

## Department of Chemistry, Providence Women's College

### Industrial Training on Food Analysis

*SYNTHECIS, Institute of Chemical Industrial Training, Vadakara*

(Under DBT STAR College Scheme)

A group of 40 B. Sc. Chemistry students along with two lab assistants visited the food analysis lab, Synthecis, Vadakara for Industrial training on food analysis under DBT STAR college scheme on 14<sup>th</sup> and 17<sup>th</sup> February 2024. The visit is aimed at bridging the gap between industry and academia and to impart the students with an insight into the quality parameters practiced across various platforms of the food industry.



### Skill Development Program

- Overview: Food industry
- Handling of chemicals
- Sampling of milk
- FSSAI testing methods
- Estimation of fat, solid not fat, titrable acidity and total solids
- Detection of adulteration of milk

### Under DBT STAR COLLEGE Scheme

## INDUSTRIAL TRAINING ON FOOD ANALYSIS

14, 17 February 2024

### SYNTHECIS

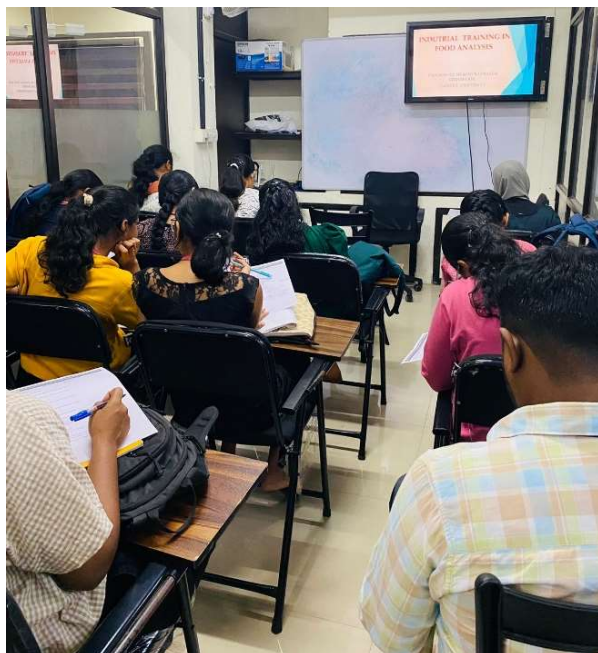
Institute of Chemical Industrial Training, Vadakara



Department of Chemistry  
Providence Women's College Kozhikode  
[www.providencecollegcalicut.ac.in](http://www.providencecollegcalicut.ac.in)

The session commenced with a lecture by the managing director Mr. Sherjil Abdulla on the various aspects of Chemistry. The talk stressed on the application of chemistry in daily life, opportunities for chemistry students in various industries such as pharmaceuticals, forensic labs, food analysis labs etc. The students were made aware of the importance of good laboratory practices and safe handling of chemicals. MSDS of various chemicals that are generally used in

the chemistry laboratory was discussed in detail. Fire safety lessons were provided, along with the demonstration of fire extinguisher.



The afternoon session was based on the food industry and specifically on the Quality analysis of milk. The lecture narrated various components of milk, sampling of milk, possible contaminants and adulterants. FSSAI testing methods for the estimation of starch, fat, total solids, titrable acidity etc. were explained in detail.



On the second day of the visit, the students were segregated into groups of 4 and hands-on training on previously discussed aspects were conducted. Students were introduced to Mojonnier type flasks for fat extraction. Two market samples (Eranad milk and Janatha milk) were given for analysis. Application and operation of laboratory equipment such as Flame photometer, pH Meter, Conductivity meter, Turbidity meter, Hot air oven etc. were also demonstrated. A quiz on basic chemistry and safe laboratory practices was conducted to evaluate the fundamental understanding of students. The brochure, photographs, sample certificate, syllabus and attendance list of the programme are attached.





# SynTheCis

## INSTITUTE OF CHEMICAL INDUSTRIAL TRAINING



### Certificate

Sl. No: **2022**

Certificate No: **SICIT/2022-I/2024**

**CHANDANA C**

*This is to certify that Ms.....*

*has successfully completed laboratory Internship in Basic Food Analysis at our Institution*

*conducted on 14-02-24 & 17-02-24*

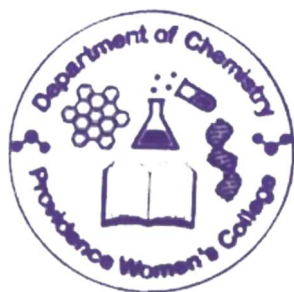
Date : 19-02-2024






  
**Managing Director**

Building No. 9/2397, VADAKARA, KOZHIKODE, KERALA, INDIA. 673 101. @ www.synthecisglobal.com, ✉ synthecis@outlook.com





## Skill Development Program

- **Overview: Food industry**
- **Handling of chemicals**
- **Sampling of milk**
- **FSSAI testing methods**
- **Estimation of fat, solid not fat, titrable acidity and total solids**
- **Detection of adulteration of milk**



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Under  
**DBT STAR COLLEGE**  
Scheme

# INDUSTRIAL TRAINING ON FOOD ANALYSIS

14, 17 February 2024

**SYNTHECIS**

Institute of Chemical Industrial  
Training, Vadakara





# SynTheCis

**ANALYTICAL SOLUTIONS & INSTITUTE OF CHEMICAL INDUSTRIAL TRAINING**

A GOVT. APPROVED WATER TESTING LABORATORY

ISO 9001-2015 CERTIFIED INSTITUTION

DATE: 12-02-2024

Respected Madam,

Please find the syllabus for the Industrial Training programme for BSc chemistry Graduate students for your reference.

## Syllabus

### Introduction (5hour)

Scope of chemistry, Food industrial overview, Milk industry in India, Handling of Chemicals, Understanding of MSDS, Fire & Safety precautions, Chemical Hazard Symbols, Basic instrumentation techniques (UV-visible spectrophotometer, pH meter, Soxhlet apparatus, Mojonnier apparatus)

### Parameters and Methods (5hour)

Sampling of milk, Standard test method, Composition and nutritional value of milk and factors affecting composition of milk. FSSAI testing methods

### Practicals (10hour)

Estimation of fat, solid not fat (S.N.F), Titrable acidity and Total solids. Detection of adulteration of milk (Starch, NaCl, Neutralizer)

**Sherjil Abdulla**

**Managing Director**



Building No. 9/2397, VADAKARA, KOZHIKODE, KERALA, INDIA. 673 101

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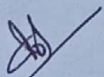
### Industrial Training on Food Analysis

Department of Chemistry, Providence Women's College

#### Attendance

| Sl. No | Name                           | Class of Study / Designation | 14-02-2024 | 17-02-2024 |
|--------|--------------------------------|------------------------------|------------|------------|
| 1      | Isha Ferbin K M                | II Chemistry                 |            |            |
| 2      | Sneha K. K                     | II Chemistry                 |            |            |
| 3      | Ayisha Musliha P               | II Chemistry                 |            |            |
| 4      | Linssa V. S.                   | II Chemistry                 |            |            |
| 5      | Vinaya S Vinod                 | II Chemistry                 |            |            |
| 6      | Nandana K                      | II Chemistry                 |            |            |
| 7      | Chandana C                     | II Chemistry                 |            |            |
| 8      | Safiya K                       | II Chemistry                 |            |            |
| 9      | Fathima Shirin                 | II Chemistry                 |            |            |
| 10     | Pranaya Shyamlal               | II Chemistry                 |            |            |
| 11     | <del>Shahala AK</del> Devika M | II Chemistry                 |            |            |
| 12     | Nayana P Chandran              | II Chemistry                 |            |            |
| 13     | Nandana B                      | II Chemistry                 |            |            |
| 14     | Anjalin Peter                  | II Chemistry                 |            |            |
| 15     | Nandana C T                    | III Chemistry                |            |            |
| 16     | Nandana M M                    | III Chemistry                |            |            |
| 17     | Nayana Shanmughan M            | III Chemistry                |            |            |
| 18     | Avanya K P                     | III Chemistry                |            |            |
| 19     | Fahima A T                     | III Chemistry                |            |            |
| 20     | Gayathri J P                   | III Chemistry                |            |            |
| 21     | Gowri Krishna N                | I Chemistry                  |            |            |
| 22     | Prarthana Puthusseri           | I Chemistry                  |            |            |
| 23     | Neha Manoharan PM              | I Chemistry                  |            |            |

|    |                       |               |                     |                     |
|----|-----------------------|---------------|---------------------|---------------------|
| 24 | Fathima Fida K M      | I Chemistry   | <del>Fida</del>     | <del>Fida</del>     |
| 25 | Janika M S            | I Chemistry   | <del>Janika</del>   | <del>Janika</del>   |
| 26 | Hanna Fathima         | I Chemistry   | <del>Hanna</del>    | <del>Hanna</del>    |
| 27 | Aza Mariyam           | I Chemistry   | <del>Aza</del>      | <del>Aza</del>      |
| 28 | Diya Fathima          | I Chemistry   | <del>Diya</del>     | <del>Diya</del>     |
| 29 | Afeefa Aboobacker     | I Chemistry   | <del>Afeefa</del>   | <del>Afeefa</del>   |
| 30 | Aleena Baiju CM       | I Chemistry   | <del>Aleena</del>   | <del>Aleena</del>   |
| 31 | Noora Nasrin K K      | I Chemistry   | <del>Noora</del>    | <del>Noora</del>    |
| 32 | Hana Shafeeq          | I Chemistry   | <del>Hana</del>     | <del>Hana</del>     |
| 33 | Sanlia Maria          | I Chemistry   | <del>Sanlia</del>   | <del>Sanlia</del>   |
| 34 | Lena E                | I Chemistry   | <del>Lena</del>     | <del>Lena</del>     |
| 35 | Fajusha V P           | I Chemistry   | <del>Fajusha</del>  | <del>Fajusha</del>  |
| 36 | Naja Fathima P        | I Chemistry   | <del>Naja</del>     | <del>Naja</del>     |
| 37 | Fathima Noona P       | I Chemistry   | <del>Noona</del>    | <del>Noona</del>    |
| 38 | Priyanka Alakan       | I Chemistry   | <del>Priyanka</del> | <del>Priyanka</del> |
| 39 | Mariya Thomas         | I Chemistry   | <del>Mariya</del>   | <del>Mariya</del>   |
| 40 | Alana Saleesh         | I Chemistry   | <del>Alana</del>    | <del>Alana</del>    |
| 41 | Maisal Mathew         | Lab Assistant | <del>Maisal</del>   | <del>Maisal</del>   |
| 42 | Helen Tresa Fernandes | Lab Assistant | <del>Helen</del>    | <del>Helen</del>    |

  
 Sr. ASHA THOMAS  
 Assistant Professor & Head  
 Dept. of Chemistry  
 Providence Women's College  
 Calicut-9



*Shree*



# SynTheCis

## INSTITUTE OF CHEMICAL INDUSTRIAL TRAINING

### Certificate

Sl. No: **2025**

Certificate No: **SICIT/2025-I/2024**

*This is to certify that Ms. ....* **ISHA FERBIN K M**  
*has successfully completed laboratory Internship in Basic Food Analysis at our Institution*  
*conducted on 14-02-24 & 17-02-24*

Date : 19-02-2024



**Managing Director**

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