

METHOD SUMMARY – QWI-FM0007



Method Title	Listeria spp, Listeria Differentiation and L. monocytogenes – Presence/Absence – AS		
Document number	QWI-FM0007	Date Issued	13 th December 2018
Method External References	AS 5013.24.1-2009 Food Microbiology – Microbiology of food and animal feeding stuffs – Horizontal method for the detection and enumeration of Listeria monocytogenes – Detection method (ISO 11290-1:1996, MOD).		
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"/> Other (please specify): _____		
Method Scope	<p>This method is used for the qualitative detection of Listeria spp in food (including dairy) and animal feeding stuffs including hygiene swabs according to AS/NZS. The dairy products include milk, dried milk, dried buttermilk, dried lactose, dried casein and caseinate, butter, cheese, edible ices, fermented milks, yoghurts custards and desserts. Food samples must be processed rapidly in order to ensure optimum isolation due to its sensitivity to many environmental conditions.</p>		
Method Principle	<p>The detection of Listeria follows four successive stages. A test portion of 25 g of sample or any other specified amount is weighed aseptically, to which a primary selective enrichment medium Demi Fraser Broth (DFB containing one volume of lithium chloride and half a volume of both acriflavine and nalidixic acid) is added at a ratio of 1:10 and incubated at 30 ± 1 °C for 24 hours. The DFB is further subcultured into the secondary selective enrichment broth (Fraser broth) and incubated at 37 ± 1 °C for 48 ± 2 hours. The Fraser broth is then subcultured onto 2 selective agar plates, CLA and PALCAM and typical colonies are confirmed by Gram stain, hemolytic reactions and biochemical tests using commercial identification kits or MALDI-TOF Biotyper.</p> <p>This method differentiates between species of Listeria using the Microbact 12 L system as an alternative to the conventional biochemical identification outlined in the standard or using MALDI-TOF Biotyper.</p>		
Reporting Unit	Detected/Not detected in X g, X mL or swab		
LOR/LOQ	< 1		

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Minimum amount of sample required for analysis	Minimum of 25 g	Turnaround time	5 days
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Author:	Document Controller	Date:	14 th August 2019
Authorised By:	National Quality Manager	Date:	14 th August 2019

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