

PROJECT DELIVERABLE

Collaborative project: Large-scale integrating project

Project acronym: BASELINE

Project title: Selection and improving of fit-for-purpose sampling procedures for specific foods and risks

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D7.3	A validated DNA-array method that can specifically identify Salmonella for which there are set targets.	7	ISS	R	PU	M48

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1 Scope

The aim of this deliverable is to validate a method based on the use of the DNA array as reported in deliverables 2.3.

The DNA array have to be able for discrimination of *Salmonella* serovars. This method should be very useful to substitute the classical serotype method that is very specific but expensive and time-consuming. Mainly the purpose of the method was to evaluate the possibility to specifically identify the five serovars of *Salmonella* that are mentioned in the FSO for laying hens.

A validation of an alternative method should be very important to substitute classical serotyping methods. An evaluation of a universal DNA micro array prototype with random probe sequences for discrimination was tested in WP2.

2 Normative references

The following referenced documents are indispensable for validating alternative methods.

ISO 7218, Microbiology of food and animal feeding stuffs - General requirements and guidance for microbiological examinations

ISO 11290-1 Microbiology of food and animal feeding stuffs -- Horizontal method for the detection and enumeration of *Listeria monocytogenes* -- Part 1: Detection method + Amd. 1:2004

ISO 20837, Microbiology of food and animal feeding stuffs -- Polymerase chain reaction (PCR) for the detection of food-borne pathogens -- Requirements for sample preparation for qualitative detection

ISO 20838, Microbiology of food and animal feeding stuffs -- Polymerase chain reaction (PCR) for the detection of food-borne pathogens -- Requirements for amplification and detection for qualitative methods

ISO 22174, Microbiology of food and animal feeding stuffs -- Polymerase chain reaction (PCR) for the detection of food-borne pathogens -- General requirements and definitions

ISO 22119, Microbiology of food and animal feeding stuffs -- Real-time polymerase chain reaction (PCR) for the detection of food-borne pathogens -- General requirements and definitions

ISO 6887-2 Microbiology of food and animal feeding stuffs -- Preparation of test samples, initial suspension and decimal dilutions for microbiological examination -- Part 2: Specific rules for the preparation of meat and meat products

ISO 16140 Microbiology of food and animal feeding stuffs -- Protocol for the validation of alternative methods

3 Results

At the mid-term review of the BASELINE project, the review committee judged this method to be less suitable for industrial use than PCR. Based on the disappointing results and this judgment by the review committee, no further work, included the validation, has been performed in BASELINE on this method.

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