

METHOD SUMMARY – QWI-FM0082



Method Title	E.coli Count in Poultry		
Document number	QWI-FM0082	Date Issued	15 th May 2019

Method External References	3M: Petrifilm Interpretation guide		
	AOAC 991.14: Coliform and Escherichia coli counts in Foods		
	AOAC 998.08: Confirmed Escherichia coli counts in Poultry, Meats and Seafood		
	AS5013.11.1-2018: Food Microbiology - Microbiology of the food chain – Preparation of test samples, initial suspension and decimal dilutions for microbiological examination – General rules for the preparation of the initial suspension and decimal dilution		
	AS 5013.14.1-2010: Food Microbiology - Microbiology of food and animal feeding stuffs - General requirements for microbiological examinations		
	AS 5013.20-2004: Food Microbiology – Preparation of test samples for microbiological examination – Poultry and poultry product surfaces		
Matrix	Poultry or poultry products prepared or packed as individual units of any size (for example sausages, vacuum-packed minced poultry) or poultry in pieces not exceeding 2 kg in mass. Carcasses, or cuts of carcasses, in pieces exceeding 2 kg in mass, and mechanically separated poultry.		
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 type="checkbox"/> Qualitative <input type="checkbox"/> Pour Plate <input type="checkbox"/> Spread Plate <input type="checkbox"/> MPN <input type="checkbox"/> Filtration <input checked="" type="checkbox"/> Petrifilm <input type="checkbox"/> EHS <input type="checkbox"/> ELISA <input type="checkbox"/> VIDAS UP <input type="checkbox"/> VIDAS <input type="checkbox"/> Other (please specify): _____		
Method Scope	This method documents the procedure for the determination of the <i>E. coli</i> count using Petrifilm technique in products such as: <ul style="list-style-type: none"> - Poultry or poultry products prepared or packed as individual units of any size (for example sausages, vacuum-packed minced poultry) or poultry in pieces not exceeding 2 kg in mass. - Carcasses, or cuts of carcasses, in pieces exceeding 2 kg in mass, and mechanically separated poultry. Food samples must be processed rapidly in order to ensure optimum isolation due to its sensitivity to many environmental conditions.		
Method Principle	Poultry and poultry products are prepared by means of the rinse technique or by subsampling the product to be analysed. This method uses bacterial culture plates of dry medium and cold		

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	<p>H₂O soluble gel. One (1) mL of test suspension is added to the plate and when pressure is applied to the overlay the test portion is spread over 20 cm². The gelling agent is allowed to solidify and plates are incubated at 35 ± 1 °C for 24 ± 1 hours and then counted. Petrifilm™ Coliform Count plates contain Violet Red Bile (VRB) nutrients, a cold water gelling agent, an indicator of glucuronidase activity and a tetrazolium indicator that facilitates colony enumeration. The top film traps gas produced by the lactose fermenting Coliforms. Typical coliform colony morphology is blue to blue-red colonies with gas regardless of size or intensity of colour or red colonies with gas. Typical <i>E. coli</i> colony morphology is blue to blue-red colonies with gas regardless of size or intensity of colour. Decimal dilutions of the poultry or poultry products can also be prepared and tested.</p> <p>A count of colonies on each plate is then performed, the result is then calculated taking into account the dilution factor and poultry portion/mass. The number of micro-organisms per g, per bird or per cm² is then calculated.</p>
Reporting Unit	<i>E.coli</i> Count cfu/g, cfu/bird or cfu/cm ²
LOR/LOQ	< 10

Minimum amount of sample required for analysis	Poultry Unit	Turnaround time	3 days
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