PRACTICAL MICROBIOLOGICAL TRAINING

METHODS OF ISOLATION & IDENTIFICATION OF MICROBIAL PATHOGENS IN FOOD & FOOD PRODUCTS

CURRICULUM

This course provides the foundation for understanding food microbiology in the laboratory. Delivered in a classroom and laboratory environment, the course sessions incorporate a practical mixture of theory, demonstrations and hand-on activities to maximize attendees’ comprehension of training topics and share URS’s knowledge and expertise.

- General and Food Microbiology
- Environmental Monitoring and Sampling
- Good Laboratory Practices
- Fundamental Laboratory Techniques
- Enumeration and Pathogen Test Methods & Result interpretation

WHO SHOULD ATTEND?

This introductory course is designed for industry professionals who work at or with a food microbiology laboratory and for those without a technical science background who are required to discuss, interpret or act on microbiological test results.

This course would benefit:

- Food Laboratory Technicians & Scientists
- Quality Assurance
- Laboratory Managers
- Individuals looking for additional hands-on or technical training

2015 DATES / LOCATION:

The course will be held on-site at URS Microbiological Services in the dedicated Training Center and Special Projects Lab.

- As the course includes lab exercises, business casual dress and jeans are acceptable
- Contact lenses are not permitted on-site. Close-toed shoes are required
Course Duration – 5 days

Course Content

Day 1

Morning Session : Theory Class

✓ Introduction to Microbiology
✓ Cultivation of Microorganisms
✓ Sterilization & Decontamination process

Afternoon session : Practical Class

✓ Safety in the Laboratory
✓ Operation of the Lab instruments
✓ Media preparation & Sterilization Process

Day 2

Morning Session : Theory Class

✓ Introduction to Microbiology pathogens that spoil food
✓ Isolation, enumeration & detection of Microorganisms from food (Salmonella, S.aureus, E.coli, ColiformsTotal plate count, Yeast & Mould
✓ Testing & Incubation

Afternoon session : Practical Class

✓ Preparation of sample & Isolation
✓ Plating method – Pour, streak, spread (Salmonella, S.aureus, E.coli, Coliforms, Total plate count, Yeast & Mould
✓ Testing & Incubation
Day 3

Morning Session : Theory Class

✓ Enumeration & detection of Microorganisms from food.
✓ Morphological identification of microorganisms – Method, types of staining, Microscopy.
✓ Confirmatory test for test pathogens Identification & Confirmation procedure.

Afternoon session : Practical Class

✓ Enumeration method techniques
✓ Staining techniques – Gram staining and types

Day 4

Morning Session : Theory Class

✓ Biochemical Tests profiles
✓ Importance of Pathogens and toxins in food testing

Afternoon session : Practical Class

✓ Practical demonstration and Incubation of all the conducted tests
Day 5

Morning Session: Theory Class

- Observations & Interpretations
- Group discussion & Examination

Afternoon Session: Practical Class

- Evaluation and Technical discussions
- Feedback on Trainings