**Water Testing for Generic E. coli**

Three different water tests are available at most labs:

* Total coliform
* Fecal coliform
* The recommended generic *E. coli* test.\*

**\*It is important to understand the difference and to request**

**the generic *E. coli* test that is quantitative.**

Total coliform bacteria are microbes found in the digestive systems of warm-blooded animals, in soil, on plants and in surface water. Fecal coliform bacteria are a kind of total coliform. The feces (or stool) and digestive systems of humans and warm-blooded animals contain millions of fecal coliforms. E. coli is part of the fecal coliform group and may be tested for by itself, such as with the recommended generic E. coli test.

Tests can indicate either a minimal reading of presence and/or absence or can quantify the amount of the pathogen’s presence. These quantitative tests are what you should be looking for with results measured in MPN (most probable number) or CFU (colony forming units).

Field or Irrigation Water: ( in accordance with the EPA Clean Water Act of 1972 /Bacterial Water Quality Standards for Recreational Waters):

1.  Where **edible portions** of the crop **ARE NOT contacted by water**

* Acceptable Criteria: Single Sample: less than or equal to 576 MPN/100 per mL
* Acceptable Criteria: Geometric mean of 5 samples: less than or equal to 126 MPN/100 mL

2.  Where **edible portions** of the crop **ARE contacted by water**

Acceptable Criteria: Single Sample: less than or equal to 235 MPN/100 mL

Acceptable Criteria: Geometric mean of 5 samples: less than or equal to 126 MPN/100 mL

Postharvest/Processing Water: (in accordance with EPA Drinking Water Standards):

1. **Water in direct contact with produce** should meet EPA MCLG (maximum contaminant level goal) microbial drinking water quality standards.

* Acceptable Criteria: Generic E. coli negative test or below detection limit and MCLG for total coliform in drinking water is zero

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The following additional information can be found at: http://ncfreshproducesafety.ncsu.edu/growers/water-testing-other-resources

[**Generic *E.coli* labs**](http://ncfreshproducesafety.ncsu.edu/wp-content/uploads/2012/03/H20.-Generic-E.coli-labs.-Current_2011_2.pdf) **(PDF)** List of laboratories and prices for testing of water for generic *E. coli*.

[**U.S. Environmental Protection Agency: Ground Water and Drinking Water**](http://www.epa.gov/safewater/index.html) The EPA’s drinking water standards program has established health based standards for more than 80 contaminants. Water systems and states use analytical methods developed by government agencies, universities and other organizations.

[**Bacterial Water Quality Standards for Recreational Waters**](http://water.epa.gov/type/oceb/beaches/local_index.cfm) The EPA provides a brief overview of the bacterial water quality standards that have been adopted by states for their marine and fresh recreational waters in the United States.

[**Drinking Water Well Condition and Location on the Farm**](http://www.extension.purdue.edu/extmedia/WQ/WQ-22.html) Resource from Purdue University for farmers and rural homeowners to assess the risk of your well location (proximity to pollution sources) and condition.