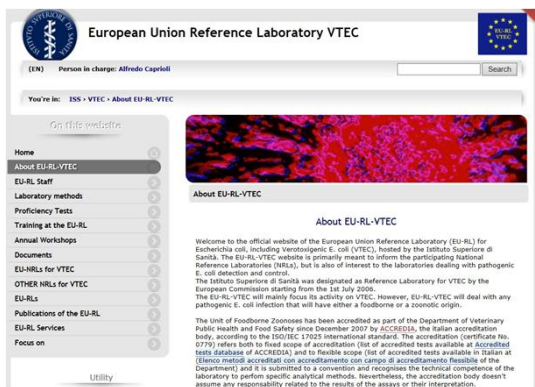


Detection and typing of Verocytotoxin-producing *Escherichia coli* (VTEC): the proficiency test program of the European Union Reference Laboratory

Clarissa Ferreri¹, Stefano Morabito¹, Gaia Scavia¹, Rosangela Tozzoli¹, Antonella Maugliani¹, Fabio Minelli¹, Maria Luisa Marziano¹, Susan Babsa¹, Fabio Galati², Marina Patriarca¹, Alfredo Caprioli¹

¹ DSPVSA and ² SIDBAE, Istituto Superiore di Sanità, Rome, Italy



A web-based platform for submitting the PT results was developed and used since 2010.

Workflow of the platform

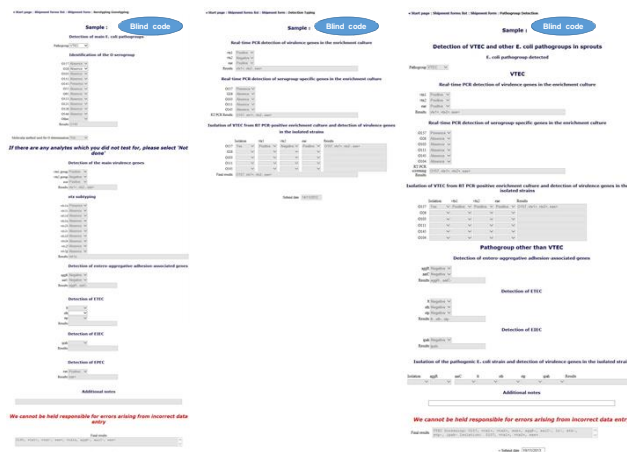
Login in the Restricted Area



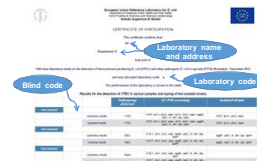
Complete the Shipment Form



Select the sample and submit the Results in the form specific for every type of analysis



After the deadline download the Individual Report



Since 2006, the EU-RL has developed and evaluated standard operating procedures for the identification and typing of VTEC and for their detection in food, mainly based on PCR detection of virulence genes. In particular, it coordinated the development of the Technical Specification CEN/ISO/TS 13136:2012 on the detection of VTEC in food and animal feed, based on the Real Time PCR (RT-PCR) screening of food enrichment cultures.

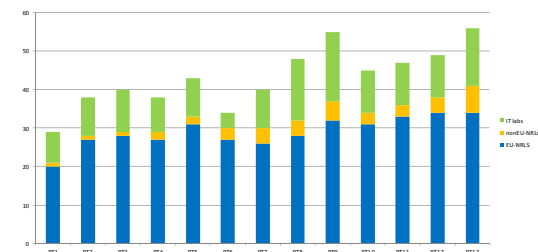


Fig. 1: Participation of EU-NRLs, nonEU-NRLs and Italian official laboratories in the PT schemes of the EU-RL VTEC (2007-2014)

PT organized

7 PTs on the identification and typing of pathogenic *E. coli* strains:

detection of virulence genes by PCR and identification of the VTEC serogroups by serological and molecular methods. The last three PTs also included molecular typing by PFGE.

6 PTs on the detection of VTEC in different matrices: carcass swabs, milk, spinach, water, seeds and sprouts analyzed by using CEN/ISO/TS 13136.

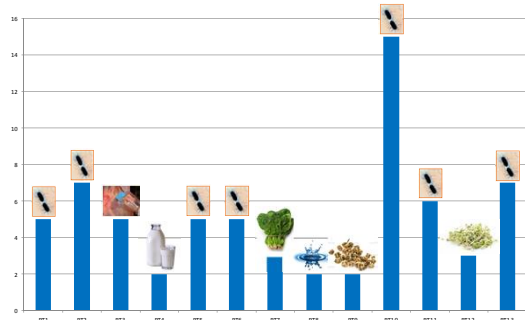


Fig. 2: Matrices and number samples in the PTs of the EU-RL VTEC (2007-2014)

Between 2007 and 2014, a positive trend was observed in both the number of participants (from 30 to over 50) and their performance.

Conclusions

