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This presentation is used with
Lesson Plan 4: Intro to Drinking
Water Quality Testing in the
Drinking Water Quality Testing
Trainer Manual

Available at

www.cawst.org/resources

Introduction to Drinking Water Quality Testing



Learning Expectations

1. Discuss the purpose of drinking water quality testing (DWQT).
2. Explain different options to testing: Observation, portable test kits, mobile laboratory, commercial laboratory, project laboratory.

Why Do We Do Water Quality Testing?

- Ensure safe drinking water
- Identify problems
- Adopt precautionary measures
- Raise awareness
- Determine the effectiveness of household water treatment technologies
- Select an appropriate water source
- Influence government to supply safe water

What Are Your Testing Options?

- Observation
- Portable test kits
- Mobile laboratory
- Commercial laboratory
- Setting up a project laboratory

Observation

- Advantages:
 - Quick, easy and inexpensive
 - Does not require specialized equipment
 - Does not require highly trained staff
 - Gives information about the causes of pollution and possible future trends
- Limitations:
 - Does not confirm the water quality or type of contamination



Portable Test Kits

- Advantages:
 - Easy to use, portable and self-contained
 - Rapid results
 - Does not require high level of training
 - Less expensive than laboratory testing
- Limitations:
 - Reduced precision and accuracy
 - Reduced level of quality assurance
 - More difficult to process a large number of samples



Mobile Laboratory

- Advantages:
 - Controlled environment
 - High level of precision and accuracy
- Limitations:
 - Relatively expensive
 - Requires skilled laboratory technicians



Credit: European Customs Union

Commercial Laboratory

- Advantages:
 - Controlled environment
 - High level of precision and accuracy
 - High level of quality assurance
 - More consistent results
 - More samples can be processed in a shorter time
- Limitations:
 - Relatively expensive
 - Usually located in urban areas, may require samples to be transported over long distances
 - Some laboratories may have limited options of test methods



Credit: Water for Cambodia, Siem Reap

Setting Up a Project Laboratory

- Advantages:
 - Control
 - Located close to project
 - Increased precision and accuracy
 - More samples processed
 - Source of revenue
- Limitations:
 - Relatively expensive
 - Skilled staff and training required
 - Specialized equipment required
 - Dedicated facilities required



Credit: Seeds of Hope Water Laboratory

Review

1. What are the 5 options for drinking water quality testing?
 - observation, testing using portable (field) kits, mobile laboratory testing, commercial laboratory testing, and setting up your own project laboratory