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Construction of a Moore Swab

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Typhoid Environmental Surveillance

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Moore swabs are gauze swabs used to capture bacteria in water such as sewage and wastewater. The gauze is held together by a string which is then tied to a stationary object in the water and left for 24-72 hours. During this time, as water moves past the swab bacteria are caught and attach to the swab, allowing isolation and identification for monitoring and surveillance of the bacteria of interest. This protocol based on the Moore swab construction described in Sikorski and Levine (2020).

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protocol

Reviving the “Moore Swab”: a Classic Environmental Surveillance Tool Involving Filtration of Flowing Surface Water and Sewage Water To Recover Typhoidal Salmonella Bacteria Michael J. Sikorski, Myron M. Levine Applied and Environmental Microbiology Jun 2020, 86 (13) e00060-20; DOI: 10.1128/AEM.00060-20

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The material used to tie the swab together may depend on the nature of the water it is being placed in. For example, if it is faster flowing or there are many solids in the water then you may require a stronger fishing line rather than twine to reduce loss of swabs.

Cotton gauze (6 x 48 inches)

A length of twine or fishing line (nylon thread)

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1 Fold the gauze eight times length-wise to form an 8-ply square

2 Tie the gauze around the middle with twine/fishing line leaving a long tail for attaching the swab once it has been placed.