

Louisiana Office of Public Health Laboratories	
Test Name	Coliform Enumeration in Potable Water, Dairy Water, Bottled Water and Vending Water Samples
PHL Location	Amite Laboratory, Central Laboratory
CPT Code	N/A
Synonyms	MTT, Multiple Tube Fermentation 10-tube Most Probable Number (MPN) Technique for the Detection and Quantitation of Total and Fecal Coliforms in Potable Water.
Brief Description of Test	This method detects and estimates the total coliform population and the fecal coliform population in water samples through the use of sample inoculations into replicate tubes of selective media incubated under varying, well-defined conditions.
Possible Results	Total coliform & <i>E. coli</i> MPN/100 ml
Reference Range	<1.1/100 ml
Specimen Type	Potable water, Dairy Water (all types, including recirculated cooling water and glycol water), bottled water, vending water.
Specimen Container(s):	<p>Sterile, disposable 100 ml Nasco Whirl-Pak bag containing a 10 mg sodium thiosulfate tablet.</p> <ul style="list-style-type: none"> • Only containers QCed and supplied by the laboratory are suitable for use. DO NOT purchase privately. <p>Bottled water-submitted in commercial packaging.</p>
Minimum volume accepted:	100 ml
Collection Instructions	<ul style="list-style-type: none"> • Collect representative sample according to established protocols. • When using the Whirl-Pak bag fill to 100 ml line and leave at least 1 inch of air space at the top of container. <ul style="list-style-type: none"> ○ Whirl bag to close. ○ Do not twist tabs together.
Storage and Transport Instructions	<ul style="list-style-type: none"> • Store refrigerated & transport sample(s) in clean cooler(s) with ice packs (ice is not recommended due to melting and possible cross contamination). • Submitters are encouraged to hold drinking water samples at <10°C during transit. <ul style="list-style-type: none"> ○ Maximum holding time is 30 hours. • Bottled water need not be refrigerated or cooled, and has no maximum holding time. • Dairy water samples must be 0 – 4.5°C upon receipt in laboratory. <ul style="list-style-type: none"> ○ Dairy waters must be submitted within within 6 hours of collection and tested within 8 hours of collection.

Causes for Rejection	<ul style="list-style-type: none"> • Drinking water samples >30 hours old. • Dairy water samples >8 hours old. • Sample frozen. • No sample ID. • Unacceptable collection container. • Insufficient sample. • Sample leakage. • Sample totally immersed in ice-water. • Incomplete sample form.
Limitations of the Procedure	Improper mixing of sample will allow for underestimating of the bacteria density of the sample.
Interfering Substances	Excessive chlorine and heterotrophic levels.
References	<ol style="list-style-type: none"> 1. Standard Methods for the Examination of Water and Wastewater, 18th Edition. 2. LA DHH-OPH Laboratory Services SOP DOLSOPDWM-03 Multiple Tube Fermentation 10 tube MPN Technique for the Detection and Quantitation of Total and Fecal Coliforms in Potable Water.
Additional Information	<p>Complete a Lab 8 Laboratory Request and Report Form.</p> <p>The following is required Lab 8 information:</p> <ul style="list-style-type: none"> • Sample sequence #s • Project Code • Name of Supply • Collected by (name) • PWS ID • Date/Time Collected • Type of source water • Disinfectant residuals (if applicable)
Release Date	11/2013
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