



# NORDIC COOPERATION FOR PROFICIENCY TESTING OF REGIONAL LABORATORIES

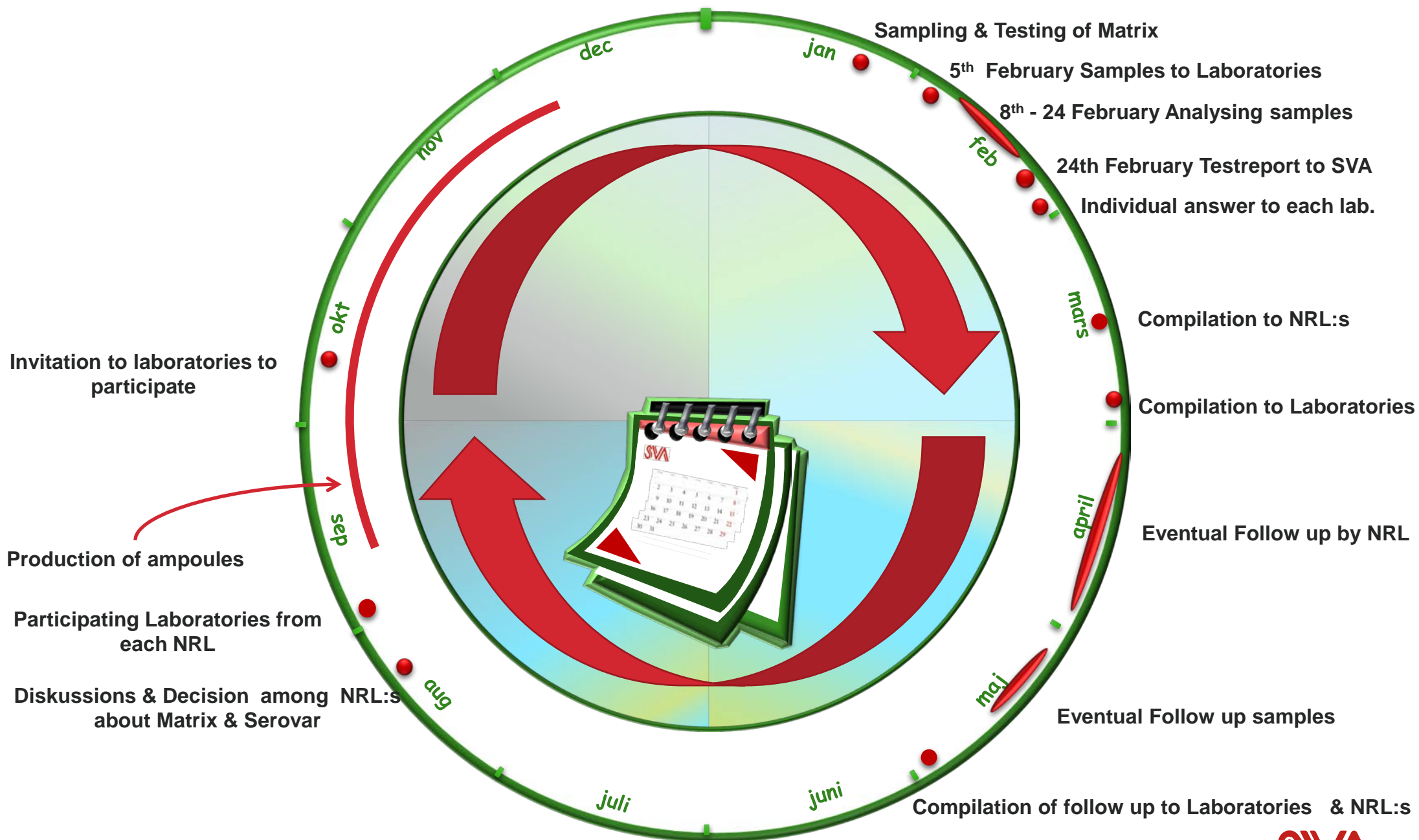
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# *BACKGROUND*



- This a joint venture between the NRL:s in
  - Denmark
  - Finland
  - Norway
  - Sweden
- 10 year anniversary 2016
- Primary production Faeces
  - Bovine
  - Pig
  - Poultry

# PLANNING WHEEL SCANDINAVIAN PT



RESULTS OF ISOLATION USING MSRV (9<sup>th</sup> Scandinavian Interlaboratory comparison of Salmonella in material from animal production)

Salmonella	Cfu/ampoul	Lab 1 *)		Lab 2		Lab 3		Lab 4		Lab 5		Lab 6		Lab 7		Lab 8 **)		Lab 9 **)		Lab 10		Lab 11		Lab 12 ***)		Lab 13 ***)		Lab 14		Lab 15		Lab 16		Lab 17		Lab 18		Lab 19		Demand NRL (correct/total)	
		XLD(n)	BG	XLD(n)	BSA	XLD	HS	XLD	RB	XLD	BG	XLD(n)	BG	XLD	BG	XLD	BG	XLD	BG	XLD	BG	XLD	önöz	XLD	RB	XLD	RB	XLD	HEA	XLD	önöz	XLD	RS	XLD(n)	RB	XLD	önöz	XLD	BG		
Blank	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5/5		
Blank	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5/5	
Blank	0			-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5/5	
Blank	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5/5	
Blank	0			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5/5	
S. Dublin	15			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	15			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	15			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	15			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	15			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	90			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	90			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	90			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Dublin	90			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm (no H <sub>2</sub> S)	75			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm (no H <sub>2</sub> S)	75			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm (no H <sub>2</sub> S)	75			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm (no H <sub>2</sub> S)	75			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm (no H <sub>2</sub> S)	75			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm	20			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm	20			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm	20			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm	20			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
S. Tm	20			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	≥ 4/5
				25	25	25	25	25	24	25	23	20	25	25	20	22	25	24	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	

Second Plating-out medium used

Used by

(+) = Salmonella Detected after 24 h
(+) = Salmonella Detected after 48 h
(-) = Salmonella not detected
Red = Not a Corecct answer
Good Performance
Below Good Performance

<b>XLD (n)</b>	Xylose Lysine Deoxycholate agar (+0,15% neomycin) (Himedia / Thermo / Oxoid)	4 Laboratories
<b>XLD</b>	Xylose Lysine Deoxycholate agar (Himedia / Thermo / Oxoid / LabM)	14 Laboratories
<b>BG</b>	Briliant green agar (Himedia / Oxoid / Merc)	7 Laboratories
<b>BSA</b>	Briliant Salmonella Agar (Thermo)	1 Laboratories
<b>RB</b>	Rambach agar (Merc) (Merc / Tammertutkanmaljat OY)	4 Laboratories
<b>HS</b>	Harlequin Salmonella ABC (LabM)	1 Laboratories
<b>HEA</b>	Hectoen Enteric Agar (Becton Dickinson Difco)	1 Laboratories
<b>RS</b>	Rapid Salmonella (BIORAD 356-4705) (Biorad)	1 Laboratories
<b>önNöZ</b>	(Himedia M 573) (Himedia)	3 Laboratories



RESULTS OF ISOLATION USING  
NMKL (4 lab.)

Salmonella	Cfu/ ampoul	Lab 1		Lab 2		Lab 16		Lab 17	
		XLD(n)	BG	XLD	BG	XLD	RS	XLD	BG
Blank	0	+	+	-	-	-	-	-	-
Blank	0	-	-	-	-	-	-	-	-
Blank	0	-	-	-	-	-	-	-	-
Blank	0	-	+	-	-	-	-	-	-
Blank	0			-	-	-	-	-	-
S. Dublin	15	+	+	-	-	+	+	-	+
S. Dublin	15	+	+	-	-	+	+	+	+
S. Dublin	15	+	+	-	-	+	+	+	+
S. Dublin	15	+	+	-	-	+	+	+	+
S. Dublin	15	+	+	-	-	+	+	+	+
S. Dublin	90	-	-	+	+	+	+	+	+
S. Dublin	90	-	+	-	-	+	+	-	+
S. Dublin	90	-	+	-	-	+	+	+	+
S. Dublin	90	-	-	-	-	+	+	+	+
S. Dublin	90	-	+	+	+	+	+	+	+
S. Typhimurium (ej H <sub>2</sub> S)	75	+	+	-	-	+	+	-	-
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-	-	-	+	+	+	+
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-	-	-	+	+	-	-
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-	-	-	+	+	+	+
S. Typhimurium (ej H <sub>2</sub> S)	75	-	+	-	-	+	+	+	+
S. Typhimurium	20	+	+	+	+	+	+	-	-
S. Typhimurium	20	+	+	-	-	+	+	+	+
S. Typhimurium	20	+	+	-	-	+	+	-	+
S. Typhimurium	20	+	+	-	-	+	+	+	+
S. Typhimurium	20	+	+	+	+	+	+	+	+
		15		9		25		22	

RESULTS OF ISOLATION USING  
Selenit enrichment (1 lab.)

Salmonella	Cfu/ ampoul	Lab 19	
		XLD	BG
Blank	0	-	-
Blank	0	-	-
Blank	0	-	-
Blank	0	-	-
Blank	0	-	-
S. Dublin	15	-	-
S. Dublin	15	+	+
S. Dublin	15	-	-
S. Dublin	15	+	+
S. Dublin	15	+	+
S. Dublin	90	+	+
S. Dublin	90	+	+
S. Dublin	90	+	+
S. Dublin	90	+	+
S. Dublin	90	+	+
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-
S. Typhimurium (ej H <sub>2</sub> S)	75	-	-
S. Typhimurium	20	+	+
S. Typhimurium	20	+	+
S. Typhimurium	20	+	+
S. Typhimurium	20	+	+
S. Typhimurium	20	+	+
		18	



# COMPILATION OF RESULTS OVER TIME

Year	2008		2009		2010			2011			2012		2014		2015		2016	
No. Participants	14		9		21			23			29		26		20		19	
Matrix	Bovine		Pig		Pig			Chicken			Bovine		Pig		Chicken		Bovine	
Lab with Good Performance MSRV	100%		67%		76%			91%			93%		88%		100%		78%	
Serovar	S. Dublin		S. Typhimurium		S. Typhimurium			S. Typhimurium			S. Typhimurium		S. Typhimurium		S. Typhimurium		S. Typhimurium	
No. CFU/Ampoule	15	175	20	200	3	20	200	3	20	200	45	300	25	400	50	20	70 (noH <sub>2</sub> S)	
Detected Isolates	MSRV	70/70	70/70	25/45	45/45	20/40	67/100	93/100	18/46	96/115	110/115	141/145	142/145	114/115	114/115	95/95	90/90	70/90
		100%	100%	56%	100%	50%	67%	93%	39%	83%	96%	97%	98%	97%	99%	100%	100%	78%
	RVS	19/50	25/50	3/25	12/25	1/12	9/30	12/30	0/30	7/30	12/30	8/20	9/20	10/20	14/20	15/15	16/20	10/20
		38%	50%	12%	48%	8%	30%	40%	0%	23%	40%	40%	45%	50%	70%	100%	80%	50%
	Selenit	10/35	16/35	9/10	9/10	4/6	13/15	13/15	0/5	0/5	1/5						5/5	0/5
		29%	46%	90%	90%	67%	87%	87%	0%	0%	20%						100%	0%
Serovar	S. Enteritidis		S. Enteritidis		S. Enteritidis			S. Enteritidis			S. Dublin		S. Enteritidis		S. Infantis		S. Dublin	
No. CFU/Ampoule	45	1500	50	500	25	550		25	550		50	450	100	1000	35	15	90	
Detected Isolates	MSRV	70/70	70/70	45/45	45/45		97/100	100/100		114/115	115/115	138/145	143/145	115/115	115/115	95/95	90/90	89/90
		100%	100%	100%	100%		97%	100%		99%	100%	95%	99%	100%	100%	100%	100%	99%
	RVS	33/50	50/50	24/25	25/25		27/30	30/30		26/30	26/30	6/20	9/20	16/20	20/20	15/15	15/20	15/20
		66%	100%	96%	100%		90%	100%		87%	87%	30%	45%	80%	100%	100%	75%	75%
	Selenit	15/35	25/35	7/10	10/10		13/15	15/15		1/5	4/5						3/5	5/5
		43%	71%	70%	100%		87%	100%		20%	80%						75%	100%

***THE END!***

