

METHOD SUMMARY – QWI-FM0115

Method Title	Sulphite Reducing Clostridia - MPN		
Document number	QWI-FM0115	Date Issued	7 th December 2017

Method External References	APHA: Compendium of Methods For the Microbiological Examination of Foods 4th Ed (Pages 229 – 235)		
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 type="checkbox"/> Spread Plate <input checked="" 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 the procedure for estimating the MPN of sulphite reducing Clostridia in foods by using the MPN technique. Sulphite reducing Clostridia (SRC) are bacteria which are gram positive spore-forming rods. They are non-motile and reduce sulphite to hydrogen sulphide under strict anaerobic conditions. Sulphite reducing Clostridia can be used as an indicator of faecal contamination and as a spoilage bacteria in food and water. After hydrogen sulphite (H₂S) has been metabolized by Clostridia it is reduced to hydrogen sulphite which produces a blackening (H₂S) in DRCM and releases an egg or foul-smelling odour. The MPN is a semi-quantitative technique to enumerate the most probable number (MPN) of the sulphite reducing Clostridia using the DCRM media. The DCRM media is heated initially to eliminate the dissolved oxygen content so as to provide an anaerobic environment. The sample is further heat shocked to destroy vegetative cells and recover spores for enumeration.</p>		
Reporting Unit	Sulphite Reducing Clostridia (MPN)/ gram or mL		
LOR/LOQ	<0.30 or <3.0		

Minimum amount of sample required for analysis	10 g	Turnaround time	7 working days
--	------	-----------------	----------------

Author:	Document Controller	Date:	9 th February 2018
Authorised By:	National Quality Manager	Date:	9 th February 2018