

Standard Operating Procedure (SOP) for Household and Community Water Sampling (Baseline and Follow-up Study)

**Impact Evaluation of the Mozambique Rural Water Supply Activity Under a
Cooperative Agreement between MCC and Stanford University**

March 3, 2014

Prepared by Virginia Tech and Stanford University



SOP for Household and Community Water Sampling

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Household water sampling

- 1.) The inquiridor explains why s/he wants to sample stored drinking water for the household and requests a sample. If the respondent agrees, the inquiridor continues with the rest of the sampling procedures, as prompted by the survey. If the respondent refuses, the inquiridor skips the rest of the sampling section.
- 2.) The inquiridor asks the respondent to identify the source from which the stored drinking water was obtained.
- 3.) The inquiridor takes out one sampling packet and labels the frasco with the following information:
 - Numero de Identificação (HHID)
 - Data
 - Nome do inquiridor
 - Nome da comunidade
 - Tempo (Hora e minutos quando tira amostra)
 - Amostra #1 ou #2 for that HH
 - a. If the HH has been selected for a duplicate sample, the inquiridor will label both frascos at the same time.
- 4.) The inquiridor explains to the respondent that he/she is using hand sanitizer and putting on gloves so that he/she does not contaminate the respondent's water (it is not because anyone is sick or anything is unsafe within the household). The inquiridor obtains approval for these measures (gloves and hand sanitizer) from the respondent.
- 5.) The inquiridor applies hand sanitizer to his/her hands and puts on the gloves.
- 6.) The inquiridor asks the respondent if s/he could withdraw water from the storage container in the manner that s/he normally would.
- 7.) The respondent is asked to pour the water into the frasco. The inquiridor opens the frasco and holds it while the respondent pours the water. The respondent should never touch the frasco and the inquiridor should never touch the water. Fill the frasco entirely; ensure that it has water at least to the 100 ml line.
- 8.) The inquiridor thanks the respondent, closes the lid tightly and places the frasco in the cooler on the ice.
- 9.) If this household has been selected for a duplicate sample, the inquiridor repeats the sampling process with the second frasco.
- 10.) The inquiridor takes off his/her gloves and places them back in the plastiquinho, then ties the plastiquinho and puts it in his/her bag.
- 11.) It is important not leave any sampling supplies behind in the household.

Community source sampling

- 1.) The inquiridor should only go to the community water sources if accompanied by a guide.
- 2.) The inquiridor should fill out the Water Point Sampling sheet for each source visited in the community.

- 3.) The inquiridor may need to explain to any individuals assembled at the water point that we are simply testing the quality of the water; we do not know that it is unsafe or there is any problem.
- 4.) The inquiridor should ask the permission of any individuals assembled near the water point if he/she can obtain a 4 frascos of water from the source.
- 5.) The inquiridor takes out one water source sampling packet and opens the bag.
- 6.) The inquiridor labels the frascos with the Date, Time, Water Source Name, Inquiridor Name and Community name.
 - a. All water sources are duplicates, so the inquiridor should label all frascos at the same time.
 - b. Additionally, the inquiridor should label the 4 frascos as #1, #2, #3, and #4.
- 7.) The inquiridor explains to observers that he/she is using hand sanitizer and putting on gloves so that he/she does not contaminate the water source (it is not because anyone is sick or anything is known to be unsafe at the source).
- 8.) The inquiridor applies hand sanitizer to his/her hands and puts on the gloves.
- 9.) The inquiridor asks the community guide or another observer if s/he could withdraw water from the source in the manner that s/he normally would..
- 10.) The inquiridor opens the frasco and holds it while the guide/ observer pours the water. The guide/observer should never touch the frasco and the inquiridor should never touch the water. Fill the frasco entirely. Repeat the process until all four frascos have been billed.
- 11.) The inquiridor places the frascos in the cooler on the ice.
- 12.) The inquiridor takes off his/her gloves and places them back in the plastiquinho, then ties the plastiquinho and puts it in his/her bag.
- 13.) It is important not leave any sampling supplies behind at the water point.

Water sample processing

- 1.) Turn on the generator and then turn on the IDEXX sealing machine. Let the sealer warm up until the Orange/Red light turns Green.
- 2.) Put on a new pair of gloves.
- 3.) Record the bottle information on the back of the Quantitray and on a small a sample tracking sheet.
- 4.) Write on the tray the following information from the label on the bottle:
 - Numero de Identificação (ID)
 - Data
 - Nome do inquiridor
 - Nome da comunidade
 - Tempo (Hora e minutos quando tira amostra)
 - Amostra #1 ou #2
- 5.) Shake the bottle well, then decant the excess water if necessary such that the volume of water in the bottle is exactly 100ml.
- 6.) Open one powder packet and pour the powder in one bottle.
- 7.) Mix until the powder fully dissolves.
- 8.) Pour the mixture from the bottle into the Quantitray 2000, then place it on the rubber sealer tray.

- 9.) Feed the tray into the sealing machine.
- 10.) Once the tray is sealed, place it in the incubator. Write the hour in which the trays were put in the incubator on the back of the tray and on the "to read data sheet."
- 11.) Leave the tray in the incubator for 18 hours at 35°C for Enterilert and 24 hours at 41°C for Colilert. When incubation is complete, remove the Quantitray from the incubator and record the incubation time on the back of the Quantitray.
- 12.) Take a picture of the back of the Quantitray. Make sure all the relevant information is clearly readable in each picture.
- 13.) Take a picture of the small and large yellow cells in the same Quantitray. Make sure all the relevant information is clearly readable in each picture.
- 14.) Take a picture using the UV light of the same Quantitray. Make sure all the relevant information is clearly readable in each picture.
- 15.) Record all information on sample tracking sheet.