



# Examination of Legionella Species

## Including Legionella pneumophila in Water – AS 3896:2017

### INTRODUCTION

ALS Water Microbiology Laboratories throughout Australia have NATA accreditation for analysing water samples, including cooling tower, industrial, recreational, waste, potable and natural waters according to the Australian Standard 3896 (ALS method codes MM527 or MW021).

AS 3896:2008 has been reviewed and updated in 2017. AS 3896:2017 “stems from a need, expressed by health authorities and other stake holders, for a standard method for the enumeration of legionellae in waters to facilitate the monitoring of the effectiveness of measures adopted for preventing the proliferation of legionellae in waters.” As a result of this review a slightly different emphasis has been placed on the reporting of legionellae.

The updated method acknowledges that although *Legionella pneumophila* serogroup 1 causes Legionnaire’s Disease, there are other potentially pathogenic Legionella species and other *Legionella pneumophila* serogroups which may cause Legionellosis. Over 20 species of Legionella have been identified as human pathogens. The emphasis, therefore, has been placed on the enumeration of *Legionella pneumophila*, Legionella species and Total Legionellae detected per mL of sample.

Unlike in the previous standard, the enumeration of *Legionella pneumophila* serogroups is not part of the AS 3896:2017 scope.

### A New Look For Reporting Legionella

The AS 3896:2017 reporting requirements differ from the previous AS 3896:2008 requirements. With AS 3896:2017 - the number of *Legionella pneumophila*, Legionella species and Total Legionellae (cfu per mL) will be reported.

If serogroups of *Legionella pneumophila* (SG1 and / or SG 2-14) are detected in the sample then this shall be noted in the report. An estimation of numbers cannot be made.

### MINIMAL METHOD CHANGES

The AS 3896:2017 method has minor procedural changes which do not impact on the recovery, isolation and enumeration of legionellae.

### METHOD INFORMATION

#### MM527/MW021 - LEGIONELLA IN WATER

##### LEVEL OF REPORTING

*Legionella pneumophila*: 10 cfu/mL

Legionella species (other than *L.pneumophila*): 10 cfu/mL

Total Legionellae: 10 cfu/mL

Detection of serogroups of *L.pneumophila* if present

#### HETEROTROPHIC PLATE COUNT IN COOLING TOWER & POTABLE SYSTEMS

Usually at the same time as testing for Legionella a test for heterotrophic plate count bacteria (HPC) present is also undertaken.

MM689/MW003/MM526: Heterotrophic Bacteria in Cooling Tower Water

MM524/MW002: Heterotrophic Bacteria in Treated Potable Systems

##### LEVEL OF REPORTING

Heterotrophic plate count: <1000 cfu/mL (MM689)

Heterotrophic plate count: <100 cfu/mL (MM526/MW003)

Heterotrophic plate count: <1 cfu/mL (MM524/MW002)

### SAMPLING AND ANALYSIS

ALS can provide independent NATA accredited onsite sampling services to collect samples according to the individual facility’s monitoring program.

Holding Time	24 hours (HPC), 48 hours (Legionella)
Bottle Type	Clean, sterile 250 mL plastic bottle
Preservative	Sodium thiosulphate
Shipping & Storage	Immediately chill and transport to lab at 2 - 8°C.

ALS supply the appropriate sampling containers and eskies free of charge.

For further information or to order sample containers please contact your local ALS client services team.

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