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DIAGNOSTICS

foodproof®

STEC Detection Kits

Screening and Identification

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

Shigatoxin producing *E. coli* (STEC) like *E. coli* O157:H7, *E. coli* O157:H- or *E. coli* O104:H4 are known to cause different diseases like diarrhea, hemorrhagic colitis (HC) and the potentially fatal hemolytic uremic syndrome (HUS). STEC are most commonly transmitted through undercooked minced meat, unpasteurized or inadequately pasteurized milk, cold sandwiches, sprouts and vegetables. As most of these foods have relatively short shelf lives, the need for a rapid, accurate and sensitive detection method is a major food safety issue.

The **foodproof® STEC Screening and Identification Kits** are based on real-time PCR technology, which is well-established in the food industry as a highly sensitive and specific detection method. The **foodproof® STEC Identification LyoKit** can detect and identify the eight most important STEC serotypes in just one single PCR test. The completely new and unique assay design enables melting curve analysis with sequence specific 5'Nuclease-probes, whereby highest specificity is achieved.

Fast: < 24 h to result with < 40 min of hands-on time

Safe: Prevention of false-positive results and carry-over contamination by using Uracil-N-Glycosylase

Sensitive: Validated to detect 1–10 cfu/25g sample, including enrichment

Easy: Convenient, complete solution including DNA extraction and real-time PCR analysis

Experienced: Manufacturer of PCR-based rapid tests for the food industry since 1998 with an ISO 17025 accredited service lab



Best Specificity

100% Inclusivity

STEC screening provides individual answers for *stx1*, *stx2*, and *eae* genes in one reaction

100% Exclusivity

> 120* and > 50** strains tested, including closely related organisms and microorganisms of the same habitat

Matrices

> 100* tested food matrices, including meat, seafood, milk, fruits, vegetables and environmental samples

Approvals*



AOAC approved for "All Kind of Foods"

* R 300 10, R 302 10

** R 602 11, R 602 12



BIOTECON Diagnostics

Workflow



Sample Enrichment
Start



DNA Extraction
approx. 30 min



PCR Setup
approx. 10 min



Real-time PCR Run
60 - 100 min

Analysis Results in < 2.5 h

STEC Detection Kits

- R 602 11 **foodproof®** STEC Screening LyoKit (5' Nuclease)
Detection of the virulence genes *stx1*, *stx2* and *eae*
- R 602 12 **foodproof®** STEC Identification LyoKit (5' Nuclease)
Identification of the 8 most important serogroups
(O26, O45, O103, O104, O111, O121, O145 and O157)
- R 300 10 **foodproof®** *E. coli* O157 Detection Kit (LC 1.x, 2.0)
- R 302 10 **foodproof®** *E. coli* O157 Detection Kit (5' Nuclease)

Specific DNA Extraction Kits

- S 400 02 **foodproof®** ShortPrep II Kit - rapid purification
- S 400 04 **foodproof®** Sample Preparation Kit I - high quality column purification
- S 400 07 **foodproof®** StarPrep One Kit - bulk purification
- S 400 18 **foodproof®** StarPrep Three Kit - bulk purification (for R 602 11 & R 602 12)
- S 400 11 **foodproof®** Magnetic Preparation Kit I - automated purification



Lyophilized Format!

- Convenient, lyophilized, pre-filled reaction mix
- With internal amplification control and our proven UNG-System
- Easy storage

Storage at -15 °C to -25 °C

LyoKits storage at 2 °C to 8 °C

96 Reactions with final volume of 20 or 25 µl

Safe and Specific

The STEC Screening LyoKit detects *stx1*, *stx2* and *eae*

The *stx2f* variant is included, which will not be detected using the ISO TS 13136 method

Instrument Compatibility

- LightCycler 480, LC 96
- 5'Nuclease / TaqMan® cyclers (e.g. PikoReal 24, AriaMx, CFX96, ABI 7500)

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