

METHOD SUMMARY – QWI-FM0028



Method Title	Lactic Acid Bacteria – Enumeration – Food and Water		
Document number	QWI-FM0028	Date Issued	8 th August 2019

Method External References	The Oxoid Manual 8th Edition		
	ISO 15214:1998 Microbiology of food and animal feeding stuff – horizontal method for the enumeration of mesophilic lactic acid bacteria – colony count technique at 30 °C		
	AS 5013.11.1-2018 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 dilutions		
	AS 5013.14.1-2010 Food Microbiology - Microbiology of food and animal feeding stuffs - General requirements and guidance for microbiological examinations- section 7.5 (holding temperature of media in water bath)		
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"/> Other (please specify): _____		
Method Scope	<p>This method is used to enumerate Lactic Acid Bacteria in water, food, particularly of dairy origin and also environmental swabs. In the context of this method, organisms which are catalase negative, gram positive cocci and gram positive non sporing rods, varying from long slender, sometimes bent rods to very short coccoid rods occurring singularly or in chains are regarded as Lactic Acid Bacteria.</p> <p>Pediococci and Leuconostocs will also grow in MRS agar.</p> <p>Food samples must be processed rapidly in order to ensure optimum isolation due to its sensitivity to many environmental conditions.</p>		
Method Principle	<p>This test method is used to enumerate Lactic Acid Bacteria by pour plate or filtration in a sample using MRS agar at pH 5.7 with an incubation temperature of 30 °C for 3 days under microaerophilic conditions.</p> <p>Typical colonies are then confirmed using gram stain and catalase tests.</p> <p>Calculation of the number of mesophilic lactic acid bacteria per gram or per mL of test sample from the number of colonies obtained on</p>		

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	the selected Petri dishes, and possibly confirmed.
Reporting Unit	Determination of Lactic Acid Bacteria cfu/g or cfu/mL or cfu/volume filtered
LOR/LOQ	< 10 cfu/g or cfu/mL or cfu/volume filtered

Minimum amount of sample required for analysis	20 g	Turnaround time	72 hours
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