

REFERENCE LABORATORY FOR *ESCHERICHIA COLI* FOR FOOD OF PLANT ORIGIN

LABORATORY OF DEPARTMENT OF
FOOD AND CONSUMER ARTICLES
RESEARCH

NATIONAL INSTITUTE OF PUBLIC
HEALTH-NATIONAL INSTITUTE OF
HYGIENE

WARSAW

2 National Reference Laboratories for *E. coli* in POLAND

- National Veterinary Research Institute in Pulawy – for animal products
- National Institute of Public Health-National Institute of Hygiene in Warsaw – for non-animal products and products from retail



Food samples from retail in 2009 (200 samples)



beef products	- 24%
pork products	- 20%
poultry products	- 19%
vegetables	- 19%
herbs and spices	- 6%
sprouts	- 5%
salads	- 3%
juice unpasteurized	- 2%
giblets	- 2%

The Laboratory isolated only 3 strains of *E. coli* O 157 (including genes vtx1, vtx2 and eae)



Activity of Laboratory of Food Microbiology

Introducing of PCR:

examination of strains of *E. coli* O 157
isolated from food

*including genes: vtx1, vtx2 and
eae*



Activity of Laboratory of Food Microbiology



Preparation of the National Plan of Sampling for official control for State Sanitary Inspectorate with the introduction for the first time:

- in 2009 examination of *E. coli* O 157 in vegetables from retail and
- in 2010 in meat and meat products from retail



The results:

In 2009 State Sanitary Inspectorate laboratories isolated only 5 strains of *E. coli* O 157 from vegetables (about 800 examined samples from retail)



- four of them including vtx1 and vtx2.



LABORATORY OF FOOD MICROBIOLOGY

ACTIVITIES AS A NATIONAL REFERENCE LABORATORY



- providing training for State Sanitary Inspection laboratories
- organizing proficiency tests for State Sanitary Inspection laboratories



Enterohaemorrhagic *E.coli* in Poland- by Department of Epidemiology of National Institute of Hygiene



	2006	2007	2009
Number of cases	5	3	5
Incidence per 100,000 population	0,01	0,005	0,01
Number and percentage of hospitalization	1(25%)	1(33%)	2(40%)



CONCLUSIONS

- *strains of E. coli* O 157 are seldom isolated in Poland

low risk of foodborne for people in Poland



A scanning electron micrograph (SEM) showing numerous rod-shaped Escherichia coli bacteria. The bacteria are reddish-orange in color and are scattered across a green, textured background. Some bacteria are in pairs, while others are single. The overall appearance is that of a dense population of these microorganisms.

Thank You

Escherichia.com