

## Don't be theoretical, be Practical.....!!!!

□ **Instrumental Techniques:** Training students in the use of analytical instruments like spectrophotometers, chromatographs, and mass spectrometers. This includes understanding how to calibrate, operate, and interpret results.

□ **Quantitative Analysis:** Teaching techniques for accurate measurement and analysis, including titration, gravimetric analysis, and the use of analytical balances.

□ **Data Interpretation:** Helping students learn how to analyze and interpret data from experiments, including error analysis, statistical methods, and the use of software tools for data analysis.

□ **Safety Protocols:** Emphasizing the importance of safety in the lab, including proper handling of chemicals, use of personal protective equipment, and emergency procedures.

□ **Experimental Design:** Guiding students in designing their own experiments, including hypothesis formulation, variable control, and methodical approaches to testing.

□ **Report Writing:** Training on how to write clear and accurate lab reports, their results, as well as to troubleshoot and resolve unexpected outcomes. including data presentation, analysis, and discussion of results.

## Analytical Hands-on Training-2024-25

Tephra Bioscience will offer Hands-on Training of analysis of Pesticides Residues in water and waste water & food and food products, Chemical testing, Fertilizer testing, content testing.

□ **Collaboration Skills:** Promoting teamwork and communication among students, as many laboratory tasks are performed in groups and require effective collaboration.



Liquid chromatography–mass spectrometry (LCMS-MS)

Gas chromatography

High-performance liquid chromatography

Ultraviolet–visible spectroscopy

Food & Water Chemical testing

Fertilizer content testing

Applicable Training Fees:

1 Month- 15,000/-

3 Months- 40,000/-

6 Months- 70,000/-

**20 % Discount for all college students, extra 5 % discount for first 5 students.**

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### Training Certificate

#### 1 Months Program –

- Good Laboratory Practices
- Weighing (gram & mg)
- Pipetting (bulk and graduate pipetting & Micro pipetting)
- Titration
- Nutritional Parameter in food products as per FSSAI**
- Total fat
- Total protein
- Total Ash & acid insoluble ash
- Moisture content
- Total Carbohydrate
- Total Energy

### Training Certificate

#### 2 Months Program –

- Pesticides & Fertilizer Testing**
- Cold test
- Degree of dispersion
- Emulsion Stability
- Flash Point
- Loss on drying (LOD)
- Material Insoluble in Acetone
- Melting Point
- Odor
- Persistence Foam
- pH Range
- Physical State
- Pourability
- Solubility in Water
- Solubility in Organic Solvents
- Specific Gravity
- UV-Visible absorption spectra
- Wettability
- Wet Sieve Analysis

### Training Certificate

#### 3 Months Program –

- Pesticides & Fertilizer Testing**
- Sample Preparation of content testing in technical & formulation samples
- Software & Hardware training of HPLC, GC & UV-VIS
- Calibration of HPLC, GC & UV-VIS
- Data processing & interpretation of HPLC, GC, UV-VIS

### Training Certificate

#### 4 Months Program –

- Pesticides Residue in Food and food products & Water and waste water**
- Sample preparation of pesticides residue in food and food products
- Sample preparation of pesticides residue in Water and waste water
- Pesticides CRM handling, storage and preparation



### Training Certificate

#### 5 Months Program –

- Software & Hardware training of LCMS-MS.
- Calibration of LCMS-MS
- Handling and calibration of supportive analytical instrument used in testing
- Data processing and interpretation

### Training Certificate

#### 6 Months Program –

- Pesticides Residue in Food and food products & Water and waste water**
- Lab Setup as per ISO/IEC 17025 :2017
- Complete Method Validation & Verification in food & food products and water & waste water as per guideline.



#### Why is technical ability important?

Proficiency in technical skills enables individuals to better understand and leverage technology in their work, communicate effectively with technical teams, and adapt to the increasingly digital nature of modern workplaces, opening up new opportunities for career growth and innovation.