature. After 20 hours the reaction was monitored by TLC. Then it is filtered off under a vacuum and ried using the rotary evaporator. The yield obtained is 48.47g and it's melting point is 57°C.



2. SYNTHESIS OF DIBENZYLIDENEACETONE:-

6.8g of acetone was taken in an RB flask by fixing the condenser. 20ml of ethanol+100ml of water was added and to this mixture 11g of sodium hydroxide was added into the RB flask in the ice bath they were allowed to stir for 15min and 25g of benzaldehyde was added slowly into the RB flask at the room temperature and the RB flask was closed using the stopper and the thermopack. This reaction is an overnight reaction. After, the completion of the reaction, it is monitored by checking the TLC. Then it's filtered off under the vacuum and washed with cold ethanol water mixture. The salt is dried using the rotary evaporator and the color of the salt is pale yellow. The yield obtained was 30.15g and it's melting point is 112°C.



CONCLUSION:-

My overall experience in the internship training in Myrtace Healthcare pvt ltd helped me to gain new things and knowledge about the testing and manufacturing of the products. The staffs were so helpful and taught about their overall working in the industry. It gave an idea about how the R&D lab functions and production of their products. It was a new learning and would be helpful for my further career development.

A Study on the synthesis of Disubstituted chalcones

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : B.ARPUTHAJOTHI

REG.NO : C21UG152CHE004

Under the Supervision of

Dr.S.MURALIDHARAN

Myrtace Healthcare Private limited Hosur.

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affliated to Periyar University , Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	**Arputhajothi.B**
2.	University Examination Registration Number	**C21UG152CHE004**
3.	Name of the college	**St.Joseph's College of Arts and Science for Women, Hosur - 635126**
4.	Name of the Department/Degree	**Chemistry/Bsc.Chemistry..,**
5.	Name of the industry/ Institute in which for internship Training Undergone	**Myrtace Healthcare Private Limited, Hosur.**
6.	Guide / Supervisor under whom the training undertaken	**Dr.S.Muralidharan (Manager of R and D)**
7.	Title of the Training	**Synthesis of Disubstituted Chalcones.**
8.	Brief output training (not more than 2 Pages)	**Annexure Enclosed**
9.	Conclusion	**For determining the amount of organic substance obtained .**
10.	Outcome of the training	**To ensure the completion of the reaction by TLC method.**

Submitted for B.Sc., Internship Examination held on 14.11.2023 at the Department of chemistry, St.Joseph's College of Arts and Science for Women, Hosur - 635126.

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

Examiner:

Arputhajothi.B
Signature of the Student

Signature of the Guide

Head of the Department

Principal

1.

2.

MYRTACE

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri - Dt.
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. B. Arputhajothi, B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on **"SYNTHESIS OF DISUBSTITUTED CHALCONES – THE CLAISEN-SCHMIDT CONDENSATION"** in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan
Manager – R&D

QUALITY CHECKING OF RAW MATERIALS

Introduction :

I attended my internship program in MYRTACE Health care private Limited,Hosur. There I have learned the working and production of their products that are processed in large industrial scale.

ABSTRACT:

The various pharmaceuticals and medical related products are being produced in the company. Most of their products are based on Calcium,which makes them one of the largest manufacturer in it.I have learned about quality assurance where they would test samples which is to be used in main Production.The Manufacturing unit and other places where maintained with good contamination.

The faculties and staffs working there were kind and didn't hesitate to teach us. When asked about their products and other information regarding the production and company.

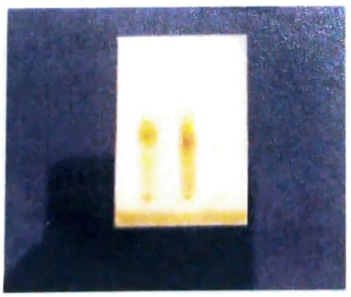
We were given Internship program for two weeks .They gave demonstration on the working of instruments used for sampling

There were several Equipments to produce different pharmaceutical products Various guidelines and safety measures are followed to ensure safety.

METHODOLOGY

THIN LAYER CHROMATOGRAPHY

- Thin layer chromatography is performed on a sheet of glass ,plastic,which is coated with a thin layer of adsorbent material usually silica gel,Aluminium oxide.After the sample has been applied on the plate a solvent mixture is drawn up the plate
- It is used in determining the purity of a substance and used in identification of medicinal plants and their constituents
- The components involved in TLC are TLC plate,TLC chamber mobile phase,Filter paperround bottom flask,Conical flask, Magnetic stirred,Magnetic wallet,Condenser.



DISCUSSION

The company is dedicated in producing various pharmaceutical and medical related products like tablets, capsules, ointments and active product ingredients at its highest quality. allthe safety Equipments. They explained how raw materials are converted to finished products step by step and how they are packed and distributed.They have several equipments to produce different pharmaceutical products Various guidelines and safety measures are followed to ensure safety

TLC is a use full tool for reaction monitoring for this.The plate normally contains a spot of starting material, a spot from the reaction mixture and a co spot containing both.The analysis will show if the starting material is disappeared and if any new products appeared

The claisen Schmidt condensation reaction is an Organic reaction with an aromatic hydrogen reacts with an aromatic carbonyl compound which does not have any alpha hydrogen

CONCLUSION

Through Internship training at MYRTACE private limited hosur a clear knowledge has been obtained about the various steps involved in Thin layer chromatography and preparation of Organic compounds.The thin layer chromatography was conducted successfully through there were some errors in the experiment. In general there was three steps to perform TLC that is spotting, Development and visualization.It is indeed a very exciting and interesting training to attend. I have equipped with lot of practical knowledge during the process of training which could definitely help me during upcoming studies.

A Study on Synthesis of Organic Compounds

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

NAME : SOUFIYA.M

REG.NO: C21UG152CHE031

Under the Supervision of

Dr. S. MURALIDHARAN

Myrtace Healthcare Private Limited, Hosur.

DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR.

(Affiliated to Periyar University, Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

Name of the Candidate	**Soufiya M**
University Examination Registration Number	**C21UG152CHE031**
Name of the college	**St. Joseph's College of Arts and Science for Women, Hosur**
Name of the Department/Degree	**Chemistry/B.Sc. Chemistry**
Name of the industry/ Institute in which for internship Training Undergone	**Myrtace Healthcare Pvt Ltd, Hosur**
Guide / Supervisor under whom the training undertaken	**Dr. S. Muralidharan (Manager of R&D)**
Title of the Training	**Synthesis of Disubstituted Chalcones**
Brief output training (not more than 2 Pages)	**Annexure Enclosed**
Conclusion	**For determining the amount of organic substance obtained**
Outcome of the training	**To ensure the completion of the reaction by TLC method**

omitted for B.Sc., Internship Examination held on 16.11.2023. at the Department
try, St. Joseph's College of Arts and Science for Women, Hosur-635126.

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

Soufiya
re of the
dent

Signature of the Guide

Head of the Department

Principal

MYRTACE

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur – 635109, Krishnagiri – Dt.
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. M. Soufiya, B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES – THE CLAISEN–SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

4/02/2023

Dr. S. Muralidharan

Manager – R&D

SYNTHESIS OF DISUBSTITUTED CHALCONES-THE CLAISEN-SCHMIDTCONDENSATION

TRODUCTION:

st, I would like to thank the Directors of Myrtace Healthcare Private Limited Mr. Sakthivel Chinniah, Mr. adharajan Ventadasamy. And the Manager Mr. Muralitharan who gave this opportunity to do the internship in s company. And the employers Mr. Arun Kumar, Mr. Karthick. Who helped us to learn many new things that will p me in 3rd year and the for the future.

BSTRACT:

prepare the organic compound Dibenzal acetone from benzaldehyde and acetone in the presence of sodium droxide. First of all, this practical training has given me a very big exposure to the Research and velopment of compounds. I have undergone training in the Myrtace Healthcare Private Limited., a period of 14 days. This report deals with the preparation, chromatography, purification methods, rking, and principles of the Rotary evaporator.

HROMATOGRAPHY:

omatography is a process for separating components of a mixture- Paper Lime Chromatograph, TLC - Thin er Chromatography, GLC- Gas Liquid Chromatography, HPLC- High Performance Liquid Chromatography, Ion hange Chromatography.

ETHODOLOGY:

THEORY:

matic aldehyde undergoes condensation reaction with aldehyde or ketone which contain alpha hydrogen atoms in presence of an alkali. This reaction is called Claisen-Schmidt reaction. According to Claisen aldehyde in the ence of Sodium hydroxide can condense with another aldehyde or ketone eliminating a water molecule. Thus, es of benzaldehyde condense with one mole of acetone to give Dibenzal acetone.

PPRATUS:

e Necked R.B flask, Single Neck R.B Flask, Magnetic Stirrer, Green - nitrogen gas, Red-Hydrogen gas, denser, Thermopack, Stopper, Guard Tube, Magnetic Palate, Adapter, Moter, UV Chamber, TLC Plate, Vial, arating Tube.

ROCEDURE:

e a Three necked RB flask add Magnetic pellet. And fixed with condenser. And 23.5g of Acetone.
lso add 50ml of Ethanol and 100ml of water.
ce the flask in Coldwater bath and then add 11g of sodium hydroxide drop wise with constant
ng.
aintain the temperature at 30o C. After the complete addition of sodium hydroxide.
d 25g of Benzaldehyde and then transfer to a 250ml separating funnel.
s one day reaction /24-hour reaction.
ter overnight reaction need to take TLC.

fter that separate the liquid is transferred to single neck RB flask
d fixed to Rotary evaporator.
ter that salt is dried.
nd the weight is noted.

RECRYSTALLISATION:

After drying a small amount of salt is taken in a test tube and dissolved in ethanol and heated.
After cooling salt is formed and filtered.
TLC checked and the product is formed in salt.
After TLC checked the salt is dried using rotary evaporator.
After dried salt is weighted and noted.

OBSERVATION:

Color of the crystals	Pale-yellow
Expected Yield	4gm
Melting point	112

RESULT:

lcone synthesized and the yield was found to be 48.47g.

CONCLUSION:

nclusion, the internship was a useful experience. I have found out what my strength and weakness are; I gained knowledge and skills and met many people. I archived many of learning goal.

A STUDY ON THE SYNTHESIS OF DISUBSTITUTED CHALCONE

Report on Internship Training submitted to Periyar university, Salem in partial fulfilment of requirement for the award of the degree of

BACHELOR OF CHEMISTRY

Submitted by

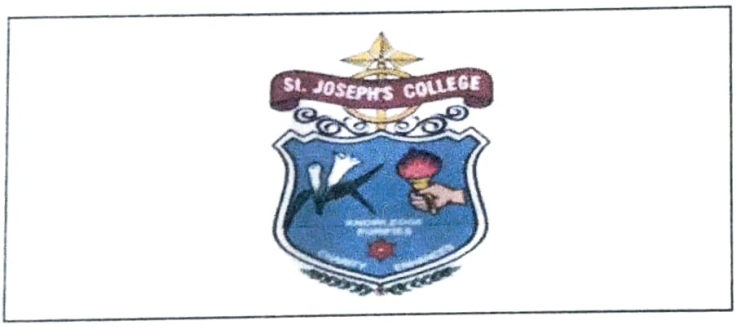
NAME : MONIKA . M

REG.NO : C21UG152CHE023

Under the Supervision of

Dr.S.MURALIDHARAN

Myrtace healthcare Pvt Ltd, Hosur.



DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE FOR WOMEN, HOSUR

(Affliated to Periyar University , Salem)

PERIYAR UNIVERSITY

INTERNSHIP TRAINING REPORT

1.	Name of the Candidate	Monika. M
2.	University Examination Registration Number	C21UG152CHE023
3.	Name of the college	St.Joseph's College of Art's and Science for Women, Sipcot, Hosur-635126
4.	Name of the Department/Degree	Chemistry/ B.Sc Chemistry
5.	Name of the industry/ Institute in which for internship Training Undergone	Myrtace Healthcare Private Limited, Hosur.
6.	Guide / Supervisor under whom the training undertaken	Dr. S. Muralidharan (Manager of R&D)
7.	Title of the Training	Synthesis of disubstituted Chalcone.
8.	Brief output training (not more than 2 Pages)	Annexure Enclosed
9.	Conclusion	Determining the completion of an organic reaction by TLC technique.
10	Outcome of the training	To ensure that manufactured product is standard and maximum yield is obtained.

Submitted for B.Sc., Internship Examination held on 14.11.2[illegible] at the Department of Chemistry, St. Joseph's College of Art's and Science, Hosur.

PRINCIPAL
ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE FOR WOMEN
Mookandapalli, Sipcot,
HOSUR - 635 126, Krishnagiri - Dist.

Monika.M

Signature of the Student | Signature of the Guide | Head of the Department | Principal

Examiner

1.

2.

MYRTACE

Myrtace Healthcare Private Limited
Plot No. 29, SIPCOT Phase II
SIPCOT Industrial Complex
Hosur - 635109, Krishnagiri Dt
Tamil Nadu, India

Date: February 04, 2023

CERTIFICATE

This is to certify that Ms. M. Monika , B.Sc., Chemistry student of St.Joseph's College of arts and science for women, Hosur, Tamil Nadu, did her internship on "**SYNTHESIS OF DISUBSTITUTED CHALCONES - THE CLAISEN-SCHMIDT CONDENSATION**" in our R&D unit at Hosur from January 23, 2023 to February 04, 2023. We wish her all the best.

For Myrtace Healthcare Private Limited

Dr. S. Muralidharan

Manager – R&D

SYNTHESIS OF DISUBSTITUTED CHALCONE:-

INTRODUCTION:-

I attended my internship program in Myrtace healthcare Pvt Ltd, Hosur. There I have learned the preparation and determination of their products that are processed on a large scale industry.

ABSTRACT:-

Myrtace healthcare Private Limited is a pharmaceutical company that was incorporated on 17 March 2017 in Chennai, Tamil Nadu, India. Two directors are associated with the organisation. Varadharajan Venkadasamy and Sakthivel Chinniah are presently associated as directors. It plays a major role in facilitating society's healthcare and providing various raw materials for preparing chemicals, medicines and vaccines. In Hosur, its role is as an R & D centre that examines the organic preparation of compounds in easier and effective ways by using compounds of exact equivalence with relevant solvents.

- The faculties and staff working there were kind and didn't hesitate to teach us when asked about their products and other information regarding the production and the company.
- We were given an internship program for two weeks. They gave demonstrations on the working of instruments used for preparation of samples. A representation of bulk production by using reactors was also explained.

METHODOLOGY:-

The main role of R & D is to help a company to maintain its competitiveness on developing trends and analysing the current conditions of the market. Most of the apparatus used in the laboratory are made up of borosilicate glass to resist thermal shock of uneven heating, chemical resistance, easy cleaning and allow transparent visual monitoring.

The reaction is initiated by mixing 25.8g of acetophenone and 22.8g of benzaldehyde with sodium hydroxide solution in a condensed apparatus set up. TLC is a common technique in the organic chemistry laboratory because it can give quick and useful information about the purity of a sample and also whether a reaction in progress is completed or not. By using TLC plates, the completion of the reaction is checked. Thus, the reaction is completed.

- Qualitative test is done to ensure the completion of the reaction.
- The crude product obtained is recrystallised by various methods that includes separating funnel, vacuum separation and finally with the help of the rotary evaporator, it is recrystallised.

We were taught to use the instrumentation of rotary evaporator, melting point analyser and TLC technique.

DISCUSSION:-

I have learned about the instrumentation of the vacuum filtration, separating funnel and rotary evaporator. By using the separating funnel, the crude product is separated with the help of the suitable solvent like ethyl acetate. The concentrated crude product is separated from the aqueous solution. Further, by using the rotary evaporator, the recrystallisation process is done. Finally, we got the recrystallised chalcone with maximum yield of 48.08g . Likewise many organic preparations are done with the help of these apparatus with proper qualitative methods.

CONCLUSION:-

My overall experience in the Myrtace healthcare private limited, Hosur helped me to gain a broad knowledge in the branch of analytical and organic chemistry that contributes towards the pharmaceutical industry.