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BIOTECON Diagnostics



NEWSLETTER



For safer food – BIOTECON Diagnostics – simply builds up trust!

Welcome to our newsletter

Our regular newsletters are an easy way to keep up-to-date with all our new developments and interesting scientific research in the field of rapid tests. With contributions from our in-house experts, our newsletters contain quarterly highlights, news pieces, and keep you informed of all our upcoming events and activities.

Topics:

- *Listeria* StarBroth
- Animal ID Detection Systems
- GMO Multiplex LyoKits for Soya
- Seminar and Workshops
- Upcoming Events



Impressum

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foodproof® *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 **foodproof® *Listeria monocytogenes* Detection LyoKit** in combination with a rapid enrichment media specifically for Gram+ organisms: **foodproof® *Listeria* StarBroth** in comparison to Half-Fraser broth of the ISO method.

For the DNA extraction the participants could either use the **foodproof® StarPrep Two Kit**, or the **foodproof® 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 **foodproof® *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 **foodproof® *Listeria* StarBroth**, the **foodproof® StarPrep Two Kit** including the 8-strip version and the **foodproof® *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 **foodproof® *Listeria* StarBroth** in comparison to Half-Fraser Broth.

An AOAC-RI PTM certification for the whole set of **foodproof®** 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: bjunge@bc-diagnostics.com.



foodproof® *Listeria* StarBroth

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



foodproof® *Listeria monocytogenes* Detection LyoKit

- Convenient lyophilized detection kit format
- Highest sensitivity and specificity

AOAC-RI PTM validation in progress

**AVAILABLE:
Since April 2016**



Meat and Seafood Traceability: Animal ID Detection Systems



Food traceability means the ability to track any food, feed, food-producing animal or substance that will be used for consumption. It allows the provision of accurate information to the public and targeted withdrawals. Livestock identification and meat traceability systems were introduced in countries as a reaction to the BSE problem. In the European Union, consumer confidence in labeling information was shaken during a horsemeat scandal, when beef sold at retail and in restaurants was widely found to contain horsemeat and in addition, significant amounts of pork meat. Fraud through misbranding has now been revealed as realistic concern. For improving traceability in the meat industry molecular animal detection systems which result in fast and accurate results are beneficial.

BIOTECON Diagnostic's **foodproof® Animal Identification Kits** detect specific animal species in food by real-time PCR. They enable the identification and differentiation of swine, cattle, sheep, horse, donkey, chicken, and goat. Recently, two new products for identification of duck and shrimp and crab in food have been added to BIOTECON's portfolio. In addition, the new **foodproof® Porcine Detection LyoKit** enables qualitative detection of porcine DNA even in highly processed foods. The LyoKit is an easy-to-use systems, as DNA samples could be add simply to lyophilized pellets. The **foodproof® Porcine Detection LyoKit** was verified for performance with a large variety of foods. Applicability of the kit has been shown on all open real-time PCR platforms with appropriate technology for monitoring labeled, 5'Nuclease probes.

Species identification provides quality control of meat, cross-check of gelatin products, confectionery, and even traces of DNA in cosmetics or pharmaceutical products (e.g. gelatin capsules). Exclusion of swine DNA or identification of the species is relevant for survey of halal or kosher food in many countries.

foodproof® SL Animal Identification Kits

Z 730 02 **foodproof® SL**
Bovine Species Detection Kit

Z 730 03 **foodproof® SL**
Sheep Species Detection Kit

Z 730 04 **foodproof® SL**
Horse Species Detection Kit

Z 730 05 **foodproof® SL**
Chicken Species Detection Kit

Z 730 06 **foodproof® SL**
Goat Species Detection Kit

Z 730 07 **foodproof® SL**
Duck Species Detection Kit

Z 730 08 **foodproof® SL**
Shrimp and Crab Species
Detection Kit

RDK 100 07 **foodproof®**
Donkey Detection Kit

Z 730 01 **foodproof® SL**
Porcine Species Detection Kit

Also available as **LyoKit:**

R 602 43 **foodproof® Porcine
Detection LyoKit**

Highlights

- High sensitivity (LOD of this kit 1ppm)
- Suitable for different matrices (gelatine, meat, non-food e.g. pharmaceutical capsules)
- Lyo formate (less liquid handling steps. less contamination risk)
- Manual or automatic DNA preparation possible
- Validation data report available

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BIOTECON Diagnostics

Closing the Gap: New GMO Multiplex LyoKits for Screening for GM Soya



Many countries have implemented legislations for the use of GMOs, cultivation and labelling of food containing GMOs. There is large variation among these regulations: Some require a zero tolerance against GMOs, while other regulations allow their use under certain conditions. In some countries the product must be labeled as GMO, when a defined threshold is crossed, while in other countries the labelling is voluntary. Different regulations need different approaches for detection, identification and quantification of the GMO content in food and feed.

The European Union has established a legal framework to strictly regulate the use of GMOs. The main regulations are Directive 2001/18/EC for the deliberate release of GMOs into the environment, Regulation (EC) No 1829/2003 for placing on the market of GMO food and feed and (EC) No 1830/2003 for labelling and traceability requirements amending Directive 2001/18/EC. Additionally, Directive (EU) 2015/412 regards the possibility for the Member States to restrict or prohibit the cultivation of GMOs in their territory.

In the past the combined detection of the cauliflower mosaic virus (CaMV) 35S promoter and NOS terminator of the nopaline synthase gene of *Agrobacterium tumefaciens* gave a good certainty concerning the presence or absence of GMO in a sample. However, the development of new GMO events, that do neither contain P-35S nor T-NOS, already outdated this approach. BIOTECON Diagnostics has developed a sophisticated screening assay system, screening for 8 different elements. But even with this approach, certain events like MON87708 or MON87769 are not detected. To close the gap, BIOTECON Diagnostics offers the **foodproof® GMO Soya Identification 1 LyoKit** (Order No. R 602 24) and **foodproof® GMO Soya Identification 2 LyoKit** (Order No. R 602 25), which detect 4 soya events in one multiplex reaction, respectively.

With the **foodproof®** GMO product line, BIOTECON Diagnostics offers a wide range of easy and reliable assays for the detection, identification and quantification of GMO. The **foodproof® GMO Screening Kits** facilitate a fast, safe and easy detection in food samples, and the **foodproof® GMO Quantification Kits** provide a precise and sensitive determination of the relative GMO content in accordance with EU regulations.

foodproof® **GMO Screening Kits**

R 300 17 **foodproof®** GMO Screening Kit (LC 1.x, 2.0, 480)

R 302 17 **foodproof®** GMO Screening Kit (5' Nuclease)

R 602 17 **foodproof®** GMO Screening 1 LyoKit (5' Nuclease)

R 602 18 **foodproof®** GMO Screening 2 LyoKit (5' Nuclease)

R 602 21 **foodproof®** Plant Detection LyoKit (5' Nuclease)

RDK 302 39 **foodproof®** CaMV Detection Kit (R&D version)

foodproof® **GMO Soya** **Quantification Kits**

R 300 19 **foodproof®** GMO RR Soya Quantification Kit (LC 1.x, 2.0)

R 302 19 **foodproof®** GMO RR Soya Quantification Kit (5' Nuclease)

R 302 35 **foodproof®** GMO RR 2 Yield Soya Quantification Kit (5' Nuclease)

foodproof® **SL** **GMO Soya Detection Kits**

Z 722 01 **foodproof®** SL GMO A2704-12 Soya Detection Kit

Z 722 02 **foodproof®** SL GMO GTS 40-3-2 Soya Detection Kit



The facts in brief:

foodproof® GMO Screening 1 LyoKit (R 602 17)

- 3 Targets: P-35S, T-NOS and P-FMV
- All controls are integrated in the kit (positive, negative, and internal amplification control)
- UNG minimizing carryover contamination risk
- 100% specificity: 35 different reference materials were successfully tested
- The assay is compatible with all relevant food matrices like tofu, fruit yoghurt, rice waffle, fat, soya flour or cracker
- The LOD_{abs} is 1 target copy/μl
- The LOD_{rel} is 0.01%
- User friendly lyophilized kit format
- 96 reactions

foodproof® GMO Screening LyoKit 2 (R 602 18)

- 5 Targets: bar, P-35S-pat, CTP2-CP4-EPSPS and P-NOS-nptII / P-35S-nptII
- UNG minimizing carryover contamination risk
- Controls are integrated in the kit (positive and negative control)
- 100% specificity: 35 different reference materials were successfully tested
- The assay is compatible with all relevant food matrices like tofu, fruit yoghurt, rice waffle, fat, soya flour or cracker
- The LOD_{abs} is 1 target copy/μl
- The LOD_{rel} is 0.01%
- User friendly lyophilized kit format
- 96 reactions

foodproof® GMO Soya Identification 1 LyoKit (R 602 24)

- Identification of DAS-44406-6, MON87701, MON87708 and MON87769
- Controls are integrated in the kit (positive and negative control)
- UNG minimizing carryover contamination risk
- The assay is compatible with all relevant food matrices
- User friendly lyophilized kit format
- 96 reactions

foodproof® GMO Soya Identification 2 LyoKit (R 602 25)

- Identification of BPS-CV127-9, DP-305423-1, DAS-68416-4 and DAS-81419-2
- Controls are integrated in the kit (positive and negative control)
- UNG minimizing carryover contamination risk
- The assay is compatible with all relevant food matrices
- User friendly lyophilized kit format
- 96 reactions

foodproof® Plant Detection LyoKit (R 602 21)

- Detection of plant DNA from raw material, processed food, feed and seed samples
- Eliminates risk of false-negative results because of degraded DNA
- Controls are integrated in the kit (positive and negative control)
- UNG minimizing carryover contamination risk
- The assay is compatible with all relevant food matrices like tofu, fruit yoghurt, rice waffle, fat, soya flour or cracker
- The LOD_{abs} is 0.1 target copy/μl
- User friendly lyophilized kit format
- 96 reactions

For more information about our broad [GMO product range](#) please contact: meierwiedenbach@bc-diagnostics.com

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BIOTECON Diagnostics

Invitation to our Annual Meeting for Distributors and Seminar „Rapid Methods in Food Safety Analysis“



Seminar and Workshops

BIOTECON Diagnostics would like to invite all our distributors worldwide to the annual meeting 2016 in Potsdam, Germany.

The meeting will take place between **20th and 21st of September 2016**.

During the two days of meeting we will inform you about our latest kit developments. We will present you our new facilities including the showroom. A dinner in Potsdam will bring you the opportunity for an exchange of ideas.

The meeting will start 1 p.m. on the 20th and is free for all participants (travel expenses and hotel are not included). We can give recommendations for hotels in Potsdam or Berlin with a good price/value. In addition this year our next highlight is in close connection.

On 22nd of September BIOTECON Diagnostics organizes for the third time the seminar “**Rapid Methods in Food Safety Analysis**” and for the first time it will be an international seminar in English. We are proud to present six excellent and well-known experts speaking about different topics in food and beverage safety.

For this event we want to invite you and offer two special rates to all our distributors:

- a) *“2 for 1” If you book one ticket you will get a second ticket for free!*
- b) *“Attending with your customer” If you will attend in company with one or more of your paying customers, for you the seminar is for free!*

BIOTECON Diagnostics would like to ask you to forward the invitation to your customers. The seminar is a great opportunity to hear about new trends and methods in food safety. Your customers are also welcome to participate at our workshops. On 23rd of September 4 workshops will be offered showing practical performance especially for our customers.

For registration and further information, please contact our marketing & sales assistant, Dr. Constanze Klopfleisch: cklopfleisch@bc-diagnostics.com

We are looking forward to welcome you in Potsdam and spend some inspiring time together for discussion and exchange!

Seminar topics:

Beer Quality Control

Dr. Mathias Hutzler
(TU Munich, Germany)

Vibrio & Campylobacter Detection

Prof. Dr. Thomas Alter
(FU Berlin, Germany)

MALDI-TOF-MS at a Glance

Dr. Jürgen Behr
(BayBioMS Zentrum Munich, Germany)

Control of Listeria

Prof. Dr. Roger Stephan
(UZH Zurich, Switzerland)

Norovirus Detection

Prof. Dr. Mieke Uyttendaele
(Ghent University, Belgium)

GMO News

Dr. Patrick Gürtler
(LGL Oberschleißheim, Germany)

Workshops:

- #1: GMO
- #2: STEC
- #3: Automation solutions and *Salmonella*
- #4: MALDI-TOF-MS



[Download flyer](#)



Upcoming Events

Join us at the upcoming events to share insights and best practices with colleagues, connect and form new collaborations and discover new product launches.

Event	Date and Location	Contact
July 2016		
IAFP Annual Meeting 2016	31st July - 2nd August 2016 in St.Louis, USA Booth 1109	Dr. Christina Harzman Dr. Ivo Meier-Wiedenbach
August 2016		
World Brewing Congress 2016	13th - 17th August 2016 in Denver, USA Booth 220	Dr. Sarah Borg Markus Fandke
September 2016		
Twenty-first Conference on Food Microbiology	15th - 16th 2016 September in Brussels, Belgium	Dr. Guido Murra
AOAC 130th Annual Meeting and Exposition	18th - 21st September 2016 in Dallas, USA	Benjamin Junge
COLMIC 2016 - XIII Latin American Congress of Microbiology and Food Hygiene	27th - 30th September 2016 in Medellin, Columbia	Alberto Skinfill
October 2016		
IDF World Dairy Summit	16th - 19th October 2016 in Rotterdam, Netherlands	André Olthoff
November 2016		
BrauBeviale	08th - 10th October 2016 in Nürnberg, Germany Hall 4 Booth 4-410	André Olthoff Markus Fandke
Latin Food 2016	09th - 11th October 2016 in Cancun, Mexico	Alberto Skinfill
XIV Workshop: Rapid Methods and Automation in Food Microbiology	22nd - 25th November 2016 in Barcelona, Spain	Olaf Degen

BrauBeviale

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