

METHOD SUMMARY – QWI-FM0065

Method Title	E. coli / Coliforms - Presence Absence - Food Modification		
Document number	QWI-FM0065	Date Issued	28 th February 2017

Method External References	<p>AS 5013.15-2006: Based on AS 5013.15-2006 - Method 15: Microbiology of food and animal feeding stuffs Horizontal method for the detection and enumeration of presumptive <i>Escherichia coli</i> – Most probable number technique.</p> <p>AS 5013.3-2009: Based on AS 5013.3-2009 - Food microbiology - Microbiology – General guidance for the enumeration of coliforms - Most probable number technique</p> <p>AS 5013.11.1-2004: Food Microbiology - Microbiology of food and animal feeding stuffs – Preparation of test samples, initial suspension and decimal dilutions of microbiological examination – General rules for the preparation of the initial suspension and decimal dilution</p> <p>AS 5013.14.1-2010: Food Microbiology - Microbiology of food and animal feeding stuffs - General rules for microbiological examinations- section 7.5 (holding temperature of media in water bath)</p>
Matrix	As listed on NATA Scope.
ALS Department	<input type="checkbox"/> Pharmaceutical Chemistry <input type="checkbox"/> Water Microbiology <input checked="" type="checkbox"/> Food Microbiology <input type="checkbox"/> Pharmaceutical Microbiology <input type="checkbox"/> Food Chemistry
Accreditation Status	<input checked="" type="checkbox"/> NATA <input type="checkbox"/> NON-NATA <input type="checkbox"/> N/A
Analysis technique	<input type="checkbox"/> HPLC <input type="checkbox"/> GC <input type="checkbox"/> Wet Chemistry <input type="checkbox"/> Physical <input type="checkbox"/> Gravimetric <input checked="" type="checkbox"/> Qualitative <input type="checkbox"/> Pour Plate <input type="checkbox"/> Spread Plate <input type="checkbox"/> MPN <input type="checkbox"/> Filtration <input type="checkbox"/> Petrifilm <input type="checkbox"/> EHS <input type="checkbox"/> ELISA <input type="checkbox"/> VIDAS UP <input type="checkbox"/> VIDAS <input type="checkbox"/> TEMPO
Method Principle	<p>This method describes a procedure for determining the presence of <i>Escherichia coli</i> and Coliforms in a specified amount of food after incubations at 37 °C in a liquid medium in 10 grams of solid food or in 10 mL of liquid food using the enrichment method.</p> <p>Escherichia coli Detection Method (NATA Accredited)</p> <p>A liquid selective enrichment medium is inoculated with a specific quantity of the initial suspension of the test sample. The initial suspension is incubated at 37 ± 1 °C for up to 48 hours. The enrichment is subcultured to a tube containing a liquid selective medium (EC broth). The EC broth tube is then incubated at 44 ± 1 °C for up to 48 hours. The tube is examined for gas production after 24 hours and 48 hours. If the tube of medium EC broth has given rise to gaseous emission, it is subcultured to a tube containing indole-free peptone water. It is then incubated at 44 ± 1 °C for 48 hours and examined for indole production resulting from degradation of tryptophan in the peptone constituent.</p>

	Coliforms Detection Method (Non NATA Accredited) Selective enrichment broth is inoculated with the test portion and incubated at 37 °C for 48 hours. The enrichment is subcultured to a tube containing a liquid selective medium (BGBB broth) and incubated at 37 °C for 48 hours. The presence of Coliforms is confirmed in the case that opacity and gas formation have been noted after examination of the subcultured tube (confirmation medium).
Reporting Unit	<i>E. coli</i> detected/not detected per 10 gram or 10 mL or amount specified by Client <i>Coliform</i> detected/not detected per 10 gram or 10 mL or amount specified by Client.
LOR/LOQ	<1

Minimum amount of sample required for analysis	10 gram or 10 mL	Turnaround time	7 days
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Author:	Document Controller	Date:	12 th December 2017
Authorised By:	National Quality Manager	Date	12 th December 2017

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