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Colitag™ 16-48 Hour P/A Test for Total Coliforms and *E. coli* in Drinking Water

Product Overview Colitag™ is a selective and differential medium for the determination of the presence or absence of total coliforms and *E. coli* in drinking water. It is a one-step, ready to use medium, to be combined with a water sample. This product is designed to test water samples for total coliform and/or *E. coli* bacteria within a 16 to 48 hour window and does not require further confirmation or verification steps. Colitag™ detects 1 colony-forming unit (CFU) of *E. coli* and other total coliform bacteria in 100mL of water.

Method Summary: A 100-mL water sample is mixed with Colitag™ followed by incubation at 35.0° C ± 0.5° C for 22-48 hours. For reading between 16-22 hours, if sample is not already between 33-38° C, then place sample vessel in a 44.5° C water bath for 7 to 10 minutes. If total coliform bacteria are present, the medium changes color from near colorless to yellow. If any *E. coli* bacteria are present in the sample, a bright blue fluorescence is emitted when the sample is subjected to long wavelength (365-nanometer) ultraviolet (UV) light placed 3-4 centimeters away.

The Colitag™ method is based on the detection of two enzymes, β-glucuronidase and β-galactosidase, which are characteristic of *E. coli* and the coliform groups, respectively. Colitag™ detects total coliforms using the chromogenic substrate ortho-nitrophenyl-β-D-galactopyranoside (ONPG). Upon hydrolysis by β-galactosidase, ONPG produces a distinct yellow color, confirming the presence of coliforms in the sample. For detection of *E. coli*, Colitag™ utilizes the fluorogenic enzyme substrate 4-methylumbelliferyl-β-D-glucuronide (MUG). Upon hydrolysis by β-glucuronidase, MUG releases 4methylumbelliferone. This reaction by-product fluoresces when exposed to UV light. The β-glucuronidase enzyme is specific to *E. coli* and observation of fluorescence differentiates this organism from other members of the coliform group. Only the Colitag method offers a patented technology called “acid resuscitation” for increased test sensitivity. In this cutting edge technology, a small amount of acid works together with specialized nutrients to resuscitate weak and injured *E. coli* and other total coliform cells.

Only Colitag offers the longest testing window of 16 to 48 hours. Only Colitag offers you the most versatile total coliform and *E. coli* test in the world.

Please contact CPI International for any questions or concerns you may have. Thank you.

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