

Detection of Foodborne Pathogens



- Highly sensitive system for fast and reliable detection of foodborne pathogens via qPCR
- Optimized bacterial DNA extraction system from a broad range of enrichment broths as starting material
- Quick and parallel analysis of multiple microorganisms from the same extract
- Clear and easily interpretable results
- Lyophilized, temperature-stable components
- Easy-to-use

Background

Bacterial detection is a key aspect in food microbiology. Consequently, microbiological quality control programs are intensified throughout the food chain production in order to minimize the risk of intoxicating consumers. Thus, the reliability, speed and robustness of a test system to detect the presence, absence or even the degree of contamination of pathogens becomes increasingly important.

Food Control™ qPCR kits are for fast and reliable detection of foodborne pathogens via real-time PCR for the easy determination of contamination degree in agricultural or food industry. Food Control™ qPCR kits should be used in conjunction with our optimized DNA extraction system ExtractNow™ Food Control.

Benefits

Very sensitive

Detection accomplished down to 10 DNA copies/assay.

Easy to use

Isolated total DNA from potentially contaminated food serves as starting material, typically after pre-cultivation in a suited sample growth medium. Detection is done via qPCR.

Instrument Compatibility

Food Control™ qPCR works on cyclers with FAM™ and HEX™ filters.

One extract – multiple parameters

One extract can be used for PCR reactions with different specificities, so that multiple microorganisms can be analyzed in parallel and at user's choice.

Clear

A clear and easily interpretable result is obtained with one PCR reaction. No subsequent and laborious detection or cost-intensive devices are required.

Stable

All master mixes are freeze-dried and need to be rehydrated with a supplied buffer to reduce shipping costs and increase product stability.

Contamination prevention

All PCR kits can also be used with UNG for carry-over prevention (UNG is not included).

ExtractNow™ Food Control



Features

Type of Sample

ExtractNow™ Food Control can be used for extraction of gram+ and gram- bacterial DNA after pre-cultivation in suited food pathogen enrichment media. Kit is suited for isolation of DNA from up to 1×10^9 bacterial cells.

Separation principle

Spin filter columns

Storage and Shelf Life

Components can be stored at room temperature for at least 12 months.

Description

Spin column-based DNA extraction method for a broad range of different enrichment broths as starting material. Using a cutting-edge chemistry, the duration of the DNA purification is reduced to a minimum.

Specifications

Time for extraction: approx. 45 minutes

Column binding capacity: > 50 µg DNA

Average Yield: Depending on type and cell number

Average purity: 1.7 - 2.0

Ordering Information

Cat. No. 609-1010 10 extractions

Cat. No. 609-1050 50 extractions

Food Control™ qPCR



Features

Target

<i>Salmonella enterica</i>	invasion protein (invA) gene
<i>Yersinia enterocolitica</i>	heat-stable enterotoxin A gene
<i>Shigella</i> spp.	invasion plasmid antigen (ipaH6) gene
<i>Campylobacter</i> spp.	acyl-[acyl-carrier-protein]-UDP-N-acetylglucosamine O-acyltransferase (IpxA) gene
<i>Clostridium perfringens</i>	phospholipase C alpha toxin (plc) gene
Shiga Toxin 1	stx1 gene
Shiga Toxin 2	stx2 gene
<i>Escherichia coli</i> O157	wbdR gene
<i>Escherichia coli</i> O104	wckD gene
<i>Listeria</i> spp.	invasion associated protein p60 (iap) gene
<i>Listeria monocytogenes</i>	listeriolysin O (hly) gene
<i>Salmonella</i> spp.	spacer-region between 16S and 23S RNA genes

Sensitivity

Down to 10 DNA copies/assay.

Principle

TaqMan® assay based on FAM™ and HEX™ labeled probes.

Content

qPCR mix, Rehydration Buffer, PCR Grade Water, Internal Control DNA, Positive Control DNA

Sample Requirements

Isolated total DNA from potentially contaminated food serves here as starting material, typically after pre-cultivation of the sample in growth medium.

Recommended Use

For research use only!

Time to Result

150 minutes

Required PCR Cycler

Any qPCR cycler with FAM™ and HEX™ filters.

Ordering Information

Cat. No.	Species	25 Reactions Each	Cat. No.	Species	25 Reactions Each
11-02-01-025	<i>Salmonella enterica</i>		11-02-07-025	Shiga Toxin 2	
11-02-02-025	<i>Yersinia enterocolitica</i>		11-02-08-025	<i>Escherichia coli</i> O157	
11-02-03-025	<i>Shigella</i> spp.		11-02-09-025	<i>Escherichia coli</i> O104	
11-02-04-025	<i>Campylobacter</i> spp.		11-02-10-025	<i>Listeria</i> spp.	
11-02-05-025	<i>Clostridium perfringens</i>		11-02-11-025	<i>Listeria monocytogenes</i>	
11-02-06-025	Shiga Toxin 1		11-02-12-025	<i>Salmonella</i> spp.	

How to order

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