

Use of *E. coli* test kits for drinking water compliance monitoring

Water Planning and Regulation (the Regulator) accepts drinking water *E. coli* results obtained using commercial *E. coli* test kits that are based on the *E. coli* methods described in the Australian Drinking Water Guideline 2011, including both enumeration and presence/absence forms of the methodologies.

Background

Drinking water service providers (DWSPs) under the *Water Supply (Safety and Reliability) Act 2008* (Qld) (the Act) are required to undertake monitoring of their drinking water service to ensure it complies with the water quality criteria. The Water Quality Criteria includes standards set under both the Public Health Regulation 2005 (the PHR) and the Water Quality and Reporting Guideline for a Drinking Water Service (the guideline). *Escherichia coli* (*E. coli*) must be sampled at the frequency stipulated in the PHR.

Neither the Act, the PHR, nor the guideline stipulate specific test methodologies for *E. coli*, other than by the units of measure which implies a specific method.

A number of DWSPs have advised the Regulator of difficulties in meeting the regulatory requirements related to *E. coli* monitoring. Typically, issues arise due to the remote location and associated availability of transport that ensures samples are received at laboratories within acceptable timeframes for test method validity.

As a result, there has been an increase in the number of DWSPs establishing their own in-house testing using commercial *E. coli* testing kits.

Policy position

Queensland Health and the Regulator have both been formal and informal advocates of the potential benefits of DWSPs using in-house tests kits for drinking water compliance monitoring. The Regulator believes that the use of in-house test kits by some DWSPs has resulted in an increased frequency of monitoring and more rapid incident response by DWSPs based on their own testing.

The Regulator, through section 3.6.4 of the guideline, advises that if a DWSP does not have ready access to laboratory facilities, they have the option of using an in-house test kit to monitor for *E. coli*. The common *E. coli* test methods described in the Australian Drinking Water Guideline 2011, including both enumeration and presence/absence forms of the methodologies, are recommended.

The Regulator recommends that providers using in-house *E. coli* test kits should ensure the appropriateness of the test kits (i.e. they are able to detect *E. coli* to a limit of less than 1 cfu/100mL), send regular validation samples to a laboratory with a recognised quality system to confirm results and have adequate and appropriate quality control and record keeping processes to record the information.

Contact a dedicated Contact Officer or email drinkingwater.reporting@dews.qld.gov.au to receive further information.