

# **WATER ANALYSIS & LAB SAFETY**



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**TRAINING TITLE**

WATER ANALYSIS & LAB SAFETY

**VENUE**

Dubai, UAE

**DURATION**

5 Days

**DATES**

27- 31 October 2019

**PRICE**

US\$4,000 per attendee including training material/handouts, morning/afternoon coffee breaks and Lunch buffet.

**TRAINING INTRODUCTION**

The training focuses on analytical techniques of water analyses & lab safety. it will help to manage and the water treatment plant operations.

**TRAINING OBJECTIVES**

Upon successful completion of this course, the delegates will be able to:

- ☐ Obtain knowledge on water analysis and quality control
- ☐ Implement water analysis and quality control in water treatment plant operations
- ☐ Discuss the different types of water treatment plants
- ☐ Explain the significant parameters or physical parameters including temperature, pH, color chloride content and conductivity
- ☐ Identify solid measurement and field measurement
- ☐ Understand water treatment plants and its parts
- ☐ Recognize sampling protocols for various chemicals and materials

## **TRAINING AUDIENCE**

This course is intended for operators and laboratory technicians, and microbiologists to help them learn the value of timely feedback from the laboratory and microbiology lab for better operations and control of the plant. Attendees are invited to bring plant and lab details with them to help understand the criticality of feedback and solve problems.

## **TRAINING OUTLINE**

Day 1:

- Introduction
- Pre-Test
- The different types of water treatment plants
- What are the significant parameters?
- Physical Parameters
  - o Temperature
  - o pH
  - o color
  - o chloride content
  - o conductivity
- Dissolved and Fixed Solids Measurement and Particle sizing
- Organic Contaminants
- Field measurement & rapid techniques

Day 2:

- Understanding your water treatment plant and its parts

- o membrane plants
- o thermal desalination plants
- Sampling Protocols for various chemicals and materials
- Making sure that your sample is representative
- Detailed considerations for analyses
- Preparing and storing the sample
- Labeling the sample for feedback
- Managing the paperwork blizzard of a modern laboratory
- The value of duplicate and replicate analyses
- Analysis of Metals, sensitivity, conditioning and sample preparation
- o AA Techniques and Sensitivity
- o Colormetric Techniques
- o ICP Techniques

Field Techniques and their reliability and accuracy

Day 3:

- Organic Analyses
- Sample Cleanup and Prep
- Equipment and its accuracy
- o Analysis by GC
- o Analysis by GC/MS
- o Analysis by colormetric techniques

Day 4:

- Ranges for Recovery
- Duplicates & Spikes

- Monitoring instrumentation
- Calibration
- Corrosion Measurements
- Laboratory Management
- Laboratory Auditing

Day 5:

- Laboratory Safety & Training
- Personnel Protective Equipment
- Nuclear Materials & Measurements
- Other Analyses and their significance
  - o Langolier Index
  - o Corrosive Waters
  - o Conductivity
- TOC and other continuous monitoring equipment
- Waste Chemicals and Lab Supplies and Wastes Disposals
- Post Test

## **TRAINING CERTIFICATE**

**MAESTRO CONSULTANTS** Certificate of Completion for delegates who attend and complete the training course

## **METHODOLOGY**

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of “real life” issues in their organizations.

The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.