

Laboratory training course

Group work exercise:

Objective of group work:

To create awareness of sources of errors and how to contain these in a quality control system

Question to resolve:

You instructed an officer to go to Kapissa to collect a water sample from a specific well and bring sample to lab and analyze. When you received results two days later, the results were completely wrong. What could be the sources of errors? List and discuss ALL sources of errors for the group work.

(One group consider well as sampling point, other group consider spring)

The participants were divided into two groups.

Reports (As can be seen in DARI on photos from the workshop)

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Group1:

- Water sampling by professional
- Standard bottles to be used
- Take temperature measurement in the field
- When sampling use protective clothing,
- Take location photo
- Record GPS coordinates from sampling area
- Fill form with sample information
- Physical parameters to be tested in the field
- List source of water sample (protected?)
- Handpump to be sterlised
- From each source collect 4 samples for complete analysis of different parameters
- Open well must take open sample

Group 2:

- Bottles according to need
- Coldbox
- pH meter
- EC meter
- Bacteriological unit
- Chemical kit for NO₃

- Marker for label
- GPS
- Camera
- Conservation chemicals
- Mask, gloves,
- Bacteriological analysis>
 - All bottles sterilized and washed
 - Collect sample 30 cm below surface
 - Bottle in Ice box
- Transport to the lab fast
 - Before 24 hours (biological)
- Chemical analysis
 - Cloves
 - Wash bottles 2-3 times with sample
 - Each bottle filled complete (no air)
- Write label:
 - Source
 - Village
 - District
 - Position
 - Name of water sample
 - Date and time