
**PROTOCOL OF THE 15TH INTERLABORATORY COMPARISON
STUDY (NOVEMBER 2010) ON SEROTYPING AND PHAGE TYPING
OF *SALMONELLA* STRAINS, FOR THE NRL-*SALMONELLA*
LABORATORIES**

Introduction

The European Union Reference Laboratory (EU-RL) - *Salmonella* organises the fifteenth interlaboratory comparison study on the typing of *Salmonella* strains amongst the National Reference Laboratories for *Salmonella* (NRLs-*Salmonella*).

The main objective of this typing study is to test the performance of the participating laboratories for serotyping and phage typing of *Salmonella* spp.

The study will take place in week 46 (starting on 15 November 2010). The timetable can be found on the last page of this protocol.

All data have to be reported in the test report, sent to the CRL-*Salmonella* and will be used for analysis. The data on phage typing will be forwarded by CRL-*Salmonella* to the Health Protection Agency (HPA, London, United Kingdom) for further analyses.

Transportation of the *Salmonella* strains to the laboratories

The strains for the serotyping part and the phage typing part of the study will be transported in a separate parcel. The strains will be sent as Biological Substance Category B (UN 3373) with a door-to-door courier to your laboratory.

Serotyping

A total number of 20 *Salmonella* strains (coded S1 - S20) have to be serotyped. The method routinely performed in your laboratory can be used in this study. Each laboratory is allowed to send strains for serotyping to another reference laboratory in their country, if this is part of the normal routine procedure.

The results for each strain have to be reported with the formula for the O-antigens and H-antigens **and** the serovar names according to the White-Kauffman-le Minor scheme of 2007 (<http://www.pasteur.fr/ip/portal/action/WebdriveActionEvent/oid/01s-000036-089>).

Definite conclusions can only be based on agglutination with mono-specific antisera. Otherwise it is better to identify the strains by giving the antigenic formula as far as detected.

The evaluation of the serotyping results will be performed by the Laboratory for Zoonoses and Environmental Microbiology (LZO) and the Laboratory for Infectious Diseases and Perinatal Screening (LIS) of the RIVM according to Table 1.

Table 1 Evaluation of serotyping results

Results	Evaluation	Abbreviation
Auto-agglutination or Incomplete set of antisera (outside range of antisera)	Not typable	NT
Partly typable due to incomplete set of antisera or Part of the formula (for the name of the serovar) or No name serovar	Partly correct	+/-
Wrong serovar or mixed sera formula	Incorrect	-

Recent information revealed that colonial form variation may occur with the expression of the O:6₁ antigen by some serogroup C₂ serovars (Hendriksen et al., J Clin Microbiol 47(9): 2729-2736). Also for this third EQA scheme on serotyping it was decided to consider the serovar pairs concerned (e.g. as *S. Newport/S. Bardo* and *S. Hadar/S. Istanbul* in the second EQA) not as distinct serovars.

Phage typing

A total number of 20 *Salmonella* strains have to be phage typed:

- 10 strains of *S. Enteritidis* coded E1 - E10
- 10 strains of *S. Typhimurium* coded T1 - T10

The evaluation of the phage typing results will be done in collaboration with the *Salmonella* Reference Unit of the HPA.

Please record all test results in the separately provided Test Report file and return this file by e-mail to wilma.jacobs@rivm.nl on **10 December 2010 at the latest**.

A check-up by the participants of the submitted results is no longer needed when the results are sent by email in the provided file format. This will save time, *but participants need to be sure to fill in the right results at once*.

If you have questions or remarks about this study, please contact:

Wilma Jacobs
P.O. Box 1
3720 BA Bilthoven
tel. number: +31-30-2744290
fax. number: +31-30-2744434
e-mail: wilma.jacobs@rivm.nl

If you have questions or remarks on the phage typing, please contact:

Elizabeth de Pinna
Public Health Laboratory Service, Laboratory of Enteric Pathogens
61 Colindale Avenue, London NW9 5HT
tel. number: + 44-20-8327 6136
fax number: + 44-20-8905 9929
e-mail: Elizabeth.DePinna@HPA.org.uk

**Timetable of the 15th interlaboratory comparison study (2010) on
serotyping and phage typing of *Salmonella* spp.
for NRLs-*Salmonella***

Week	Date	Topic
43	25-29 October	Mailing of the protocol and test report 2010.
45	8-12 November	Mailing of the parcels to the participants as diagnostic specimens by door-to-door courier service. After arrival at the laboratory the strains need to be sub-cultured and stored until the performance of the typing. If you did not receive the parcel by 12 November, do contact the CRL-<i>Salmonella</i> immediately.
46	15-19 November	Starting with the identification of the strains.
49	6-10 December	Send the electronically completed test report by email to the CRL- <i>Salmonella</i> . Deadline: 10 December 2010
50	13-17 December	Data input at the CRL- <i>Salmonella</i> . A check-up of the submitted results by the NRLs is no longer needed when the results are sent by email in the provided excel file format. This will save time, but NRLs need to be sure to fill out the right results at once.
	January 2011	Reporting of individual laboratory results.
	March 2011	Interim Summary Report.
	Summer 2011	Final report.