BIOTECON Diagnostics

NEWSLETTER

# **food**proof® *Listeria* StarBroth: A New Rapid Enrichment Media for *Listeria monocytogenes*

Microbiological methods for the detection of *Listeria monocytogenes* including enrichment, isolation on agar plates and confirmation usually take several days. Therefore real-time PCR and other alternative methods have been developed to shorten the time from sample to result for this dangerous organism. Crucial for the duration of *Listeria monocytogenes* detection by molecular methods is the time needed for the enrichment of the bacteria.

BIOTECON Diagnostics organized and accomplished an interlaboratory test from April to May 2016 with altogether 18 laboratories from 4 countries including Germany, Switzerland, the Netherlands and UK. The aim of this study was to evaluate the performance of the new **food**proof® *Listeria monocytogenes* Detection LyoKit in combination with a rapid enrichment media specifically for Gram+ organisms: **food**proof® *Listeria* StarBroth in comparison to Half-Fraser broth of the ISO method.

For the DNA extraction the participants could either use the **food**proof® StarPrep Two Kit, or the **food**proof® StarPrep Two 8-Strip Kit (high throughput testing in deep-well stripes). Both are lysis based methods which eliminate the need for hazardous organic extractions or chaotropic agents.

Two unspiked matrices, Harzer cheese and Wiener sausage, were sent to all participants. Spiking was done in each laboratory with EASI-TAB™ *Listeria monocytogenes* reference material (approx. 20 CFU / 25g). The samples were enriched for 22 h +/- 2 h in **food**proof® *Listeria* StarBroth and for 24 h +/- 2 h and 48 h +/- 2 h in Half-Fraser broth (each sample spiked and unspiked in duplicate).

The interlaboratory study showed an overall good performance in different laboratories and on several different PCR instruments. The combination of **food**proof® *Listeria* StarBroth, the **food**proof® StarPrep Two Kit including the 8-strip version and the **food**proof® *Listeria monocytogenes* Detection LyoKit was highly efficient for the detection of low levels of *L. monocytogenes* in two different food categories.

As expected the performance with the ISO method enrichment broth Half-Fraser was also good, but the interlaboratory study results indicated that for some matrices a prolonged enrichment time of 48 h +/- 2 h is necessary. Altogether it could be shown that there is an improved growth of *Listeria monocytogenes* - in average approximately two log levels – in **food**proof® *Listeria* StarBroth in comparison to Half-Fraser Broth.

An AOAC-RI PTM certification for the whole set of **food**proof® media, DNA extraction and real-time PCR for *Listeria monocytogenes* detection is in progress.

For more information about the interlaboratory study results and/or the AOAC-RI PTM validation please contact: **sales@oxfordbiosystems.com**.

**food**proof® *Listeria* StarBroth

- Safe detection of *Listeria monocytogenes* in all kind of foods in less than 24h

**food**proof® *Listeria monocytogenes* Detection LyoKit

- Convenient lyophilized detection kit format
- Highest sensitivity and specificity

AOAC-RI PTM validation in progress

**AVAILABLE: Since April 2016**