Experience of the first Italian public veterinary institute accredited as provider of food microbiological proficiency testing in conformity to ISO/IEC 17043

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### Bibliography
1. ISO/IEC 17025:2005 – General requirements for the competence of testing and calibration laboratories
2. ISO/IEC 17043:2010 – Conformity assessment – General requirements for proficiency testing
5. ISO/TS 22117:2010 – Microbiology of food and animal feeding stuffs – specific requirements and guidance for proficiency testing by interlaboratory comparison

### Accreditation experience
Following the accreditation experience, measures were taken to improve and optimize some managerial aspects. The activities included:
- formalization of a group of technical experts, encompassing key figures inside the PT provider itself;
- editing and formalization of the terms of sale;
- development of a web site for the submission of results from each participant; publication of documents and reports;
- a customer satisfaction survey, resulting in 47% feedback, which also provided several valuable suggestions which were used to improve the quality system;
- organization of two conferences on ISO/IEC 17043 and PT provider management.

### Performance evaluation:
- CFU quantitative method: z-score obtained using the assigned value as a consensus value from participants and the standard deviation for proficiency assessment equal to 0.25log_{10}
- MPN quantitative methods: range of acceptability according to the ISO/TS 22117:2010

### Other activities implemented to enhance the PT program included:
- periodical re-training of key personnel for all PT processes, to demonstrate improvements in competences and skills;
- drafting out annual trend performance reports, to yearly evaluate the conformity of the PT and to outline any difference between the expected values and the assigned values;
- production of annual reports to be submitted to each participant, to verify its annual performances.

### Table: Food microbiology Tests

<table>
<thead>
<tr>
<th>Round</th>
<th>Food microbiology Tests</th>
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</thead>
<tbody>
<tr>
<td>MA1</td>
<td>Enumeration of mesophilic microorganisms Detection of staphylococcal enterotoxins</td>
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<tr>
<td>MA2</td>
<td>Enumeration of Bacillus cereus Enumeration of Escherichia coli (MPN) Detection of Salmonella spp.</td>
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<tr>
<td>MA3</td>
<td>Enumeration of Campylobacter spp. Detection of Campylobacter spp. Detection of Escherichia coli O157</td>
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<tr>
<td>MA4</td>
<td>Enumeration of Escherichia coli Enumeration of Clostrids Enumeration of Enterobacteriaceae</td>
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<tr>
<td>MA5</td>
<td>Enumeration of Listeria monocytogenes (CFU) Enumeration of Listeria monocytogenes (MPN) Detection of Cronobacter sakazakii</td>
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<tr>
<td>MA6</td>
<td>Detection of Listeria monocytogenes Detection of Yersinia enterocolitica</td>
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<tr>
<td>MA7</td>
<td>Enumeration of sulphite-reducing bacteria Enumeration of Clostridium perfringens Detection of Salmonella spp.</td>
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