

CUSTOMER TRAINING PROGRAM 2022



OneSource[®]
Laboratory Services

Education Services to Empower Your Lab


PerkinElmer[®]
For the Better

Your Benefit From Training

Instructor Led Training (ILT)

Our classroom training offers an ideal setting for learning how to get the best possible performance from your instrument. Free from everyday distractions, you'll receive hands-on experience in a laboratory environment complete with the latest equipment, software and accessories.

You'll receive guidance from expert faculty with comprehensive instrument knowledge and experience. You'll also have the opportunity to network with other participants to problem solve.

Training courses are offered at PerkinElmer Centers of Excellence, conveniently located throughout the United States and Canada. We maintain a small class size to ensure you receive individual attention and ample hands-on instrument use – everything you need for focused learning that can lead to increased productivity. Participants are accepted on a first-come, first-served basis, so reserve your spot soon.

Basic On-Site Training (ILT)

Training delivered at your facility to ensure operators understand the fundamentals of their instrument.

This hands-on training delivered at your facility is an ideal way to ensure operators understand the fundamentals of their instrument. Busy facilities are able to train multiple operators simultaneously to keep their labs up and running. Operators learn how to use and maintain their instruments properly right from the start.

Unable to Get Away from Your Lab?

Contact us to discuss bringing the training directly on-site to you – saving you time and travel expenses.

Request More Information

or Send Email to:

USTraining@perkinelmer.com

Virtual Instructor Led Training (VILT)

Virtual Instructor Led Training (VILT) offers a novel, expedient and affordable route to receive the best possible performance from your instrument – right from your desk!

You'll receive carefully crafted instructor presented lectures as well as virtually delivered software and practical training on relevant equipment, software and accessories. You'll also have the opportunity to network with other participants to problem solve.

Virtual courses can be taken at your desk, home, workplace and anywhere else with a conducive learning environment. We maintain a small class size to ensure you receive individual attention and ample software training – everything you need for focused learning. Participants are accepted on a first-come, first-served basis, so reserve your spot soon.

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Training Program at a Glance

 In person  Virtual

Atomic Spectroscopy

ICP-OES Inductively Coupled Plasma Optical Emission Spectrometry

Inductively Coupled Plasma (N0205010)		Advanced ICP-OES (N0200027)	Avio / Optima Series - Virtual Instructor Led Training (VILT) (N0236068)					
Mar 21-23 Atlanta, GA	Aug 10-12 Fort Collins, CO	Mar 24-25 Atlanta, GA	Jan 31- Feb 1 Feb 17-18	Mar 10-11 Apr 7-8	May 12-13 Jun 9-10	Jul 7-8 Aug 11-12	Sep 8-9 Oct 6-7	Nov 10-11 Dec 8-9

ICP-MS Inductively Coupled Plasma Mass Spectrometry

NexION® ICP-MS Series (N0200193)			NexION® ICP-MS Series - Virtual Instructor Led Training (VILT) (N0236069)					
Mar 21-25 Shelton, CT	May 23-27 Fort Collins, CO	Oct 26-28 Fort Collins, CO	Jan 12-14 Feb 16-18	Mar 16-18 Apr 6-8	May 18-20 Jun 15-17	Jul 13-15 Aug 17-19	Sep 14-16 Oct 12-14	Nov 16-18 Dec 14-16

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Program at a Glance NEXT ➡

Training Program at a Glance

 In person  Virtual

Chromatography

GC/MS Gas Chromatography Mass Spectrometry

Clarus® GC/MS Operator (N0200417) 4 Day Course	Torion® GC/MS Basic Operations (N0239010) 3 Day Course	Torion® GC/MS Advanced Operations (N0239011) 5 Day Course	Torion® GC/MS Advanced Operations and Maintenance for Distributors (N0239012) 10 Day Course
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LC Liquid Chromatography

Fundamentals of LC (N0200501) Apr 4-8 Shelton, CT
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LC/MS Liquid Chromatography Mass Spectrometry

QSight® Triple Quad LC/MS/MS (N0200417) Apr 4-8 Shelton, CT	QSight® Triple Quad LC/MS/MS - Virtual Instructor Led Training (VILT) (N0233071) Jan 12-14 Feb 9-11	Mar 9-11 Apr 20-22	May 11-13 Jun 8-10	Jul 13-15 Aug 10-12	Sep 28-30 Oct 12-14	Nov 16-18 Dec 7-9
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CDS Chromatography Data Systems

TotalChrom® Principles (N0201043) 3 Day Course
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TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Training Program at a Glance

 In person  Virtual

Molecular Spectroscopy

IR Infrared Spectroscopy

Intro to IR Spectroscopy
(N0200126)

Feb 22-23
Chicago, IL

IR Spectral Interpretation
(N0200152)

Feb 24-25
Chicago, IL

Thermal / Elemental Analysis

DSC Differential Scanning Calorimetry

Intro to Differential Scanning Calorimetry
(N0200607)

2 Day Course

TGA Thermogravimetric Analysis

Intro to Thermogravimetric Analysis
(N0200605)

2 Day Course

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Atomic Spectroscopy

 In person  Virtual

ICP-OES Inductively Coupled Plasma Optical Emission Spectrometry

ICP-OES

3 Days
\$ 2,258.00

Course Nbr. N0205010

This comprehensive course comprises a study of basic emission theory, radial versus axial viewing, ICP hardware, and WinLab 32 and Syngistix software. All lab experiments will be conducted on current models of the PerkinElmer ICP series.

Lectures and Labs

- Identifying interferences
- Inter-element correction factors
- Using internal standards
- Multicomponent spectral fitting

Prerequisite: Analysts should have spent at least one month becoming familiar with the instrument and should have a working knowledge of WinLab 32 software before attending this course.

Instructor Led Training (ILT)

Jan 5-7: Fort Collins, CO
Mar 21-23: Atlanta, GA
Aug 10-12: Fort Collins, CO

Advanced ICP-OES

2 Days
\$ 1,596.00

Course Nbr. N0200027

This two-day course provides analysts with the knowledge needed to develop a method for ICP-OES analysis of complex samples. This lab intensive course covers when and how to use internal standards, inter-element correction factors (IECs) and multi-component spectral fitting (MSF) effectively to obtain accurate results.

Lectures and Labs

- Identifying interferences
- Inter-element correction factors
- Using internal standards
- Multicomponent spectral fitting

Prerequisite: The student should have completed course N0205010 (ICP with ICP WinLab Software) or have a minimum of six months experience with the Optima ICP and the WinLab software before attending this course. This course is not recommended for beginners.

Instructor Led Training (ILT)

Mar 24-25: Atlanta, GA

ICP-OES

2 Days
\$ 1,596.00

Course Nbr. N0236068

This two-day Virtual training program is designed to closely emulate the in-class training experience and is instructor led. Class sizes are controlled to maximize each trainee's learning experience. Theory is delivered via web, group exercises and discussions are conducted using simulation software, and several laboratory exercises are emulated to ensure learning effectiveness.

Lectures and Labs

- ICP-OES theory
- ICP-OES hardware and software fundamentals
- ICP-OES workflow
- User maintenance
- Method design and optimization
- Interference and correction tools

Prerequisite: Analysts should have ideally spent at least one month becoming familiar with the instrument and should have a working knowledge of WinLab 32 and/or Syngistix software before attending this course.

Virtual Instructor Led Training (VILT)

Jan 31-Feb 1	Apr 7-8	Jul 7-8	Oct 6-7
Feb 17-18	May 12-13	Aug 11-12	Nov 10-11
Mar 10-11	Jun 9-10	Sep 8-9	Dec 8-9

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Atomic Spectroscopy

 In person  Virtual

ICP-MS Inductively Coupled Plasma Mass Spectrometry

NexION ICP-MS Series

5 Days
\$ 3,476.00

Course Nbr. N0200193

This five-day course will cover the NexION® series of ICP-MS. This course will be a combination of classroom lectures and hands on laboratory experiments and exercises. Also, as part of this course material, appropriate lab exercises will be conducted that are related to the discussions held. Laboratory experiments will be conducted to show how to set up, optimize and maintain the ICP-MS instrument. In addition, data will be collected by means of various analytical methods available with this technique. All lab experiments will be conducted on the NexION models of ICP-MS instruments. **An experiment on how to use the autosampler will be covered in class however ESI Autosampler material will NOT be covered.*

Lectures and Labs

- ICP-MS theory and method development
- Overview and discussion of the hardware
- NexION Software training
- Discussion on optimization and setup of the instrument
- Introduction into the optimization and the use of Universal Cell Technology (UCT)
- Troubleshooting and maintenance
- Reporting and data exporting

Prerequisite: Students should have spent at least one month becoming familiar with the instrument and should have a working knowledge of the software before attending this course.

Instructor Led Training (ILT)

Mar 21-25: Shelton, CT
May 23-27: Fort Collins, CO
Oct 24-28: Fort Collins, CO

NexION ICP-MS Series

3 Days
\$ 2,258.00

Course Nbr. N0236069

The three-day VILT component comprises a study of mass spectrometry fundamentals, hardware familiarization, maintenance training, software and interference control training. All training will be provided using the Syngistix™ software. This class will cover the NexION single analyze quadrupole series of instrument – including the NexION 300, 350, 1000 and 2000. **An experiment on how to use the autosampler will be covered in class however ESI Autosampler material will NOT be covered.*

Lectures and Labs

- ICP-MS theory and method development
- Interference and correction tools
- Overview and discussion of the hardware and maintenance
- Universal Cell Technology (UCT)
- Syngistix software training
- Data acquisition, visualization, and reporting
- Optimization and setup of the instrument

Prerequisite: Analysts should have spent at least one month becoming familiar with the instrument and have a working knowledge of WinLab 32 and/or Syngistix software before attending this course.

Virtual Instructor Led Training (VILT)

Jan 12-14	Apr 6-8	Jul 13-15	Oct 12-14
Feb 16-18	May 18-20	Aug 17-19	Nov 16-18
Mar 16-18	Jun 15-17	Sep 14-16	Dec 14-16

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions



Chromatography

 In person  Virtual

GC/MS Gas Chromatography Mass Spectrometry

Clarus GC/MS Operator

4 Days
\$ 2,982.00 **Course Nbr. N0200417**

This four-days course introduces new Clarus® GC/MS users to gas chromatography/mass spectroscopy (GC/MS) and gives them an orientation to the hardware, software, and experimental requirements to accomplish successful system operation. Laboratory exercises provide an opportunity to carry out the main operations described in the lecture material.

Lectures and Labs

- System maintenance and software troubleshooting procedures
- Connecting the GC and MS
- Spectral data processing and cold starting the instrument
- Library searching
- Tuning the instrument
- Developing a method for construction and data analysis
- Instrument control and data acquisition
- Developing a Clarus MS method for quantization and a GC control method
- General maintenance

Prerequisite: Students are required to have completed one of the PerkinElmer gas chromatography training courses, or to certify a history of extensive GC experience. The student will also be required to have at least one month of experience with an installed and operating Clarus MS system.

Instructor Led Training (ILT)

Email for Availability (USTraining@perkinelmer.com)

Torion GC/MS Basic Operations

3 Days
\$ 2,258.00 **Course Nbr. N0239010**

This three-day class will cover basic operations of the Torion T-9 Portable GC/MS system.

Lectures and Labs

- Setting up the instrument for laboratory or field use
- Start up and preparation
- Conducting Performance Validation runs to correct operation of the system
- Basic SPME sampling techniques for gas and liquid samples
- Basic data viewing and analysis using Chromion Software
- Very basic maintenance for the T-9 GC/MS and SPME Custodion to ensure correct operation of the system

Instructor Led Training (ILT)

Email for Availability (USTraining@perkinelmer.com)

Torion GC/MS Advanced Operations

5 Days
\$ 3,476.00 **Course Nbr. N0239011**

Torion GC/MS Advanced Operations and Maintenance for Distributors

10 Days
\$ 6,600.00 **Course Nbr. N0239012**

The five-day class will cover advanced operations of the Torion T-9 Portable GC/MS system. The 10-day class - specifically for distributors only - will additionally cover maintenance. *Note: Maintenance is not covered in the five-day class.*

Lectures and Labs

- Advanced data analysis using Chromion software
- Building custom target lists and unknown libraries in Chromion
- Air Sampling using the Custodion Needle Trap and Clarion air pump
- Maintenance (ten-day class only)

Instructor Led Training (ILT)

Email for Availability (USTraining@perkinelmer.com)

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Chromatography

LC Liquid Chromatography

Fundamentals of LC

2 Days
\$ 1,596.00

Course Nbr. N0200501

For the beginner, this introduction to liquid chromatography provides an overview of the principles and practice of high-performance liquid chromatography (HPLC). The topics covered are basic chromatographic terminology, modes of HPLC (normal and reversed-phase, size exclusion, and ion exchange chromatography), instrumentation, peak identification and method development, a brief applications review, and routine maintenance and troubleshooting.

Lectures and Labs

- History and theory of LC
- Modes of HPLC
- Hardware components
- Peak identification and method development
- Applications overview
- Troubleshooting
- Basic chromatographic parameters
- Hardware familiarization
- Routine maintenance

Prerequisite: The student should have spent at least one month becoming familiar with an instrument.

Instructor Led Training (ILT)

Apr 4-8: Shelton, CT

In person Virtual



TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Chromatography

LC/MS Liquid Chromatography Mass Spectrometry

QSight® Triple Quad LC/MS/MS

5 Days
\$ 3,476.00

Course Nbr. N0233042

This five-day course covers overviews including the fundamentals of mass spectrometry, QSight technology, Simplicity software, basic applications, and basics maintenance and troubleshooting. It also incorporates hands-on practices of creating LC/MS/MS methods, mass calibration, setting up batches, acquiring data, and data analysis with demonstration data using Simplicity software.

Lectures and Labs

- QSight technology
- Simplicity software
- Basic applications
- Basic maintenance and troubleshooting
- Creating LC/MS/MS methods
- Mass calibration
- Setting up batches
- Acquiring data, and data analysis
- Demonstration data using Simplicity software

Prerequisite: This course requires students to have basic Mass Spectrometry and Chromatogram knowledge with at least 1 month spent becoming familiar with the QSight LC/MS System hardware and software. Having work experience with LC and MS Method development is preferred.

Instructor Led Training (ILT)

Apr 4-8: Shelton, CT
Sep 12-16: Shelton, CT

QSight® Triple Quad LC/MS/MS

3 Days
\$ 2,258.00

Course Nbr. N0233071

The three-day VILT component comprises a study of mass spectrometry fundamentals, QSight hardware familiarization and optimization, user maintenance, Simplicity software, basic applications and more. This class will cover the QSight LC/MS/MS instrument series

Lectures and Labs

- QSight Instrument Hardware Training
- QSight Quantitation method development and data analysis
- Mass Spectrometry Theory
- MS Basic and advanced method setup/development
- Simplicity 3Q™ Software
- User maintenance and basic troubleshooting
- Instrument auto mass calibration and resolution tuning

Prerequisite: Students should have ideally spent at least one month becoming familiar with the instrument and should have a working knowledge of the software before attending this course.

Virtual Instructor Led Training (VILT)

Jan 12-14	Apr 20-22	Jul 13-15	Oct 12-14
Feb 9-11	May 11-13	Aug 10-12	Nov 16-18
Mar 9-11	Jun 8-10	Sep 28-30	Dec 7-9

 In person  Virtual

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions



Chromatography

CDS Chromatography Data Systems

TotalChrom® Principles

3 Days
\$ 2,258.00

Course Nbr. N0201043

This three-day lecture and lab course presents users of TotalChrom™ Workstation and Client/Server with a fundamental knowledge of the theory and operation of the software, basic maintenance, and troubleshooting. Discussion and hands-on exercises emphasize acquiring data, developing quantitative methods, and reprocessing data. This course is for key operators of laboratories who need formal product training or operators who need more comprehensive training than that supplied by on-site familiarization courses.

Lectures and Labs

- System overview
- PerkinElmer Intelligent Interface
- Software configuration
- Peak detection and identification
- Generation and calibration of method files
- Data acquisition
- Graphic reprocessing
- Comparing chromatograms
- Batch
- Generation of sequences

Prerequisite: A fundamental understanding and/or experience using the Microsoft® Windows® 95, 98 or 2000 operating systems are strongly recommended for this course. Thirty to sixty days of product usage before the class is recommended.

Instructor Led Training (ILT)

Email for Availability (USTraining@perkinelmer.com)

In person Virtual



TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Molecular Spectroscopy

 In person  Virtual

IR Infrared Spectroscopy

Introduction to IR Spectroscopy

2 Days
\$ 1,596.00 **Course Nbr. N0200126**

This fundamental course provides instruction in theory, instrumentation, maintenance, data acquisition software, sample preparation and the use of various accessories, enabling students to acquire good quality spectra by either reflectance or transmission. The course will cover instrument maintenance, calibration, and the preparation of solids, liquids, and pastes for both reflectance (Universal Attenuated Total Reflectance UATR), and transmission studies. The use of the UATR accessory will be the focus on day two along with additional techniques for sample preparation.

Lectures and Labs

- IR theory and advantages of IR spectroscopy
- Instrument parts, maintenance and validation
- Software operation
- Sample preparation using the UATR
- Casting films on IR transparent windows
- KBr pellet making
- Gas cell preparation
- Troubleshooting

Instructor Led Training (ILT)

Feb 22-23: Chicago, IL

IR Spectral Interpretation

2 Days
\$ 1,596.00 **Course Nbr. N0200152**

This infrared interpretation course provides students with basic knowledge of the location of absorption bands and the chemical bonds present that are the cause of these absorptions. Various examples of infrared (IR) spectra representing a wide variety of chemical classifications both aliphatic and aromatic will be shown. Each sample spectra discussed will focus on the chemical bonds present and the corresponding infrared absorption. The student will learn the most direct way to interpret an IR spectrum and how to compare an unknown spectrum with known reference spectra. Exercises will focus on a displayed spectrum and the chemical bonds present that cause an infrared absorption in a particular region of the spectrum.

Instructor Led Training (ILT)

Feb 24-25: Chicago, IL

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Thermal/Elemental Analysis

 In person  Virtual

DSC Differential Scanning Calometry

Introduction to Differential Scanning Calorimetry

2 Days

\$ 1,596.00

Course Nbr. N0200607

This course is for students who have recently started using the DSC 4000, 6000 or 8000, Diamond™ DSC or Jade instruments. The practical aspects of operation and maintenance as well as introductory theory are covered in the course. In addition, the common functions of the Pyris™ software and their application in the use of the various power compensated DSC instruments will be demonstrated. **The Pyris Player and the TGA Autosampler will not be covered in this course.*

Lectures and Labs

- System configuration/overview
- Setup
- Baseline optimization
- Calibration
- Practical laboratory experiments
- Generic applications
- Data handling
- Operating variables
- Safety

Prerequisite: The student should have spent at least one month becoming familiar with the instrument.

Instructor Led Training (ILT)

Email for Availability (USTraining@perkinelmer.com)



TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Thermal/Elemental Analysis

In person Virtual

TGA Thermogravimetric Analysis

Introduction to Thermogravimetric Analysis

2 Days

\$ 1,596.00

Course Nbr. N0200605

This course is designed for people who have recently started using TGA 4000, TGA7 and Pyris™ 1 TGA. The practical aspects of operation and maintenance as well as introductory theory are covered. In addition, the course covers the common functions of the standard Pyris software and applications of the TGA7 and Pyris 1 TGA. **The Pyris Player and the TGA Autosampler will not be covered in this course.*

Lectures and Labs

- System configuration/overview
- Setup
- Calibration
- Sample handling
- Maintenance and troubleshooting
- Practical laboratory experiments
- Generic applications
- Data handling
- Operating variables
- Safety

Prerequisite: The student should have spent at least one month becoming familiar with the instrument.

Instructor Led Training (ILT)

Email for Availability (USTraining@perkinelmer.com)



TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Program Specifics

ILT Locations

Atlanta, Georgia

PerkinElmer, Inc.
11695 Johns Creek Parkway
Suite 150
Johns Creek, GA 30097

Shelton, Connecticut

PerkinElmer, Inc.
710 Bridgeport Avenue
Shelton, CT 06484-4794

Chicago, Illinois

PerkinElmer, Inc.
2651 Warrenville Road
Suite 100
Downers Grove, IL 60515

Fort Collins, Colorado

PerkinElmer, Inc.
1350 Center Ave
Fort Collins, CO 80521

VILT Customer Requirements

Technical Specifications

- Online virtual machines are used to conduct the lab / software simulation portion of training. Please visit the following website and ensure that the connection test passes. <https://use.cloudshare.com/Ent/Machine.mvc/testpage#/>
- At least a 20-25 mbps connection and access to Microsoft Teams will be necessary for the exercise to work. Please check with your IT department ahead of time if using a corporate PC. If using a personal PC, Microsoft Teams is a free download.
- This class is designed for PC (Windows 10) systems. Mac/Tablets etc. may not be compatible with our training systems.
- Please avoid the use of VPN systems; performance is not predictable over such systems.
- Please note that the online class is meant for use by the registered/enrolled student only. Additional trainees are not permitted to attend or 'sit-in' without explicit authorization from PerkinElmer. Failure to adhere to this requirement could be grounds for removal from the class.

Enrollment Information

Please contact the **US Training Center** by phone at: **800-762-4000** or by email at: **USTraining@perkinelmer.com** to register and pay for all courses.

- Please provide payment information when registering for courses.
- Purchase order or credit card payments may be used for course fees.
- A confirmation email will be sent within 48 hours of enrollment.
- Please review all payment terms and conditions below.

TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions

Program Specifics

Course Terms and Conditions

Payment

Pricing is quoted in US Dollars. Payment is required upon enrollment. Purchase order and credit cards accepted. If paying by purchase order, an emailed copy of the purchase order must be provided during course enrollment.

Cancellation

PerkinElmer may cancel or reschedule courses up to 14 days prior to the start date if the minimum enrollment is not met. A full refund of the tuition fee will be provided if this happens. If air travel is required, we discourage the purchase of non-refundable tickets.

PerkinElmer is not responsible for any travel expenses incurred due to a class cancellation. Our refund policy regarding a student’s cancellation from a class is as follows:

Up to 14 days prior to the course left justify Reschedule / Full Refund.

Less than 14 days left justify Reschedule for Alternate Date.

No Refund.

All cancellations must be made with the training administration office directly. For all training inquiries or cancellations, please contact us at 800-762-4000.

PerkinElmer's OneSource® laboratory services leverage deep scientific knowledge and expertise in the development of the most comprehensive suite of scientific laboratory services, from instrument maintenance and enterprise solutions to scientific consulting services to optimize laboratory efficiency. Discover our integrated approach and take advantage of an ideal set of tools to help empower your science and drive your business.



TABLE OF CONTENTS

Your Benefit from Training

Training Program at a Glance

Atomic Spectroscopy

- ▷ ICP-OES
- ▷ ICP-MS

Chromatography

- ▷ GC/MS
- ▷ LC
- ▷ LC/MS
- ▷ CDS

Molecular Spectroscopy

- ▷ IR

Thermal/Elemental Analysis

- ▷ DSC
- ▷ TGA

Program Specifics

- ▷ ILT Locations
- ▷ VILT Customer Requirements
- ▷ Enrollment Information
- ▷ Course Terms and Conditions



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