Quality assurance in dairy

Infosheet

STEC

(*Shigatoxine producing Escherichia coli*)

Introduction

The Annual Epidemiological Reports 2022 from the ECDC show that there has been an increase in serious foodborne infections in the EU, particularly listeriosis and Shiga toxin-producing *Escherichia coli* (STEC). The numbers are significantly higher than before the COVID-19 pandemic.

Most problems are caused by this bacterium in raw milk and raw milk products such as farmhouse cheese. This is the reason why STEC is identified as a public health risk by the NVWA.

Public Health risk

Certain E.coli bacteria, naturally found in the intestines of humans and animals, produce shigatoxin, which is a toxin. Therefore it's called STEC (Shigatoxin-producing Escherichia coli). Shigatoxin can cause severe, life-threatening symptoms of illness, such as even haemolytic uraemic syndrome (HUS).

Contamination

Your products may become contaminated with STEC through inadequate hygienic practices. For example, through contact with:

- ✓ raw products
- ✓ surface water
- ✓ people (hands)
- ✓ animals

Legislation and regulations

At January 1, 2025, criteria for STEC have been included in the 'Warenwetbesluit Bereiding en Behandeling van levensmiddelen' and the 'Warenwetbesluit hygiëne van levensmiddelen'.

By this oficial national legislation, the intervention document of the NVWA has been withdrawn.

For all ready-to-eat products, the requirement is 'absence in 25 g/ml'.

STEC analysis

Qlip can perform accredited STEC analysis in its own laboratory. These analysis apply to milk and dairy products.
With these analysis, we can help you prove that no STEC was found on the product samples we examined for you or, in case of a positive result, where you may still need to take measures.

As a specialised dairy laboratory, we are at your service!

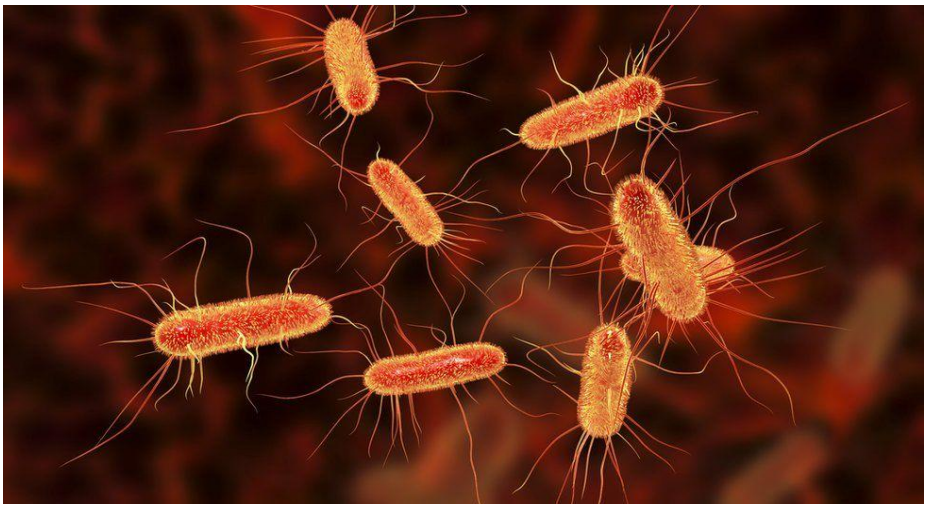
On the back of this information sheet, you can read more about the accredited research method for STEC at Qlip.

Your benefits

- ✓ Monitoring in accordance with NVWA policy: Intervention presence STEC in foodstuffs
- ✓ Demonstrating food safety products
- ✓ Hygiene control
- ✓ Control measures
- ✓ Reliable analysis results by accredited techniques equivalent to NPR-CEN-ISO/TS 13136 (MicroVal 2021LR96)
- ✓ Use of Qlip's specialised knowledge
- ✓ Performance of analysis in an ISO17025: 2017 accredited laboratory

Any questions?

The analysis can easily be requested via the customer portal.
If you have any questions about the STEC analysis, please contact our sales department at sales@qlip.nl or +31 88-7547199.



Procedure

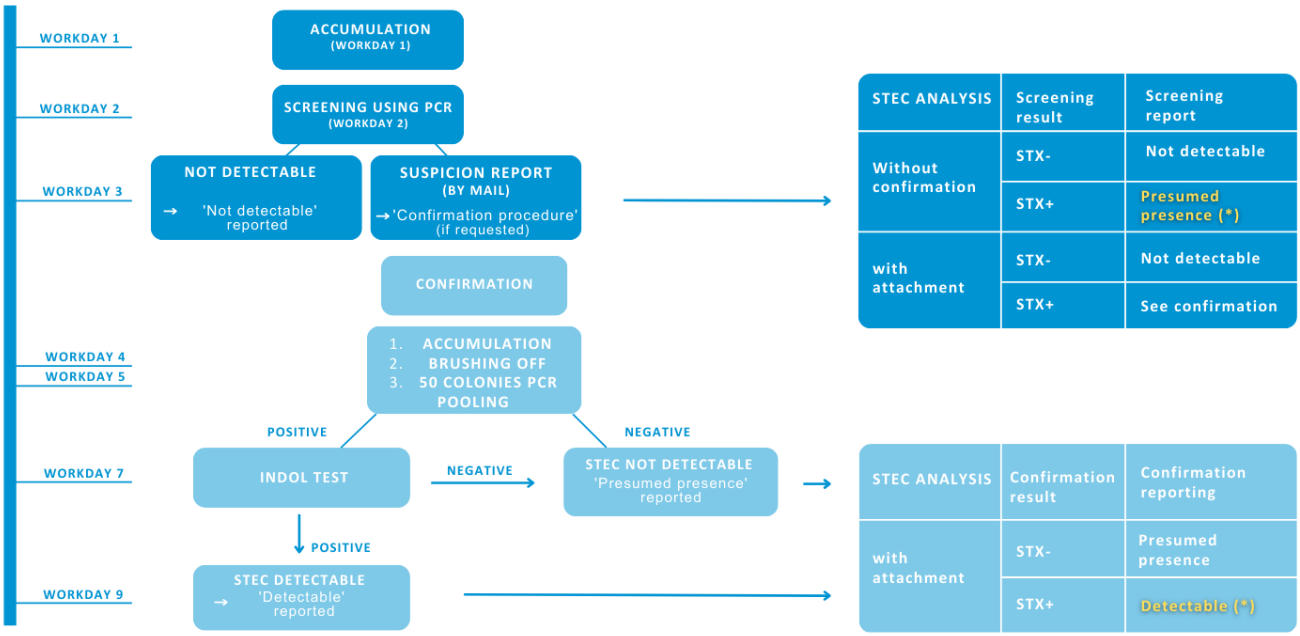
Below you will find an overview of the various steps during the STEC research. The research consists of screening, isolation and, if requested and necessary, confirmation of the STX genes in the isolates.

Reporting

Qlip must comply with the guideline for reporting thet STEC research as laid down in document SAP-L009 of the Accreditation Council. The presence/absence of the stx genes and the eae genes must be indicated. The presence/absence of the stx genes provides an indication of whether shiga toxin (toxin) can be formed. The next steps depend on this result. The eae genes are an indication of virulence.

STEC research is carried out in the dairy sector in products based on raw milk. Below is an overview of the various options for reporting the results for STEC analyses. A distinction can be made between the STEC analysis without confirmation and with confirmation:

STEC analysis:



STEC ANALYSIS	Screening result	Screening report
Without confirmation	STX-	Not detectable
	STX+	Presumed presence (*)
with attachment	STX-	Not detectable
	STX+	See confirmation

STEC ANALYSIS	Confirmation result	Confirmation reporting
with attachment	STX-	Presumed presence
	STX+	Detectable (*)

(*) if this result is reported for ready-to-eat (dairy) products, action must be taken.

An explanation of the screening and confirmation report is available via this link.

Test specifications

Testcodes (accredited):
BF7870e, BF7871e, BF7872e and BF7879e

Matrices:
- Raw milk and dairy products, including raw milk, butter, farm- and soft cheese
- Heat treated milk and dairy products

Method:

PCR technique and if necessary followed by confirmation equivalent to NPR-CEN-ISO/TS 13136 (MicroVal 2021LR96).

Measurement result:
Detectable, presumed presence or not detectable

Turnaround time analysis:
10 days after sample receipt

Sample quantity:

Depending on the quantity to be tested 25 ml, 25g or 125g

Qlip

The analyses performed under ISO 17025:2017 accreditation at Qlip are listed on the RVA site.