

# METHOD SUMMARY – QWI-FM0088



<b>Method Title</b>	Mesophilic Anaerobic Spores - APHA		
<b>Document number</b>	<b>QWI-FM0088</b>	<b>Date Issued</b>	1 <sup>st</sup> February 2019

Method External References	APHA Compendium of Methods for the Microbiological Examination of Foods 4th Edition		
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>Mesophilic spore-forming anaerobes all belong to the genus Clostridium. This is a general method, other methods for Clostridium are considered. Mesophilic spore forming anaerobes are rather large gram-positive rods, generally motile and although considered to be strict anaerobes, some are able to grow in the presence of relatively high levels of oxygen. These anaerobes are distributed widely in nature.</p> <p>Plating is the least reliable method of enumeration of these organisms and it is not uncommon to find wide variation in numbers of colonies developing on replicate plates of the same dilution.</p>		
Method Principle	<p>An initial 1:10 dilution of the food product is prepared. The sample preparation is heat treated at 80 °C for 10 minutes. 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 Differential Clostridial Medium (DRCM). Once dry, the plates are overlaid with 2 % technical agar. The plates are incubated anaerobically at 30 °C for 72 hours. Presumptive colonies are then counted and confirmed by means of biochemical analysis. Confirmed colonies are counted and the final result is determined by multiplying the confirmed count with the dilution factor. The final result is recorded cfu/g or cfu/mL.</p>		
Reporting Unit	Mesophilic Anaerobes Spores per g or mL of samples		
LOR/LOQ	<10 cfu/g or cfu/mL		

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

<b>Author:</b>	Document Controller	<b>Date:</b>	5 <sup>th</sup> March 2019
<b>Authorised By:</b>	National Quality Manager	<b>Date:</b>	5 <sup>th</sup> March 2019