

## Workshop Outline

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### Introduction to Drinking Water Quality Testing Workshop

**LENGTH: 5 days**

#### **WORKSHOP DESCRIPTION**

This workshop is designed for those interested in conducting drinking water quality testing as part of the implementation, monitoring, or evaluation of household water treatment and safe storage (HWTS) or small community water supply systems projects.

The workshop offers instruction on using portable test kits for testing the physical, chemical, and microbiological parameters of drinking water. Other topics to be addressed include health and safety; sanitary inspections; World Health Organization guidelines and national standards for drinking water quality; water sampling; different test methods for physical, chemical, and microbiological parameters; and interpreting and reporting water quality data.

The broader objective of this training workshop is to transfer knowledge and skills for participants to become familiar with different water quality test methods and understand the practicalities of implementing their own drinking water quality testing project.

#### **OBJECTIVES**

Upon completion of the workshop, participants will be able to:

- Explain the purpose and scope of drinking water quality testing
- Define safe drinking water
- Describe different physical, chemical, and microbiological parameters of drinking water
- Find and interpret national standards and World Health Organization guidelines for drinking water quality
- Take a water sample from various sources
- Discuss different testing options, including observation, using portable test kits, and using a commercial laboratory
- Use portable water quality test kits to determine the physical, chemical, and microbiological quality of drinking water
- Use good techniques to maintain quality control
- Analyze and interpret water quality data
- Read and interpret a laboratory water quality testing report
- Conduct a sanitary inspection using a standardized form

#### **METHODS OF INSTRUCTION**

The participatory workshop includes theory, demonstrations, open discussion, case studies, and hands-on practice. Approximately two-thirds of the workshop will be spent in practical sessions. Active participant engagement in learning activities is encouraged.

## CONTENT

The following is a tentative list of the topics covered. A specific agenda will be developed for the training based on consultations with the organizer and participants.

### Theory

- Water quality issues and the connection to public health
- Drinking water quality guidelines and standards
- Physical, chemical, and microbiological parameters of safe drinking water
- Water sampling from various locations
- Quality assurance and control, including sterilization and aseptic techniques
- Different test methods for physical, chemical, and microbiological parameters
- Selection of appropriate test methods, equipment, and products
- Record keeping, interpreting results, and reporting
- Sanitary inspections
- Health and safety, including proper disposal of waste
- Project planning (optional depending on time and interest from the participants)

### Practical

- Collecting water samples from various sources
- Testing for physical parameters using portable test kits
- Testing for chemical parameters using portable test kits
- Testing for microbiological parameters using portable test kits
- Interpreting results from water quality data
- Conducting sanitary inspections

## PARTICIPANTS

The ideal participants are those who are:

- High school educated (minimum)
- Able to understand, read, and write in the language of instruction
- Working in water, sanitation and hygiene (WASH), community development, or health projects seeking solutions for drinking water quality testing
- Program organizers or project managers with the responsibility for organizing projects and making decisions
- Technicians or individuals who will be taking water samples, conducting water quality tests using portable test kits, and interpreting results

It is an advantage if participants have the following:

- Source of funding in place to begin implementation (as this will allow for immediate application of the knowledge and skills gained in the workshop)
- Support of their organization which recognizes that drinking water quality testing may be beneficial for their project

This is an introductory level workshop. It is NOT intended for people already trained in drinking water quality testing procedures. However, the workshop can be refresher training, especially on how to use portable test kits.

## **TRAINING MATERIALS**

The following materials will be provided to all workshop participants:

- Introduction to Drinking Water Quality Testing Manual

### **For Further Detail**

#### **Training Centre**

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