



Summary of Results

External Quality Assessment of Food Microbiology Standard Scheme

Distribution Number: 356

Sample Numbers: S0749, S0750

Distribution Date:	January 2023
Results Due:	10 March 2023
Report Date:	17 March 2023
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For further information on the scheme please refer to:

Scheme Guide: <https://www.gov.uk/government/publications/food-and-water-proficiency-testing-schemes-scheme-guide>

Guide to Scoring and Statistics:

<https://www.gov.uk/government/publications/food-and-water-proficiency-testing-schemes-scoring-systems-and-statistics>

General guidance for z-scores:

Participants' enumeration results are converted into z-scores using the following formula:

$$Z = \frac{(X_i - X_{pt})}{\sigma_{pt}}$$

X_i = participants' result (expressed as a log₁₀ value)
 X_{pt} = assigned value (participants' consensus median (expressed as a log₁₀ value))
 σ_{pt} = the fixed standard deviation for the examination (calculated by FEPTU)

The σ_{pt} -value expresses the acceptable difference between the individual participant's result and the participants' consensus median. The σ_{pt} -value used for calculating z-scores for all parameters in the Standard Scheme is 0.35. A guide to interpreting z-scores follows, although laboratories must interpret their scores in the context of their own laboratory situation:

z = -1.99 to +1.99 **satisfactory**
z = -2 to -2.99 or +2 to +2.99 **questionable**
z = < -3.00 or > + 3.00 **unsatisfactory**

It is usually recommended that z-scores exceeding +/-2 are investigated to establish the possible cause. As a general rule, UKHSA recommends that all questionable and unsatisfactory results are investigated.

FEPTU Quality control: To demonstrate homogeneity of the sample, a minimum of 10 freeze-dried vials, selected randomly from a batch, are tested in duplicate for parameters requiring enumeration and 10 freeze-dried vials are examined for pathogen detection.

To demonstrate stability of the sample, a minimum of six vials, selected randomly from a batch, are examined throughout the distribution period, either for enumeration or pathogen detection.

FEPTU results are determined using methods based on ISO methods and are included in the 'intended results' letters which provide guidance for participants regarding the assigned values.

The FEPTU results are used for guidance in the preliminary intended results notification, letters are posted on the website immediately after every distribution; electronic notification of their availability is sent to all participants

Refer to section 17.0 of the Scheme Guide if you have experienced difficulties with any of the examinations.

<https://www.gov.uk/government/publications/food-and-water-proficiency-testing-schemes-scheme-guide>

All participants are reminded that reporting an incorrect or incomplete identification of pathogens from food samples could have serious public health implications. Similarly, the levels of micro-organisms reported in the sample may affect the subsequent outcome for the product.

Participants are reminded that the purpose of scoring is to draw attention to incorrect or outlying results. The results, as summarised in the performance assessment sheet included in this report, provide a more effective indication of on-going problems with food microbiology examinations.

The bar charts in this report are compiled using the processes outlined in the Guide to Scoring Systems and Statistics for the allocation of UKHSA scores. Z-scores are included on the sample-specific pages only; the relevant sections will be left blank if a z-score does not apply.

Please contact FEPTU staff for advice and information:

Repeat samples	Carmen Gomes or Kermin Daruwalla	Tel: +44 (0)20 8327 7119
Data Analysis	Nita Patel	Fax:
Microbiological advice	Nita Patel or Zak Prior	Email:
General comments and complaints	Nita Patel or Zak Prior	FEPTU's website
Scheme consultants	Melody Greenwood	
Scheme Co-ordinator	Nita Patel	

Accreditation: UKHSA Food EQA Scheme for Standard is accredited by the United Kingdom Accreditation Service (UKAS) to ISO/IEC 17043:2010.



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Sample: S0749

Contents: *Staphylococcus aureus* (4.2x10⁴) (wild strain), *Listeria monocytogenes* (4.0x10³) (wild strain), *Listeria welshimeri* (4.8x10³) (wild strain), *Lactobacillus plantarum* (4.0x10³) (wild strain), *Pantoea agglomerans* (4.0x10³) (wild strain), *Escherichia coli* (2.9x10⁴) (wild strain)

All levels are presented as colony forming units (cfu) per ml reconstituted sample

All levels are presented as colony forming units (cfu) per ml reconstituted sample

Expected Results:

Examination	Expected Result	Your Result	Score	Z-score
Presumptive <i>B.cereus</i>	<10 cfu g ⁻¹			
Coagulase-positive staphylococci	1.4x10 ⁴ - 1.4x10 ⁵ cfu g ⁻¹			
<i>Listeria</i> spp. (including <i>L.mono</i>)	2.0x10 ³ - 2.0x10 ⁴ cfu g ⁻¹			
<i>L.monocytogenes</i>	1.1x10 ³ - 1.1x10 ⁴ cfu g ⁻¹			
Aerobic colony count	2.7x10 ⁴ - 2.7x10 ⁵ cfu g ⁻¹			
Coliform	1.3x10 ³ - 2.2x10 ⁴ cfu g ⁻¹			

Presumptive <i>B.cereus</i>	
Total participants reporting for Presumptive <i>B.cereus</i>	90
Participants reporting correctly	90 (100%)

Coagulase-positive staphylococci	
Total participants reporting for Coagulase-positive staphylococci	105
Total participants enumerating Coagulase-positive staphylococci	104
Participants reporting a high censored value	2
Assigned value (participants' median)	4.4x10 ⁴ cfu g ⁻¹ (4.64 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10} \text{cfu g}^{-1}$)	0.02
No. of outlying counts	6 (4 low / 2 high)
Participants mean	4.4x10 ⁴ cfu g ⁻¹ (4.64 log ₁₀)
Standard deviation of participants results *	0.15 log ₁₀ cfu g ⁻¹
FEPTU QC medians	
▪ ISO 6888-1:2021	4.4x10 ⁴ cfu g ⁻¹ (4.64 log ₁₀)

Listeria spp. (including <i>L.mono</i>)	
Total participants reporting for <i>Listeria</i> spp. (including <i>L.mono</i>)	86
Total participants enumerating <i>Listeria</i> spp. (including <i>L.mono</i>)	82
Assigned value (participants' median)	6.5x10 ³ cfu g ⁻¹ (3.81 log ₁₀)
Uncertainty of assigned value ($U(\chi_{pt})=\log_{10}$ cfu g ⁻¹)	0.02
No. of outlying counts	4 (3 low / 1 high)
Participants mean	6.4x10 ³ cfu g ⁻¹ (3.8 log ₁₀)
Standard deviation of participants results *	0.14 log ₁₀ cfu g ⁻¹
FEPTU QC medians	
▪ ISO 11290-2:2017	9.7x10 ³ cfu g ⁻¹ (3.99 log ₁₀)

<i>L.monocytogenes</i>	
Total participants reporting for <i>L.monocytogenes</i>	100
Total participants enumerating <i>L.monocytogenes</i>	97
Participants reporting a low censored value	1
Assigned value (participants' median)	3.4x10 ³ cfu g ⁻¹ (3.53 log ₁₀)
Uncertainty of assigned value ($U(\chi_{pt})=\log_{10}$ cfu g ⁻¹)	0.02
No. of outlying counts	5 (3 low / 2 high)
Participants mean	3.3x10 ³ cfu g ⁻¹ (3.51 log ₁₀)
Standard deviation of participants results *	0.19 log ₁₀ cfu g ⁻¹
FEPTU QC medians	
▪ ISO 11290-2:2017	4.7x10 ³ cfu g ⁻¹ (3.67 log ₁₀)

Aerobic colony count	
Total participants reporting for Aerobic colony count	88
Assigned value (participants' median)	8.6x10 ⁴ cfu g ⁻¹ (4.93 log ₁₀)
Uncertainty of assigned value ($U(\chi_{pt})=\log_{10}$ cfu g ⁻¹)	0.02
No. of outlying counts	6 (2 low / 4 high)
Participants mean	8.6x10 ⁴ cfu g ⁻¹ (4.93 log ₁₀)
Standard deviation of participants results *	0.17 log ₁₀ cfu g ⁻¹
FEPTU QC median	5.1x10 ⁴ cfu g ⁻¹ (4.7 log ₁₀)

Coliform	
Total participants reporting for Coliform	81
Assigned value (participants' median)	6.8x10 ³ cfu g ⁻¹ (3.83 log ₁₀)
Uncertainty of assigned value ($U(\chi_{pt})=\log_{10}$ cfu g ⁻¹)	0.04
No. of outlying counts	14 (8 low / 6 high)
Participants mean	6.1x10 ³ cfu g ⁻¹ (3.79 log ₁₀)
Standard deviation of participants results *	0.33 log ₁₀ cfu g ⁻¹
FEPTU QC median	4.9x10 ³ cfu g ⁻¹ (3.69 log ₁₀)

Total sent samples	111
Non-returns	0
Not examined	1

The fixed standard deviation value (σ_{pt} value) used for calculation of the z-scores is **0.35** for all parameters.

* Robust S^* based on median absolute deviation about the participants' median (*MADe*).

Sample: S0750

Contents: *Bacillus cereus* (1.3x10³) (wild strain), *Enterococcus faecalis* (1.0x10⁴) (wild strain), *Lactococcus lactis* (1.2x10⁴) (wild strain), *Staphylococcus sciuri* (1.6x10⁴) (wild strain)

All levels are presented as colony forming units (cfu) per ml reconstituted sample

All levels are presented as colony forming units (cfu) per ml reconstituted sample

Expected Results:

Examination	Expected Result	Your Result	Score	Z-score
Presumptive <i>B. cereus</i>	2.8x10 ² - 2.9x10 ³ cfu g ⁻¹			
Coagulase-positive staphylococci	<10 cfu g ⁻¹			
<i>Listeria</i> spp. (including <i>L. mono</i>)	<10 cfu g ⁻¹			
<i>L. monocytogenes</i>	<10 cfu g ⁻¹			
Aerobic colony count	2.0x10 ⁴ - 2.0x10 ⁵ cfu g ⁻¹			
Coliform	<10 cfu g ⁻¹			

Presumptive *B. cereus*

Total participants reporting for Presumptive <i>B. cereus</i>	72
Total participants enumerating Presumptive <i>B. cereus</i>	71
Assigned value (participants' median)	9.0x10 ² cfu g ⁻¹ (2.95 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10} \text{cfu g}^{-1}$)	0.03
No. of outlying counts	9 (4 low / 5 high)
Participants mean	9.0x10 ² cfu g ⁻¹ (2.96 log ₁₀)
Standard deviation of participants results *	0.2 log ₁₀ cfu g ⁻¹
FEPTU QC medians	
▪ ISO 7932:2004	1.0x10 ³ cfu g ⁻¹ (3.01 log ₁₀)

Coagulase-positive staphylococci

Total participants reporting for Coagulase-positive staphylococci	86
Participants reporting correctly	81 (94%)

Listeria spp. (including <i>L.mono</i>)	
Total participants reporting for <i>Listeria</i> spp. (including <i>L.mono</i>)	66
Participants reporting correctly	62 (94%)

<i>L.monocytogenes</i>	
Total participants reporting for <i>L.monocytogenes</i>	82
Participants reporting correctly	82 (100%)

Aerobic colony count	
Total participants reporting for Aerobic colony count	86
Assigned value (participants' median)	6.3x10 ⁴ cfu g ⁻¹ (4.8 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10}$ cfu g ⁻¹)	0.03
No. of outlying counts	9 (2 low / 7 high)
Participants mean	6.3x10 ⁴ cfu g ⁻¹ (4.8 log ₁₀)
Standard deviation of participants results *	0.21 log ₁₀ cfu g ⁻¹
FEPTU QC median	3.8x10 ⁴ cfu g ⁻¹ (4.57 log ₁₀)

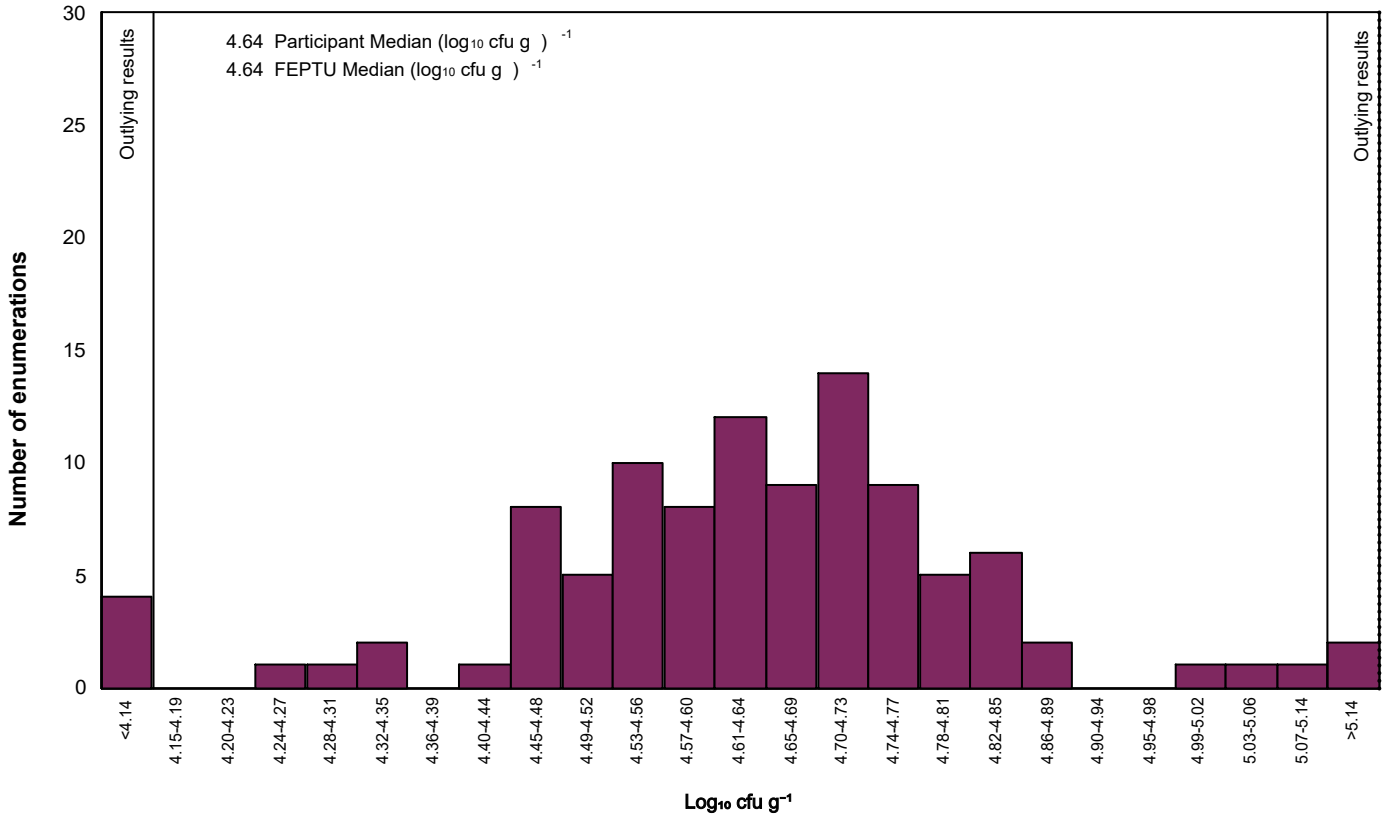
Coliform	
Total participants reporting for Coliform	64
Participants reporting correctly	62 (97%)

Total sent samples	111
Non-returns	0
Not examined	20

The fixed standard deviation value (σ_{pt} value) used for calculation of the z-scores is **0.35** for all parameters.

* Robust S^* based on median absolute deviation about the participants' median (*MADe*).

Coagulase-positive staphylococci reported by participants - Sample S0749



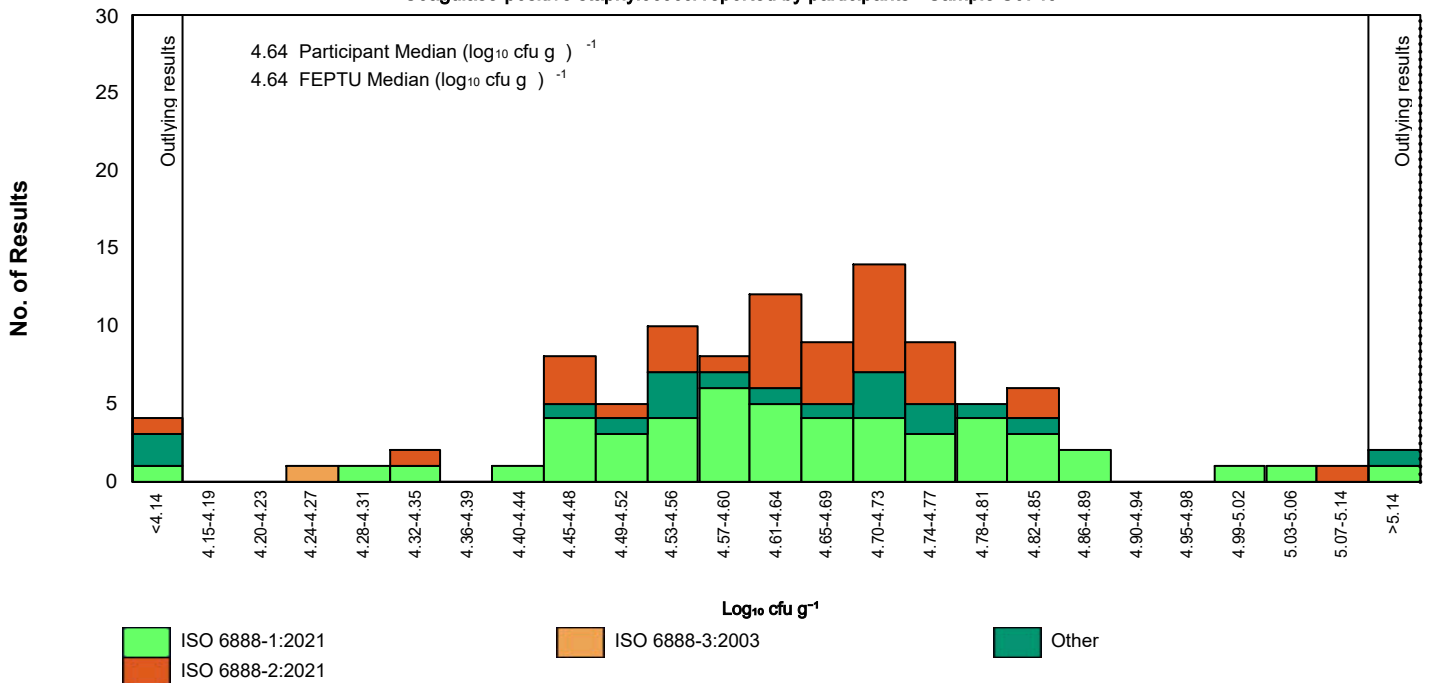
Method based presentation

S0749 : Coagulase-positive staphylococci

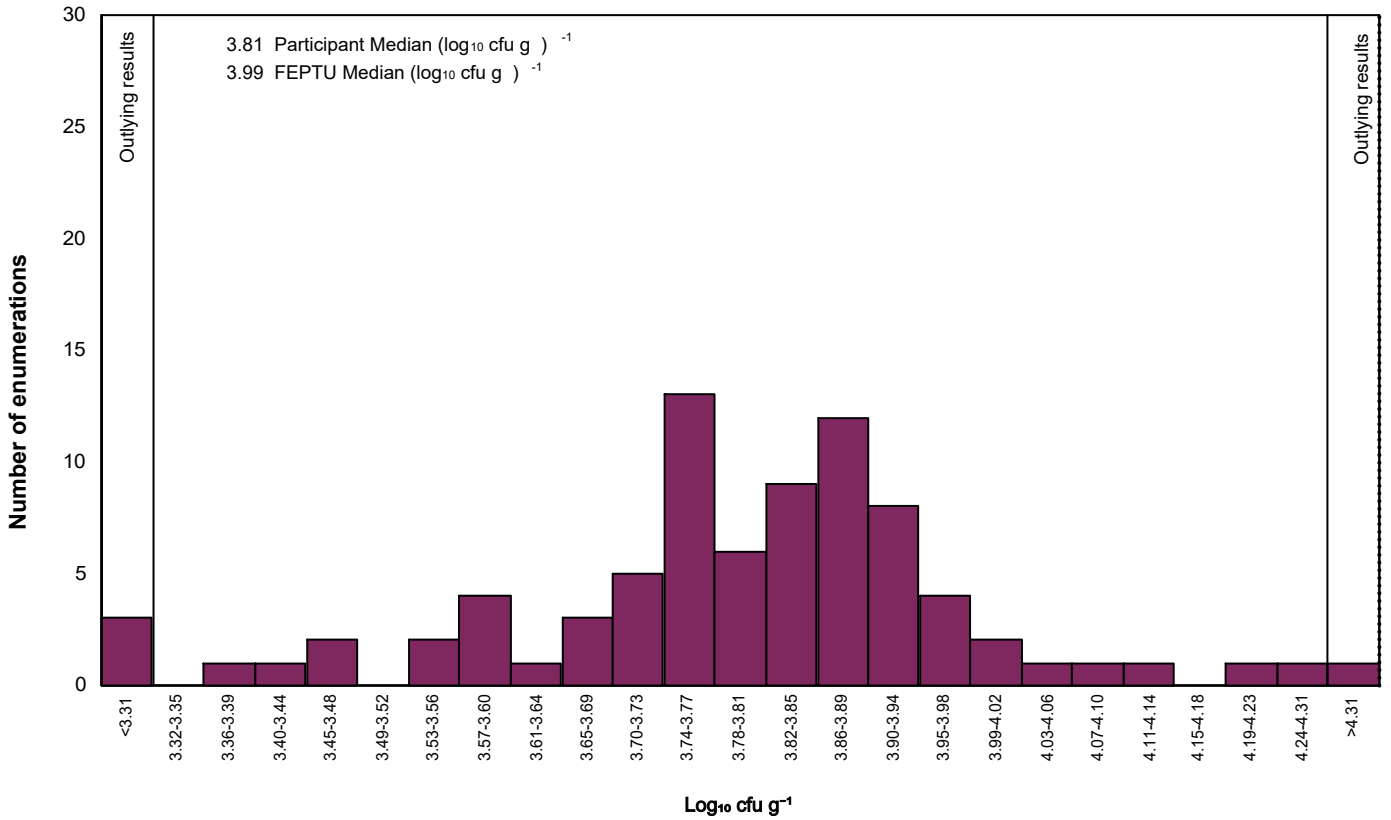
FEPTU Method: ISO 6888-1:2021

Method	Number of Results	Excluded Results	Percentage of the total	Median (\log_{10} cfu g ⁻¹)	Robust S* (\log_{10} cfu g ⁻¹)	Range Reported (\log_{10} cfu g ⁻¹)
ISO 6888-1:2021	49	1	48	4.64	0.16	3.66 - 5.35
ISO 6888-3:2003	1	1	0			-
Other	18	0	17	4.65	0.16	3.52 - 6.04
ISO 6888-2:2021	34	0	33	4.67	0.10	4.04 - 5.11

Coagulase-positive staphylococci reported by participants - Sample S0749



Listeria spp. (including *L.mono*) reported by participants - Sample S0749



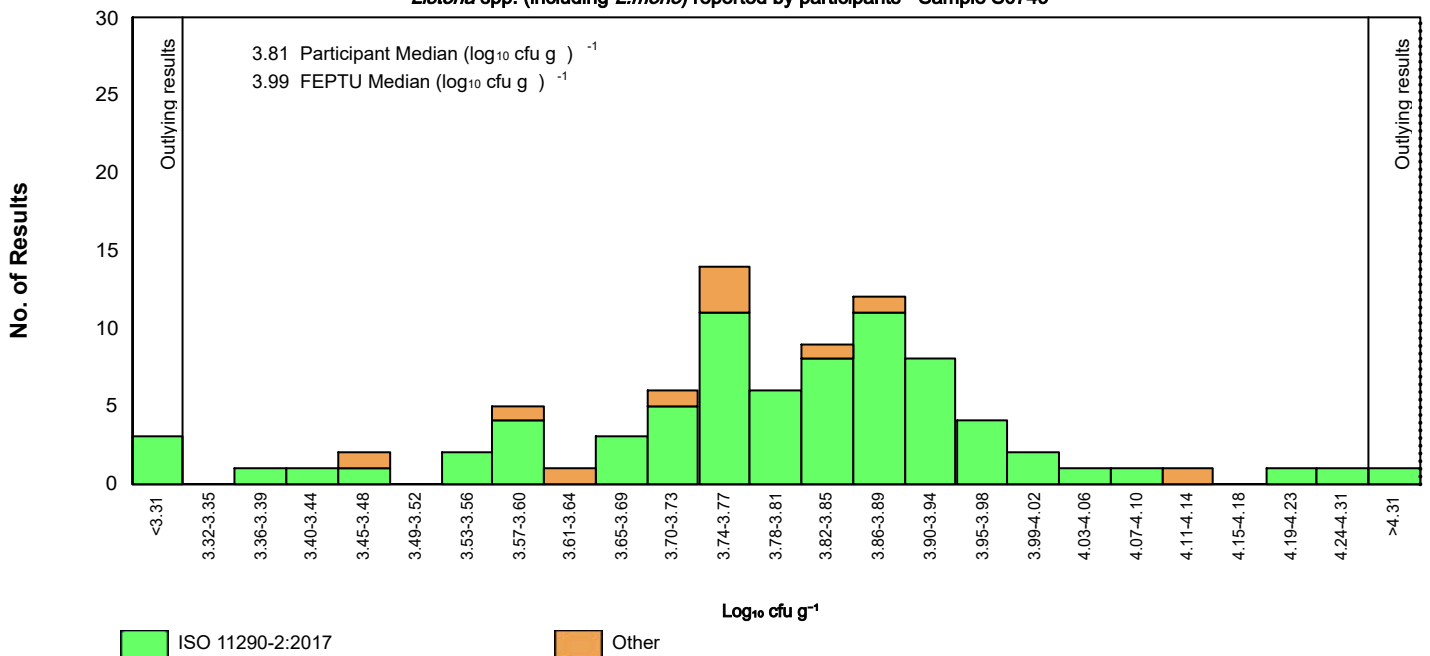
Method based presentation

S0749 : *Listeria* spp. (including *L.mono*)

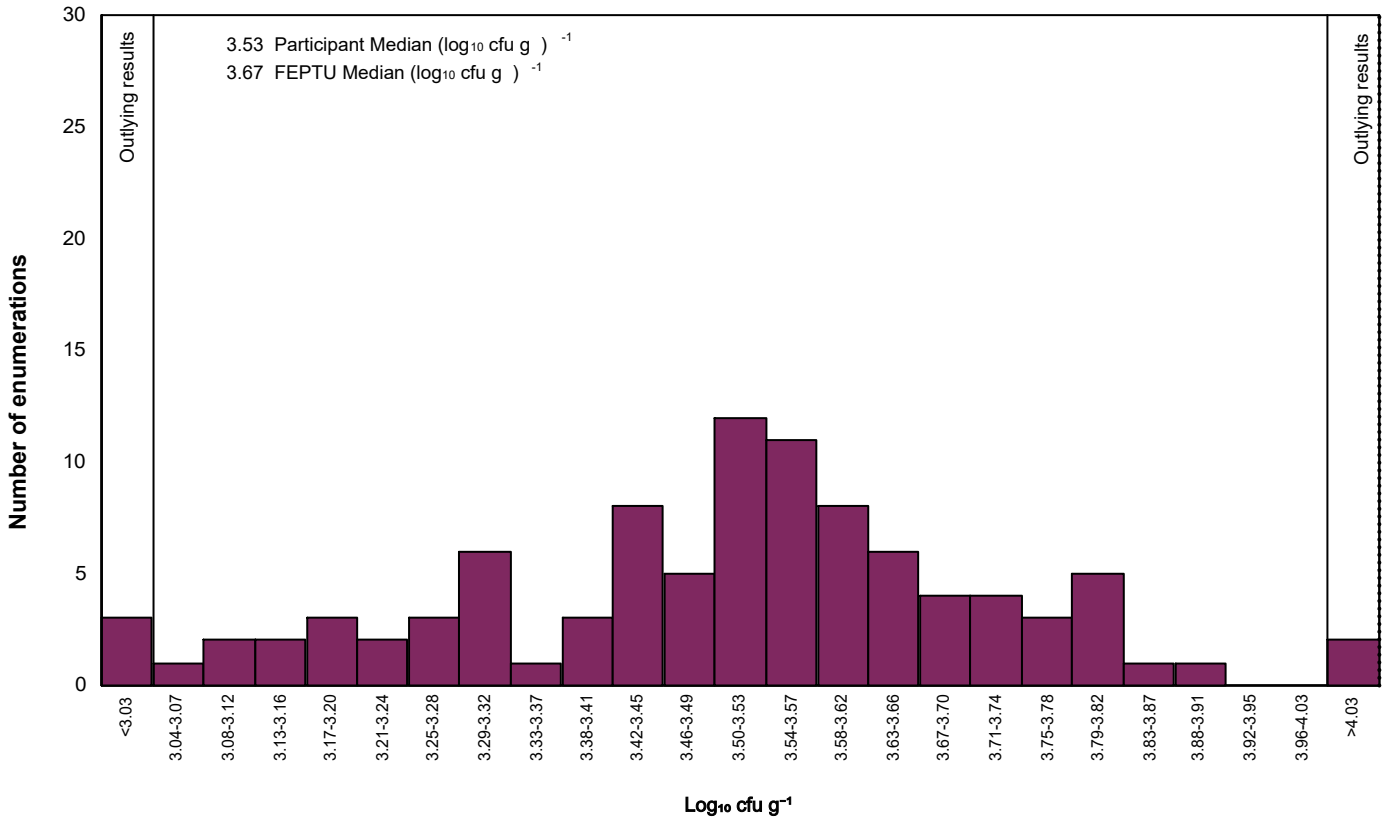
FEPTU Method: ISO 11290-2:2017

Method	Number of Results	Excluded Results	Percentage of the total	Median (\log_{10} cfu g ⁻¹)	Robust S* (\log_{10} cfu g ⁻¹)	Range Reported (\log_{10} cfu g ⁻¹)
ISO 11290-2:2017	75	0	88	3.81	0.14	2.90 - 4.70
Other	10	0	11	3.74	0.15	3.47 - 4.11

Listeria spp. (including *L.mono*) reported by participants - Sample S0749



L.monocytogenes reported by participants - Sample S0749



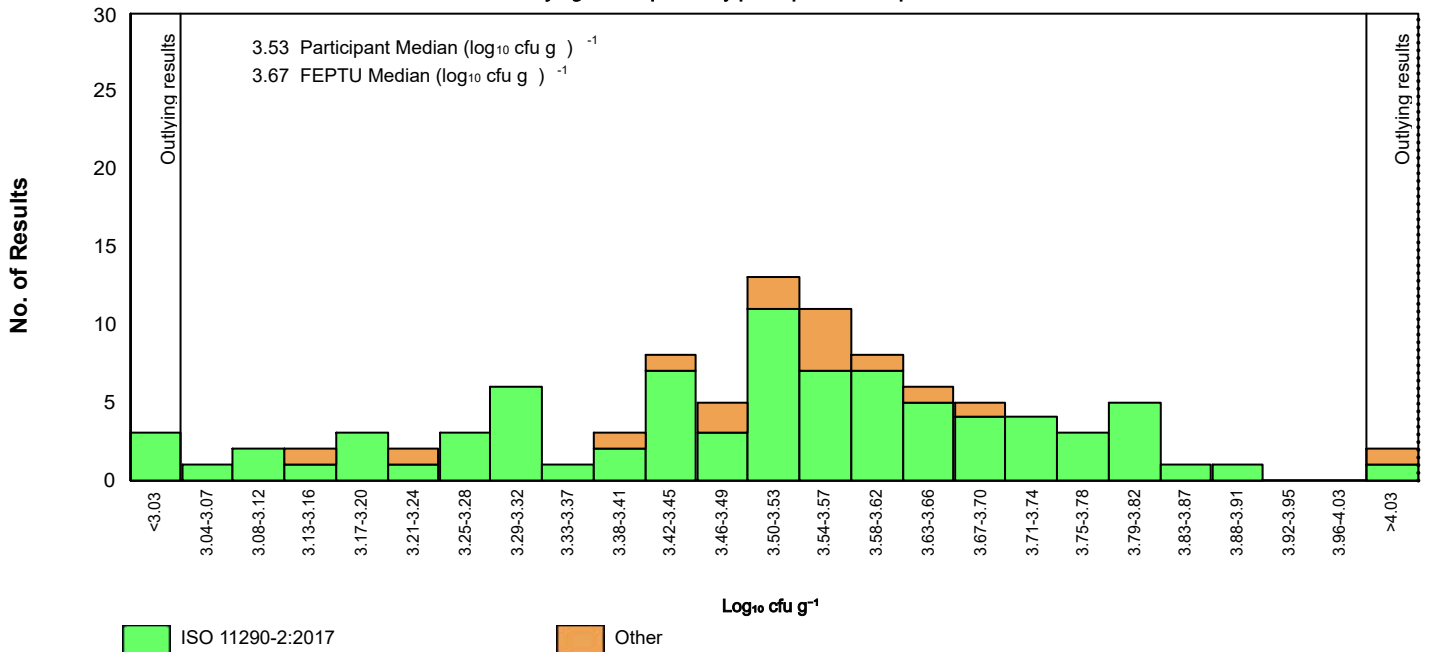
Method based presentation

S0749 : *L.monocytogenes*

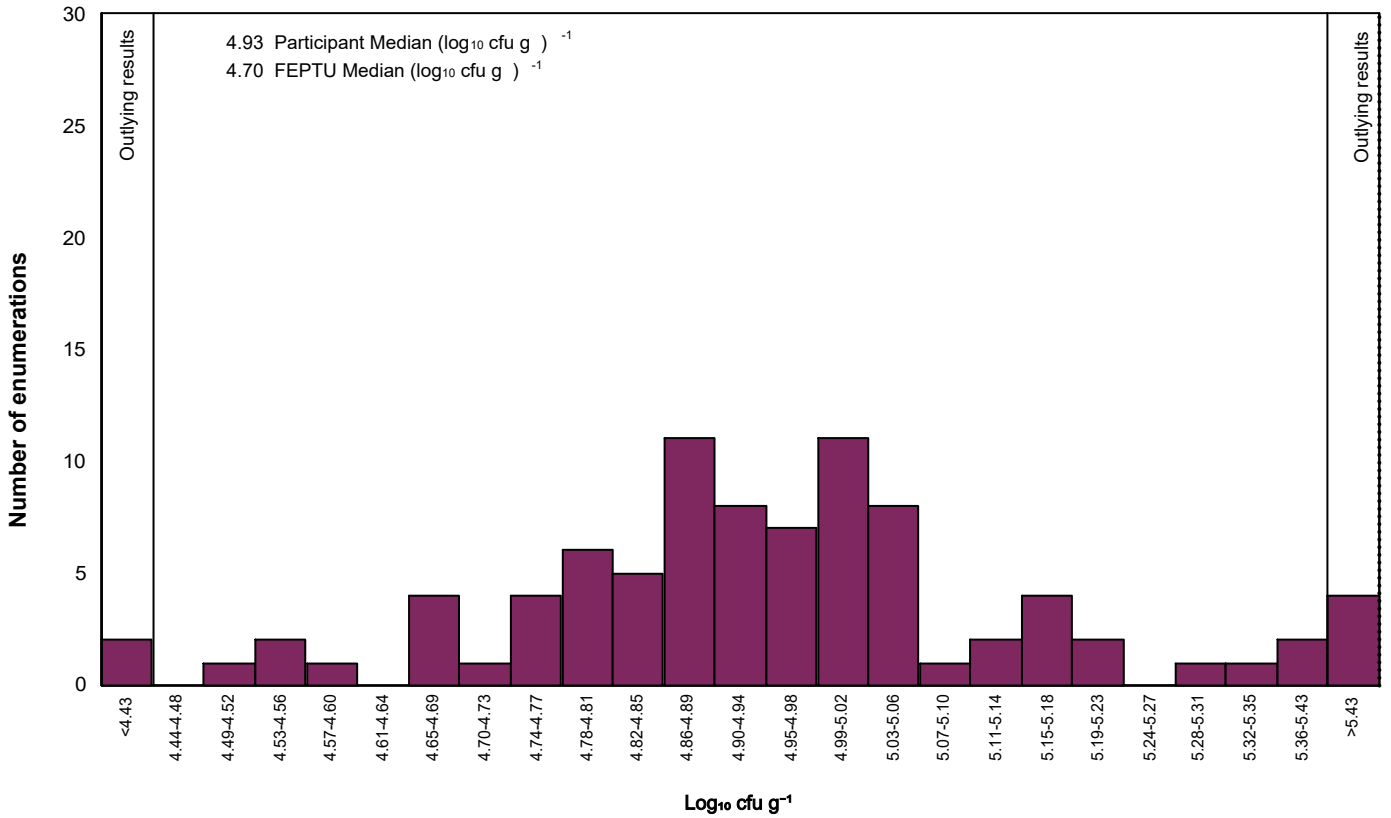
FEPTU Method: ISO 11290-2:2017

Method	Number of Results	Excluded Results	Percentage of the total	Median (\log_{10} cfu g ⁻¹)	Robust S* (\log_{10} cfu g ⁻¹)	Range Reported (\log_{10} cfu g ⁻¹)
ISO 11290-2:2017	82	0	83	3.53	0.21	2.56 - 4.38
Other	16	0	16	3.53	0.10	3.12 - 4.61

L.monocytogenes reported by participants - Sample S0749



Aerobic colony count reported by participants - Sample S0749



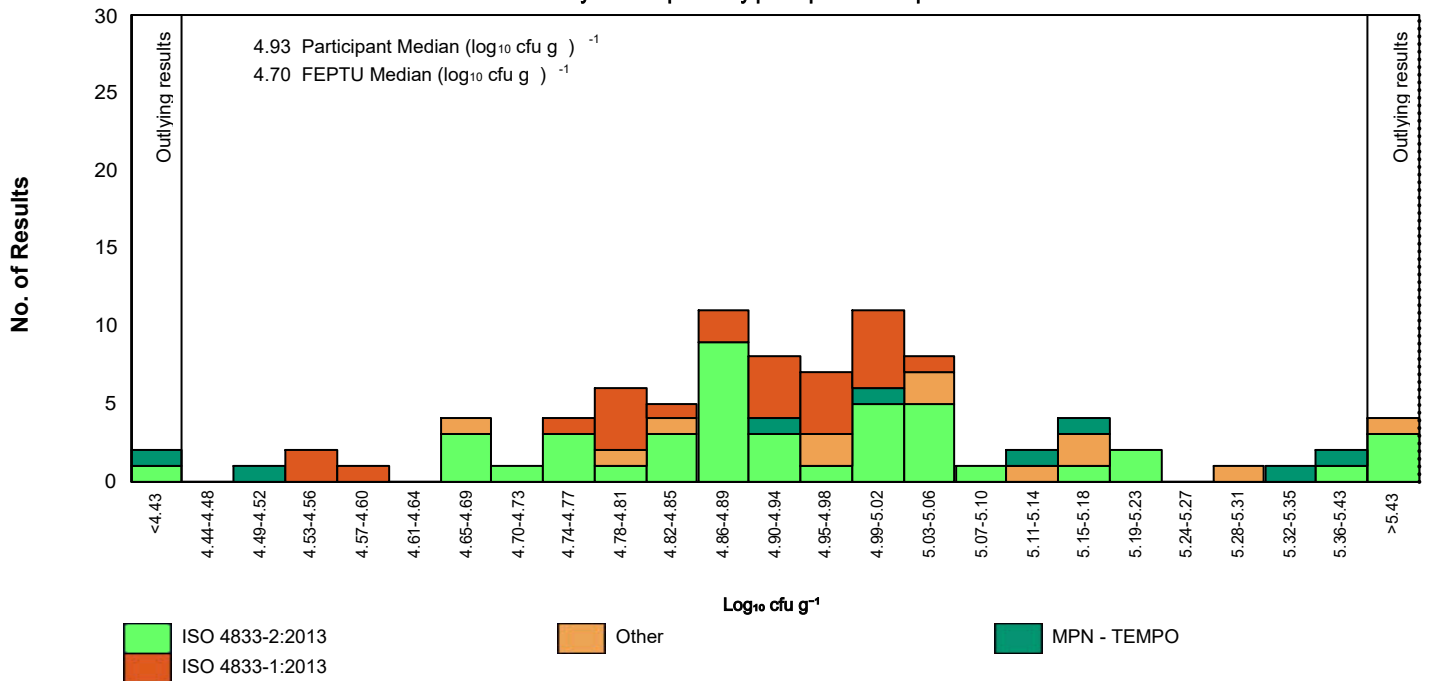
Method based presentation

S0749 : Aerobic colony count

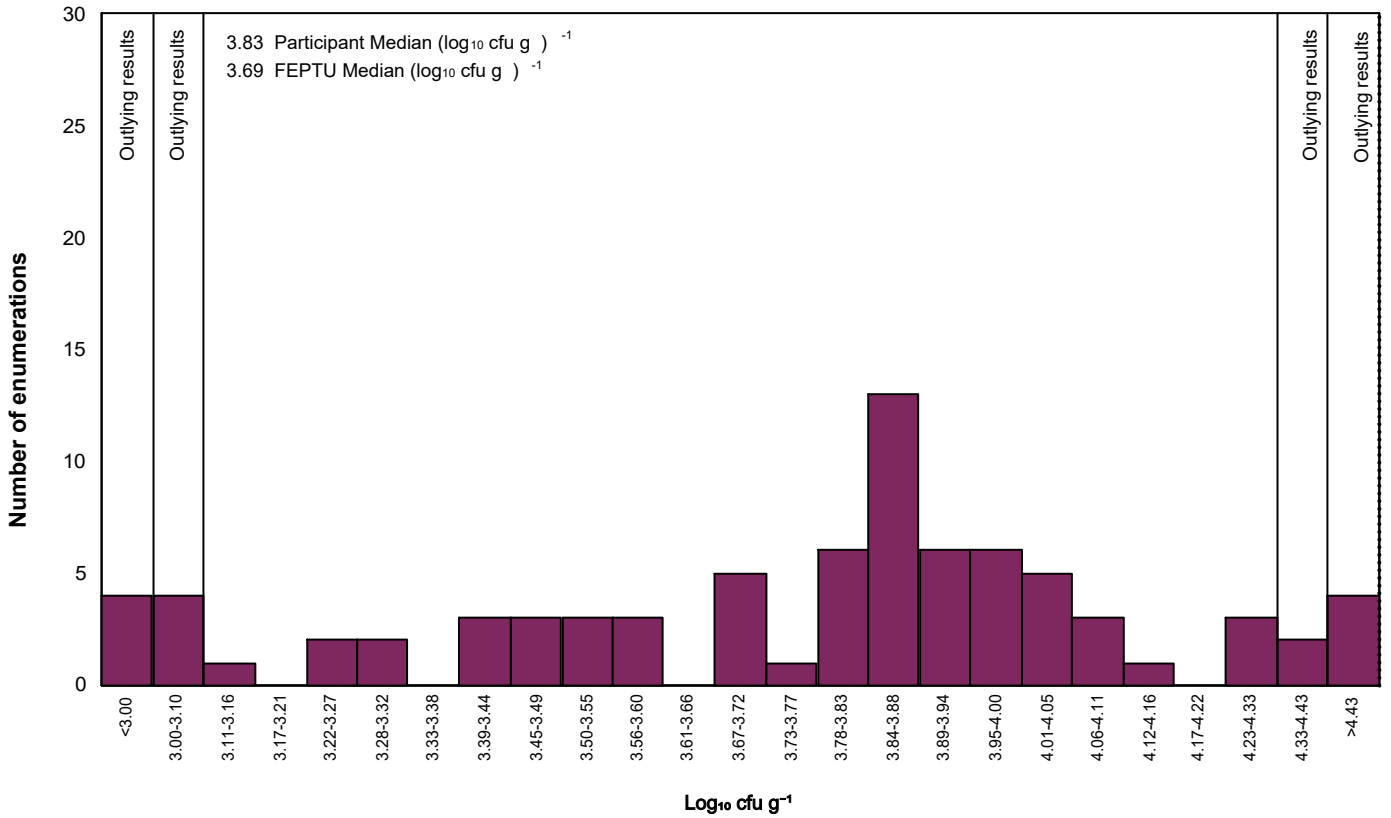
FEPTU Method: ISO 4833-2:2013

Method	Number of Results	Excluded Results	Percentage of the total	Median (\log_{10} cfu g ⁻¹)	Robust S* (\log_{10} cfu g ⁻¹)	Range Reported (\log_{10} cfu g ⁻¹)
ISO 4833-2:2013	43	0	48	4.91	0.17	4.30 - 5.98
Other	12	0	13	5.04	0.20	4.65 - 6.23
MPN - TEMPO	8	0	9			-
ISO 4833-1:2013	25	0	28	4.91	0.11	4.53 - 5.04

Aerobic colony count reported by participants - Sample S0749



Coliform reported by participants - Sample S0749



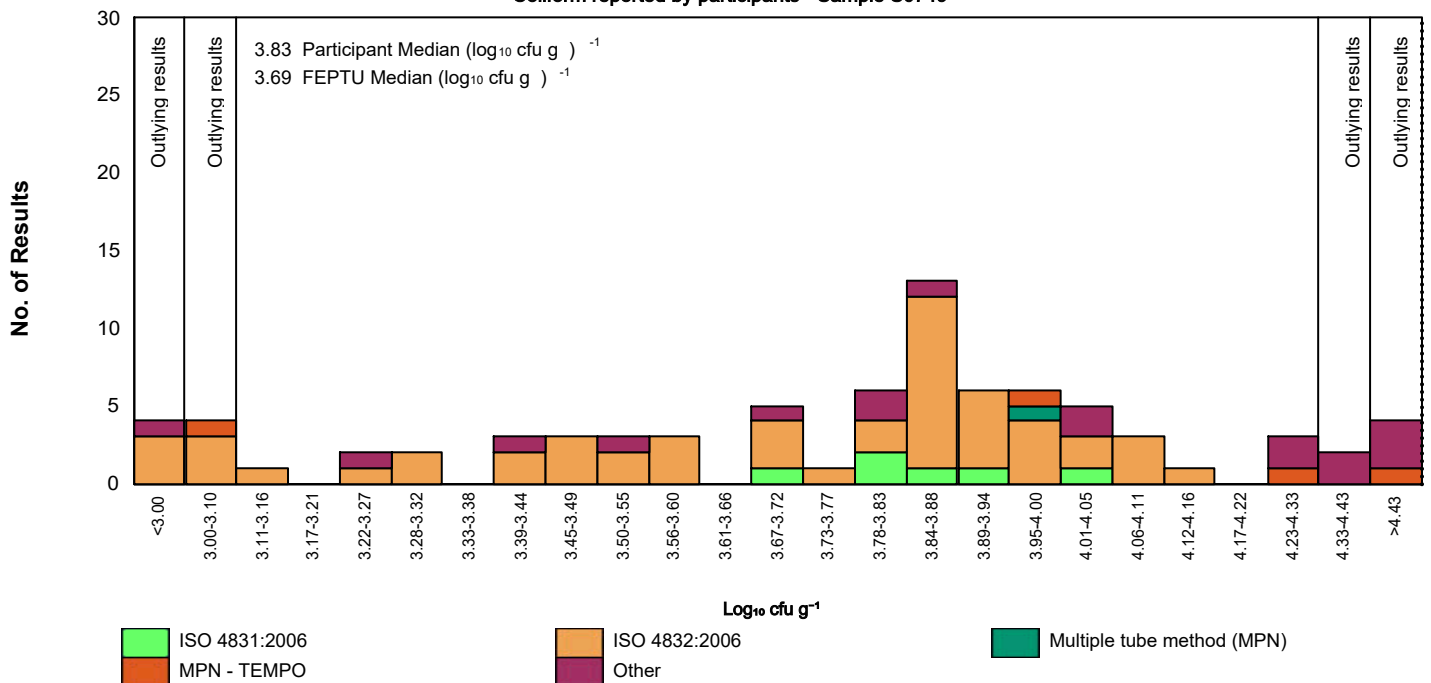
Method based presentation

S0749 : Coliform

FEPTU Method: ISO 4832:2006

Method	Number of Results	Excluded Results	Percentage of the total	Median (Log ₁₀ cfu g ⁻¹)	Robust S* (Log ₁₀ cfu g ⁻¹)	Range Reported (Log ₁₀ cfu g ⁻¹)
ISO 4831:2006	6	0	7			-
ISO 4832:2006	52	0	65	3.82	0.26	2.00 - 4.15
Multiple tube method (MPN)	1	0	1			-
MPN - TEMPO	4	0	5			-
Other	17	0	21	4.04	0.56	2.74 - 5.28

Coliform reported by participants - Sample S0749



Sample S0749

Presumptive <i>B.cereus</i> Method	Presumptive <i>B.cereus</i> Media	Presumptive <i>B.cereus</i> Incubation	Count reported	Count censored values
	Bacillus cereus selective agar (MYP)	30°C/18-48h	0	0
ISO 7932:2004	Bacillus cereus selective agar (MYP)	30°C/18-48h	0	63
ISO 7932:2004	Bacillus cereus selective agar (PEMBA formulation)	30°C/18-48h	0	4
ISO 7932:2004	Bacillus cereus selective agar (PEMBA formulation)	37°C/18-48h	1	3
ISO 7932:2004	Chromogenic agar - please state	30°C/18-48h	0	1
ISO 7932:2004	Chromogenic agar - please state	37°C/18-48h	0	1
ISO 7932:2004	Other	30°C/18-48h	0	1
Other	Bacillus cereus selective agar (MYP)	30°C/18-48h	0	3
Other	Bacillus cereus selective agar (MYP)	37°C/18-48h	0	1
Other	Bacillus cereus selective agar (MYP)	Other	0	1
Other	Bacillus cereus selective agar (PEMBA formulation)	30°C/18-48h	0	1
Other	Bacillus cereus selective agar (PEMBA formulation)	Other	0	1
Other	Chromogenic agar - please state	30°C/18-48h	2	1
Other	Chromogenic agar - please state	37°C/18-48h	0	2
Other	Other	30°C/18-48h	0	3
Other	Other	37°C/18-48h	0	1
Other; ISO 7932:2004	Chromogenic agar - please state; Bacillus cereus selective agar (PEMBA formulation)	37°C/18-48h	0	0

Sample S0749

Coagulase-positive staphylococci Method	Coagulase-positive staphylococci Media	Coagulase-positive staphylococci Incubation	Count reported	Count censored values
ISO 6888-1:2021	Baird – Parker medium (BPM)	37°C/24-48h	49	1
ISO 6888-2:2021	Baird – Parker medium (BPM)	37°C/18-24h	1	0
ISO 6888-2:2021	Baird – Parker medium (BPM)	37°C/24-48h	5	0
ISO 6888-2:2021	Baird – Parker medium (BPM); Rabbit plasma fibrinogen agar (RPF)	37°C/24-48h	0	0
ISO 6888-2:2021	Chromogenic agar - please state	37°C/24-48h	1	0
ISO 6888-2:2021	Other	37°C/24-48h	1	0
ISO 6888-2:2021	Rabbit plasma fibrinogen agar (RPF)	37°C/18-24h	2	0
ISO 6888-2:2021	Rabbit plasma fibrinogen agar (RPF)	37°C/24-48h	24	0
ISO 6888-3:2003	Baird – Parker medium (BPM)	37°C/24-48h	1	1
Other	Baird – Parker medium (BPM)	37°C/18-24h	1	0
Other	Baird – Parker medium (BPM)	37°C/24-48h	3	0
Other	Baird – Parker medium (BPM)	Other	2	0
Other	Chromogenic agar - please state	37°C/18-24h	2	0
Other	Chromogenic agar - please state	Other	1	0
Other	Other	37°C/18-24h	4	1
Other	Other	37°C/24-48h	3	0
Other	Other	Other	1	0
Other	Rabbit plasma fibrinogen agar (RPF)	37°C/24-48h	1	0

Sample S0749

<i>Listeria</i> spp. (including <i>L.mono</i>) Method	<i>Listeria</i> spp. (including <i>L.mono</i>) Media	<i>Listeria</i> spp. (including <i>L.mono</i>) Incubation	Count reported	Count censored values
		37°C/24-48h	0	0
ISO 11290-2:2017	Brilliance Listeria agar	37°C/24-48h	1	0
ISO 11290-2:2017	Brilliance Listeria agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	0
ISO 11290-2:2017	Brilliance Listeria agar; Oxford Listeria selective agar	37°C/24-48h	1	0
ISO 11290-2:2017	Other	37°C/24-48h	2	0
ISO 11290-2:2017	Other chromogenic agar	37°C/24-48h	5	0
ISO 11290-2:2017	Other chromogenic agar; Oxford Listeria selective agar	37°C/24-48h	2	0
ISO 11290-2:2017	Other; Oxford Listeria selective agar	37°C/24-48h	1	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	35	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); BBL TM CHROMagar TM Listeria agar; Brilliance Listeria agar	37°C/24-48h	0	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Other chromogenic agar	37°C/24-48h	1	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Oxford Listeria selective agar	37°C/24-48h	7	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); PALCAM Listeria selective agar	37°C/24-48h	2	0
ISO 11290-2:2017	Oxford Listeria selective agar	37°C/24-48h	1	0
ISO 11290-2:2017	Oxford Listeria selective agar; Other chromogenic agar	37°C/24-48h	1	0
ISO 11290-2:2017	Oxford Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	10	0
ISO 11290-2:2017	PALCAM Listeria selective agar; Other chromogenic agar	37°C/24-48h	0	1
ISO 11290-2:2017	PALCAM Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	3	0
ISO 11290-2:2017; Other	Other	Other	1	0
ISO 11290-2:2017; Other	Other chromogenic agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	1	0
Other	Brilliance Listeria agar	37°C/24-48h	1	1
Other	Other	37°C/24-48h	2	0
Other	Other	Other	0	1
Other	Other chromogenic agar	37°C/24-48h	3	0
Other	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	1	1
Other; ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	1	0

Sample S0749

<i>L.monocytogenes</i> Method	<i>L.monocytogenes</i> Media	<i>L.monocytogenes</i> Incubation	Count reported	Count censored values
ISO 11290-2:2017	Brilliance Listeria agar	37°C/24-48h	1	0
ISO 11290-2:2017	Brilliance Listeria agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	0
ISO 11290-2:2017	Brilliance Listeria agar; Oxford Listeria selective agar	37°C/24-48h	1	0
ISO 11290-2:2017	Other	37°C/24-48h	2	0
ISO 11290-2:2017	Other chromogenic agar	37°C/24-48h	6	1
ISO 11290-2:2017	Other; Oxford Listeria selective agar	37°C/24-48h	1	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	43	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Other chromogenic agar	37°C/24-48h	1	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Oxford Listeria selective agar	37°C/24-48h	10	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); PALCAM Listeria selective agar	37°C/24-48h	4	0
ISO 11290-2:2017	Oxford Listeria selective agar	37°C/24-48h	1	0
ISO 11290-2:2017	Oxford Listeria selective agar; Other chromogenic agar	37°C/24-48h	2	0
ISO 11290-2:2017	Oxford Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	6	0
ISO 11290-2:2017	PALCAM Listeria selective agar; Other chromogenic agar	37°C/24-48h	0	1
ISO 11290-2:2017	PALCAM Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	2	0
ISO 11290-2:2017; Other	Ottaviani and Agosti agar (ALOA); Other chromogenic agar	37°C/24-48h	1	0
Other	Brilliance Listeria agar	37°C/24-48h	2	0
Other	Other	37°C/24-48h	3	0
Other	Other	Other	0	1
Other	Other chromogenic agar	37°C/24-48h	7	0
Other	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	1	1
Other	Ottaviani and Agosti agar (ALOA); Oxford Listeria selective agar	37°C/24-48h	1	0
Other; ISO 11290-2:2017	Brilliance Listeria agar; Other chromogenic agar	37°C/24-48h	1	0

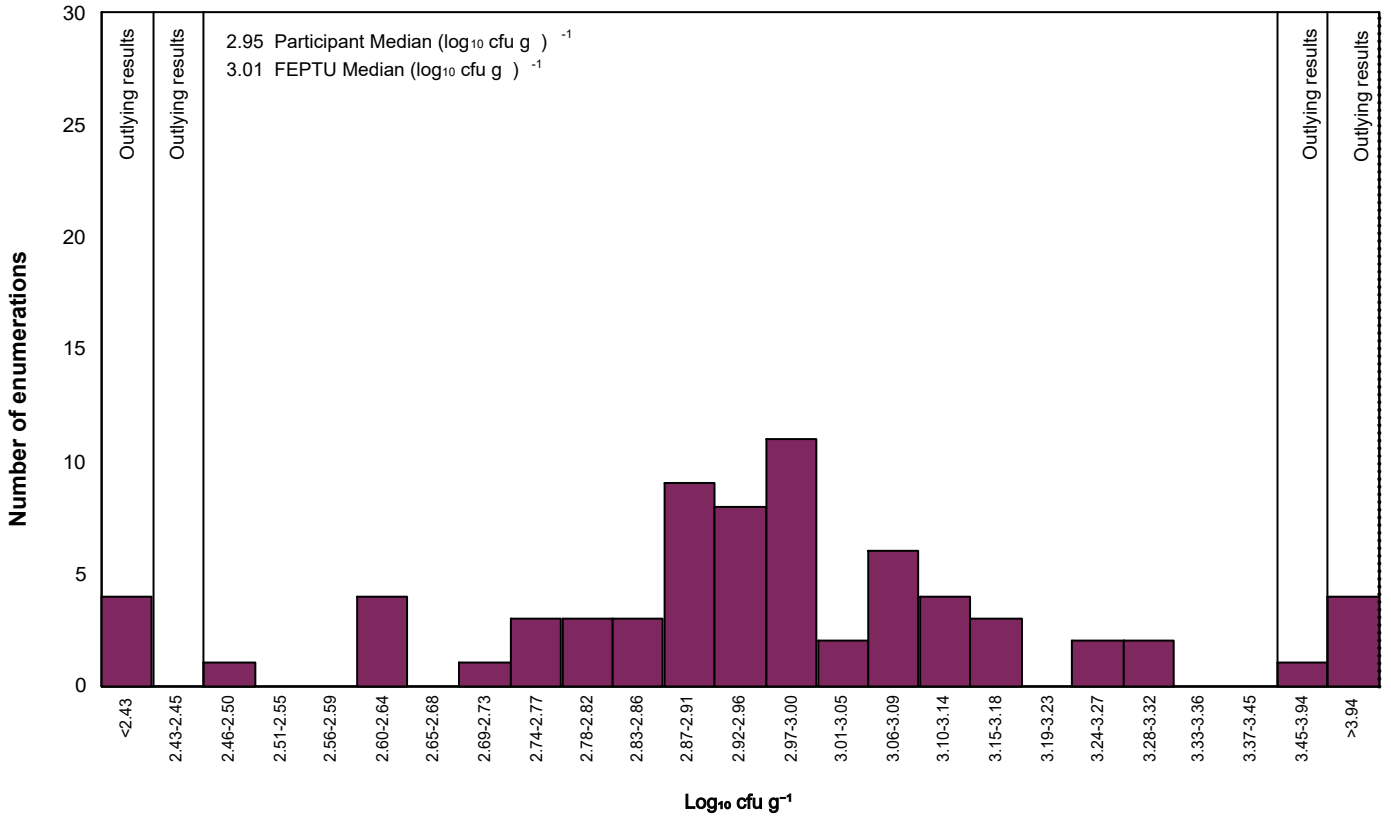
Sample S0749

Aerobic colony count Method	Aerobic colony count Media	Aerobic colony count Incubation	Count reported	Count censored values
	Plate count agar	30°C/72h	0	0
ISO 4833-1:2013	Petrifilm TM	30°C/48h	1	0
ISO 4833-1:2013	Plate count agar	30°C/72h	24	0
ISO 4833-2:2013	Petrifilm TM	30°C/48h	2	0
ISO 4833-2:2013	Petrifilm TM	30°C/72h	1	0
ISO 4833-2:2013	Petrifilm TM	Other	1	0
ISO 4833-2:2013	Petrifilm TM; Plate count agar	30°C/48h	0	0
ISO 4833-2:2013	Plate count agar	30°C/48h	13	0
ISO 4833-2:2013	Plate count agar	30°C/72h	26	0
ISO 4833-2:2013	Plate count agar	30°C/72h; 30°C/48h	0	0
MPN - TEMPO	Other	30°C/48h	7	0
MPN - TEMPO	Other	Other	1	0
Other	Other	30°C/72h	1	0
Other	Other	37°C/24h	1	0
Other	Petrifilm TM	30°C/48h	1	0
Other	Petrifilm TM	Other	3	0
Other	Plate count agar	30°C/48h	1	0
Other	Plate count agar	30°C/72h	2	0
Other	Plate count agar	Other	3	0

Sample S0749

Coliform Method	Coliform Media	Coliform Incubation	Count reported	Count censored values
		37°C/24h	0	0
ISO 4831:2006	Petrifilm TM	37°C/24h	2	0
ISO 4831:2006	Petrifilm TM	37°C/24h; 30°C/24h	0	0
ISO 4831:2006	Petrifilm TM	Other	1	0
ISO 4831:2006	Violet red bile agar (VRBA)	37°C/24h	3	0
ISO 4832:2006	Chromogenic agar - please state	37°C/24h	2	0
ISO 4832:2006	Other	30°C/24h	2	0
ISO 4832:2006	Other	37°C/24h	1	0
ISO 4832:2006	Petrifilm TM	30°C/24h	1	0
ISO 4832:2006	Petrifilm TM	37°C/24h	1	0
ISO 4832:2006	Violet red bile agar (VRBA)	30°C/24h	11	0
ISO 4832:2006	Violet red bile agar (VRBA)	37°C/24h	34	0
MPN - TEMPO	Other	30°C/24h	4	0
Multiple tube method (MPN)	Other	Other	1	0
Other	Chromogenic agar - please state	37°C/24h	5	0
Other	Other	37°C/24h	2	1
Other	Petrifilm TM	37°C/24h	2	0
Other	Petrifilm TM	Other	1	0
Other	Violet red bile agar (VRBA)	30°C/24h	4	0
Other	Violet red bile agar (VRBA)	37°C/24h	1	0
Other	Violet red bile agar (VRBA)	Other	2	0

Presumptive *B.cereus* reported by participants - Sample S0750



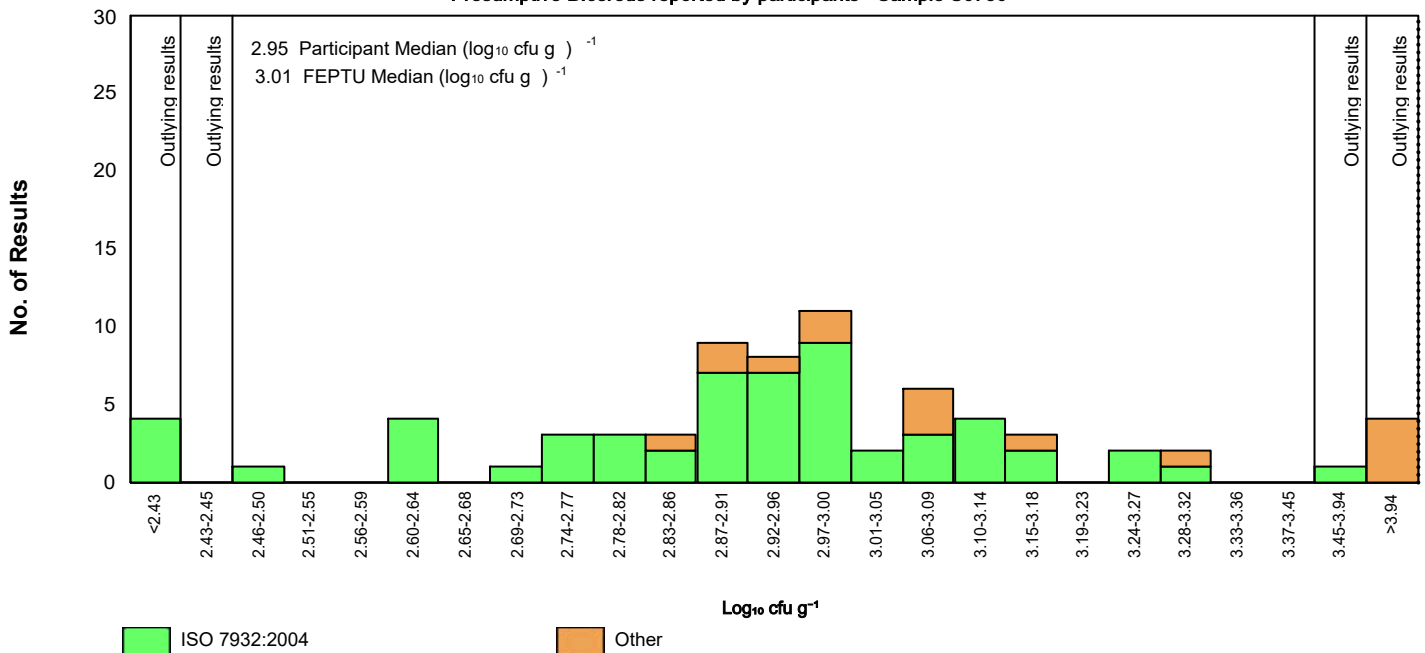
Method based presentation

S0750 : Presumptive *B.cereus*

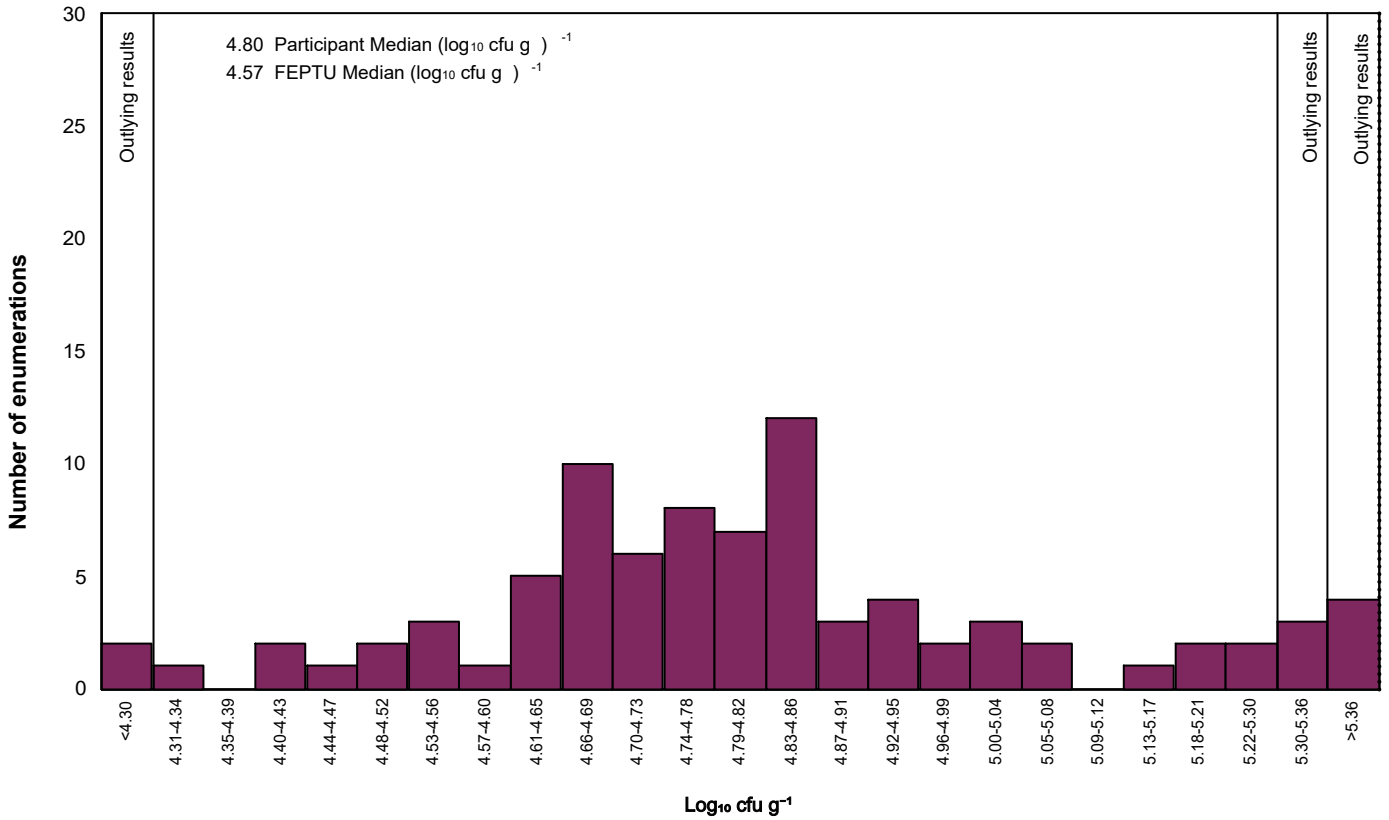
FEPTU Method: ISO 7932:2004

Method	Number of Results	Excluded Results	Percentage of the total	Median (\log_{10} cfu g ⁻¹)	Robust S* (\log_{10} cfu g ⁻¹)	Range Reported (\log_{10} cfu g ⁻¹)
ISO 7932:2004	56	0	78	2.93	0.20	2.00 - 3.83
Other	15	0	21	3.08	0.27	2.84 - 4.34

Presumptive *B.cereus* reported by participants - Sample S0750



Aerobic colony count reported by participants - Sample S0750



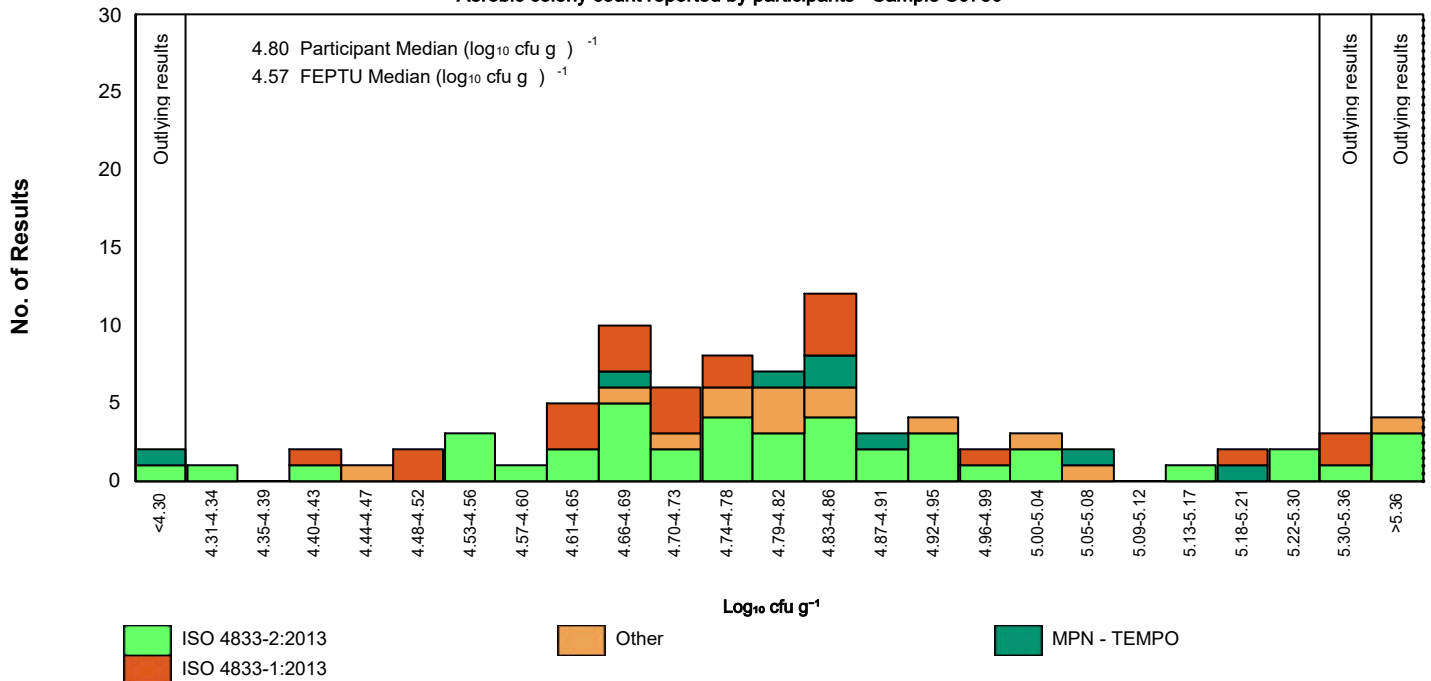
Method based presentation

S0750 : Aerobic colony count

FEPTU Method: ISO 4833-2:2013

Method	Number of Results	Excluded Results	Percentage of the total	Median (\log_{10} cfu g ⁻¹)	Robust S* (\log_{10} cfu g ⁻¹)	Range Reported (\log_{10} cfu g ⁻¹)
ISO 4833-2:2013	42	0	48	4.80	0.22	3.55 - 6.49
Other	14	0	16	4.80	0.12	4.45 - 6.81
MPN - TEMPO	8	0	9			-
ISO 4833-1:2013	22	0	25	4.72	0.17	4.40 - 5.36

Aerobic colony count reported by participants - Sample S0750



Sample S0750

Presumptive <i>B.cereus</i> Method	Presumptive <i>B.cereus</i> Media	Presumptive <i>B.cereus</i> Incubation	Count reported	Count censored values
	Bacillus cereus selective agar (MYP)	30°C/18-48h	0	0
ISO 7932:2004	Bacillus cereus selective agar (MYP)	30°C/18-48h	46	0
ISO 7932:2004	Bacillus cereus selective agar (MYP)	30°C/18-48h; 37°C/18-48h	0	0
ISO 7932:2004	Bacillus cereus selective agar (PEMBA formulation)	30°C/18-48h	3	0
ISO 7932:2004	Bacillus cereus selective agar (PEMBA formulation)	37°C/18-48h	4	0
ISO 7932:2004	Chromogenic agar - please state	30°C/18-48h	1	0
ISO 7932:2004	Chromogenic agar - please state	37°C/18-48h	1	0
ISO 7932:2004	Other	30°C/18-48h	1	0
Other	Bacillus cereus selective agar (MYP)	30°C/18-48h	3	0
Other	Bacillus cereus selective agar (MYP)	37°C/18-48h	1	0
Other	Bacillus cereus selective agar (MYP)	Other	1	0
Other	Bacillus cereus selective agar (PEMBA formulation)	30°C/18-48h	1	0
Other	Bacillus cereus selective agar (PEMBA formulation)	Other	1	0
Other	Chromogenic agar - please state	30°C/18-48h	3	0
Other	Chromogenic agar - please state	37°C/18-48h	2	0
Other	Other	30°C/18-48h	3	0
Other	Other	37°C/18-48h	0	1
Other; ISO 7932:2004	Bacillus cereus selective agar (PEMBA formulation); Chromogenic agar - please state	37°C/18-48h	0	0

Sample S0750

Coagulase-positive staphylococci Method	Coagulase-positive staphylococci Media	Coagulase-positive staphylococci Incubation	Count reported	Count censored values
ISO 6888-1:2021	Baird – Parker medium (BPM)	37°C/24-48h	5	39
ISO 6888-1:2021	Rabbit plasma fibrinogen agar (RPF); Baird – Parker medium (BPM)	37°C/24-48h	0	0
ISO 6888-2:2021	Baird – Parker medium (BPM)	37°C/18-24h	0	1
ISO 6888-2:2021	Baird – Parker medium (BPM)	37°C/24-48h	0	4
ISO 6888-2:2021	Chromogenic agar - please state	37°C/24-48h	0	1
ISO 6888-2:2021	Other	37°C/24-48h	0	1
ISO 6888-2:2021	Rabbit plasma fibrinogen agar (RPF)	37°C/18-24h	0	2
ISO 6888-2:2021	Rabbit plasma fibrinogen agar (RPF)	37°C/24-48h	1	9
ISO 6888-2:2021	Rabbit plasma fibrinogen agar (RPF); Baird – Parker medium (BPM)	37°C/24-48h	0	0
ISO 6888-2:2021; ISO 6888-1:2021	Rabbit plasma fibrinogen agar (RPF); Baird – Parker medium (BPM)	37°C/18-24h; 37°C/24-48h	0	0
ISO 6888-2:2021; ISO 6888-1:2021	Rabbit plasma fibrinogen agar (RPF); Baird – Parker medium (BPM)	37°C/24-48h	0	0
ISO 6888-2:2021; ISO 6888-3:2003	Rabbit plasma fibrinogen agar (RPF)	37°C/24-48h	0	0
ISO 6888-3:2003	Baird – Parker medium (BPM)	37°C/24-48h	1	1
ISO 6888-3:2003	Other	Other	1	0
Other	Baird – Parker medium (BPM)	37°C/18-24h	0	1
Other	Baird – Parker medium (BPM)	37°C/24-48h	0	3
Other	Baird – Parker medium (BPM)	Other	0	2
Other	Chromogenic agar - please state	37°C/18-24h	0	2
Other	Chromogenic agar - please state	Other	1	0
Other	Other	37°C/18-24h	0	7
Other	Other	37°C/24-48h	0	2
Other	Other	Other	0	1
Other	Rabbit plasma fibrinogen agar (RPF)	37°C/24-48h	1	0

Sample S0750

<i>Listeria</i> spp. (including <i>L.mono</i>) Method	<i>Listeria</i> spp. (including <i>L.mono</i>) Media	<i>Listeria</i> spp. (including <i>L.mono</i>) Incubation	Count reported	Count censored values
ISO 11290-2:2017	Brilliance Listeria agar	37°C/24-48h	1	0
ISO 11290-2:2017	Brilliance Listeria agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	0
ISO 11290-2:2017	Other	37°C/24-48h	0	2
ISO 11290-2:2017	Other chromogenic agar	37°C/24-48h	0	5
ISO 11290-2:2017	Other; Oxford Listeria selective agar	37°C/24-48h	0	1
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	1	29
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); BBL TM CHROMagar TM Listeria agar; Brilliance Listeria agar	37°C/24-48h	0	0
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Other chromogenic agar	37°C/24-48h	0	1
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Oxford Listeria selective agar	37°C/24-48h	1	3
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); PALCAM Listeria selective agar	37°C/24-48h	0	1
ISO 11290-2:2017	Oxford Listeria selective agar	37°C/24-48h	0	0
ISO 11290-2:2017	Oxford Listeria selective agar; Brilliance Listeria agar	37°C/24-48h	0	1
ISO 11290-2:2017	Oxford Listeria selective agar; Other chromogenic agar	37°C/24-48h	0	3
ISO 11290-2:2017	Oxford Listeria selective agar; Ottaviani and Agosti agar (ALOA)		0	0
ISO 11290-2:2017	Oxford Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	1
ISO 11290-2:2017	PALCAM Listeria selective agar; Other chromogenic agar	37°C/24-48h	0	1
ISO 11290-2:2017	PALCAM Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	3
ISO 11290-2:2017; Other	Ottaviani and Agosti agar (ALOA); Other chromogenic agar	37°C/24-48h	0	0
Other	Brilliance Listeria agar	37°C/24-48h	1	2
Other	Other	37°C/24-48h	0	2
Other	Other	Other	0	1
Other	Other chromogenic agar	37°C/24-48h	1	1
Other	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	2
Other; ISO 11290-2:2017	Other	Other	0	1
Other; ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	1

Sample S0750

<i>L.monocytogenes</i> Method	<i>L.monocytogenes</i> Media	<i>L.monocytogenes</i> Incubation	Count reported	Count censored values
ISO 11290-2:2017	Brilliance Listeria agar	37°C/24-48h	0	1
ISO 11290-2:2017	Brilliance Listeria agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	0
ISO 11290-2:2017	Brilliance Listeria agar; Oxford Listeria selective agar	37°C/24-48h	0	1
ISO 11290-2:2017	Other	37°C/24-48h	0	2
ISO 11290-2:2017	Other chromogenic agar	37°C/24-48h	0	6
ISO 11290-2:2017	Other chromogenic agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	1
ISO 11290-2:2017	Other chromogenic agar; Oxford Listeria selective agar	37°C/24-48h	0	1
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	2	36
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); Oxford Listeria selective agar	37°C/24-48h	0	1
ISO 11290-2:2017	Ottaviani and Agosti agar (ALOA); PALCAM Listeria selective agar	37°C/24-48h	0	2
ISO 11290-2:2017	Oxford Listeria selective agar	37°C/24-48h	0	0
ISO 11290-2:2017	Oxford Listeria selective agar; Other	37°C/24-48h	0	1
ISO 11290-2:2017	Oxford Listeria selective agar; Other chromogenic agar	37°C/24-48h	0	2
ISO 11290-2:2017	Oxford Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	3
ISO 11290-2:2017	PALCAM Listeria selective agar; Other chromogenic agar	37°C/24-48h	0	1
ISO 11290-2:2017	PALCAM Listeria selective agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	5
ISO 11290-2:2017; Other	Other chromogenic agar; Brilliance Listeria agar	37°C/24-48h	0	1
ISO 11290-2:2017; Other	Other chromogenic agar; Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	0
Other	Brilliance Listeria agar	37°C/24-48h	0	2
Other	Other	37°C/24-48h	0	3
Other	Other chromogenic agar	37°C/24-48h	0	7
Other	Ottaviani and Agosti agar (ALOA)	37°C/24-48h	0	2
Other	Ottaviani and Agosti agar (ALOA); Oxford Listeria selective agar	37°C/24-48h	0	1
Other	PALCAM Listeria selective agar; Other	Other	0	1

Sample S0750

Aerobic colony count Method	Aerobic colony count Media	Aerobic colony count Incubation	Count reported	Count censored values
	Plate count agar	30°C/72h	0	0
ISO 4833-1:2013	Petrifilm TM	30°C/48h	1	0
ISO 4833-1:2013	Plate count agar	30°C/72h	21	0
ISO 4833-2:2013	Petrifilm TM	30°C/48h	2	0
ISO 4833-2:2013	Petrifilm TM	30°C/72h	1	0
ISO 4833-2:2013	Petrifilm TM	Other	1	0
ISO 4833-2:2013	Petrifilm TM; Plate count agar	30°C/48h	0	0
ISO 4833-2:2013	Plate count agar	30°C/48h	12	0
ISO 4833-2:2013	Plate count agar	30°C/48h; 30°C/72h	0	0
ISO 4833-2:2013	Plate count agar	30°C/72h	26	0
MPN - TEMPO	Other	30°C/48h	7	0
MPN - TEMPO	Other	Other	1	0
Other	Other	30°C/72h	1	0
Other	Other	37°C/24h	1	0
Other	Other	Other	1	0
Other	Petrifilm TM	30°C/48h	1	0
Other	Petrifilm TM	Other	3	0
Other	Plate count agar	30°C/48h	1	0
Other	Plate count agar	30°C/72h	3	0
Other	Plate count agar	Other	3	0

Sample S0750

Coliform Method	Coliform Media	Coliform Incubation	Count reported	Count censored values
		37°C/24h	0	0
ISO 4831:2006	Other	Other	1	0
ISO 4831:2006	Petrifilm TM	37°C/24h	1	1
ISO 4831:2006	Petrifilm TM	37°C/24h; 30°C/24h	0	0
ISO 4831:2006	Petrifilm TM	Other	0	1
ISO 4831:2006	Violet red bile agar (VRBA)	37°C/24h	1	1
ISO 4831:2006; ISO 4832:2006	Violet red bile agar (VRBA)	37°C/24h	0	0
ISO 4832:2006	Chromogenic agar - please state	37°C/24h	0	2
ISO 4832:2006	Other	30°C/24h	0	2
ISO 4832:2006	Petrifilm TM	30°C/24h	0	1
ISO 4832:2006	Petrifilm TM	37°C/24h	1	0
ISO 4832:2006	Violet red bile agar (VRBA)	30°C/24h	0	11
ISO 4832:2006	Violet red bile agar (VRBA)	30°C/24h; 37°C/24h	0	0
ISO 4832:2006	Violet red bile agar (VRBA)	37°C/24h	0	19
ISO 4832:2006; ISO 4831:2006	Violet red bile agar (VRBA)	37°C/24h; 30°C/24h	0	0
MPN - TEMPO	Other	30°C/24h	0	4
Multiple tube method (MPN)	Other	Other	0	1
Other	Chromogenic agar - please state	37°C/24h	1	4
Other	Other	37°C/24h	0	3
Other	Petrifilm TM	37°C/24h	1	1
Other	Petrifilm TM	Other	1	0
Other	Violet red bile agar (VRBA)	30°C/24h	0	4
Other	Violet red bile agar (VRBA)	Other	0	2

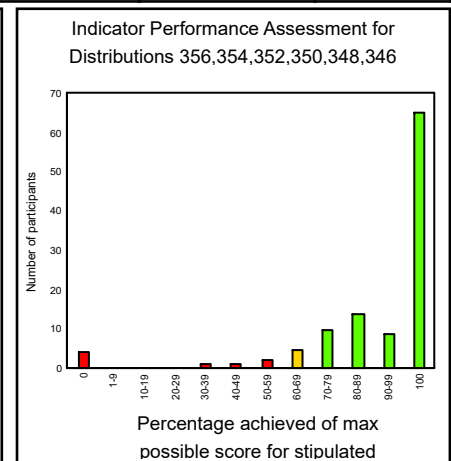
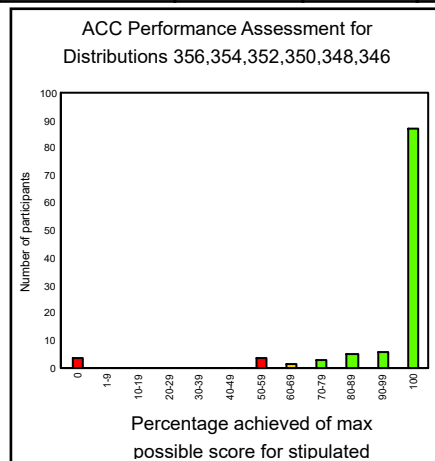
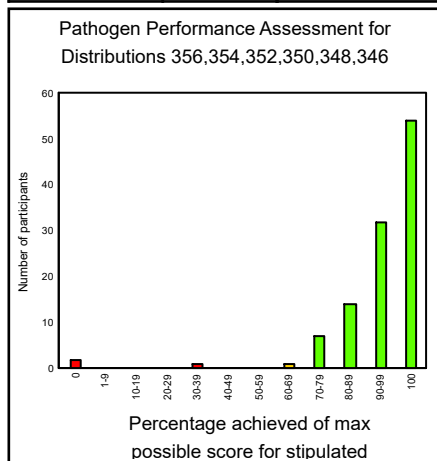
Performance Assessment Sheet

Participants are reminded that to take advantage of the performance assessment overtime tool provided in the reports they need to take part in more than one distribution a year.

Performance assessments are designed to identify laboratories with on-going problems with their examinations and are undertaken after every distribution. Scores are allocated to results reported for every sample to help assess participants' performance.

Cumulative scores are calculated for every participant, for all examination types, for the current and previous five distributions. Participants' cumulative scores for each of the examination types are compared with the maximum possible scores after every distribution.

Distribution	Sample	Examination	Your score	Your %	Sample	Examination	Your score	Your %
356	S0749	Pathogen			S0750	Pathogen		
	S0749	ACC			S0750	ACC		
	S0749	Indicator			S0750	Indicator		
354	S0745	Pathogen			S0746	Pathogen		
	S0745	ACC			S0746	ACC		
	S0745	Indicator			S0746	Indicator		
352	S0741	Pathogen			S0742	Pathogen		
	S0741	ACC			S0742	ACC		
	S0741	Indicator			S0742	Indicator		
350	S0737	Pathogen			S0738	Pathogen		
	S0737	ACC			S0738	ACC		
	S0737	Indicator			S0738	Indicator		
348	S0733	Pathogen			S0734	Pathogen		
	S0733	ACC			S0734	ACC		
	S0733	Indicator			S0734	Indicator		
346	S0729	Pathogen			S0730	Pathogen		
	S0729	ACC			S0730	ACC		
	S0729	Indicator			S0730	Indicator		



Performance Assessment Comment:

Laboratories that achieve less than 70% of the maximum possible score are likely to be experiencing significant problems with their examinations and are advised to

- refer to the relevant sample reports for specific comments
- refer to the website guidance documents:

<https://www.gov.uk/government/collections/external-quality-assessment-ega-and-proficiency-testing-pt-for-food-water-and-environmental-microbiology>

- contact the organisers for advice.

General distribution comment:

Participants are reminded if you do not examine a specific parameter, you must return your results as 'Not examined' as this impacts the overall scores awarded.

General comments on methods:

Participants that did not provide information on the method and testing conditions, their data is not included in the method graphs and tables. This information is useful; therefore, participants are encouraged to complete these details.

Method based presentation tables for enumeration results:

Participants are advised if less than 10 laboratories report an enumeration result for a method, no data is shown for the Median, Robust SD and the Range Reported. Numbers shown in the 'Excluded Results' column are laboratories that reported a censored value.

Method, media and enrichment/incubation tables:

Participants are asked to note:

- that for pathogen detection parameters, the data presented in the tables on the specific method used, is only shown when five or more laboratories have reported a result for that specific method
- that the count shown in the 'Count reported' or 'Count censored values' column includes data from those laboratories that reported:
 - a censored value
 - a result reported as detected or not detected
 - method data with no results reported.

Participants are reminded that the method data presented in this way has some limitations and seeks to identify trends in the results rather than assess specific method details.

Trend analysis:

Plotting your PT results over a period of time can help to identify potential problems. If you need the latest file, please email us on foodeqa@ukhhsa.gov.uk.

General comment:

If you do not return a result for a distribution, you will not be able to view all the participants' results data in your individualised report. Please contact us if you require this information on foodeqa@ukhhsa.gov.uk.

End of report.

