TRANSFORMING
LEARNING INTO
EXPERTISE





#### **ABOUT US**

Kulkarni Laboratory (NABL Accredited) Laboratory under Quality Council of India in both Chemical and Biological discipline for Food & water testing. We provide hands-on training for various laboratory courses since 2022. Laboratory training is provided in online, offline as well as in Hybrid mode.

## BASIC MICROBIAL TECHNIQUES:



#### Course contents:

- Different types of medias and media preparation
- Sterilization process, Aseptic techniques, Sample preparation, Serial/decimal dilutions
- Plating methods: Pour plate tech, Spread plate tech and streak plate tech.
- Inoculation, Incubation, Isolation, Gram's Staining,
   Colony characterization, Pipetting
- Regular hands-on practical training

## MICROBIAL CULTURE MAINTENANCE AND VERIFICATION:



#### Course contents:

- Handling and revival of microbial cultures
- Isolation on selective media, Biochemical characterization
- Preparation of stock culture of known concentration
- Preparation of working culture of known concentration from stock
- Serological confirmation as applicable
- Hands-on practical training

Course fees: 5000/-

**Duration: 1 week** 

Course fees: 5000/-

**Duration: 1 week** 

### MICROBIAL TESTING OF FOOD:



## MICROBIAL TESTING OF WATER:



#### Course contents:

- Total viable count, yeast and mould count, E.coli and coliform, pathogen testing including Salmonella spp.
- Introduction to FSSAI regulation for food products standards
- Introduction of various national and international test methods.

#### Course contents:

- Ground water, drinking water, filtered water,
   R.O. water, distilled water, domestic use water,
   packaged drinking water, Process water for food industries
- IS 14543, IS 10500, IS 3328, IS 4251
- MPN, Membrane filtration method, serial dilution

Course fees: 5000/-

**Duration: 1 week** 

Course fees: 5000/-

**Duration: 1 week** 

## SHELF LIFE OF FOOD PRODUCTS

### SHELF LIFE TESTING PRACTICAL

# ENVIRONMENT MONITORING AND BIO BURDEN TESTING



- Real time and accelerated shelf life study
- Organoleptic and sensory parameters
- Chemical testing
- Microbiological testing



- 1. Organoleptic and sensory parameters
  - 2. Chemical testing
  - 3. Microbiological testing
- 4. Training on standard equipment.

- - Sterility test
  - Air monitoring
  - Surface swab testing
  - Fumigation and efficiency check

**Duration: 1 day theory** 

Course fees: 2000/-

**Duration: 5 days** 

Course fees: 5000/-

**Duration: 5 days** 

Course fees: 5000/-

## MICROBIAL MEDIA VALIDATION



### INTRODUCTION TO NABL AND ISO/IEC 17025:2017 (PRESENTATION)



#### Course contents:

- Introduction to ISO 11133
- Critical consumable testing
- Media productivity test
- Media specificity test
- Media selectivity test
- Growth promotion test
- Growth inhibition test

#### Course contents:

- What is accreditation and its necessity
- Global approach of accreditation
- Process of getting accreditation
- Brief introduction to requirements of ISO 17025
- Facility and documentations per ISO /IEC
   17025:2017 standard

Duration: 1 week (3 days)

Course fees: 5000/-

Duration: 4 days
Theory

Course fees: 3000/-



# CHEMICAL ANALYSIS OF CEREALS, PULSES & CEREAL BASED PRODUCTS



#### Course contents:

- Moisture, Total Ash &
   Acid Insoluble Ash.
- Foreign Matter, Weevil
   Seeds, Damaged broken
   Seeds & Extraneous
   Matter
- Non-Volatile Ether
   Extract, Volatile Oil
   Content & Crude Fibres

#### Course contents:

- Moisture, Total Ash &
   Acid Insoluble Ash
- Alcoholic Acidity, Gluten
   Content & Crude Fibres.
- Foreign Matter, Weevil
   Seeds, Damaged broken
   Seeds & Extraneous
   Matter

#### Course contents:

- Total Ash & Acid Insoluble
   Ash, Water Soluble Ash
- Water Extract, Alkalinity
   of water soluble ash
- Crude Fibres

Course fees: 3000/-

**Duration:- 4 days** 

Course fees: 3000/-

**Duration:- 4 Days** 

Course fees: 3000/-

**Duration:- 4 Days** 

## CHEMICAL ANALYSIS OF MILK & MILK PRODUCTS

- Milk Fat, Fat Content & Solid Not-Fat
- Total Solids, Milk Solids
   & Moisture Content
- Sucrose Content, Titrable Acidity
- Total Nitrogen content
- Qualitative Test

   Parameters: Anionic
   Detergents,
   Formaldehydes,
   hydrogen Peroxide, Boric
   Acid & Borates, Salicylic
   Acid & maltodextrin
- Sucrose, Starch, Urea, Ammonium Salts, Sulphates & Glucose
- Sodium Chloride, Foreign Fats, Nitrate, Neutralizers, Hypochlorites & Chloramines, Quaternary Ammonium Compounds

Course fees: 3000/-

**Duration:- 1week** 



Chemical Analysis of Edible Fat- Oil/
Ghee

#### Course contents:

- Moisture, Total Fat & Acid Insoluble Ash
- Acid Value of Extracted fat, Free Fatty
   Acids as Oleic Acid & Peroxide Value
- Training on standard equipment

#### Course contents:

- Saponification value & Unsaponifiable
   Matter
- Acid Value, Iodine value, Peroxide value, Acetyl Value, Hydroxyl Value, Polenske Value & RM Value
- Melting Point & Refractive Index
- Free Fatty Acid, Baudine test, Bellier turbidity temperature
- Butyro Refractometer Reading BR

Course fees: 3000/-

Course fees: 3000/-

**Duration:- 4 days** 

**Duration:- 5 days** 

## CHEMICAL ANALYSIS OF WATER (DRINKING WATER & WASTE WATER)

- Importance of Water Quality testing
- . pH, Conductivity, Turbidity
- Total Dissolved Solids
   (TDS), Total Suspended
   Solids (TSS), Oil &
   Grease, Organic &
   Inorganic Residue
- Alkalinity, Chloride,
   Hardness, Calcium &
   Magnesium, Residual
   Chlorine
- Sulphate, Nitrate,
   Chemical Oxygen
   Demand (COD),
   Biochemical Oxygen
   Demand (BOD)



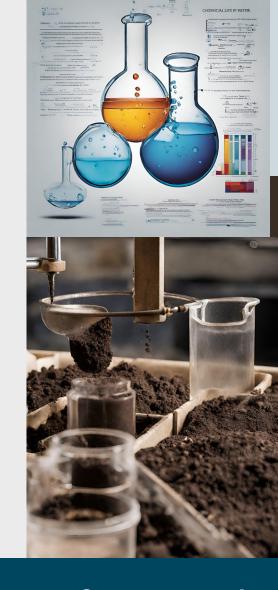
Course fees: 3000/-

**Duration:- 1 Week** 

# CHEMICAL ANALYSIS OF SOIL & IRRIGATION WATER & FERTILIZERS (AS PER FCO (FERTILIZER CONTROL STANDARD)

- Importance of Soil & Fertilizers testing
- pH, Conductivity,
   Organic Carbon,
   Available Nitrogen
- Elemental Analysis incl:
   Available Phosphorus,
   Potassium, Sulphur,
   Boron, Calcium,
   Magnesium, Calcium
   Carbonate (CaCO3),
   Copper, Iron,
   Manganese, Zinc,
   Sodium, Chloride,
   Bicarbonates

- pH, Conductivity,
   Colour, Odour, Moisture,
   Bulk Density
- Organic Matter & Carbon
- Total Nitrogen,
   Ammonical Nitrogen,
   Nitrate Nitrogen
- Elemental Analysis incl:
   Total Phosphorus,
   Potassium, Sulphur,
   Boron, Calcium,
   Magnesium, Calcium
   Carbonate (CaCO3),
   Copper, Iron ,
   Manganese, Zinc,
   Sodium, Chloride,
   Bicarbonate



Course fees: 5000/-

**Duration:- 2 Weeks** 



#### सावित्रीबाई फुले पुणे विद्यापीठ

पनेत्रशिंद, पुणे - ४११००७

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संदर्भ कः सीबी/ जुद्र ०६ | १९१ | २

प्रति.

मा. अध्यक्ष, सर्व अभ्यासमंडळे,

महोदय/महोदया,

शैक्षणिक वर्ष २०२३—२४ पासून नवीन शैक्षणिक घोरणाची आंमलवजावणी विविध अभ्यासक्रमांच्या माध्यमातून होणार असून, आपल्या अभ्यासमंडळाने यासाठी अभ्यासक्रमाचा सविस्तर आराखडा तयार केलेला आहे. याबद्दल आपणा सर्वांचे मन:पूर्वक अभिनंदन.

नवीन शैक्षणिक धोरणामधील Internship आणि On the Job Training यांसारख्या विषयांसाठी सावित्रीबाई फुले पुणे विद्यापीठाने कोणकोणत्या आस्थापनांवरोवर शैक्षणिक करार करणे आवश्यक आहे यासंदर्भात आपल्या अध्यासमंडळांच्या पुढील बैठकीमध्ये चर्चेसाठी विषय घेण्यात यावा. आपल्या अध्यासमंडळांच्या पुढील बैठकीमध्ये चर्चेसाठी विषय घेण्यात यावा. आपल्या अध्यासमंडळाल त्या—त्या विषयांसाठी Internship आणि On the Job Training कसे उपलब्ध होऊ शकेल यासंदर्भात माहिती संकलित केल्यास, विद्यापीठाच्या प्रशासनाला अशा सर्व आस्थापना/संस्था/उद्योग/प्रशासकीय अधिकारी यांचेसोबत संपर्क साधून त्या—त्या विषयांकरिता शैक्षणिक करार पुढील काळामध्ये करता येईल. जेणेकरून विद्याध्यांसाठी Internship आणि On the Job Training ची संधी पुरेशा प्रमाणात आपल्याला उपलब्ध करून देता येतील. अशा सर्व आस्थापना/संस्था/उद्योग/प्रशासकीय अधिकारी यांची माहिती एक महिन्यांच्या आत विद्यापीठाच्या शैक्षणिक (मान्यता कक्ष) विभागाकडे पाठविल्यास, त्यावर योग्य ती कार्यवाही विद्यापीठस्तरावर करणे सोयीचे होईल. तसेच या संदर्भात आपल्या अभ्यासमंडळामधील काही तज्ज व्यक्ती मदत करण्यास तथार असल्यास, तसेही स्वतंत्रपणे कळवावे.

As stipulated by Savitribai Phule Pune University [Ref.No. CB/1303 Dated 07/12/2023], every institute is supposed to provide On Job Training and Internship programme to students. And institutions are appealed to make agreements with various companies for the same.



### Student testimonials





Training program was very helpful for us. We learnt about various analytical instruments as well as methods. Lectures were brilliantly taught to us. We have developed more interest in the program. I really enjoyed the course .Thank you so much for suggesting such a great course!

The staff is knowledgeable and friendly. You have successfully created the environment conductive to learning. I feel confident in the skills I have acquired.

#### - Kranti Gaikwad

The faculties are knowledgeable and approachable. The hands-on sessions were good. I highly recommend this laboratory for its professionalism and commitment of providing an excellent training.

- Mr. Wagh

I have completed one month training programme recently and I have learnt a lot of things in this period. The lab infrastucture is very advanced and faculty members are very supportive. The syllabus is very well designed and its execution is phenomenal. The laboratory environment is supportive for learning. I would strongly recommend this course to all fello students.

- Devraj Kulkarni























Team





Alumni embarking on the Analytical journey



From the Classroom





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**Laboratory Training**