



## UPDATED LEGIONELLA TESTING METHODS FOR WATER AND SWAB

### Background

Legionellae bacteria could be inhaled by human lung, via mist or water vapor in in all types of water matrix, including nature and human-made water systems.

For example, evaporative cooling towers and humidifiers of air-conditioning systems, hot and cold water systems, whirlpool or spas, even decorative water fountains, home respiratory therapy devices, humidifiers and mist machines.



ALS provides below accredited legionella testing methods with the latest edition.

Tests	Latest edition	Previous edition
Legionella	<b>AS 3896: 2017</b> (ALS code: EM016a)	AS/NZS 3896:1998 (ALS code: EM016)
	<b>ISO 11731: 2017</b> (ALS code: EM016B/ EM039)	ISO 11731-2: 2014 (superseded)

### The table summaries for the comparison between AS methods

Method	AS 3896 : 2017	AS/NZS 3896 : 1998
Application	<b>All water samples:</b> Dirty: cooling tower water, wastewater; <b>Clean: recreational, potable and natural water</b>	Dirty: cooling tower water and wastewater ONLY
Reporting limit	10 cfu/mL	10 cfu/mL
Treatment Technique	Direct, heat, acid <b>Additional acid treatment to increase accuracy</b>	Direct, heat, acid
Turnaround Time	10 days (3 days of confirmation included)	

### The table summaries for the comparison between ISO methods

Method	ISO 11731 :2017	ISO 11731-2 : 2004
Application	<b>1) Most water samples including clean to dirty matrix</b> <b>2) Swab</b>	Clean water only such as recreational & potable water
Reporting limit	<b>EM016B:</b> 0.1 cfu/mL <b>EM039:</b> Clean water: 1-100 cfu/L Dirty water: 10 cfu/mL  Clean swab: 10 cfu/swab Dirty swab: 100 cfu/swab	0.1 cfu/mL (100 cfu/L)
Treatment Technique	<b>Specific treatment and medica used for various sample matrix</b> (avoid masking other colonies to Legionellae colonies)	Single type of acid treatment only
Turnaround Time	12 days (2 days of confirmation included)	



Figure 1: Typical suspected legionella colonies on BCYE Agar



Figure 2: Sterile Swab for surface legionella test.

Since ALS has provided different legionella testing methods, client please state the detailed sample type, ALS method code or testing method with edition on the submission form when submitting samples.

#### For example:

Sample Description/ID	Sample Type	*Test(s) Required
Water feature	Water	Legionellae testing (EM016a)
Handrail	Swab	Legionellae testing (EM039HL)

#### For More Information

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