## PG and Research Department of Chemistry

#### PSPHA20:SUMMER PROJECT

#### Academic Year 2022-23

#### STUDENTS NAME LIST

	67 SON 10
30521P14001	AGALYA M
30521P14002	DAYANA DU
30521P14003	JENIFER L
30521P14004	KOKILA S
30521P14005	MARY THERESA S
30521P14006	NANDHINI E
30521P14007	PAVITHRA B
30521P14008	PONARASI P
30521P14009	PRIYADHARSHINI M
30521P14010	SANOFAR A
30521P14011	SARANYA P
30521P14012	SNEHA S
30521P14014	SULAKSHANA VASUGI K
30521P14015	SWETHA M
30521P14016	VAISHNAVI C
30521P14017	VINOTHINI P
30521P14018	YOGALAKSHMI T

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PRINCIPAL

# चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड

(भारत सरकार का उद्यम और आईओसीएल की समूह कम्पनी)

# Chennai Petroleum Corporation Limited

(A Government of India Enterprise and Group Company of IOCL)



29/07/2022

# CERTIFICATE

This is to certify that Ms.AGALYA M, a Student of M.Sc. (Chemistry), AUXILIUM COLLEGE (Autonomous), VELLORE, has completed the Project Work on "STUDY ON EVALUATION OF LUBE POTENTIAL IN CRUDE OIL(X) VACCUM DISTILLATE" in our organization during the period from 11/07/2022 to 29/07/2022.

We wish her all success in her future endeavour.

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Recived M.Ag.f. Sivappirakasam C Officer(Personnel)

सी. शिवपिरकासाम C. SIVAPPIRAKASAM अधिकारी (कार्मिक) Officer (Personnel) चेनी पेट्रोलियम कॉपोरेशन लिमिटेड

Chennai Petroleum Corporation Ltd. संजली (Manali,चेन्ने/Chennai-600 068.

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## ोट्रोकेभिकल्स तकनीकी संस्थान (आईपीटी)

ट्रोरसायन विभाग विरुक्त मंत्रालय, भारत सरकार – 600 032-4-2225 4701 (6 लाइन) 44-22254707 nnai@cipet.gov.in rw.cipet.gov.in





CIPET: INSTITUTE OF PETROCHEMICALS TECHNOLOGY (IPT)

> Department of Chemicals & Petrochemicals Ministry of Chemicals & Fertilizers, Govt. of India Guindy, Chennai - 600 032.

Phone: 91-44-2225 4701 (6 Lines)

Fax: 91 - 44 - 22254707 E-mail: chennai@cipet.gov.in Website: www.cipet.gov.in

08.07.2022

IPET: IPT/CHN/VTC/Inplant Trg/2022-23/15

#### CERTIFICATE

his is to certify that Ms. DAYANA D.U., D/o. Mr. Devanesan D., is a 1st year student f M.Sc. (Chemistry) from Auxilium College (Autonomous), Vellore 632006, has successfully ompleted the Inplant Training Programme on "Plastics Processing & Testing" from 4.07.2022 to 08.07.2022 Central Institute of Petrochemicals Engineering and Technology TPET), Institute of Petrochemicals Technology (IPT), (Department of Chemicals & etrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India), Guindy, Chennai 10 032.

uring the training period, the performance of the trainee was found good.

Constitution of the second of

SHRIKANT SHIRALI
PRINCIPAL DIRECTOR & HEAD

A. R. F

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PRINCIPAL AUXILIUM COLLEGE (Autonomeus) Gar III Nagar, Vellere - 632 006.

मुख्यालय : सिपेट, गिण्डी, चेन्नै - 600 032. Head Office : CIPET, Guindy, Chennai - 600 032: ावाद, अमृतसर, औरंगाबाद, अगरतला, बदी, वालासोर, बेंगलुरु, भोपाल, भुवनेश्वर, चन्द्रपुर, घेन्नई, देहरादून, गुरुग्राम, गुवाहाटी, ग्वालियर, इंजीपुर, इल्दिया, इम्फाल, जयपुर, कोट्यि, कोरबा, लखनऊ, मदुरे, मुरथल, मैसूरु, रायपुर, राँची, वलसाड, वाराणसी एवं विजयवाड़ा labad, Amritsar, Aurangabad, Agartala, Baddi, Balasore, Bengaluru. Bhonal Rhubangung Chandran.

# चेन्नै पेट्रोलियम कॉपॉरेशन लिमिटेड

(भारत सरकार का उद्यम और आईओसीएल की समृह कम्पनी)

# Chennai Petroleum Corporation Limited

(A Government of India Enterprise and Group Company of IOCL)



29/07/2022

# CERTIFICATE

nis is to certify that Ms.JENIFER L, a Student of M.Sc. (Chemistry), AUXILIUM OLLEGE (Autonomous), VELLORE, has completed the Project Work on "STUDY ON VALUATION OF LUBE POTENTIAL IN CRUDE OIL(X) VACCUM DISTILLATE" in our rganization during the period from 11/07/2022 to 29/07/2022.

le wish her all success in her future endeavour.



Sivappirakasam C Officer(Personnel)

स्री. शिवपिरकासाम C. SIVAPPIRAKASAM अधिकारी (कार्मिक) Officer (Personnel) चेन्नै पेट्रोलियम कॉर्पो रेशन लिमिटेड

Chennai Petroleum Corporation Ltd. मणली /Manali,चेन्नी/Chennai-600 068.

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PRINCIPAL
AUXILIUM COLLEGE (Autonomous)
G. Nagar, Vellore - 632 006.

## CERTIFICATE

I do hereby certify that the Summer Project report entitled "SYNTHESIS AND CHARACTERIZATION OF FeMoO<sub>4</sub> PHOTOCATALYST AND ITS APPLICATION IN WASTEWATER TREATMENT" has been carried out by the candidate Ms. S. KOKILA. II M.Sc. Chemistry. PG and Research Department of Chemistry. Auxilium College (Autonomous) in the Department of Chemistry. Thiruvalluvar University, during the period 04.07.2022 to 23.07.2022.

Signature of the Guide with seal

DR. J. MADHAVAN Associate Professor, Department of Chemistry, Thiruvalluvar University Vellore - 632 115.

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PRINCIPAL AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006. Vellore District, Tamil Nadu.

# THIRUVALLUVAR UNIVERSITY VELLORE – 632 115 CERTIFICATE

I do hereby certify that the Summer Project Report entitled "SYNTHESIS AND CHARACTERIZATION OF BiOI PHOTOCATALYST AND ITS APPLICATION IN WASTEWATER TREATMENT" has been carried out by the candidate Ms. S. Mary Theresa, II M. Sc. Chemistry, PG and Research Department of Chemistry, Auxilium College (Autonomous) in the Department of Physical Chemistry, the Solar Energy Lab, Thiruvalluvar University, Vellore, during the period of  $04^{th}$  -  $17^{th}$  June, 2022.

Dr. J. Madhavan, M.Sc., B.Ed., Ph.D.

Associate Professor,

Department of Physical Chemistry

Thriuvalluvar University,

Serkkadu, Vellore - 632 115

OK THE SUNNER

### पेटोकेमिकल्स तकनीकी संस्थान (आईपीटी)

पेटोरसायन विभाग दर्बरक मंत्रालय, भारत सरकार नै - 600 032. -44-2225 4701 (6 लाइन) 1-44-22254707 hennai@cipet.gov.in www.cipet.gov.in



CIPET: INSTITUTE OF PETROCHEMICALS TECHNOLOGY (IPT)

> Department of Chemicals & Petrochemicals Ministry of Chemicals & Fertilizers, Govt. of India Guindy, Chennai - 600 032.

Phone: 91-44-2225 4701 (6 Lines)

Fax: 91 - 44 - 22254707 E-mail: chennai@cipet.gov.in Website: www.cipet.gov.in



CIPET: IPT/CHN/VTC/ Inplant Trg/2022-23/16



08.07.2022

## CERTIFICATE

This is to certify that Ms. NANDHINI E., D/o. Mr. Ethiraj C., is a 1st year student of M.Sc. (Chemistry) from Auxilium College (Autonomous), Vellore 632006, has successfully completed the Inplant Training Programme on "Plastics Processing & Testing" from 04.07.2022 to 08.07.2022 Central Institute of Petrochemicals Engineering and Technology (CIPET), Institute of Petrochemicals Technology (IPT), (Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India), Guindy, Chennai 600 032.

During the training period, the performance of the trainee was found good.



SHRIKANT SHIRALI

PRINCIPAL DIRECTOR & HEAD

A. Rant

de orga suntil

PRINCIPAL AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006. Vellore District, Tamil Nadu.

मुख्यालय : सिपेट, गिण्डी, चेन्नै - 600 032. Head Office : CIPET, Guindy, Chennai - 600 032.

अहमदाबाद, अमृतसर, औरंगाबाद, अगरतला, बद्दी, बालासोर, बेंगलुरु, भोपाल, मुवंनेश्वर, चन्द्रपुर, चेन्नई, देहरादून, गुरुग्राम, गुवाहाटी, ग्वालियर, हैदराबाद, हाजीपुर, हिल्दिया, इम्फाल, जयपुर, कोच्चि, कोरबा, लखनऊ, मदुरै, मुख्थल, मैसूरु, रायपुर, राँची, वलसाड, वाराणसी एवं विजयवाड़ा Ahmedabad, Amritsar, Aurangabad, Agartala, Baddi, Balasore, Bengaluru, Bhopal, Bhubaneswar, Chandrapur, Chennai, Dehradun, Gurugram, Suwahati. Gwalior, Hyderabad. Haiibur, Haldia. Imphal. Jainur Kochi. Korba. Lucknow Madurai. Murthal. Mysimi. Raibur, Ranchi. Valsad. Varanasi & Vijayawada

# Thirumalai Chemicals Ltd.

301, 14001, 50001, OHSAS 18001 & FSSC 22000 CERTIFIED COMPANY) CIN: L24100MH1972PLC016149 25-A, SIPCOT INDUSTRIAL COMPLEX, RANIPET 632 403, TAMILNADU, INDIA. PHONE: +91 - 4172 - 244441, 2, 6

FAX : +91 - 4172 - 244308

E-MAIL: mail@thirumalaichemicals.com

Sept 15, 2022

#### **IN-PLANT TRAINING CERTIFICATE**

This is to certify that Ms. B. PAVITHRA (Reg. No: 30521P14007)

M.Sc. (Chemistry), student from AUXILIUM COLLEGE, Vellore has undergone

Summer Training Programme at Thirumalai Chemicals Ltd., Ranipet for Fifteen days from July 4, 2022

During this period, she was found to be very inquisitive in learning, sincere and dedicated.

We wish her all the best for her future Endeavour.

For Thirumalai Chemicals Ltd.,

Kothanda Raman V

Senior Manager - Personnel & HR

85 gg 80012-2

PRINCIPAL AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006. Vellore District, Tamil Nadu.

E-Mail: thirumalai@thirumalaichemicals.com





# PERINSTITUTE OF TECHNOLOY

(AffiliatedtoAnnaUniversity)
No1,MANNIVAKKAM,WESTTAMBARAM,CHENNAI-600048.

## **CERTIFICATE**

I do hereby certify that the Summer Project Report entitled "Synthesis and Characterization of semi rganic Nonlinear Optical Diaquabis (L-Lactato) Magnesium (DLLM) Single Crystal" has been carried out by the candidate Ms. M. PRIYADHARSHINI., II M. Sc. Chemistry, PG and Research Department of Chemistry, Auxilium College (Autonomous) in the Department of Research & Development, Peri Institute of Cechnology, Mannivakkam, West Tambaram. Chemiai during the period of 4<sup>th</sup> July - 22<sup>th</sup> July, 2019.

Prof.V.Chitambaram,M.Sc., Ph.D. R&DHead

Professor of Physics
Professor of Physics
PERI INSTITUTE OF TECHNOLOGIC
Mannivakkam, Chennai- 600 048

PERI

@PERIKnowledgePark,Mannivakkam, Chennai-600048, Tamilnadu

©Phone:+91-44-61333422\*admin@peri.education@www.peri.education

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# PERINSTITUTE OF TECHNOLGY

(AffiliatedtoAnnaUniversity)
No1,MANNIVAKKAM,WESTFAMBARAM,CHENNAI-600048.

## CERTIFICATE

do hereby certify that the SummerProject Report entitled "SYNTHESIS AND CTERIZATION ON NICKEL OXIDE BY HYDROTHERMAL METHOD" has been carried out andidate Ms. P. PONARASI., II M. Sc. Chemistry, FG and Research Department of Chemistry, 1 College (Autonomous) in the Department of Research & Development, Peri Institute of Technology, kkam, West Tambaram, Chemnai during the period of 4th July - 22th July, 2019.

Prof. V. Chitambaram, M.Sc., Ph.D. R&DHead

Professor of Physics
Professor of Physics
PERI INSTITUTE OF TECHNOLOGY
Mannivakkam, Chennai-600 048

RATION

@PERIKnowledgePark,Wannivakkam, Chennai-600048, Tamilnadu

CPhone: 491-44-61333422 \*admin@peri.education@www.peri.education

85- 7ye 800h-0

PRINCIPAL

AUXILIUM COLLEGE (Autonomous)
Ganne Nagar, Vellore - 632 006.

Ven re District, Tamil Nadu.



# PERIEducational and Charitable Trust

(AffiliatedtoAnnaUniversity)

No1, MANNIVAKKAM, WESTTAMBARAM, CHENNAI-600048.

## **CERTIFICATE**

I do hereby certify that the SummerProject Report entitled "THE STRUCTURAL, ORPHOLOGICAL, OPTICAL, THERMAL AND MAGNETIC PROPERTIES OF MnFe<sub>2</sub>O<sub>4</sub>

ANOPARTICALS" has been carried out bythe candidate Ms. A. SANOFAR., II M. Sc. Chemistry, PG and search Department of Chemistry, Auxilium College (Autonomous) in the Department of Research & velopment, Peri Institute of Technology, Mannivakkam, West Tambaram, Chennai during the period of July - 22<sup>th</sup> July, 2019.

Prof.V.Chitambaram,M.Sc., Ph.D. R&DHead

> J. Chithambaram, M.Sc., M. Phil Phil Professor of Physics PERI INSTITUTE OF TECHNOLOGY Mannivakkam, Chennai-600 048



@PERIKnowledgePark,Mannivakkam, Chennai-600048, Tamilnadu

@Phone:+91-44-61333422\*admin@peri.education@www.peri.education

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SACTURERS OF INORGANIC PIGMENTS AND SYNTHETIC DETERGENTS

1-4172-278500-28 :t@ultramarinepigments.net ultramarinepigments.net



13-07-2022

#### TO WHOM SO EVER IT MAY CONCERNED

This is to certify that Ms. P. Saranya (Reg. No. 30521P14011), M.Sc (Chemistry) studenty studying in "Auxilium College (Autonomous)", successfully completed her project in our organization from 7th July 2022 to 13th July 2022 as a part of her curriculum.

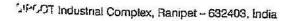
During the tenure of the project period, her conduct was good and satisfactory.

We wish her all success in her future endeavors.

For ULTRAMARINE & PIGMENTS LTD.,

Executive - Personnel

80. Jy 800h





# MALLADI DRUGS & PHARMACEUTICALS LIMITED

MOPL.

\*LOT No. 67, SIPCOT INDUSTRIAL ESTATE, HANIPET - 632 403, HÁNIPET DIST., TAMILNADU, INDIA.
PHONE: 91-4172-244006, FAX: 91-4172-244906

August 11, 2022

#### TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Sneha S (30521P14012) doing her M.SC Chemistry from Auxillium College Autonomus has completed her internship at our organization as a part of her curriculum from July 01, 2022 to July 15, 2022.

Her conduct during the period has been good. We wish her all the best for her future endeavors.

Yours faithfully,

For Malladi Drugs & Pharmaceuticals Limited,

Naveen Kumar M

Senior Manager - Human Resources

PRINCIPAL

AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006.

Veilore District, Tamil Nadu.

io.: SKCL Tech Square, 7th Floor, Plot No. SP14, Thiru Vi Ka Industrial Estate, Guindy, Chennai - 600 032.

Phone: + 91-44-6687 6999, Fax: + 91-44-6687 6998.

Email: marketing@malladi.co.in materials@malladi.co.in, WEB SITE: www.malladi.com

CIN: U24230TN1980PLC008382

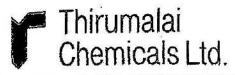


92, SIPCOT INDUSTRIAL COMPLEX, HOSUR - 635 126 (T.N.) Tel. : +91- 4344-276618, 277937 Fax : +91- 4344-277261

Date:30/07/2022.

## STUDENT INTERNSHIP CERTIFICATE

This is to certify that Mr. / Ms. Sulakshana Vasugi K
/     /
College / Autonomous University has / have successfully completed Internship Training / Project work from 15/07/2022 to 30/07/2022.
We wish him / her / them all success in their future endeavours.
For MICRO LABS LIMITED
Authorised Signatory  HOSUR



ISO 9001, 14001, 50001, OHSAS 18001 & FSSC 22000 CERTIFIED COMPANY) CIN: L24100MH1972PI C016149 25-A, SIPCOT INDUSTRIAL COMPLEX, RANIPET 632 403, TAMILNADU, INDIA. PHONE: +91 - 4172 - 244441, 2, 6

FAX : +91 - 4172 - 244308

E-MAIL: mail@thirumalaichemicals.cc

Sept 15, 2022

#### IN-PLANT TRAINING CERTIFICATE

This is to certify that Ms. M. SWETHA (Reg. No : 30521P14015)

M.Sc. (Chemistry), student from AUXILIUM COLLEGE, Vellore has undergone

Summer Training Programme at Thirumalai Chemicals Ltd., Ranipet for Fifteen days from July 4, 2022

During this period, she was found to be very inquisitive in learning, sincere and dedicated.

We wish her all the best for her future Endeavour.

For Thirumalai Chemicals Ltd.,

Kothanda Raman V

Senior Manager - Personnel & HR

85. Zyr 840 h 50



सेपेट: पेट्रोकेमिकल्स तकनीकी संस्थान (आईपीटी)

सायन एव पेट्रोरसायन विभाग सावन एवं उर्वरक मंत्रालय, भारत सरकार गण्डी, चेनी - 600 032.

होन : 91-44-2225 4701 (6 लाइन)

केक्स : 91-44-22254707 -मेल : chennai@cipet.gov.in त्रेन्सइट : www.cipet.gov.in



CIPET: INSTITUTE OF PETROCHEMICALS TECHNOLOGY (IPT)

Department of Chemicals & Petrochemicals Ministry of Chemicals & Fertilizers, Govt. of India Guindy, Chennai - 600 032.

Phone: 91-44-2225 4701 (6 Lines)

Fax: 91 - 44 - 22254707 E-mail: chennai@cipet.gov.in Website: www.cipet.gov.in



CIPET: IPT/CHN/VTC/Inplant Trg./2022-23/14

08.07.2022

#### CERTIFICATE

This is to certify that Ms. VAISHNAVI C., D/o. Mr. Chandraganthan R., is a 1st year student of M.Sc. (Chemistry) from Auxilium College (Autonomous), Vellore 632006, has successfully completed the Inplant Training Programme on "Plastics Processing & Testing" from 04.07.2022 to 08.07.2022 Central Institute of Petrochemicals Engineering and Technology (CIPET), Institute of Petrochemicals Technology (IPT), (Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India), Guindy, Chennai 600 032.

During the training period, the performance of the trainee was found good.



SHRIKANT SHIRALI PRINCIPAL DIRECTOR & HEAD

85- Type 800h-a

AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006. Vellore District, Tamil Nadu.

मुख्यालय : सिपेट, निण्डो, चेन्नै - 600 032. Head Office : CIPET, Guindy, Chennai - 600 032.

केन्द्र : अहमदाबाद, अमृतसर, ऑरंगाबाद, अगरतला, वदी, वालासोर, वेंग्लुरु, मोपाल, भुवनेश्वर, चन्द्रपुर, चेन्नई, देहरादून, गुरुग्राम, गुवाहाटी, ग्वालियर, हैदराबाद, हाजीपुर, हिन्दिया, इम्फाल, जयपुर, कोच्चि, कोरया, लखनक, मदुरै, मुरथल, मैसूरु, रायपुर, राँची, वलसाड, वाराणसी एवं विजयताड़ा Centres: Ahmedabad, Amritsar, Aurangabad, Agartala, Baddi, Balasore, Bengaluru, Bhopal, Bhubaneswar, Chandrapur, Chennai, Dehradun, Gurugram, Guwahati, Gwalior, Hyderabad, Hajipur, Haldia, Imphal, Jaipur, Kochi, Korba, Lucknow, Madurai, Murthal, Mysuru, Raipur, Ranchi, Valsad, Varanasi & Vijayawada

# चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड

(भारत यरकार का उद्यम और आईओसीएल की समृह कम्पनी)

# Chennai Petroleum Corporation Limited

(A Government of India Enterprise and Group Company of IOCL)



29/07/2022

# CERTIFICATE

This is to certify that Ms.VINOTHINI P, a Student of M.Sc. (Chemistry), AUXILIUM COLLEGE (Autonomous), VELLORE, has completed the Project Work on "STUDY ON EVALUATION OF LUBE POTENTIAL IN CRUDE OIL(X) VACCUM DISTILLATE" in our organization during the period from 11/07/2022 to 29/07/2022.

We wish her all success in her future endeavour.

Segment of the segmen

Sivappirakasam C Officer(Personnel)

मी शिवपिरकासाम C. SIVAPPIRAKASAM अधि औं (वर्गादा Officer (Tarsot nel)

तेल प्रति नगर प्राप्ति । क्रिकेट प्राप्त । व्यवस्थान

Received P.V.L

PRINCIPAL

AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006. Vellore District, Tamil Nadu.

9001:2008, आई एम ओ 14001:2004, जी एस ओ एक एस एएस 18001:2007 प्रमामित कमनी / An ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007 Certified Company कम्पनी की सी आई एन एल 40101 टी एन 1965 जी ओ आई 005389 / The CIN of the Company is L 40101 TN 1965 GOI 005389

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#### CERTIFICATE

I do hereby certify that the Summer Project report entitled "SYNTHESIS AND CHARACTERIZATION OF VISIBLE LIGHT ACTIVE NIWO 4 PHOTOCATALYST" has been carried out by the candidate Ms.T.YOGALAKSHMI, II M.Sc. Chemistry, PG and Research Department of Chemistry, Auxilium College (Autonomous) in the Department of Chemistry, Thiruvalluvar University, during the period 04.07.2022 to 23.07.2022.

Signature of the Guide with seal

DR. J. MADHAVAN

Associate Professor,

Department of Chemistry,

Thirties, oar University

Vellore + 32 115

PRINCIPAL

AUXILIUM COLLEGE (Autonomous) Gandhi Nagar, Vellore - 632 006.

Vellore District, Tamil Nadu.