

TECHNICAL DATASHEET

MALDI-TOF - Microbiological Confirmations

LEAP FORWARD IN MICROBIOLOGICAL ANALYSIS

- Compliant to ACoP L8, HSG 274 and HTM04-01
- Culture based (ISO11731) - results still in cfu/L
- Culture based (MoDW) – results still in cfu/100ml
- Save 2 days on positive Legionella results
- UKAS & DWTS accredited (see table below)
- No more presumptive results
- Full Speciation at no extra cost

Bacteria	Incubation Time	Traditional Confirmation Time	MALDI-TOF Confirmation	MALDI-TOF Saving	UKAS accreditation	DWTS accreditation
Legionella	10 days	2 days	Minutes	2 days	✓	
Pseudomonas aeruginosa	2 days	1 day	Minutes	1 day	✓	
Escherichia coli	1 day	1 day	Minutes	1 day	✓	✓
Coliforms	1 day	1 day	Minutes	1 day	✓	✓
Enterococci	2 days	1 day	Minutes	1 day	✓	✓
Clostridium perfringens	1 day	1 day	Minutes	1 day	✓	✓
Staphylococcus aureus	2 days	1 day	Minutes	1 day		
Salmonella	4 days	2 days	Minutes	2 days	✓	
Listeria	4 days	2 days	Minutes	2 days		
Stenotrophomonas	1 day	1 day	Minutes	1 day		
Enterobacteriaceae	1 day	1 day	Minutes	1 day		

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MATRIX ASSISTED LASER DESORPTION/IONISATION TIME OF FLIGHT MASS SPECTROMETRY

The technique is used to analyse the protein 'fingerprint' of a micro-organism, producing an identification using a validated reference library.

The ability to reduce confirmation times is as a result of MALDI-TOF being able to be performed on colonies from selective agar. This removes the need for sub culturing and incubation, which is the stage that incurs additional time. Depending on the organism being tested, this additional time can be anything from 4 hours to 5 or more days.

The technique has been reviewed by both the United Kingdom Accreditation Service (UKAS) and the Drinking Water Inspectorate (DWI). We have held ISO17025 UKAS accreditation, since December 2013. This was extended to include Drinking Water Testing Specification (DWTS) in February 2014. Although the technology has been used extensively in the clinical sector for a number of years, ALS is the first UK Environmental laboratory to use and accredit this technology.

As 'traditional' culture-based methods are still used for the isolation, compliance with standards is maintained. We are therefore fully compliant with ACoP L8 (and HSG274), The Water Supply (Water Quality) Regulations, The Private Water Supply Regulations and HTM guidance.

The reduction in confirmation times removes the risk associated with acting (or not acting) on presumptive data by providing an accredited, confirmed result within minutes of the presumptive result being generated. The added benefit is that in addition to a rapid confirmation result, in the majority of cases, species-level identification will also be available. ALS will provide this additional information as part of the standard service.

If you would like more information on specific organisms that we are able to identify, please contact our customer services department.

