

METHOD SUMMARY – QWI-FM0090

Method Title	Alicyclobacillus Species – Presence Absence – In House		
Document number	QWI-FM0090	Date Issued	21 st September 2018

Method External References	APHA Compendium of Methods for the Microbiological Examination of Foods 4 th Edition 2001 Chapter 24.44 VWR Chemicals YSG Medium Reference 723650YF July 2014 AIFST Spoilage of Preserved Foods: Causes and Diagnostics 2001		
Matrix	Fruit juices concentrates, fruit juices, acidic powders, sugar syrup concentrates and other acidic products		
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 type="checkbox"/> NATA <input checked="" 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"/> TEMPO		
Method Principle	<p>Alicyclobacillus organisms are Gram-positive, non-pathogenic, thermophilic and acidophilic spore-forming bacteria found in acid hot springs and in soil. Aerobic organisms growing over a very wide range of temperatures (4-70 °C) and pH values (0.5-6.5) with an optimum pH range of 3.5 to 4.5. Isolates from spoiled fruit drinks do not usually grow at very low temperatures or under extreme acid conditions.</p> <p>This method is used for the detection of <i>Alicyclobacillus</i> species in fruit juices concentrates, fruit juices, acidic powders, sugar syrup concentrates and other acidic products. A known volume of sample is heat treated at 80 °C for 10 minutes then cooled down in ice water prior to being incubated for 48 hours for recovery at 45 °C (diluted samples are enriched using YSGB). The sample is then sub-cultured onto a pre-poured selective agar plate (YSGA). The inoculated agar plate is then incubated at 45 °C for 5 days under aerobic conditions. Any colonies growing on YSGA are counted and then confirmed as <i>Alicyclobacillus</i> species using biochemical analysis. The result is expressed as Presence or Absence of <i>Alicyclobacillus</i> species per volume tested.</p>		
Reporting Unit	<i>Alicyclobacillus</i> species Presence or Absence per volume tested		
LOR/LOQ	<1		

Minimum amount of sample required for analysis	Minimum of 25 g	Turnaround time	5 days
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Author:	Document Controller	Date:	3 rd October 2018
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