

Shiga toxin-producing Escherichia coli Scheme







This microbiology molecular scheme provides proficiency testing (PT) samples to laboratories that analyse food samples for Shiga toxin-producing *Escherichia coli* (STEC) in accordance with European legislation Commission Regulation (EU) No 209/2013 amending Regulation (EC) No 2073/2005 as regards microbiological criteria for sprouts and the sampling rules for poultry carcases and fresh poultry meat.

The scheme focuses on raising awareness of:

- the variations in the molecular methods used which can highlight differences in PT results obtained
- the limitation of molecular methods available on the market
- updates and compliance with ISO methods or other standards
- the correct interpretation to apply on PCR results obtained

This PT scheme helps you to identify gaps in your processes, highlighting where quality improvements can be made. It also provides an opportunity to improve staffs knowledge and experience with organisms not frequently encountered.

The scheme challenges laboratories in detection of the major virulence genes associated with *E. coli* serogroups O157, O111, O26, O103, O145 and O104:H4 (STEC). The scheme also focuses on detection of *stx*-coding genes in *E. coli* cultures, for their identification as STEC. The determination of the presence of the intimin-coding gene *eae* is also included, since it is considered a hallmark of STEC strains pathogenic to humans.

Two distributions are available each year, each containing two samples

Note: The samples are prepared using killed STEC micro-organisms therefore the enrichment part of the test process is not included in the scheme design and cannot be assessed. This scheme is only suitable for examination by molecular methods and can be handled in a containment level 2



Your laboratory's personalised report will contain information such as:

- the contents and the levels of the samples
- performance data for each examination for you to compare your performance against other laboratories
- your on-going performance over a year which demonstrates your commitment to quality to clients and colleagues
- relevant actions to take to ensure that your laboratory retains high standards
- educational information on difficult and challenging samples

For your investigation repeat samples are provided free of charge and further expertise can be provided by our panel of renowned food and water microbiologists

Satisfactory performance with your PT provides assurance that your laboratory is compliant with testing standards, thereby meeting and maintaining accreditation requirements.



Assisting laboratories world wide in maintaining standards of excellence



Food, water and environmental laboratories play a vital role in protecting the public's health by helping to ensure that food is safe to consume, waters are safe to drink and that environmental and recreational waters do not make people ill.

Proficiency testing or external quality assessment provides laboratories with an independent external assessment of their performance. Regular participation in proficiency testing schemes is an important part of laboratories quality procedures and helps to ensure that the results of their tests are accurate.

With over 25 years of experience, UK Health Security Agency's Food and Environmental Proficiency Testing Unit is a world leader in providing microbiology proficiency testing schemes to food, water and environmental laboratories both in the UK and in over 70 countries internationally.

Our dedicated team of experts has unrivalled professional, scientific and technical expertise in proficiency testing. Participants also have the additional advantage of drawing on the full scientific resources of UK Health Security Agency.

Benefits of participating in UK Health Security Agency's food and water proficiency testing schemes:

- Unique schemes provided:
 - that support both EU and non-EU legislation
 - inclusion of organisms such as *Mycobacterium* spp. in endoscope and cardiac cooler waters
 - Molecular scheme for Shiga toxin-producing Escherichia coli
 - Vibrio cholerae testing
 - Staphylococcus aureus Enterotoxin
 - Norovirus and Hepatitis A virus
- Free of charge repeat samples
- Access to expert food and water microbiologists
- · Bespoke schemes reports provided
- · UKHSA and z-scores provided in some scheme reports
- Ability to make extremely low level samples
- On-going performance assessment in the reports
- Samples provided in easy to use LENTICULE[®] discs
- · Team members that speak several languages

PT Schemes available include:

Environmental Swab

European Food Microbiology Legislation

Standard Scheme

Non-Pathogen

Norovirus and Hepatitis A virus*

Pathogenic Vibrio

Shellfish

Shiga toxin-producing Escherichia coli

Staphylococcus aureus enterotoxin

Bottled and Mineral Water

Dialysis Water

Drinking Water

Endoscope Rinse Water

Hospital Tap Water

Legionella Isolation

Legionella Molecular

Recreational and Surface Water

Mycobacterium spp. in Water