

About Us

Edward Food Research & Analysis Centre Limited (EFRAC) is a state-of-the-art laboratory having the most advanced and high precision instrumentation setup. EFRAC provides worldclass research, analytical and training services to food manufacturer/food processor/food importer/exporter/food safety professionals, students, scholars and faculty members.

With the advent of globalisation and rapid expansion in the food & agricultural sector, industries across the globe are investing hugely in India. This has resulted in huge job opportunities for trained and skilled professionals for analytical and R&D services.

Every year huge job opportunities are created in research organisations, commercial laboratories, pharmaceutical companies, agrochemical industries, biotech companies and other allied industries.

All these industries seek candidates having sufficient practical exposure to handle and operate high cost sophisticated instruments. Since it is not viable and justified for colleges, institutes, research centres and other allied organisations to house this entire high-end instrumentation infrastructure, students therefore remain deprived of attaining the practical skill while undergoing their academic courses.

Due to lack of adequate skills the students passing out from different scientific disciplines and seeking job opportunities in R&D and analytical sector find it difficult to get a berth in these industries.

EFRAC has designed the course modules to enable students in such a way to gather practical experience in handling, operating and maintaining the ultramodern, highly sophisticated and automated instruments which are used for the high-end analysis in the field of chemical and biological science.

Apart from students this training module will also be very beneficial for quality and food safety professionals, scholars and faculty members in the above mentioned fields to upgrade and hone their analytical and R&D skills at par with current advancement in science and technology.

Services we offer

Training and Academic Services: For UG, PG & research students, faculty members and professionals from food industry.

Analytical Services: Pesticide residue analysis, food and water analysis, microbiology analysis of food and agriculture products.

R&D Services: For food industry, academic institutes, universities, colleges and other concerned government and non-government organisations.

Training on Pesticide Residue Analysis



The training programme is designed to provide the most comprehensive range of on the job training especially in handling sophisticated instruments for trace and ultra trace analysis. The training program will also provide both technical knowledge and practical skills essential to professionals in residue analysis in line with ISO 17025:2005.

BROAD ANALYTICAL SPECTRUM

- Pesticides/Insecticides/Herbicides/Fungicides
- Volatile and semi-volatile organic compounds (VOCs & SVOCs)
- Polychlorinated dibenzodioxin (PCDD) and polychlorinated dibenzodifuran (PCDF)
- Mycotoxins/Antitoxins/Antibiotics etc

TEST METHODS

- AOAC, APHA, EU, APA

*Workshop contents/dates may be changed at the discretion of EFRAC

Course Content

NAME OF THE TOPIC

Fundamentals of Trace Analysis

What is pesticide
Pesticide residue and toxicology
Good laboratory practices

Basic Analytical Techniques

Introduction to gas chromatography
Mass spectrometry GC-MS/MS
Introduction to liquid chromatography
Mass spectrometry LC-MS/MS

Sample Preparation

Liquid-liquid extraction
Quencher methods

Sample Cleanup Procedure

GPC cleanup
Glass column cleanup
Solid phase cleanup

Method Validation

Calibration range
Precision
Accuracy
Matrix effect
Measurement uncertainty

Reporting of Results

Loading sample and processing data
Calculations
Reporting

Legislations and Regulatory Guidelines

An overview and requirement of ISO 17025:2005
Discussion and conclusion

Assessment/Certification

Who should attend?

B.Tech, M.Tech, B.Sc and M.Sc students from Microbiology, Biotechnology, Genetic Engineering, Food Science & Nutrition, Cell Biology, Molecular Biology, Analytical Chemistry, Biochemistry, Biophysics, Instrumentation, Agriculture & Soil Science and Environmental Science.

JRFs, SRFs, Associates, Project Guides associated with research organisations.

Professionals from all fields of food manufacturing, food processing, food safety, agriculture industries and at all levels viz analysts, food inspectors, auditors, scientists, QA executives, managers etc.

ACCOMMODATION

Accommodation can be provided to the students/professionals in nearby hotels at applicable charges.



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Training Programme on Pesticide Residue Analysis

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For Course Fee & Registration Guidelines Please Contact

efraclab@efrac.org

+91 033 7112 2800 +91-8697728815

www.efrac.org

RESEARCH & ANALYSIS CENTRE

Edward Food Research & Analysis Centre Limited

Subhas Nagar Barasat PO Nilgunj Bazaar

Kolkata 700121 WB

P +91 33 7112 2800 F +91 33 7112 2801

E efraclab@efrac.org

