

METHOD SUMMARY – QWI-FM0020

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| Method Title | Enterobacteriaceae Enumeration AS | | |
| Document number | QWI-FM0020 | Date Issued | 10 th April 2018 |

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| Method External References | AS 5013.8 2004 | | |
| 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 type="checkbox"/> Qualitative <input checked="" 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 the detection and enumeration of <i>Enterobacteriaceae</i> in food and –environmental samples (hygiene swabs) without resuscitation. The family <i>Enterobacteriaceae</i> comprises a large biochemically and genetically related group of bacteria that is heterogenous in ecology and pathogenicity. For the purpose of this method, they all ferment glucose and are oxidase negative.</p> <p>This method documents the procedure to enumerate <i>Enterobacteriaceae</i> organisms in foods and environmental samples (swabs).</p> <p>An initial 1:10 dilution of the food product is prepared. For environmental samples (swabs), 9 mL of Nutrient Broth with Tween is used as the initial diluent. Further decimal dilutions of the food being tested are prepared and 1 mL volumes of each dilution are transferred into petri dishes and poured with Violet red Bile Glucose Agar (VRBGA). Once dry, the plates are overlayed with the same agar. The plates are incubated aerobically at 37 °C for 24 hours.</p> <p>A presumptive count of colonies on the plate is then recorded and specific biochemical analysis are performed on the colonies to confirm for Enterobacteriaceae. The final result is determined by multiplying the confirmed count with the dilution factor. The final result is recorded cfu/g, cfu/mL, cfu/swab(s) or cfu/(x) cm².</p> | | |
| Reporting Unit | Determination of Enterobacteriaceae cfu/g or cfu/mL, cfu/swab(s) or cfu/(x) cm ² | | |
| LOR/LOQ | <10 cfu/g or cfu/mL, cfu/swab(s) or cfu/(x) cm ² | | |

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| Minimum amount of sample required for analysis | 20 g | Turnaround time | 24 hours |
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| Author: | Document Controller | Date: | 19 th April 2018 |
| Authorised By: | National Quality Manager | Date: | 19 th April 2018 |