

DNA  
DIAGNOSTIC

# Salmonella 4 Cows



Fast and accurate  
diagnostics of  
**Salmonellosis and  
Dublin confirmation**

Salmonella species and  
Salmonella Dublin

faster diagnosis

- **Fast**  
Sample to result in 3 hours for 96 samples
- **High sensitivity,  
and specificity**  
LOD:  $1 \times 10^3$  Salmonella cells per 1 g feces
- **Easy handling**  
Protocols for feces and swabs
- **Complete kit**  
Extraction, lysis and qPCR materials included
- **No specialized equipment**  
Uses general lab equipment

Salmonella free  
Animal welfare

## Introduction

Gastrointestinal infection with different Salmonella species or Salmonella enterica subsp. enterica serovar dublin (S. dublin) is prevalent in many cattle herds worldwide.

It causes increased morbidity, mortality and production losses. Even though it is host-adapted, S. dublin occasionally causes human infections that tend to be severe due to the invasive nature of this infection.

Controlling S. dublin in cattle herds requires intervention to minimize the bacterial spread.

A test-and-cull strategy to remove persistently infected cattle has long been considered an important control element.

The Salmonella 4 cows kit is a fast, low-cost and easy-to-use method for the detection of Salmonella spp. and Dublin, directly from feces samples, swabs from feces/rectum, or swabs from the environment (e.g. boot swabs).

The Salmonella 4 cows kit contains material for Fecal/Swab DNA extraction using a simple 96 deepwell-based extraction protocol (alternatively using single tubes) and qPCR mix pre-aliquoted in 8-strip tubes fitting your instrument.

Sample protocols for:

- Fecal samples directly
- Sarstedt feces tubes
- eNAT swabs from feces/environment/rectum (ambient temperature stable for 3 days - easy sampling and transport)
- Environmental swabs (e.g. Boot swabs)

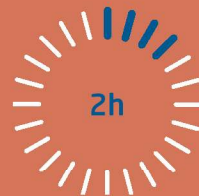
The entire protocol from DNA extraction to result can be carried out in as little as 3 hours for 96 samples.

The complete kit has a limit of detection (LOD) of  $1 \times 10^3$  Salmonella cells per gram of fecal matter, or  $1 \times 10^2$  Salmonella cells per sample input (one swab or 0,1 g feces).

## What is qPCR testing?

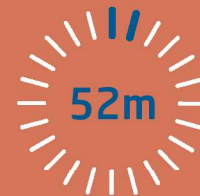
The quantitative polymerase chain reaction (qPCR) is a biochemical technology used to amplify a specific DNA target in a test tube. During amplification, fluorescent light is generated and monitored by the qPCR instrument. Today, qPCR is a common diagnostic technique and it is used for a wide variety of applications.

## Easy and fast workflow



DNA extraction

Inhibitors removed  
and Salmonella lysed



qPCR

Run Salmonella program

## Key Requirements

- qPCR instrument with FAM, ROX and CY5 filters
- Centrifuge for 96-well plates (minimum 5000 RCF)
- 96-(deep)well mixer/vortexer

For more info visit [www.dna-diagnostic.com](http://www.dna-diagnostic.com) or  
contact Tel +45 87 32 30 50 · [info@dna-diagnostic.com](mailto:info@dna-diagnostic.com)

# DNA DIAGNOSTIC

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**About us** DNA Diagnostic A/S is a Danish biotech company established in 1992. DNA Diagnostic develops and manufactures qPCR test kits for rapid identification of pathogenic microorganisms. DNA Diagnostic also makes CE-IVD kits for detecting leukemia related translocations. DNA Diagnostic is ISO 13485 certified.

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