National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Workprogramme EURL-*Salmonella* 2020-2021 Closure

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EURL *Salmonella*

Work programme 2020-2021

- Current 2-years' work programme (2019-2020) was submitted to DG-SANTE in December 2018.
- Deadline for submission next year(s) work programme not yet known.
- Template for drafting work programme, follows Regulation (EU) 625/2017, Article 94(2).

Since March 2020 new contact (desk officer)

At DG SANTE:

Jean-Baptiste Perrin

Work programme 2021-2022

- The National Institute for Public Health and the Environment (RIVM), where EURL-*Salmonella* is situated, is building a new building in Utrecht.
- Currently all departments at RIVM are busy with preparations for the movement to the new building.
- Actual movement not yet set; current planning: end 2021/ early 2022.
- Movement may affect some of the activities of the EURL (e.g. necessary to postpone a PT). If so, EC and NRLs will be informed asap.

Activity 1

'To ensure availability and use of high quality methods and to ensure high quality performance by NRLs.'

Sub-activity 1.1 Analytical methods

Objectives:

- Standardisation of methods (ISO and CEN).
- Keep track of developments in (alternative) methods.
- Provide NRLs with information on developments of relevant (standardised/new) analytical methods.

2020 - Activities in ISO and CEN - I

March 2020 publication of **EN ISO 6579-1:2017/Amd.1:2020** 'Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 1: Detection of *Salmonella* spp. - Amendment 1: Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC'.

Main amendments:

- The temperature range for incubation of selective media has been extended from 37 °C ± 1 °C to 34 °C to 38 °C;
- Correction of composition of MSRV-agar (Annex B.4) prepared from individual ingredients (final concentration of $MgCl_2$ was not correct);
- The status of Annex D on detection of *Salmonella* Typhi and *Salmonella* Paratyphi was changed from normative to informative;
- Correction of composition of selenite cystine broth (Annex D.3). Volume L-cystine corrected to 10 ml (instead of 100 ml).

2020 - Activities in ISO and CEN - II

18 May – 16 August 2020 voting for launching **New Work Item Proposal** (NWIP) in ISO and CEN of 'Draft **CEN ISO/TS 6579-4** 'Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 4: Identification of monophasic *Salmonella* Typhimurium (1,4,[5],12:i:-) by polymerase chain reaction (PCR)'.

- **Outcome voting** in ISO and CEN: 100% approval and few comments.
- Next steps:
  - Prepare document in CEN/ISO format;
  - Review comments;
  - Discuss document and next steps in ISO-WG10 (probably November 2020).

2020 - Activities in ISO and CEN - III

ISO 16140 Method validation parts 3-6:

- **Part 3**: 'Protocol for the verification of reference and validated alternative methods implemented in a single laboratory'. Voting for Final Draft International Standard (FDIS) expected fall 2020.
- **Part 4**: 'Protocol for single-laboratory (in-house) method validation' and **Part 5**: 'Protocol for factorial interlaboratory validation of non-proprietary methods'. Second FDIS votings Feb-April 2020: 100% approval. Publication in July 2020.
- **Part 6**: 'Protocol for the validation of alternative (proprietary) methods for microbiological confirmation and typing procedures'. EN ISO 16140-6 published December 2019.

2020 - Activities in ISO and CEN - IV

Draft EN ISO 23418 'Microbiology of the Food Chain — Whole genome sequencing for typing and genomic characterization of foodborne bacteria — General requirements and guidance'.

- May-July 2019 Voting for Committee Draft (CD): 15x approval, 6x approval with comments, 1 disapproval, 12x abstention.
- August 2019 – March 2020: Discussion on comments, amendment of EN ISO document, especially information on metadata (has become informative).
- Voting for Draft International Standard (DIS) expected in fall 2020.

Future activities in ISO and CEN

Activities in ISO/TC34/SC9 and CEN/TC463 (Microbiology of the Food chain) for which EURL-*Salmonella* is project leader (pl) or member:

- ISO-AHG1 on **harmonisation of ISO/CEN standards** for microbiology of the food chain (pl): annual update of guidance document; Edition 3 to be published in 2021.
- ISO-AHG4 on **validation status** of ISO/CEN standards (member).
- ISO-WG3 **Method validation**: comment on EN ISO 16140-3. Revision of EN ISO 17468 'Validation of ISO/CEN standards' (co-pl).
- ISO-WG10 (pl) – development of **CEN ISO/TS 6579-4** PCR identification of monophasic *Salmonella* Typhimurium; organisation of validation study in 2021 or 2022.
- ISO-WG25 Whole genome sequencing (member).
- CEN-TAG9 Improvement of the pre-enrichment step (member): 2020 stand still due to lack of convenor.

Sub-Activity 1.2 EURLs working group on NGS

Objectives:

- Promote the use of NGS across the EURLs' networks.
- Build capacity on producing and using NGS data within the EU.
- Ensure liaison with the work of the EURLs and the work of EFSA and ECDC on NGS.

Description:

- Working group exists of 8 biological EURLs (AMR, *Campylobacter*, *E. coli*, *Listeria monocytogenes*, Parasites, *Salmonella*, Staphylococci, Foodborne Viruses)

EURLs working group on NGS

- 8 Activities in relation to NGS have been defined:

1) Proficiency Testing
2) NGS laboratory procedures (SOPs)
3) Bioinformatics tools
4) Cluster analysis of WGS data
5) Bench marking
6) Trainings on NGS
7) Reference and confirmatory testing using NGS
8) Follow-up of ISO-activities on WGS

- For each activity guidance documents will be prepared and published on websites EURLs.
- 2020: Several guidance documents available in draft – will be discussed with WG, and amended before publication at the websites.
- 25-09-2020: Online conference organised with support of the Med-Vet-Net association 'Modern technologies to enable response to crises: Next Generation Sequencing to tackle food-borne diseases in the EU'.
- Joint EURLs training on NGS postponed to 2021.

Sub-Activity 1.3 Proficiency Tests (I)

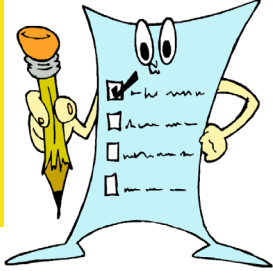
Objectives:

- Organisation of Proficiency Tests (PTs) to gain information on the performance of the NRLs-*Salmonella* for detection and typing of *Salmonella.*

Description:

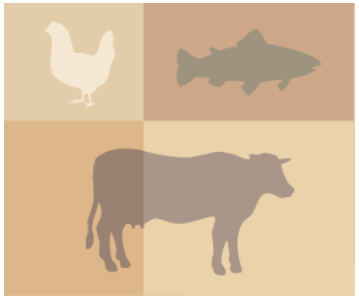
Organisation of 3 Proficiency Tests per year:

1. One study on detection of *Salmonella* in samples from the primary production stage.
2. One study on detection of *Salmonella* in food or animal feed samples.
3. One study on typing of *Salmonella* (serotyping, molecular typing).



Sub-Activity 1.3 Proficiency Tests (II)

- Sept/Oct 2020: **Combined PT for Primary Production Stage (PPS) and Food** - on detection of *Salmonella* hygiene swabs. NRLs-*Salmonella* analysing PPS samples as well as Food samples can participate (obligatory for NRLs-PPS).
- November 2020: **PT on typing** of *Salmonella* – serotyping (obligatory) and cluster analysis (voluntary).
- Approx. March 2021: PT on detection of *Salmonella* in food or animal feed samples: matrix not yet decided.



Activity 2

'To Provide scientific and technical assistance to NRLs.'

Sub-activity 2.1 Workshop

Objectives:

- Exchange of information on the activities of the NRLs-*Salmonella* and the EURL-*Salmonella*. Exchange of information on (new) developments in the relevant work field.

Description:

- 2021: Depending on the situation with COVID-19, organisation of an online meeting or a physical meeting. Probably end of May 2021.

Sub-Activity 2.2 Training courses

Objectives:

- To train NRLs-*Salmonella* in a specific work field.

Description:

Physical training courses will depend on the situation with COVID-19.

1. Training upon request of an NRL – current requests postponed to 2021.
2. Training upon advise of the EURL (e.g. in case of repeated poor performance in PTs).
3. Joint EURLs training on WGS (basics) – postponed to 2021.

Sub-Activity 2.3 Scientific advice and support NRLs

Objectives and description:

- Provide scientific and technical assistance to the NRLs-*Salmonella* for the relevant work field.
- Perform confirmatory testing (samples/isolates) for NRLs-*Salmonella* when needed.
- Perform WGS analysis of isolates of NRLs-*Salmonella* for outbreak investigations.
- Maintenance of the EURL-*Salmonella* website and updating the information on the website.
- Inform the NRLs of the activities of the EURL and other parties in the relevant work field, as well as of developments in this field.
- Publication of 4 newsletters per year, through the website.

Activity 3

'To Provide scientific and technical assistance to the European Commission and other organisations.'

Sub-activity 3.1 Scientific advice and support of EC and other organisations

Objectives:

- Provide scientific and technical assistance to EC DG SANTE for the relevant work field.
- Provide assistance to DG SANTE, EFSA and (NRLs of) Member States in case of (international) *Salmonella* outbreaks.
- Collaborate with EFSA and ECDC for the relevant work field.
- Cooperation with other biological EURLs.

Sub-Activity 3.1 Scientific advice and support EC

Description:

- Ad hoc scientific and technical assistance of DG SANTE.
- Participation in working groups/scientific committees DG SANTE, EFSA, like EFSA-ECDC Steering Committee of molecular database.
- Assistance of DG SANTE, EFSA, NRLs and ECDC in case of outbreaks, e.g consultation of NRL network for specific information, (sub)typing of suspect isolates (MLVA, WGS), analysis of data.

Salmonella events/outbreaks and monitoring

- WGS is nowadays the method of choice for sub-typing isolates in case of outbreak investigations.
- In 2020, so far, EURL-*Salmonella* involved (to a certain extent) in approx. 6 events/outbreak investigations.
- In 2020: On behalf of EFSA and ECDC, EURL-*Salmonella* is monitoring the incidence of *Salmonella* Mikawasima in food (products), animals, animal feed or the environment. Findings of *Salmonella* Mikawasima can be reported using the link at the EURL-*Salmonella* website: https://www.eurlsalmonella.eu/about-eurl.

Activity 4 Reagents and reference collections

Sub-activity 4.1 Reference strains and reference materials

Objectives:

- Supply information on available culture collections and suppliers of microbiological reference materials.

Description:

- Provide link to WKLM scheme, keep contacts with WHO ref centre.
- Reference to culture collections and reference materials at website.
- Maintenance in-house culture collection.
- Provide sets of reference strains (SE and STm) for MLVA typing.
- Subactivity 4.1 is merged with 2.3 (support NRLs; keeping information on website up to date).

Other items

Salmonella, key facts 2018 from EUOHZ

EUOHZ: the European Union One Health Zoonoses report

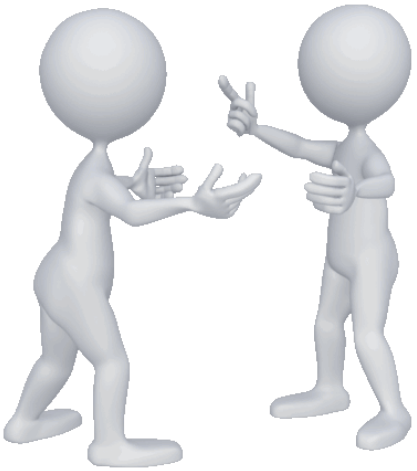
- Salmonellosis remains the **second most reported** gastrointestinal infection in humans after campylobacteriosis.
- In 2018, 91,857 confirmed cases of salmonellosis in humans were reported with an **EU notification rate 20.1** cases per 100 000 population, which was **at the same level as in 2017**.
- **The trend for salmonellosis in humans has stabilised** over the last five years after a long period of a declining trend.
- *Salmonella* the most **common cause of foodborne outbreaks** in the EU. In total, 1,580 FBOs and one waterborne outbreak of salmonellosis were reported by 24 EU MS in 2018. *Salmonella* caused 30.7% – **almost one in three – of all FBOs during 2018**, causing 11,581 human cases, which was an increase of 20.6% compared with 2017. As in the previous years, most of the *Salmonella* outbreaks were caused by *S*. Enteritidis.
- ***Salmonella*** and ***S*. Enteritidis** FBOs were during 2018 mostly **caused** by **'eggs and egg products',** followed by **'bakery products'** and **'mixed food',** as during previous years.

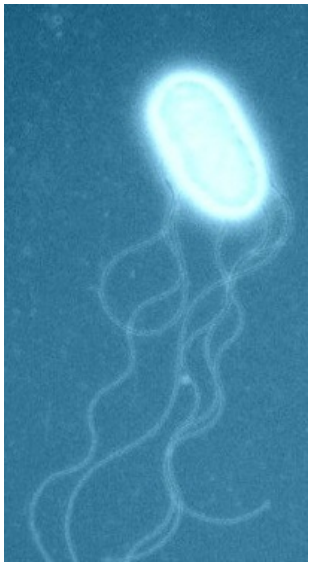
Salmonella, key facts 2018 from EUOHZ

European Food Safety Authority

- In food, the highest levels of *Salmonella-positive* samples occurred in **poultry meat and other meat, intended to be cooked before consumption**.
- The samples of Food business operators from **pig carcasses**, and from **turkey and broiler flocks** had a significantly lower proportion positives compared to Competent Authorities' samples, like in 2017.
- A **decreasing trend** in the prevalence of the **target *Salmonella* serovar-positive flocks** was observed in different poultry categories in during 2007-2018.
- The prevalence of ***Salmonella*-positive poultry flocks** tends to **slightly increase** over time since the start of the National Control Programmes (2007-2010).
- ***S*. Infantis** was the most reported serovar in fowl (*Gallus gallus*), accounting for 36.7% of the serotyped isolates. *S*. Infantis was massively reported from broilers (36.5% of all serotyped isolates) and from broiler meat (56.7%).

Questions? Remarks?
Other items to be discussed?

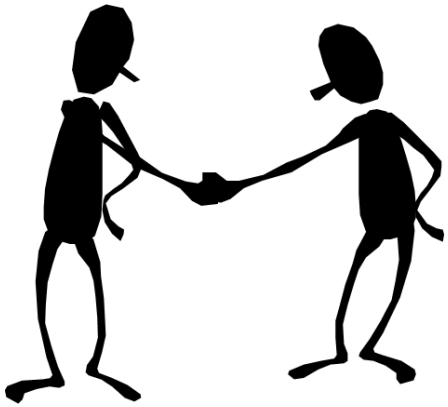




Closure

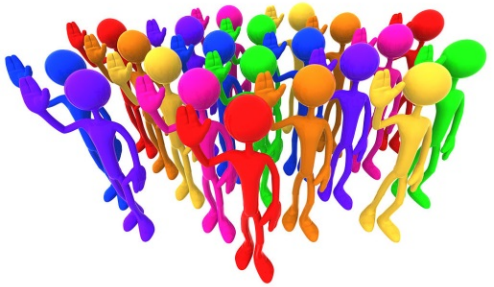
- This afternoon we will send a link to an **evaluation form**. Thank you for completing it by **30 September 2020 at latest**. Information in the completed form is anonymous.
- We plan to publish the **presentations**, in pdf format, on the EURL-*Salmonella* website in the coming week(s). If not allowed, or if amendment is needed before publication, please inform us by e-mail (EURLSalmonella@rivm.nl) asap.
- For the ones who gave a presentation(s): please send **abstract**(s) as soon as possible (if not already done), **at latest by 30 September 2020.**

Thank you very much for your attention!



Thank you all

- European Commission
- Speakers
- Participants
- EURL-staff



Stay healthy!!