

Laboratory Assistant for Eco- friendly Food Testing Laboratory

Ms. Anindita Mehta

Course In-Charge, ENVIS Coordinator & Chief General Manager
Consumer Education and Research Centre, Ahmedabad

Food laboratory technicians are very important in ensuring the food safety & quality. As the food processing units are increasing rapidly, trained professionals in testing laboratories are the need of the hour. Consumer Education and Research Centre - An ENVIS Resource Partner had developed this course to ensure widespread and effective delivery of training to food businesses with emphasis on green laboratory practices. The aim of this course is to impart the requisite knowledge and skills, through classroom activity as well as hands-on training, supported by relevant laboratory and industrial visits.

The course complies with the National Skills Qualifications Framework (NSQF) level 6 of National Skill Development Agency (NSDA) framework. The course is designed for 225 hrs wherein students get the basic knowledge and hands-on training in various analytical techniques used in food laboratories. They are introduced to nutritional aspects, food safety standards and laboratory accreditation system. They are also given knowledge on Good Laboratory Practices (GLP), FSSAI regulation, Food adulteration & quick detection methods, sampling procedures, documentation; operation, calibration & maintenance of laboratory equipments. Information regarding eco-friendly laboratory water management and laboratory safety measures is also given through the course.

Selection of Candidates

The process of selection started in the month of January'2022 through advertisements given in newspapers, website and social media. Selection process was held through online application submission followed by telephonic/G Meet interviews. We received 101 applications which were sorted and short listed as per the eligibility criteria. Out of these 15 candidates were finalized for the training program on the basis of their core capabilities. Out station candidates were about 13 and 2 of them were locally residing students. The selected trainees were graduates/ post graduates from different fields of Science such as Chemistry, Food & Nutrition, Microbiology, and Food Technology.

GREEN SKILL DEVELOPMENT PROGRAMME
Government of India

Ministry of Environment Forests and Climate Change, (MoEF&CC)
CERC-ENVIS Resource Partner, Ahmedabad

In line with the Skill India Mission of Hon'ble Prime Minister, Ministry of Environment, Forest & Climate Change (MoEF&CC) took up an initiative for skill development in the environment and forest sector to empower India's youth. The programme endeavours to develop green skilled workers. CERC being a Resource Partner of ENVIS (Environmental Information System) is offering a Free certificate course to upgrade the skill sets and enhance the employability of the aspirants.

The certificate course offered by CERC-ENVIS RP is:

"Laboratory Assistant for Eco-Friendly Food Testing Laboratory"

Minimum Educational Qualification:
Any Science Graduate (Except Maths and Physics)

It is a two-month certificate course (Max 225hrs) with **FREE** Training, Boarding and lodging. The Course module comprises of Classroom Lectures, Practical Training, Field Visits, Entrepreneurship sessions, Assessment and Related Exercises.

How to Apply:
Apply online at: <http://www.gsdp-envis.gov.in/Default3.aspx>
Mail the application to: cerc-env@nic.in, cerc@cercindia.org
For any other details contact: Ms. Divya Namboothiri, Ms. Mayuri Tank
Ms. Apeksha Sharma 079-68181600/28/29

Selection of Candidates:
Mode of selection is based on written test and Interview

Last Date of Application: 10th February, 2022

Evaluation and Assessment:
The candidates will be assessed and evaluated based on their written and practical examination. They will also be graded based on their respective field reports, Journals, performance in their viva voce and individual excellence in performing relevant test with interpretation of standards.

Certificate felicitation:
Certificates will be issued to all trainees after successful completion of course.

Ministry of Environment, Forest & Climate Change certified free course on

"Laboratory Assistant for Eco-Friendly Food Testing Laboratory"

Boarding & Lodging free for out-station candidates
Course offered by CERC-ENVIS Ahmedabad, supported by Ministry of Environment Forest and Climate Change, Government of India to empower youth to get gainful employment and/or self-employment. Unemployed youth seeking employment opportunities will be preferred.

QUALIFICATION:
Any Science graduate (except Maths & Physics)

DURATION: 2 months (225 hrs)

Apply before 10.02.2022
at <http://www.gsdp-envis.gov.in/Default3.aspx>

Website : www.cercenvis.nic.in
Email Id: cerc-env@nic.in, cerc@cercindia.org

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CONSUMER EDUCATION AND RESEARCH CENTER AHMEDABAD
Contact no : 079-68181600/28/29

Commencement of Training

Inauguration ceremony was held on 21st of February, 2022. It began with a welcome address by Ms. Divya Namboothiri, Programme Officer, ENVIS Project. Shri Praful Amin, chairman CERC was invited as Guest of Honor. Shri Amin, gave an insightful speech and raised some concerns related consumer rights and regulations in food sector and its services. The ceremony was honored by the following delegates. Dr. H.G. Kosia, Commissioner, FDCA was invited as the chief guest. Dr. Koshia shared his experience on food adulteration and food safety. He also shared few cases of malpractices in food industry. Ms. Dipika Chauhan, Director Parishil Laboratory and former Deputy Commissioner FDCA was invited as the key note speaker. She addressed the students about functionality of FDCA and FSSAI. Ms. Anindita Mehta, ENVIS Coordinator & CGM CERC briefed students about the activities taken under ENVIS project at CERC and the importance of eco-labelling and eco-friendly products. Later she also introduced the audience about the course.

The second session was dedicated to the Consumer Rights & regulation and briefing on the core work of CERC by different department Heads. At the end of the programme, there was an interactive session with the students and Ms. Apeksha Sharma, Information Officer, CERC ENVIS moderated the entire programme.





Internal & External Faculty

The training was conducted at CERC's in house Laboratory headed by Ms. Kanaklata Goswami, Senior Lab Assistant. Following Internal and External faculties made this programme a success:

Internal Faculty:

1. Ms. Anindita Mehta, Course In-charge
2. Ms. Dipika Chauhan, Project Head, CERC
3. Ms. Kanaklata Goswami, Laboratory Demonstrator

External faculty:

1. Mr. Atul Soni, Former Quality Manager at Public Laboratory – AMC
2. Ms. Meenal Pandey, Former BIS Scientist, Assistant director & Technical Manager at Aashvi Technology LLP, Ahmedabad
3. Dr. Neeraj Pandey, Authorised lead Assessor and Technical Assessor of National Accreditation Board for Testing and Calibration Laboratories (NABL) and Director of Centre for food and water testing technology, Mumbai
4. Mr. Pallav Moitra, CEO & MD of East West Hospitality

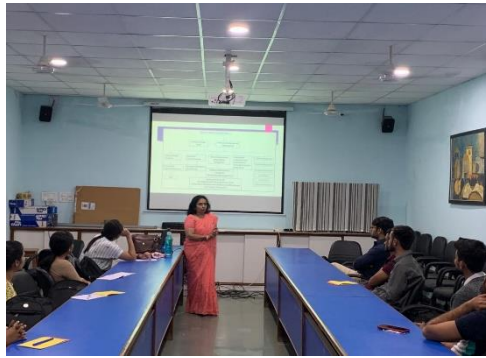
5. Mr. Priyesh Amin, CEO Accurate Laboratory & Director - Quality Assurance Aashvi Technology LLP, Ahmedabad
6. Professor J.B. Patel, Entrepreneurship Expert
7. Ms. Sukanya Pondugala , Asst. Director FDCA
8. Mr. Sameer Saxena, Sr. Programme Manager, Amul
9. Mr. Naresh Shah, Manager, AmulFed, Dairy
10. Mr. Kashyap Vaccharajani, Expert on Finance & Banking
11. Mr. Chandramauli Pathak, Entrepreneurship and SME Expert
12. V.R. Shah, Former FDCA Commissioner
13. Dr. Bharat Jain, Member Secretary GCPC and Project coordinator, GCPC ENVIS RP

Major Topics covered

This course comprised of classroom lectures and practical training. The concluding sessions entailed assessment and related exercises. Thus a total of 225 hour course schedule was lined out. The main components of the training curriculum were as mentioned below:

1. Introduction of Food, Nutritional Aspects and Safety Standards.
2. Introduction of Laboratory Accreditation
3. Eco-friendly Maintenance of Food Laboratory
4. Eco-friendly Laboratory Waste Management
5. Introduction to Chemical Laboratory and Microbiology Laboratory
6. Good Food Laboratory Practices
7. Food Safety, Test Methods, & Personnel Requirements etc., Calibration & Performance assessment, Purchase of Consumables/ equipment, Sampling & Sample Handling, Storage & handling of Chemicals, Safety in Chemical Laboratory, Food Quality Testing etc.
8. Understanding of Bureau of Indian Standards, Certified Standard Reference Materials & Elemental analysis on food products
9. NABL & its importance, certified reference materials/standards and reference, QA Manual, Reporting etc.
10. Food Industry & Sustainability
11. Sample labelling, Control & Storage, Documentation
12. Detection of Food adulteration with Rapid Test
13. Introduction of Basic Laboratory Equipment and their functions
14. Food Safety & Quality Testing
15. Food Industry & Sustainability
16. FSSAI guidelines
17. Certified Reference Materials and Standards and Elemental analysis in Food products.
18. Entrepreneurial Opportunities in Laboratory Testing, Finance and Banking for entrepreneurs Entrepreneurship and small business startups
19. Waste minimization & Greener/Cleaner Production
20. Exercises and Assessment

Gallery:
Theory Session:



Practical Session: -



Training

The training was systematically carried out according to the topics lined out in the course module. Each student was provided with a training kit consisting of training manual, stationery items, laboratory protection gear such as aprons, safety goggles, gloves and napkins etc. Various aspects of food testing and good laboratory practices were covered in details through this training. Basic analytical techniques: test methods for common parameters in foods such as Moisture Content, Ash, Acid insoluble ash, Acidity, Fat, Protein, Carbohydrate, Minerals, and Adulterants etc.

The training manual is structured to provide essential information in a standardized, logical and systematic manner while adhering to effective teaching and learning strategies. The manual provides for the standard operating procedures for general laboratory equipment as well as test methods as per BIS specifications. The training manual details the requirement on safety & quality control to be followed by personnel engaged in the food laboratory. It has been designed according to the flow of operation in the food industry for ease of understanding of the laboratory staff. This comprehensive manual is supplemented with Standard Operating Procedures specific to the food laboratory for facilitating the trainers.

Field Visit

1. A study trip was arranged to Ahmedabad Municipal Corporation's Public Health Laboratory, Ahmedabad with state of the art food testing facilities on 5th March, 2022
2. A field visit to Vadilal Industries, Gandhinagar on 9th March, 2022
3. An exposure on Food Safety on Wheels was arranged on 11th March 2022
4. A study tour was arranged to Atul Bakery, Gandhinagar on 12th March, 2022
5. A field visit to VIMTA Laboratories on 11th March, 2022
6. A study tour was arranged to AmulFed Dairy, Bhat on 21st March, 2022
7. A Study trip to Gujarat Laboratory was arranged on 26th March, 2022





Evaluation and Assessment

Final evaluation of trainees was made on the basis of assessment criteria for level 6 NSQF qualifications. They were also graded for their respective field visit reports, journals, classroom presentations and written examinations.



Valedictory Function

To conclude the two-month training program, a valedictory function was organized on 31st March 2022. Ms. Divya Namboothiri, Programme Officer, ENVIS Project, began the session with an overview of ENVIS scheme and the GSDP programs offered PAN India, under its ambit. Shri Uday Mawani, CEO and Board Secretary, CERC welcomed all the dignitaries and

mentioned the Ministry's appreciation for CERC-ENVIS's contribution in Prime Minister's commitment in achieving 2030 goals and 2047 vision of Life towards Sustainable Environment. Shri Praful Amin, Chairman, CERC addressed the audience with a valedictory speech, wherein he mentioned the importance of Green Skilling and CERC's contribution in electrical product testing and food testing. Guest of Honor, Shri Sumit Sengar, BIS Head Ahmedabad, addressed the audience about the BIS standards and its evolution in India. Chief of Guest, Shri Kalpit Gandhi, Managing Director, Vadilal Industries shared his views about quality standards by BIS and Hygiene standards by FSSAI which needs more focus on monitoring and to meet upto the standards of Europe and other developed countries. Ms. Sukanya Pondugala, Asst. Director, FSSAI asked students to not to compromise in their reporting when they work as quality analyst. Ms. Anindita Mehta, ENVIS coordinator and CGM CERC, spoke on the new initiative and dimensions included in the GSDP certificate programme such as industrial visits and about some eminent expert lectures. Ms. Dipika Chauhan, spoke about the benefits of the field visits and the expert lectures that were conducted during the programme.

A vote of thanks was delivered by Ms. Divya Namboothiri, Programme Officer, CERC-ENVIS, Resource Partner and the entire programme was moderated by Ms. Apeksha Sharma, Information Officer, CERC-ENVIS. The programme concluded with the felicitation of GSDP completion certificates to the students by the dignitaries present on the dais and also by the special guests who arrived for the event.





Placement Activity

A placement brochure was prepared with the CV's of all the trainees and it was circulated to prospective employers such as Testing Laboratories, Food Industries and Research Institutions etc. Placement drive of some of the candidates were conducted with Parishil Laboratories, VIMTA Laboratories, CERC, Gujarat Laboratory etc.

- One of the candidate was hired by CERC as Assistant, Chemical Laboratory
- One trainee got placed as Executive- Quality Control at Kings Dehydrated Foods Pvt. Ltd., Mahuva

The trainees were given career guidance about jobs in public/ private sector and how to prepare for the tests & interviews. For those who wanted to opt for a business startup were provided entrepreneurship guidance from experts and were ensured support even after the training was over.



Feedback

I am Vaidehi Apte from Devas, Madhya Pradesh. I got to know about this course from GSDP website. The course was divided into three parts such as Theory, Practical and Field Visits. The theory session was addressed by some highly qualified experts with whom we got to interact and network with. We were taken to different laboratories and food processing units wherein we got to learn about various food analysis, testing and processing respectively. During the practical we gained the basic knowledge about quality analysis of food samples and food adulteration. Ms. Kanaklata Goswami gave a very good hands-on training analysis and testing. Lastly, I would like to thank the entire CERC-ENVIS team for their generous support.



Vaidehi Apte



I am Drushti Haloli from Nashik, Maharashtra. I came to know about the course through YouTube Channel. We got to visit from very good laboratories like AMC, Gujarat Laboratory & VIMTA Laboratories. We also visited some food processing industries such as Vadilal Industries, Mother Dairy and Atul Bakery. We were given interesting lectures by some high professionals on topics that I was completely unaware of. Later we were given hands-on food testing training at CERC lab. The CERC staff was very helpful & caring. I am very thankful to the training opportunity provided to us and I also thank the ministry for taking such an initiative to promote sustainability. I am

very happy and feel lucky to be part of this course. I would definitely recommend this course to my peer group and friends. This course to promote sustainability in the food testing field was very helpful to me and will be beneficial to the society too. Thank You!

Drushti Haloli

I came to know about this course from a friend. I got to learn about food testing & what are the parameters to be considered to set up a new laboratory. I got to enhance my knowledge on the subject from some senior most faculties. I got to learn more about sophisticated instruments such as HPLC, GC, IC, UV – VIS etc. and different food processing methods during the field visits to different laboratories and industries. I thank CERC-ENVIS for giving me this opportunity which will be helpful for me in the future.



Ashish Ranpura