



Chemical Selection and Testing

Course Introduction:

Chemical selection and testing are critical processes in various industries, including pharmaceuticals, petrochemicals, and environmental science. The right choice of chemicals can significantly impact product quality, safety, and regulatory compliance. This 5-day theoretical training course, "Chemical Selection and Testing - Basic," aims to equip participants with a comprehensive understanding of the principles, methodologies, and best practices involved in selecting and testing chemicals for diverse applications.

Throughout the course, participants will explore the criteria for chemical selection, including performance characteristics, safety data, and environmental considerations. They will also learn about various testing methods used to evaluate chemical properties, efficacy, and compatibility. By examining case studies, industry standards, and regulatory frameworks, attendees will gain valuable insights into the systematic approach to chemical selection and testing, enabling them to make informed decisions in their respective fields.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the fundamental concepts of chemical selection and testing.
- Learn about the criteria for evaluating chemicals for specific applications.
- Explore various testing methodologies and their applications.
- Analyze the importance of safety and regulatory compliance in chemical selection.
- Familiarize participants with industry standards and best practices in chemical testing.

Who Should Attend?

This course is intended for Chemical engineers and scientists involved in product development, Quality assurance and control personnel, Regulatory affairs specialists and Safety and environmental compliance officers.

Course Outline:

Day 1: Introduction to Chemical Selection

- Overview of the chemical selection process and its significance
- Key factors influencing chemical selection: performance, safety, and environmental impact
- Regulatory requirements and guidelines for chemical selection

Day 2: Criteria for Evaluating Chemicals

- Performance characteristics: efficacy, stability, and compatibility
- Safety data: toxicity, flammability, and handling considerations
- Environmental considerations: biodegradability, persistence, and regulations

Day 3: Testing Methodologies for Chemical Properties

- Overview of common testing methods: physical, chemical, and biological tests
- Analytical techniques: chromatography, spectroscopy, and titration
- Interpretation of test results and data analysis

Day 4: Safety and Regulatory Compliance

- Importance of safety data sheets (SDS) and hazard communication
- Navigating regulatory frameworks: REACH, OSHA, and EPA guidelines
- Risk assessment and management in chemical selection and testing

Day 5: Industry Standards and Best Practices

- Overview of relevant industry standards for chemical testing
- Best practices for chemical selection and testing in various industries
- Case studies showcasing successful chemical selection and testing processes

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

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International Centre For Training & Development

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session