HUMAN HEALTH

ENVIRONMENTAL HEALTH

BETTER KNOWLEDGE BETTER RESULTS

Train your lab professional at PerkinElmer's world class customer knowledge centre

PerkinElmer®
For the Better

FOR THE PEOPLE.
FOR THE ENVIRONMENT.
FOR THE SHARED
GOAL OF A HEALTHIER FUTURE.

Improving human and environmental health is our focus. From earlier insights and more effective therapies to cleaner water and safer buildings where we work, learn and play; PerkinElmer touches the lives of millions of people around the world every day.

Through science, innovation and applications expertise we're committed to transforming risk into safety, mystery into knowledge and ideas into action for a healthier today and a better tomorrow.

We operate in 150 countries worldwide and employ approximately 9,100 employees. Seventy-five percent of our products are in the number one or number two position in their market. Our global headquarters are in Waltham, Massachusetts, USA.

PerkinElmer is the world's leading technology and solution providing organization in all the related fields concerned with human and environmental health. We are actively engaged in development of technology and solutions in the areas of analytical sciences, bio-discovery and genetic screening.

PerkinElmer India is proud to be associated with all the major customers across industries, including pharmaceutical, government, environmental, petrochemical and chemical. This gives us the unique ability to understand and provide solutions across a wide spectrum of product technologies and varied application segments.

Our world class product range includes :

- Molecular Spectroscopy (MS)
- Infrared (FTIR & IR) Spectrometers
- UV/Vis & UV/Vis/NIR
- Raman Spectroscopy
- Thermal Elemental Analysis (TEA)
- Atomic Absorption Spectrometers (AA)
- Inductively Coupled Plasma (ICP)
- ICP-Mass Spectrometry
- Gas Chromatography (GC)
- Liquid Chromatography (LC)

And many more

Our expertise spreads across almost all areas concerned with human and environmental health such as:

- Consumer products safety
- Drug discovery
- Pharmaceutical
- Environmental analysis
- Food, flavours and agricultural analysis
- Forensic analysis
- Hydrocarbon processing
- Optoelectronics
- Renewable energy and many more

PerkinElmer customer training facilities

PerkinElmer global technology leader in Human and Environmental health sciences has now established two training facilities for its customers. The Technology Innovation centre in Mumbai will continue to support the customers from the sub continent. In addition to this centre PerkinElmer has opened Centre of Excellence in the Hitech city of Hyderabad. Both the centers have independent setups and facilities. These two facilities will enable the customer to choose the convenient location and course of interest. Both the centers have a team of experienced scientists and application specialists to help the users and customers offer the best fit solutions.

Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) – ICP-C001

Duration: 2 days

Course Info

This comprehensive course: comprises a study of basic emission theory, radial versus axial viewing, Optima hardware, and WinLab software. All lab experiments will be conducted on current models of the PerkinElmnr Optima series.

Course Outline

- Basic Principles and Concepts of ICP
- Plasma performance
- Components of ICP-OES system
- Interferences in ICP analysis
- Method development
- Spectral interferences correction techniques
- Reports/data management
- Routine maintenance and troubleshooting
- Hands on session

Gas Chromatography & Headspace Techniques – GC-C001M or GC-C001H

Duration: 2 days

Course info

The course will cover the; Fundamental theory of Gas Chromatography (GC) and its applications. The course content includes: GC terminology. GC hardware, sample injection techniques, instruments setup, quantitative techniques. Totalchrom software, column efficiency, resolution and troubleshooting. Headspace Gas Chromatography techniques includes hardware, instrument setup, optimization, modes of operation, qualitative and quantitative calculations.

Course Outline

- Fundamental of Headspace & Headspace with Trap
- Practical session on headspace on VOC

Duration: 1 day each

- Theory
- New Development in Technology
- Key Applications
- Practical Demo with Sample runs

Gas Chromatography & Mass spectrometry Technologies – GC-C002M or GC-C002H

The course will cover the Fundamental theory of Gas

Course Info

The course will cover the fundamental theory of Gas Chromatography / Mass Spectrometer (GC/MS) and its applications. The course content includes: GC/MS technology. GC/MS hardware, instrument startup and setup, MS tuning, Turbo Mass software, developing GC control method and MS quantitative method, spectral data processing and library searching, system maintenance and troubleshooting.

Course Outline

- Basics of operations
- Fundamentals of Mass Spectrometers EI and CI
- Full Scan, SIM and SIFI
- Routine Data Acquisition, Spectral Isolation & Library Searching
- Report generation

Thermal Analyzers Standard Training Course – TA-C002

Duration: 2 days

Course Info

This course will equip junior analysts the knowledge on DSC instruments. The practical aspects of operations and maintenance as well as introduction theory are covered in the course. In addition, the common functions of DSC and various applications with DSC will be demonstrated. This course does not include Pyris player and DSC robotic systems. This course is also designed for participants who are new with Power Compensation DSC. Course also content Thermogravimetric Analysis (TGA) introduction to theory and The practical aspects of operation and maintenance. In addition, the course covers the functions of the Pyris software and various common applications of thermal techniques (DSC/TGA) will be discussed. This course does not include Pyris Player and autosampler.

Course Outline

There will be at least 3 hours lab session on calibration sample preparation and sample analysis.

- Training Objectives
- Customer's Applications and Challenges
- Instrument Theory
- Instrument Design
- Hardware and Software Orientation
- Calibration
- Operating Variables (Sample preparation, purge gas, heating rates, temperature programs, sample weight, crucibles, etc.)
- Practical Session (Group assignment for sample analysis)
- Data analysis
- Preventive Maintenance
- General Applications

Hyphenation Techniques – TA-C001

Duration: 1 day

Introduction

The Hyphenation techniques is a buzz word for the obtaining more information from the sample like:

- Reaction Mechanism
- Reverse engineering for innovators
- Counterfeit Drugs
- Polymorphic studies
- Interactive components investigation
- Thermal stability determination
- Photo degradation
- Structural information
- Composition studies
- Decomposition kinetic studies

Course Info

Basic introduction to analytical techniques such as Thermal Analysis, Gas Chromatography, Mass Spectrometry and overview of Hyphenation Techniques with some key applications like:

- Evolved Gas Analysis (EGA)
- TG-FTIR (Thermogravimetric analyzer- Infrared spectroscopy),
- TG- MS (Thermogravimetric analyzer- Mass Spectrometry),
- TG-GC-MS (Thermogravimetric analyzer - Gas chromatography-Mass Spectrometry)
- Practical session includes Demo sample analysis.

High Performance Liquid Chromatography (Basic) & Ultra High Performance LC (UHPLC) – LC-C001

Duration: 2 days

Course Info

The course will cover the basic theory and principles of liquid chromatography (LC). Topics covered also include different modes of LC (such as normal and reversed phase, size exclusion, ionexchange). hardware components, basic maintenance, troubleshooting, quantitative technique and data handling.

Flame Atomic Absorption with AA WinLab 32™ Software – AA-C001

Duration: 2 days

Course Info

This course provides the attendee with the knowledge and skills needed for optimizing and troubleshooting basic flame atomic absorption. Laboratory exercises include experiments in controlling interferences, as well as procedures for developing methods. WinLab software will also be covered.

Course Outline

- Basic Principles and Concepts of FAAS
- Definition of terms used in AAS
- Components of an AAS
- Setup and Optimization
- Flame Processes and Interferences
- Various Interference Correction Techniques
- Routine Maintenance and Troubleshooting
- Hands on session
- Introduction to FIAS

Graphite Furnace AA with WinLab 32™ Software – AA-C002

Duration: 2 days

Course Info

This two-day course provides the attendee with the knowledge and skills needed analysing samples by Aagraphite furnace technique. Laboratory exercises include experiments in controlling interferences, as well as procedures for developing methods. WinLab software will also be covered.

Course Outline

- Basic Principles and Concept of STPF Technology
- Components of an AAS
- Setup and Optimization
- Matrix Modification & Interferences
- Background Correction Techniques
- Method Development
- Routine Maintenance and Troubleshooting
- Hands on session

Raman Spectroscopy – RAM-001

Duration: 2 days

Course info

Duration: 1 day each

- Theory
- New Development in Technology
- Key Applications
- Practical Demo with Sample runs

Fourier Transform Infrared (FTIR)/FTNIR Spectroscopy & IR Microscopy Course – FTIR-001M & FTIR-001H

Duration: 2days

Course Info

The course will cover the theory and maintenance of the FTIR instrument as well as the theory and practical aspects of handling of solids, liquids and gases by both the transmission and reflection techniques.

Course Outline

- Theory of infrared spectroscopy
- Simple theory of FTIR
- Spectrum software operation
- Sample handling by transmission techniques - KBr disk, liquid cells etc.
- Sample handling by reflection techniques - diffuse reflectance and ATR accessories

Additional benefits

- Orientation of FTNIR technique and usage
- FTNIR applications
- IR analysis of microscopic objects and layered samples

Inductively Coupled Plasma Mass (ICP-MS) Course – ICPMS-001

Duration: 2 Days

Course Info

Basic theory of ICPMS, components of the systems Operational needs and precautions. Sample handling Software usage and parameter selections.

Course outline

- Theory of ICPMS
- Areas of applications and sampling techniques
- Collision cell and Dynamic reaction cell basics
- Selection of proper technique
- Interference removal methodologies

*** For more information on courses and course fees kindly contact Mrs. Ramani Gopi on +91-22-3326 1889 for Thane & Ms B. Lavanya on +91-40-3982 0720 for Hyderabad.**






CUSTOMER TRAINING CALENDAR 2012

Course Name	Code	Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Courses at Customer Knowledge Centre – Thane (Mumbai)*														
Flame Atomic AA with AA WinLab Software	AA-C001	2			15, 16			7, 8						13, 14
Graphite furnace AA with WinLab Software	AA-C002	2		9, 10										
Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)	ICP-C001	2	5, 6		1, 2			14, 15		23, 24		4, 5		27, 28
Hyphenated Techniques- TG-IR/ TG-GCMS	TA-C001	1		24		2		1		31				
Thermal analysis	TA-C002	2	23, 24		19, 20		3, 4				13, 14		1, 2	
Fourier Transform Infrared Spectroscopy (FTIR)/ FTNIR/ Microscopy	FTIR-C001	2	12, 13			12, 13				8, 9			6, 7	
Ultra High Performance Liquid Chromatography (Basic) + Software	LC-C001	2		2, 3		19, 20		21, 22		2,3		18, 19		20, 21
Fundamental of Gas Chromatography and Headspace Technologies	GC-C001	2		16, 17		26, 27			19, 20		6, 7		8, 9	
Fundamental of Gas Chromatography and Mass Spectrometry	GC-C002	2	19, 20		21, 22		10, 11		5, 6			11,12		6, 7
Raman Spectroscopy	RAM-001	1	25			25			27			26		
Courses at PerkinElmer Centre of Excellence – Hyderabad*														
Fundamental of Gas Chromatography and Headspace Technologies	GC-C003	2	12, 13		1, 2		10, 11		5, 6		6, 7		1, 2	
Fundamental of Gas Chromatography and Mass Spectrometry	GC-C004	2		23, 24		12, 13		7, 8		2, 3		4, 5		27, 28
Inductively Coupled Plasma Mass Spectrometery	ICPMS-001	2	19, 20		15, 16		3, 4		12, 13		13, 14		8, 9	
LCMS	LCMS-001	2		2, 3		19, 20		14, 15		8, 9		11, 12		13, 14
Fourier Transform Infrared Spectroscopy (FTIR)/ FTNIR/ Microscopy	FTIR-C002	2		9, 10		26, 27		21, 22		23, 24		18, 19		6, 7

*Please refer to the addresses for course locations

For developing solutions and critical applications.

In everything we do at PerkinElmer, our perspective is based on our customers' point of view, ensuring that we understand their needs and expectations, and can prioritize and problem-solve for their unique challenges. We also take personal responsibility for responding to issues with our customer-centric approach, for thinking big on every project, and for fostering effective, long-term customer relationships.

Pioneer in Infrared Spectroscopy for Identification

- Single and Multi Range of FTIR, FTNIR Spectrometers
- Raman Spectrometers
- Microscopy & Imaging
- Accessories and Application packs

Wide range of Thermal and Elemental analyzers for Material Characterization

- Differential Scanning Calorimeter (DSC)
- Thermogravimetric Analyzers (TGA)
- Dynamic Mechanical Analyzer (DMA)
- CHNS/O Analyzers

LIMS & Informatics solutions

ChemBio office, Electronic notebook (ELN), Labworks LIMS

Gold Standard in Molecular Spectroscopy

- UV VIS and UV VIS NIR Spectrometer
- Fluorescence Spectrometer

Hyphenated Techniques for researchers

- DSC Raman
- UV DSC
- TG-IR
- LC-ICPMS
- TG-MS & TG-GC-MS

New efficient Mass Spectrometers

- LCMS
- LC TOF
- GCMS Systems & Swafer Technologies

Leaders in Inorganic Analysis Solutions

- Atomic Absorption Spectrometers
- Inductively Coupled Plasma (ICP)
- ICP with Mass Spectrometer (ICP-MS)
- Sample digestion system
- Mercury analyzers

Innovative Chromatography solutions and sampling accessories

- Gas Chromatographs
- Liquid Chromatographs (HPLC) & UHPLC
- Head Space sampler & Thermal Desorber samplers
- Petroleum and gas analyzers and custom solutions

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