MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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ION CHROMATOGRAPHY TECHNIQUES IN PRACTICE

"Master practical ion chromatography techniques for accurate and efficient laboratory analysis"

Schedule

Date	Venue	Fees (Online)
24 – 25 Nov 2026	Online	USD 700 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Ion chromatography (IC) is a powerful analytical technique widely used in environmental, pharmaceutical, food, and chemical laboratories for the separation and quantification of ions. This 2-day online training focuses on practical applications, method development, and troubleshooting techniques to ensure accurate and reproducible results. Participants will gain hands-on knowledge of IC instrumentation, sample preparation, and detection methods.

The course combines theory with interactive exercises, enabling participants to understand critical factors affecting IC performance, improve analytical accuracy, and efficiently interpret results. Attendees will leave equipped with the practical skills to implement IC techniques in their daily laboratory operations.

Objectives

By the end of this course, participants will be able to:

- Understand the principles and operation of ion chromatography systems.
- Develop and optimize IC methods for different sample types.
- Troubleshoot common issues in IC analysis.
- Interpret chromatograms accurately and efficiently.
- Apply IC techniques in real-world laboratory scenarios.

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Why Attend

- Learn practical IC techniques from experienced trainers.
- Improve analytical accuracy and laboratory efficiency.
- Gain knowledge of troubleshooting and best practices.
- Network with peers in laboratory and analytical sciences.
- Receive practical tools and templates for method optimization.

Target Audience

This program is designed for:

- Laboratory analysts and chemists.
- Quality control and quality assurance professionals.
- Environmental, pharmaceutical, and food laboratory staff.
- Researchers and scientists involved in ion analysis.

Individual Benefits

Key competencies that will be developed include:

- Practical understanding of IC instrumentation and operation.
- Method development and optimization skills.
- Troubleshooting and problem-solving capabilities.
- Confidence in interpreting and reporting IC results.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved laboratory efficiency and analytical accuracy.
- Reduced errors and increased reliability of IC results.
- Better data-driven decision-making and compliance.
- Enhanced laboratory capabilities and staff competency.

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Fundamentals of ion chromatography, detection techniques, and system operation.
- Case Studies – Real-world examples of IC applications and problem-solving.
- Workshops – Hands-on exercises in method development, sample preparation, and result interpretation.
- Peer Exchange – Group discussions on laboratory challenges and best practices.
- Tools – Templates for method optimization, troubleshooting guides, and result reporting.

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Course Outline

Detailed 2-Day Course Outline

Training Hours: 9:00 AM – 5:00 PM Daily Format: 3–4 Learning Modules | Coffee Breaks & Lunch Break included

Day 1: Introduction and Principles of Ion Chromatography

Module 1: Fundamentals of IC (09:00 – 11:00)

- Overview of ion chromatography and its applications.
- Types of IC systems and detectors.
- Sample preparation and handling.

Module 2: Method Development (11:15 – 01:00)

- Selecting columns and eluents.
- Optimizing separation and resolution.
- Calibration techniques and standards.

Module 3: Troubleshooting and Common Issues (02:00 – 04:00)

- Identifying and resolving baseline, peak, and system issues.
- Maintenance of IC equipment.

Day 2: Practical Applications and Data Interpretation

Module 4: Advanced IC Techniques (09:00 – 11:00)

- Multi-ion analysis and complex matrices.
- Detection strategies and sensitivity optimization.

Module 5: Case Studies and Hands-On Exercises (11:15 – 01:00)

- Real-world examples of IC method implementation.
- Group exercises on method refinement and result interpretation.

Module 6: Review and Action Plan (02:00 – 04:00)

- Consolidation of learning.
- Developing actionable steps for lab implementation.

Certification

Participants will receive a Certificate of Completion in Ion Chromatography Techniques, validating their practical knowledge, method development skills, and proficiency in IC laboratory applications.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**