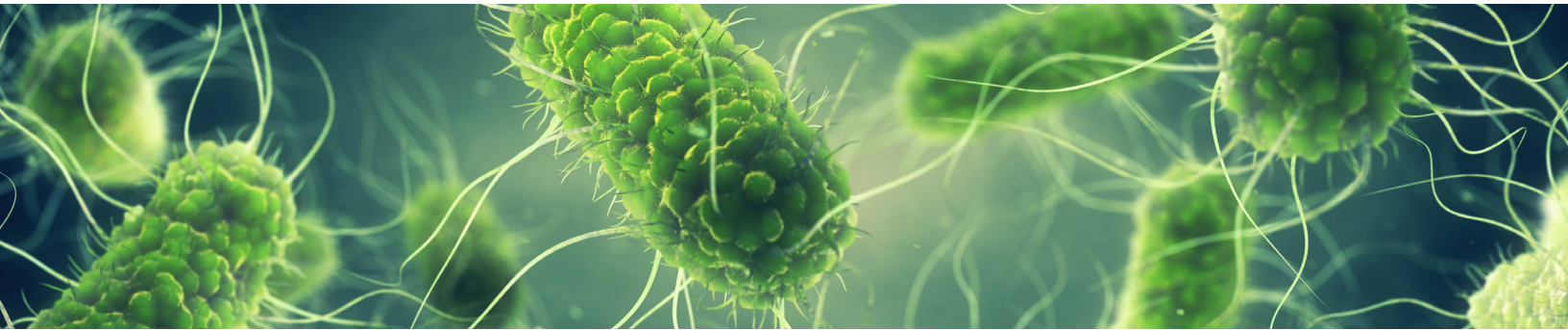


ALS LIFE SCIENCES

A revolution in micro-organism identification



right solutions.
right partner.



MALDI-TOF Technology

ALS is one of Ireland's leading providers of testing services. As part of its ongoing commitment to delivering an exceptional client experience, ALS is proud to announce a revolution in micro-organism identification utilising 'MALDI-TOF' Mass Spectrometry technology.

ALS is the only commercial lab in Ireland that holds INAB accreditation for this technology.

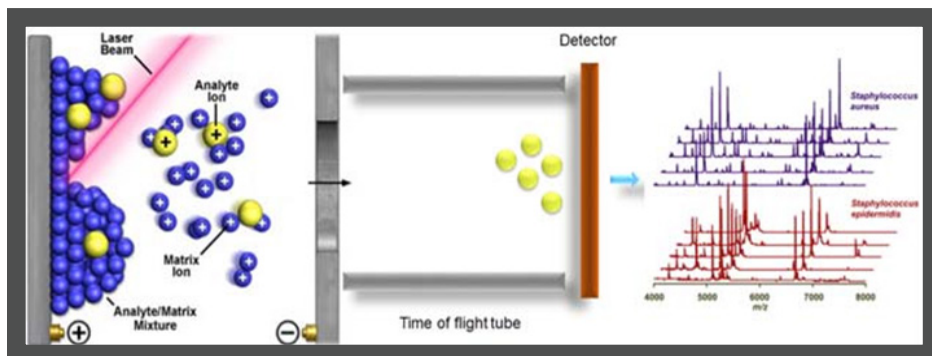
What is MALDI-TOF?

The unique way in which bacteria divide (one cell splits down the middle producing two cells) means that all bacteria of a single species are identical in terms of size, shape, mass and in their ability to utilise different sugars and proteins to derive energy.

In the past, laboratories have used these differing biochemical reactions in order to identify different bacteria from one another. This method of identification works well, but can often take several days to complete.

The technology behind the 'MALDI-TOF' method allows for rapid identification based on an established chemical methodology known as mass spectrometry.

The procedure involves mixing the colony with a suitable matrix material (**M**atrix **A**ssisted), which is then dried onto a metal plate and placed into the MALDI-TOF instrument. A pulsed **L**aser causes **D**esorption of the molecules which are then Ionised. The ions are accelerated by an electric field within a vacuum tube and the time (**T**ime **O**f **F**light) for each ion to reach a detector is measured.



By referencing the spectrum pattern or 'mass fingerprint' to a database of 911 species, an accurate identification can be obtained.



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What are the benefits?

The specific nature of the test will allow clients to build their own database which may prove helpful when tracing the common source of either environmental or finished product contamination as different strains of one show similar peak patterns.

Reduced turnaround times

In addition to the high specificity of the test, a considerable advantage of this procedure over traditional methods of identification is the rapidity of the test. Once the sample has been prepared, the time taken to achieve a full identification within the MALDI-TOF apparatus can be as little as 17 minutes rather than days, thus reducing the anxious wait for confirmation following a presumptive pathogen result.

MALDI-TOF confirmation approvals

ALS has conducted internal validations to comply with ISO 17025 requirements and the method is now INAB accredited for the following:

- Salmonella spp
- Listeria
- Legionella
- Campylobacter
- Pseudomonas
- Enterobacteriaceae
- Coliforms
- Cronobacter spp
- Clostridia
- Staphylococci

MALDI-TOF is recognised by the Retailer Supplementary Audit (RSA) Scheme as an identification tool for selected pathogens. ALS holds RSA compliance for MALDI-TOF to be used in conjunction with our RSA compliant methods for testing own label finished products supplied to Tesco and Marks & Spencer for:

- Salmonella spp
- Listeria
- Campylobacter

ALS will continue to use the current 'traditional' methods for identifying any other pathogens on own-label finished products supplied to Tesco and Marks and Spencer samples.

In addition to the above, ALS can also provide unaccredited identifications for 911 species that are in the MALDI-TOF database.

How do I use this service?

For further details please contact the Client Services Team:

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