

# FACT SHEET

## Water Testing

Last Updated: 3/3/11

### Drinking water

#### **Total coliforms/Ecoli Presence-Absence Test 8040**

Method : Enzyme substrate - Chromogenic

Standard Methods 9223

This test employs the IDEXX, Inc Colilert™ system, allowing the detection of Total Coliforms at one colony-forming unit (1 CFU equivalent) by hydrolysis of ortho-nitrophenyl-β-D-galactoside and Escherichia coli by hydrolysis of 4-methyl-umbelliferyl-β-D-glucuronide. This is the most commonly used test for determination of the potability of drinking water, whether collected from a water system or a well. Reference Range: Total Coliforms and E. coli tests should be negative for a water sample to be considered a safe drinking water source.

Turnaround time: 1 day

### Recreational and Ocean Water

#### **Total coliforms/Ecoli MPN 8025**

Method : Enzyme substrate - Chromogenic

Standard Methods 9223

This test employs the IDEXX, Inc Colilert™ Quantitray system, allowing the detection and enumeration of Total Coliforms by hydrolysis of ortho-nitrophenyl-β-D-galactoside and Escherichia coli by hydrolysis of 4-methyl-umbelliferyl-β-D-glucuronide. Enumeration results in the reporting of a Most Probable Number (MPN) and is commonly used to determine the microbial load of both the total coliforms and E coli. This is the most commonly used test for determination of safety of recreational water.

Reference Range: Total Coliforms should be less than 10,000 MPN per 100mL for single sample and less than 1,000 for a 30-day sampling period; E. coli should be less than 400 MPN per 100mL for a single sample and less than 200 for a 30-day sampling period.

Turnaround time: 1 day

#### **Enterococci MPN 8010**

Method : Defined substrate hydrolysis- Chromogenic

Standard Methods 9230

This test employs the IDEXX, Inc Enterolert™ Quantitray system, allowing the detection and enumeration of Enterococci by hydrolysis of 4-methyl-umbelliferyl glucoside. Enumeration results in the reporting of a Most Probable Number (MPN) and is commonly used to determine the microbial load of enterococci, an enteric bacterium that is easily and accurately detected and enumerated in marine and brackish waters.

Reference Range: Enterococci MPN should be less than 104 MPN per 100mL for single sample and less than 35 for a 30-day sampling period for recreational waters to be considered safe for recreational activities such as bathing.

Turnaround time: 1 day



## San Luis Obispo County Public Health Laboratory

Phone: (805) 781-5507 Fax: (805) 781-1023 [www.sloPublicHealth.org/lab](http://www.sloPublicHealth.org/lab)

2191 Johnson Ave., San Luis Obispo, CA 93401

Laboratory Hours: Monday – Friday, 8:00am – 5:00pm

# FACT SHEET

## Water Testing

Last Updated: 3/3/11

### Waste Water

#### **Total and Fecal Coliforms Waste Water 8400**

Method : Multiple Tube Fermentation Test (MTF)

Standard Methods 9221C, E

This test employs the standard method using 15-tube Lauryl Tryptose broth with production of gas from glucose. Enumeration is conducted by a Most Probable Number (MPN) table and is commonly used to determine the total coliform count. Samples of positive LTB tubes are transferred to BGGB medium tubes incubated at 35 C for 24-48 hrs to obtain a total coliform MPN and EC medium incubated at 44.5 C for 24 hrs to obtain a fecal coliform MPN

Reference Range: Waste water effluents are subject to permit requirements .

Turnaround time: 3 days

#### **Fecal Coliforms MTF 8020**

Method : Multiple Tube Fermentation Test (MTF)

Standard Methods 9221E

This test employs the standard method using 15-tube Lauryl Tryptose broth with production of gas from glucose. Enumeration is conducted by a Most Probable Number (MPN) table and is commonly used to determine the fecal coliform count. Samples of positive LTB tubes are transferred to EC medium tubes incubated at 44.5 C for 24 hrs to obtain a fecal coliform MPN

Reference Range: Waste water effluents are subject to permit requirements .

Turnaround time: 3 days

### Shellfish Growing waters

#### **Fecal Coliforms MTF 8020**

Method : Multiple Tube Fermentation Test (MTF)

Standard Methods 9221E

This test employs the standard method using 15-tube Lauryl Tryptose broth with production of gas from glucose. Enumeration is conducted by a Most Probable Number (MPN) table and is commonly used to determine the fecal coliform count. Samples of positive LTB tubes are transferred to EC medium tubes incubated at 44.5 C for 24 hrs to obtain a fecal coliform MPN

Reference Range: Shellfish growing waters have varying limits based on location .

Turnaround time: 3 days

#### **Fecal Coliforms A-1 8910**

Method : Multiple Tube Fermentation Test (MTF)

Standard Methods 9221E

This test employs the standard method using 15-tube A-1 medium with production of gas from glucose. Enumeration is conducted by a Most Probable Number (MPN) table and is commonly used to determine the fecal coliform count. Sample tubes are incubated at 35C for 3hr ± 0.5hr then at 44.5 C for 21± 2 hrs incubation.

Reference Range: Shellfish growing waters have varying limits based on location .

Turnaround time: 1 day

Please contact Sharon Beccacio 805-781-5509, [sbeccacio@co.slo.ca.us](mailto:sbeccacio@co.slo.ca.us), or Director Dr James Beebe 805-781-5512, [jbeebe@co.slo.ca.us](mailto:jbeebe@co.slo.ca.us), if you would like more information on this test.