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We use this protocol and it's working

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Field protocol for river water sampling

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ABSTRACT

This protocol is for the collection of water samples for molecular analysis. It was used for collection of river water samples from Kathmandu for detection of S. Typhi and Paratyphi A

GUIDELINES

NOTE: Bags are cleaned every day with 0.5% Hypochlorite followed by 70% ethanol before refilling the materials.

MATERIALS

Materials for Field/Sampling:

(Amount of materials required for a month of sampling)

1. 50ml Falcon tube for each sample point for the day and a field negative control. (29 tubes)
2. 50ml of sterile D/W as field negative control. (One for each sampling day)
3. 0.5% sodium hypochlorite
4. 70% ethanol
5. Cotton/ Tissue paper
6. Ice packs (Frozen)
7. pH meter
8. Gloves
9. Masks
10. Bottle of D/W
11. Tube holder
12. Discard bag
13. Permanent marker

Bag Preparation for sampling (Two separate bags, one for s..

1 Wipe the inner part of the sample bag with 0.5% Hypochlorite followed by 70% ethanol.

2 Place ice packs and a tube holder above the ice packs to place the collected samples.

3 Place the negative control tube.

4 Place each material in a separate clean ziplock bag before placing it inside the bag.

5 Always place the pH meter in upright position so as not to spill the KCl (where the electrode is dipped).

6 Refill the materials required each sampling day.

7 Replace discard bags each sampling day.

Sample Collection

8 Use the ArcGIS collector app to get to the designated sampling points.

9 Collect 50ml of flowing river water sample in a sterile 50ml falcon tube by grab sampling technique.

10 Disinfect outer surface of the tube with cotton soaked in 0.5% sodium hypochlorite followed by 70% ethanol.

11 Let the surface dry and label the tube with a fine tip permanent marker. Label each sample with Collection site code and Collection date.

12 Eg: For Bagmati river site 1 sample collected on 13th March,2020 label the tube as

13 BAG-1 13/03/2020

14 Transfer into a backpack containing ice packs for transportation to the laboratory under cold

conditions.

15 Collect measurements of pH, ORP and temperature of the river water at the sampling point using a pH meter. After measurement at each site, rinse the probe of the pH meter with distilled water.

16 Record the results and complete the questionnaire in RedCap on a tablet.