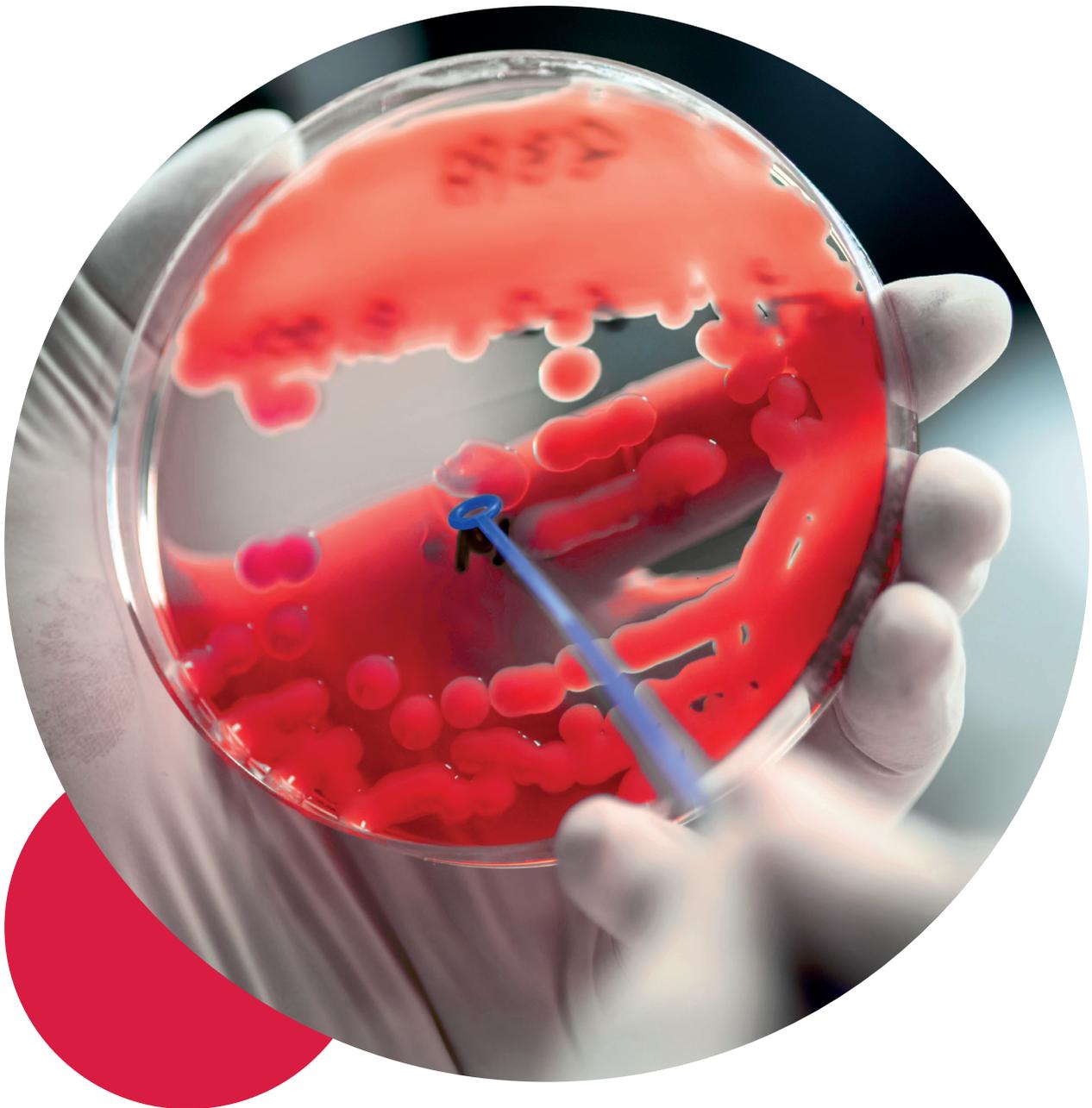


From Sample to Result

Validated PCR Methods for Foodborne Pathogen Detection



Ensuring food quality through
reliable pathogen detection

Foodborne pathogens are microorganisms that have the potential to cause illnesses when consumed through contaminated food products. The occurrence of foodborne illnesses has become a significant concern for public health globally, leading to extensive efforts to ensure the safety of food. PCR detection for foodborne pathogens has revolutionized food safety by offering a fast, precise, and reliable diagnostic solution. While classical microbiological methods take up to a week, PCR can provide conclusive results within just a few hours. Thus, rapid and accurate PCR testing can prevent foodborne disease outbreaks, increasing quality insurance for food producers as well as consumer confidence in the food supply chain.

What foods are most likely to be contaminated?

- Raw meat and poultry
- Raw eggs (uncooked brownie, cake, or cookie dough)
- Unpasteurized milk
- Raw shellfish
- Unwashed raw fruits and vegetables
- Unpasteurized fruit juice



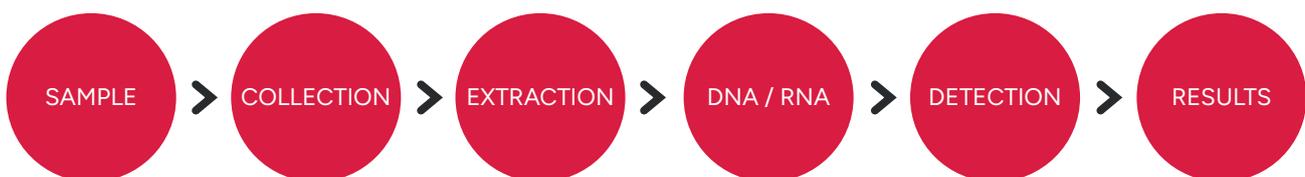
From sample to results

The **InviScreen® kits** for foodborne pathogen detection are developed based on the corresponding ISO standards that define the real-time PCR methods for the detection of the specific microorganisms in food and feed matrices. The kits include internal amplification controls and extraction controls as required by the standards. For DNA/RNA purification prior to testing, the **Invitek extraction kits** offer optimized protocols for various food matrices.

Highlights

- Modular system for the end-to-end workflow: combine specific extraction kits with a targeted pathogen detection system
- ISO-compliant validated workflows
- Compatible with open platform thermocyclers
- Premium quality real-time PCR based on Taqman® technology
- User-friendly PCR reaction setup in just 2 pipetting steps

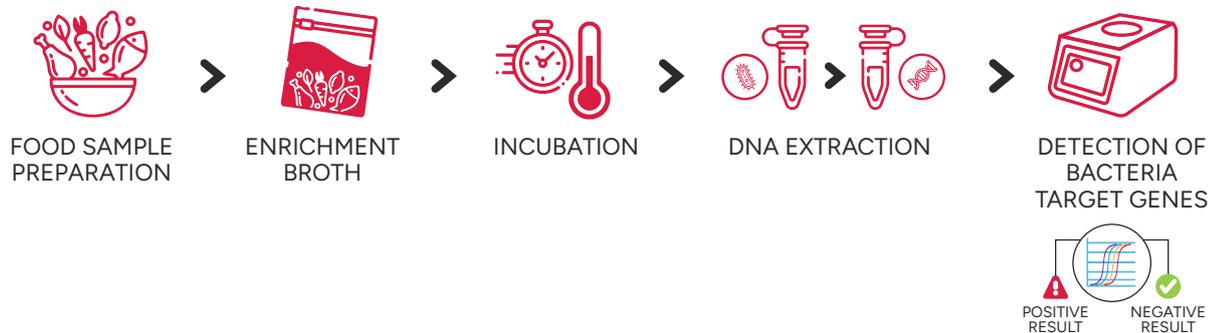
GET READY TO **SIMPLIFY YOUR WORKFLOW**
WITH INVITEK DIAGNOSTICS

INVITEK
diagnostics

Advantages of PCR over traditional methods

1. **Enhanced Specificity:** Superior specificity for precise species, strain, or variant identification in compliance with regulatory requirements
2. **High Sensitivity:** Detection of trace amounts, only 1-10 genome copies in the food sample are sufficient for the detection of a target pathogen.
3. **Mitigation of false positives and negatives:** Clear results and improved accuracy by targeting specific genetic markers
4. **Multiplexing and high throughput:** Simultaneous detection of multiple targets, improving scalability and cost-effectiveness
5. **Rapid and efficient results:** Fast turnaround times, with results in hours to support timely food safety and quality control decisions

Foodborne bacteria detection



Extraction

InviPrep® Fast Lysis Buffer

- Isolation of DNA from all bacteria and fungi (gram-positive and gram-negative)
- Enrichment samples from food, bacterial culture, bacterial colonies from plates
- Super-fast technology: 24 samples in less than 20 minutes

Detection

InviScreen® STEC Detection and Serotyping PCR Kits

- Detection and serotyping kits for Shiga toxin-producing *E. coli* in food, feed and environmental samples (O157:H7, O26, O45, O103, O111, O121, and O145)
- High sensitivity detecting as low as 3 genomic units
- Compliant with ISO/TS 13136



InviScreen® Clostridium Botulinum Detection Kit

- Screening for the presence of neurotoxin-producing clostridia in food, feed and environmental samples
- Detection of botulinum toxins type A, B, E and F
- High sensitivity detecting as low as 10 genome copies/ μ l
- Compliant with ISO/TS 17919

InviScreen® Salmonella spp. Detection Kit

- Dual AOAC *PTM* and MicroVal Certification.
- Fast turnaround time: detect *Salmonella* spp. in under 10 hours.
- Sensitivity and reliability: validated on a broad range of foods, feed and environmental samples based on ISO 16140-2:2016.
- Highly specific: tested against a panel of more than 100 *Salmonella* serovars and 30 non-*Salmonella* species.

InviScreen® Listeria spp./*L. monocytogenes* Detection Kit

- Specific & reliable: designed for qualitative, multiplex detection of *Listeria* spp. and *L. monocytogenes*
- Fast turnaround time: under 20 hours total for most matrices
- Ready-to-use workflow: complete assay with a simple Fast Lysis DNA extraction step included

Foodborne virus detection



Extraction

RTP® Pathogen (Ready-To-Prep)

- Isolation of viral DNA/RNA, bacterial DNA
- 1-step-lysis with lyophilized extraction buffer (containing Proteinase K, carrier nucleic acids, lysis buffer)
- Classic spin column technology: Highly pure nucleic acids
- Less hands-on time & reduced plastic consumption



Detection

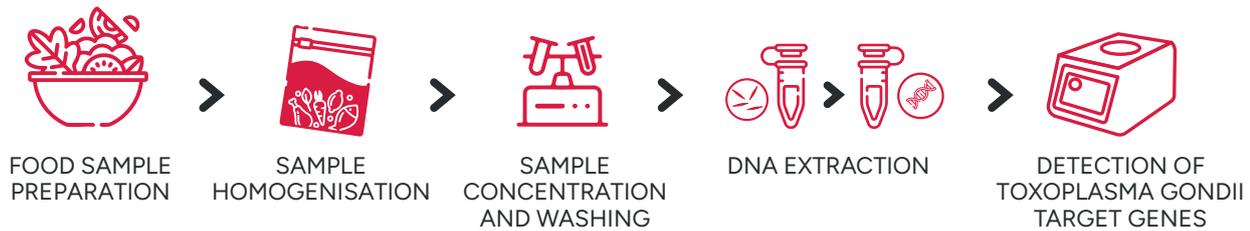
InviScreen® Norovirus Detection Kit

- Easy and ready-to-use kits to screen for the presence of Norovirus genogroups GI and GII in foodstuffs and environmental samples
- High sensitivity detecting as low as 10 copies/ μ l
- Compliant with ISO/TS 15216

InviScreen® Hepatitis A Virus Detection Kit

- Easy and ready-to-use kits to detect Hepatitis A virus in foodstuffs and environmental samples
- High sensitivity detecting as low as 10 copies/ μ l
- Completes the workflow of ISO/TS 15216 in combination with the InviScreen® Norovirus Detection Kit

Toxoplasma detection



Extraction

InviSorb® Spin Soil DNA Kit

- Reliable isolation of Toxoplasma DNA from a wide range of food matrices, including ready to eat (RTE) products and fresh produce
- Efficient mechanical cell lysis using ceramic Zirconia Beads
- Proven spin column technology for obtaining highly pure nucleic acids



Detection

InviScreen® Toxoplasma Gondii Detection Kit

- Highly specific real-time qPCR detection of Toxoplasma gondii DNA
- Validated for various food matrices, particularly ready-to-eat (RTE) products and fresh produce
- High sensitivity detecting as low as 1 genome copy/ μ L
- Compatible with open platform qPCR thermocyclers

BE CURIOUS
AND SEE WHAT'S IN FOR YOU



[invitek.com](https://www.invitek.com)

Ordering information

EXTRACTION KITS

Product	Package size	Catalogue No.
InviPrep® Fast Lysis Buffer	100 preps	1001136100
InviSorb® RTP Pathogen Kit	50 preps 250 preps	1040500200 1040500300
InviSorb® Spin Soil DNA Kit	50 preps 250 preps	1039100200 1039100300

DETECTION KITS

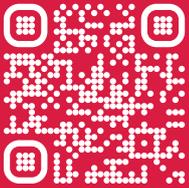
Product	Package size	Catalogue No.
InviScreen® STEC Detection Lyokit	100 tests	6015001200
InviScreen® STEC Serotyping kit (Lyokit coming soon)	100 tests	6015004204
InviScreen® O157:H7 Detection Kit (Lyokit coming soon)	100 tests	6015003201
InviScreen® Norovirus Detection Kit	100 tests	6015002200
InviScreen® C. Botulinum Detection Kit	100 tests	6015005200
InviScreen® Hepatitis A Virus Detection Kit	100 tests	6015006200
InviScreen® Salmonella spp. Detection Kit	100 tests	6015004204
InviScreen® Toxoplasma Gondii Detection Kit	100 tests	6015009200
InviScreen® Listeria spp./ L. monocytogenes Detection Kit	100 tests	6015008200
InviScreen® Toxoplasma Gondii Detection Kit	100 tests	6015009200

SIMPLIFY YOUR WORKFLOW WITH INVITEK DIAGNOSTICS



GET READY TO
SIMPLIFY YOUR WORKFLOW
WITH INVITEK DIAGNOSTICS

BE CURIOUS
AND SEE WHAT'S
IN FOR YOU



invitek.com

INVITEK
diagnostics

Contact us

info@invitek.com

INVITEK DIAGNOSTICS PORTUGAL

Zona Industrial de Tondela, ZIM II, Lote 6
3460-070 Tondela, Portugal

INVITEK DIAGNOSTICS GERMANY

Haynauer Str. 60
12249 Berlin, Germany