



ULTRA-VIOLET PRODUCTS

Application Bulletin UVP-AB-205

Corporate Headquarters: UVP, Inc.
2066 W. 11th Street, Upland, CA 91786
Telephone: (800)452-6788 or (909)946-3197
E-Mail: uvp@uvp.com

Internet: <http://www.uvp.com>

European Operations: Ultra-Violet Products Ltd.
Unit 1, Trinity Hall Farm Estate, Nuffield Rd.
Cambridge CB4 1TG UK * Tel: +44(0)1223-420022
E-Mail: uvpuk@uvp.com

APPLICATION: AUTOANALYSIS COLIFORM TESTING

WAVELENGTH: LONG WAVE (365 nm)

LAMPS USED: UVL-21*

FIELDS OF USE: PUBLIC HEALTH SERVICE – DRINKING WATER

BACKGROUND: Swift identification of coliform bacteria in water at water distribution plants is necessary to ensure a safe public drinking water supply. The Autoanalysis coliform test, officially introduced in November, 1987, at the Water Quality Technology Conference, was developed to address the time and identification limitations inherent in the existing standard tests (Multiple Tube Fermentation (NTF) and Membrane Filter (MF) techniques).

PROCEDURE: The Autoanalysis test is performed in test tubes prefilled with a powdered, Coliform specific, indicator-nutrient. Ten milliliters of sample water is added to each nutrient-filled tube and agitated to facilitate dissolution. This yields a colorless solution. Tubes are then placed in a 35°C(+3°C) incubator for 24 hours. A yellow solution after incubation denotes the presence of total Coliforms. Any tube positive for total Coliforms is illuminated with a UVP UVL-21 longwave lamp. Fluorescence of the solution indicates the presence of *Escherichia coli*, the major fecal coliform.

PRIMARY ADVANTAGES OF THIS METHOD:

Unlike the MTF or MF techniques the Autoanalysis test simultaneously determines the presence of total coliforms and *E. coli*, within 24 hours, without the need for confirmatory or completed tests. Best of all, the Autoanalysis test provides easier to interpret information than the old standards (MTF, MF) in one-third the time.

Recommended Lamp*