Analytical services – Microbiology
Listeria monocytogenes and Listeria spp

Listeria monocytogenes and *Listeria* spp detection with AFNOR methods

Introduction

Market dynamics push the food industry to face challenging production and delivery timelines. To assess the effectiveness of your safety systems against pathogenic growth, minimize the risk of releasing contaminated product, and protect your company against costly product recalls, you need accurate, timely, and reliable analytical data.

In order to meet these needs, ensuring you the fastest possible turnaround time and harmonized analytical methods, Mérieux NutriSciences offers new validated and accredited AFNOR methods in all laboratories for the qualitative and quantitative detection of *Listeria monocytogenes* and qualitative detection of *Listeria spp*. The AFNOR methods are equivalent alternatives to ISO reference methods.

The quality controls of our analytical processes allow us to share and compare at any time our performances within our network of 60 laboratories using the same method on the same matrixes, standardizing the performances and reaching excellence levels of service. In this way, laboratory and quality managers can verify the absence of irregular steps and factors in the analytical process, in order to ensure the reliability of the final result and, if necessary, quickly intervene in case of anomalies.

Listeria monocytogenes quantitative method

The detection method for *Listeria monocytogenes* is based on the use of the chromogenic medium (ALOA® ONE DAY) which allows detection of *Listeria monocytogenes and Listeria spp* thanks to the enzyme ß-glucosidase activity, common to all Listeria species, by using X-glucoside substrate in the medium. The presence of *Listeria monocytogenes* is highlighted due to the activity of a phospholipase involved in the infection process of pathogenic Listeria. *Listeria monocytogenes* grow blue-green round colonies after incubation at 37 ° C. This protocol allows us to provide the result within 72 hours, if negative. If positive, 2 additional days are required for the confirmation.

Listeria monocytogenes plate count

The plate count method for *Listeria monocytogenes* (quantitative) uses the same selective medium as the qualitative method and the same confirmation techniques as the ISO method with an alternative pour plate technique. The new accredited method (ALOA ® COUNT KIT) represent an equivalent alternative to the ISO methods.

Listeria spp qualitative method

The detection method for *Listeria spp* (qualitative) is based on the use of the chromogenic medium (ALOA® ONE DAY) which allows detection of *Listeria spp* thanks to the enzyme ß-glucosidase activity, common to all Listeria species, by using X-glucoside substrate in the medium. *Listeria spp* grow blue-green round colonies after incubation at 37 ° C. This protocol allows us to provide the result within 72 hours, if negative. If positive, 2 additional days are required for the confirmation.

Application field and turn around time

The table below shows the accredited methods performed in Prato and Resana laboratories. For further information please contact directly our Client Service.

Application field

Accredited matrixes:

- Food intended for human consumtion
- Working environment

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Appication field	Analyte	Determination	Tecnique	New AFNOR methods	Equivalent to
Foodstuff	*L. monocytogenes* (qualitative)	Presence-absence/"x" g or on "x" ml of sample*	Isolation on plate after enrichment	AFNOR: AES 10/03-09-00	NF EN ISO 11290-1 1997 + A1 2005
Foodstuff	*Listeria* spp (qualitative)	Presence-absence/"x" g or on "x" ml of sample*	Isolation on plate after enrichment	AFNOR: AES 10/03-09-00	NF EN ISO 11290-1 1997 + A1 2005
Foodstuff	*L. monocytogenes* (quantitative)	10 UFC/ml for liquid samples; 10 UFC/g for other products	Pour plate	AFNOR: AES 10/05-09-06	NF EN ISO 11290-2 1998 + A1 2005
Working environment ands	*L. monocytogenes* (qualitative)	Presence-absence/"x" cm^2 or pool**	Isolation on plate after enrichment	AFNOR: AES 10/03-09-00	ISO 18593:2004 + NF EN ISO 11290-1 1997 + A1 2005

*(method validation was conducted on product quantity less than 25g) ** (with "X" superior to 100cm2)