

THE FECAL CLOCK

Simple tool helps ensure accurate timing on test results 

Michael Carle

When the Town of Hampton (N.H.) Wastewater Treatment Plant switched its fecal coliform testing method, the operators discovered a challenge in keeping track of when to read the results of the new test. With a little ingenuity, they also found a clever and simple solution.

The 14,800-m³/d (3.9-mgd) facility obtained approval from the U.S. Environmental Protection Agency (EPA) to switch from membrane filtration to a prepackaged colorimetric method for fecal coliform testing. The operators described the new method as great. It is simple to run, easy to read, and reliable. The one challenge was keeping track of when to read the results, especially on the weekends, when different operators perform the lab duties.

The test needs to react for 18 hours before the results are tabulated, but after 24 hours the results become invalid. To eliminate any confusion about when to read the results, the operators devised a simple clock marker to show when the test run began and when the results should be read.

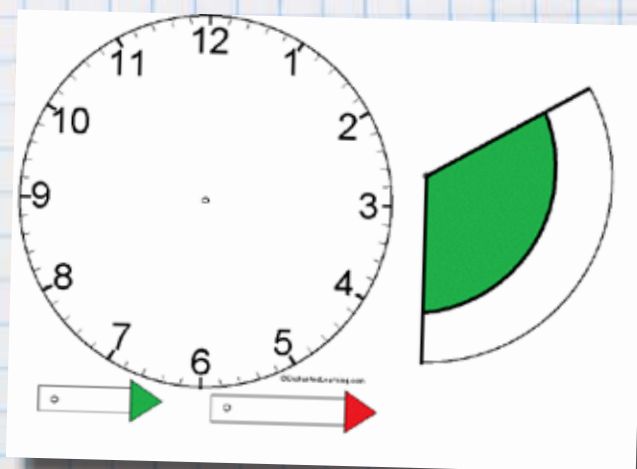
The fix – dubbed the fecal clock – is a green arrow and a green-shaded fan arranged at a particular angle and attached to a clock face. The test preparer simply points the green arrow to the time when the sample was started and the green shaded fan shows the valid window to read the results.

Operators printed the Fecal Clock on an old manila folder. In operation, the clock face is taped to the front of the incubator for easy access. With the flick of a finger, operators can communicate across shifts to ensure reliable fecal coliform results.

The Hampton facility has used the fecal clock for the past 3 years.

This invention earned Michael Carle, chief operator, The Time Turner Award for Process Control in the WEFTEC® 2014 Operator Ingenuity Contest.

Michael Carle is chief operator at the Town of Hampton, N.H., Wastewater Treatment Plant.



THE FECAL CLOCK IS SIMPLE TO USE. THE TEST PREPARER SIMPLY POINTS THE GREEN ARROW TO THE TIME WHEN THE SAMPLE WAS STARTED AND THE GREEN SHADED FAN SHOWS THE VALID WINDOW TO READ THE RESULTS.

All photos courtesy of Michael Carle