

ALL SAINTS' COLLEGE
TRIVANDRUM, KERALA

ADD ON COURSE

2





DEPARTMENT OF CHEMISTRY
ALL SAINTS' COLLEGE
Thiruvananthapuram

ADD-ON COURSE 2021

The Department of Chemistry is conducting the following Add On Course during the academic year 2020 - 2021 for the UG students.

**CHROMATOGRAPHIC
TECHNIQUES**

04/05/2021 - 30/05/2021

Those who wish to enroll for the course should register before 25/04/2021.
For further queries please contact the Course Coordinators.

Dr. Sindhu Yesodharan
Course Co-ordinator

Dr. Sunita Kurur
Hod
Department of Chemistry

Dr. Deepa M
Principal
All Saints' College



ALL SAINTS' COLLEGE

Thiruvananthapuram-695007, Kerala, India

Phone: 0471-2501153

E-mail: allsaintscollegeasc@gmail.com

| | |
|---------------------------------------|---|
| Name of Course | <i>Add On Course on 'Chromatographic Techniques' (CHE. A. 20.1)</i> |
| Department offering the Course | Dept. of Chemistry |
| Course Duration | 30 Hours |
| Faculty In Charge | Dr. Sindhu Yesodharan |

SYLLABUS

2020-21

Module I: (6 hrs)

History and classification of different methods of Chromatography (6 hrs)

Module II: (9 hrs)

Outline study of adsorption and partition chromatography, ion exchange - principle-instrumentation and applications

Chromatography- principle and applications of paper and thin layer chromatography

HPLC - Rf and Rt value

Module III: (9 hrs)

Gas Chromatography- principle-instrumentation and applications

Column chromatography.

Module IV: (6 hrs)

Introduction to Zone electrophoresis and Capillary Electrophoresis.

COURSE OUTCOMES:

- Categorize the types of chromatography
- Understand the basic parameters in chromatography.
- Understand the processes of a chromatography analysis
- categorize the types, basic components and properties of liquid chromatography.
- Realize the selection of appropriate mobile phase, column and detector
- Realize the types, features and application areas of detectors, realize the selection of appropriate mobile phase, column and detector
- Able to use a variety of chromatography systems, decide the most appropriate choice for an analysis.



Deepa

Deepa

Principal
All Saints' College
Thiruvananthapuram-7

DEPARTMENT OF CHEMISTRY
ADD ON COURSE 2020-2021
Chromatographic Techniques[CHE.A.20.1]

Attendance from 4/5/2021 to 30/5/2021

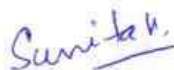
| Sl. No | Register number | Department | Name | 5/4/2021 | 5/5/2021 | 5/6/2021 | 5/8/2021 | 5/9/2021 | 5/10/2021 | 5/12/2021 | 5/14/2021 | 5/17/2021 | 5/19/2021 | 5/21/2021 | 5/24/2021 | 5/26/2021 | 5/28/2021 | 5/31/2021 | Signature of Student |
|--------|-----------------|------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|
| | | | | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | 3.30-4.30- pm | |
| 1 | 23520100001 | Chemistry | A A ANUSHNA | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | <i>A.A. Anushna</i> |
| 2 | 23520100002 | Chemistry | ADITHYA S S | a | X | X | X | X | X | X | X | X | X | X | X | X | X | X | <i>Adithya S S</i> |
| 3 | 23520100003 | Chemistry | APARNA JOSEPH | X | X | X | X | X | X | X | X | X | X | X | X | X | X | a | <i>Aparna Joseph</i> |
| 4 | 23520100004 | Chemistry | ARDRA SUJITH | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | <i>Ardra Sujith</i> |
| 5 | 23520100005 | Chemistry | ASWANI.S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | <i>Aswani S</i> |
| 6 | 23520100006 | Chemistry | BINSINA SAKEER | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | <i>Binsina Sakeer</i> |
| 7 | 23520100007 | Chemistry | FABIHA.H | a | X | X | X | X | X | X | X | X | X | X | X | X | X | X | <i>Fabiha H</i> |
| 8 | 23520100008 | Chemistry | FIBITHA FREDY | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | <i>Fibitha Fredy</i> |
| 9 | 23520100010 | Chemistry | HIMA R. | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | <i>Hima R</i> |
| 10 | 23520100011 | Chemistry | KEERTHI K .NAIR | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | <i>Keerthi K Nair</i> |
| 11 | 23520100012 | Chemistry | RESHMA RAJAN | X | X | X | X | X | X | X | X | a | X | X | X | X | X | X | <i>Reshma Rajan</i> |

| | | | | | | | | | | | | | | | | | | | | |
|----|-------------|-----------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 12 | 23520100013 | Chemistry | RIYA S. EDWARD | X | X | X | a | X | X | X | X | X | X | X | X | X | X | X | X | RIYA S EDWARD |
| 13 | 23520100014 | Chemistry | SANDHRA S RAJA | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | SANDHRA S RAJA |
| 14 | 23520100015 | Chemistry | SHALU. S | X | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | SHALU S |
| 15 | 23520100016 | Chemistry | SHILPA GEORGE | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | SHILPA GEORGE |
| 16 | 23520100017 | Chemistry | SNEHA SHIBU | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | X | SNEHA SHIBU |
| 17 | 23520100018 | Chemistry | SREEDEVI K M | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | SREEDEVI K M |
| 18 | 23520100019 | Chemistry | SREELEKSHMI.P | X | X | X | X | X | X | X | X | a | X | X | X | X | X | X | X | SREELEKSHMI.P |
| 19 | 23520100020 | Chemistry | VIJI NICHOTIOUS | a | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | VIJI NICHOTIOUS |
| 20 | 23520100021 | Chemistry | ABHIRAMI P V | X | X | X | X | X | X | X | X | X | X | X | a | X | X | X | X | ABHIRAMI P V |
| 21 | 23520100022 | Chemistry | ALIA AYOOB S | X | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | ALIA AYOOB S |
| 22 | 23520100023 | Chemistry | ANUGRAHA ALEX | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | ANUGRAHA ALEX |
| 23 | 23520100024 | Chemistry | APARNA S KUMAR | X | a | X | X | X | X | X | X | X | a | X | X | X | X | X | X | APARNA S KUMAR |
| 24 | 23520100025 | Chemistry | ARCHITHA K | X | X | X | X | a | X | X | X | X | X | X | X | X | X | X | X | ARCHITHA K |
| 25 | 23520100026 | Chemistry | ARSHA VASULA P | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | ARSHA VASULA P |
| 26 | 23520100027 | Chemistry | BEEMA S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | BEEMA S |
| 27 | 23520100028 | Chemistry | GOPIKA A J | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | X | GOPIKA A J |
| 28 | 23520100029 | Chemistry | KEERTHANA P NA | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | a | KEERTHANA P NA |
| 29 | 23520100030 | Chemistry | MANEESHA S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | MANEESHA S |
| 30 | 23520100031 | Chemistry | MEGHA NAIR P S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | MEGHA NAIR P S |
| 31 | 23520100032 | Chemistry | MEGHNA S | X | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | MEGHNA S |
| 32 | 23520100033 | Chemistry | RESHMA M R | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | RESHMA M R |
| 33 | 23520100034 | Chemistry | SHABANA NIZAM | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | SHABANA NIZAM |
| 34 | 23520100035 | Chemistry | SHALINI.R.D | X | X | X | X | X | X | X | X | X | a | X | X | X | X | X | X | SHALINI.R.D |
| 35 | 23520100036 | Chemistry | SREELEKSHMI S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | a | SREELEKSHMI S |
| 36 | 23520100037 | Chemistry | SUMI ANTONY | X | X | X | X | X | X | X | X | X | X | X | X | X | X | a | X | SUMI ANTONY |
| 37 | 23520100038 | Chemistry | VARSHA. B | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | VARSHA. B |
| 38 | 23520100039 | Chemistry | ALPHA XAVIER | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | a | ALPHA XAVIER |

| | | | | | | | | | | | | | | | | | | | | |
|----|-------------|-----------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| 39 | 23520100040 | Chemistry | ATHIRA . S . R | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | ATHIRA |
| 40 | 23520100041 | Chemistry | GOPIKA R S | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | GOPIKA |
| 41 | 23520100042 | Chemistry | REFELA N | X | X | a | X | X | X | X | X | X | X | X | X | X | X | X | X | REFELA |
| 42 | 23520100043 | Chemistry | SWETHA S SOMA | X | X | X | X | X | X | a | X | X | X | X | X | X | X | X | X | SWETHA |



Signature of FIC



Signature of HoD

Deepa
Signature of Principal
Principal
All Saints' College
Thiruvananthapuram





COURSE COMPLETION CERTIFICATE

This is to certify that **VARSHA. B** has successfully completed the Add-On Course **Chromatographic Techniques**, organised by the Department of Chemistry, All Saints' College, Thiruvananthapuram, from **04/05/2021 to 30/05/2021**

COURSE CO-ORDINATOR
Dr. Sindhu Yesodharan

Dr. Sunita Kurur
HoD
Department of Chemistry

Dr. Deepa M
PRINCIPAL
All Saints' College





COURSE COMPLETION CERTIFICATE

This is to certify that **MEGHA NAIR P S** has successfully completed the Add-On Course **Chromatographic Techniques**, organised by the Department of Chemistry, All Saints' College, Thiruvananthapuram, from **04/05/2021 to 30/05/2021**

COURSE CO-ORDINATOR
Dr. Sindhu Yesodharan

Dr. Sunita Kurur
HoD
Department of Chemistry

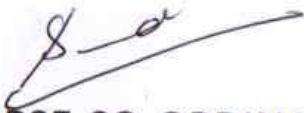
Dr. Deepa M
PRINCIPAL
All Saints' College

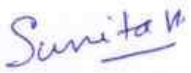





COURSE COMPLETION CERTIFICATE

This is to certify that **RIYA S. EDWARD** has successfully completed the Add-On Course **Chromatographic Techniques**, organised by the Department of Chemistry, All Saints' College, Thiruvananthapuram, from **04/05/2021 to 30/05/2021**


COURSE CO-ORDINATOR
Dr. Sindhu Yesodharan


Dr. Sunita Kurur
HoD
Department of Chemistry


Dr. Deepa M
PRINCIPAL
All Saints' College





COURSE COMPLETION CERTIFICATE

This is to certify that **ARCHITHA K** has successfully completed the Add-On Course **Chromatographic Techniques**, organised by the Department of Chemistry, All Saints' College, Thiruvananthapuram, from **04/05/2021 to 30/05/2021**

COURSE CO-ORDINATOR
Dr. Beena Kumari K S

Dr. Sunita Kurur
HoD
Department of Chemistry


Dr. Deepa M
PRINCIPAL
All Saints' College

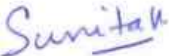





COURSE COMPLETION CERTIFICATE

This is to certify that **BINSINA SAKEER** has successfully completed the Add-On Course **Chromatographic Techniques**, organised by the Department of Chemistry, All Saints' College, Thiruvananthapuram, from **04/05/2021 to 30/05/2021**


COURSE CO-ORDINATOR
Dr. Sindhu Yesodharan


Dr. Sunita Kurur
HoD
Department of Chemistry


Dr. Deepa M
PRINCIPAL
All Saints' College





ALL SAINTS' COLLEGE

Thiruvananthapuram-695007, Kerala, India
Phone: 0471-2501153

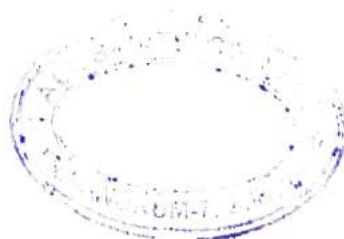
E-mail: allsaintscollegeasc@gmail.com

COURSE SUMMARY REPORT

2020-21

| | |
|---------------------------------------|---|
| Name of Course | <i>Add on Course on 'CHROMATOGRAPHIC TECHNIQUES' (CHE.A.20.1)</i> |
| Department offering the Course | Dept. of Chemistry |
| Course Duration | 30 Hours |
| Faculty In Charge | Dr. Sindhu Yesodharan |

The **add on course** on **CHROMATOGRAPHIC TECHNIQUES (CHE.A.20.1)** has been coordinated by the department of Chemistry, All Saints' College, Thiruvananthapuram. The course was specially designed to provide an understanding on the various chromatographic techniques available. The course had a well-defined syllabus and was approved by the IQAC. The add on course was coordinated by Dr. Sindhu Yesodharan, Assistant Professor, Department of Chemistry. The course was properly planned and organised to provide maximum support to students during their learning process. The course duration was 30 hours. 42 students enrolled for the program. The course started on 04.05.2021 and ended on 31.05.2021. During the end of course, an exit examination was conducted. All students wrote the examination. Final assessment was done based on the assignment submitted by students during the course and the marks secured by them during the final exit examination. All students passed in the examination. Certificates were also provided to them after the successful completion of the course.



Reshmi
Principal
All Saints' College
Thiruvananthapuram-7