

METHOD SUMMARY – QWI-FM0005



Method Title	Listeria spp – Enumeration - AS		
Document number	QWI-FM0005	Date Issued	21 st January 2020

Method External References	AS 5013.24.2-2009 Food Microbiology - Microbiology of food and animal feeding stuffs - Horizontal method for <i>Listeria monocytogenes</i> enumeration OXOID Microbact Listeria Identification System 12L, Technical Product Insert		
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 type="checkbox"/> Pour Plate <input checked="" 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	This method is used for the enumeration of <i>Listeria species</i> and <i>Listeria monocytogenes</i> by direct plating from food and animal feeding stuffs. In general, the lower limit of enumeration of this method is 10 <i>Listeria species</i> or <i>L. monocytogenes</i> per millilitre of sample for liquid products, or 100 <i>Listeria species</i> or <i>L. monocytogenes</i> per gram of sample for other. Food samples must be processed rapidly in order to ensure optimum isolation due to its sensitivity to many environmental conditions.		
Method Principle	The enumeration of <i>Listeria species</i> and <i>L. monocytogenes</i> requires six consecutive steps. There is preparation of the sample in a diluent which is resuscitated for one hour at 20 ± 2 °C and then surface plated over <i>Listeria</i> selective media (CLA). The plates are incubated at 37 ± 1 °C for 24 to 48 hours and checked for presumptive colonies of <i>Listeria</i> , whereby they are confirmed by specific tests or using MALDI-TOF Biotyper. A calculation is performed from the number of confirmed colonies to determine the number of <i>Listeria species</i> or <i>L. monocytogenes</i> per gram or per millilitre of the test sample.		
Reporting Unit	<i>Listeria species</i> / <i>Listeria monocytogenes</i> cfu/g or mL or swab		
LOR/LOQ	< 10 or < 100 cfu/g		

Minimum amount of sample required for analysis	20 g	Turnaround time	2 days
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