

Summary of Results

External Quality Assessment for Food Microbiology European Food Microbiology Legislation Scheme

Distribution Number: EFL70

Sample Numbers: EFL208, EFL209 & EFL210

Distribution Date:	27 January 2025
Results Due:	28 February 2025
Report Date:	2 April 2025
Samples prepared and quality control tested by:	Divya George Afifa Halim Nafeesa Hussain Sabine Naujokat Zak Prior Jake Videlefsky
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The data in FEPTU reports is confidential.

Lab ID:

This Scheme provides external quality assessment samples for laboratories that examine foods products in accordance with European legislation specified in Regulation (EC) 2073/2005 Microbiological Criteria for Foodstuffs associated with Regulation (EC) 852/2004 and subsequent amendments.

If you require further information about the scheme please refer to:

Scheme Guide: [Scheme Guide - Food and Environmental Proficiency Testing Unit](#)

Guide to Scoring: [Scoring - Food and Environmental Proficiency Testing Unit](#)

FEPTU Quality Control:

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

Intended results letters are published immediately after every distribution; electronic notification of their availability is sent to all participants.

If you experience difficulties with any of the examinations please refer to section 17.0 of the Scheme Guide [Scheme Guide - Food and Environmental Proficiency Testing Unit](#)

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. 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.

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	
Microbiological advice	Nita Patel or Zak Prior	E-mail: foodeqa@ukhsa.gov.uk
General comments and complaints	Nita Patel or Zak Prior	FEPTU Website
Scheme Consultant	Melody Greenwood, Caroline Willis and Heather Aird	
Scheme Co-ordinator	Nita Patel	

Accreditation: UKHSA European Food Microbiology Legislation Scheme is accredited by the United Kingdom Accreditation Service (UKAS) to ISO/IEC 17043:2010



Total number of participants sent distribution EFL70	19
Number of laboratories not returning a result for any samples in EFL70	1
Number of laboratories not examining any of the samples in EFL70	0

Sample: EFL208

Sample Details:	Unsalted garlic butter made from raw milk. Sampled at the farm's shop before product is put on the market for sale.
Sample Request:	Test to determine whether this sample complies with the relevant criteria stipulated in Commission Regulation (EC) No. 2073/2005 as amended.
	Applicable food categories are 1.2 and 2.2.6
Batch Conclusion:	Unsatisfactory. The batch does not comply with the Legislation
Contents:	<i>Listeria monocytogenes</i> (1.30x10 ² per disc) (wild strain) <i>Escherichia coli</i> (1.50x10 ⁴) (wild strain) <i>Citrobacter koseri</i> (4.80x10 ⁴) (wild strain) <i>Lactobacillus plantarum</i> (5.00x10 ⁴) (wild strain) <i>Staphylococcus saprophyticus</i> (1.08x10 ⁶) (wild strain)

All levels are presented as colony forming units (cfu) per g/ml reconstituted sample unless otherwise stated.

Required examination: *Listeria monocytogenes* and *Escherichia coli*

Examination 1- *Listeria monocytogenes*

Examination	Expected Result	Your result	Your score
Applicable food category	1.2		
Name of examination	<i>Listeria monocytogenes</i>		
Stipulated method*	EN ISO 11290-1*		
Amount of sample examined	25g		
No. of samples from a batch required for compliance	5		
Expected range	Detected		
Limits for compliance	Not detected		
Conclusion about this examination from result obtained	Your conclusion has been scored in relation to your reported result		
* The most recent edition of the standard should be used			Total score out of

Comments on Performance:

Number of participants correctly reporting a detected result for <i>L. monocytogenes</i> as part of food category 1.2	17
Number of participants correctly using EN ISO 11290-1:2017	17
Number of participants incorrectly stating that <i>Listeria monocytogenes</i> testing is not required for compliance due amendment to 'Commission Regulation (EU) 2024/2895 of 20 November 2024 amending Regulation (EC) No 2073/2005 as regards <i>Listeria monocytogenes</i> '	1

Sample: EFL208 (continued)

Examination 2 – *Escherichia coli*

Examination	Expected Result	Your result	Your score
Applicable food category	2.2.6		
Name of examination	<i>Escherichia coli</i>		
Stipulated method*	EN ISO 16649-1 or 16649-2*		
Amount of sample examined	-	-	
No. of samples from a batch required for compliance	5		
Expected result	$4.40 \times 10^3 - 4.40 \times 10^4$ cfu g ⁻¹		
Limits for compliance	m=10 cfu g ⁻¹ ; M=100 cfu g ⁻¹ ; C=2		
Conclusion about this examination from result obtained	Your conclusion has been scored in relation to your reported result		
* The most recent edition of the standard should be used			Total score out of

Comments on Performance:

Number of participants correctly reporting a count for <i>Escherichia coli</i> as part of food category 2.2.6	17
Number of participants correctly using EN ISO 16649-1:2018	4
Number of participants correctly using EN ISO 16649-2:2001	12
Number of participants using an in-house method	1

Number of participants incorrectly stating that <i>Escherichia coli</i> testing is not required for compliance	1
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Assigned value (participants' median)	1.39×10^4 cfu g ⁻¹ (4.14 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10}$ cfu g ⁻¹)	0.06
Number of outlying count	2 (2 low)
Participants mean	1.28×10^4 cfu g ⁻¹ (4.11 log ₁₀)
Standard deviation of participants results *	0.19 log ₁₀ cfu g ⁻¹
FEPTU QC median	1.41×10^4 cfu g ⁻¹ (4.15 log ₁₀)

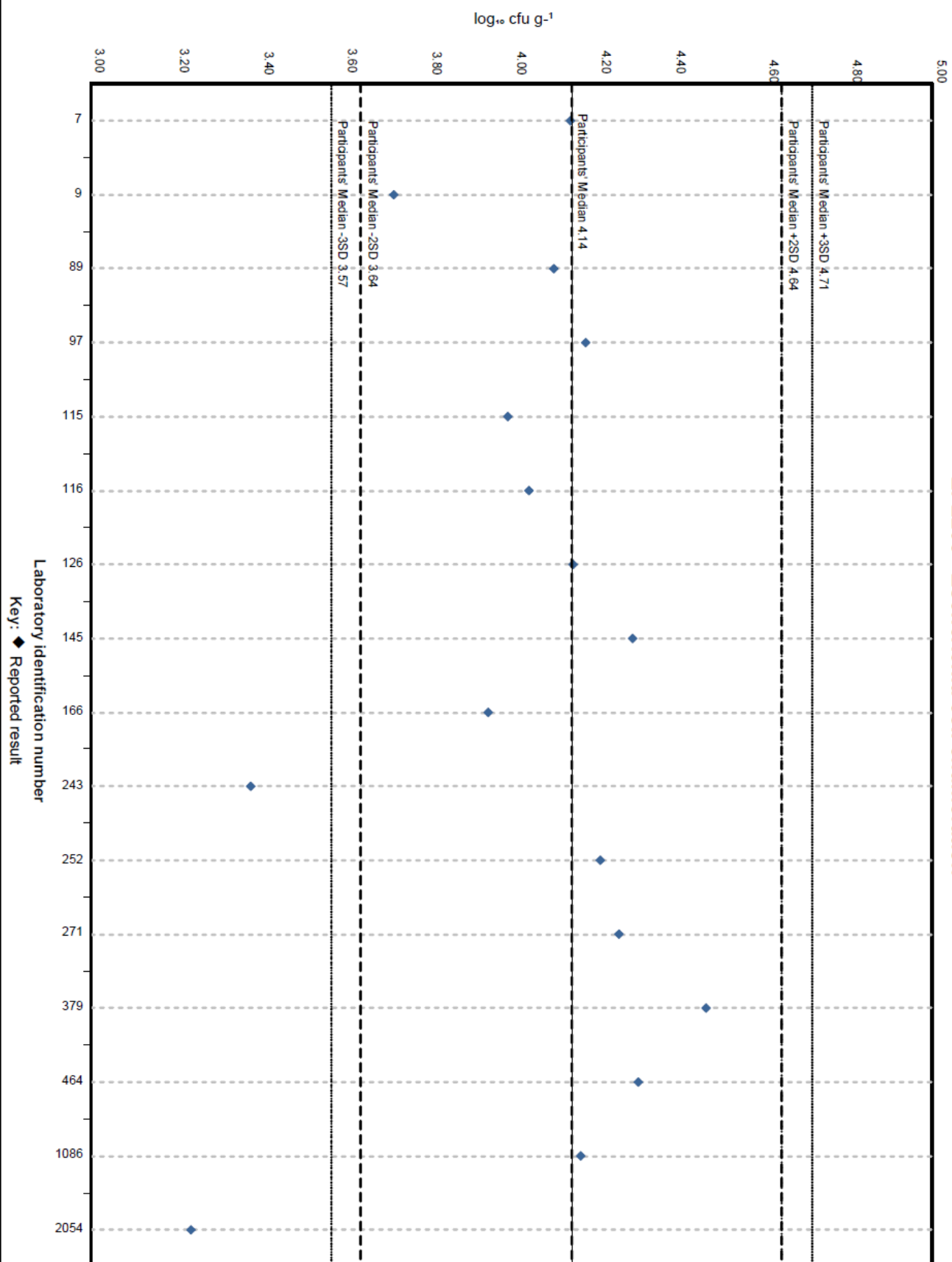
* Robust S* based on median absolute deviation about the participants' median (MADe)

Sample specific comment

Four laboratories additionally examined this sample for *Salmonella* spp.; this test is not required to determine compliance with the legislation for this sample type before the product is put on the market for sale.

	Your result	Your score
Overall batch conclusion		
Bonus score		

EFL208 - *Escherichia coli* enumeration



Sample: EFL209

Sample Details: Italian salami made with mixed spices, sampled from the fridge of a local delicatessen whilst on sale.

Sample Request: Test to determine whether this sample complies with the relevant criteria stipulated in Commission Regulation (EC) No. 2073/2005 as amended.

Batch conclusion Applicable food categories are 1.3 and 1.8
Unsatisfactory. The batch does not comply with the Food Safety Criteria

Contents: *Listeria monocytogenes* (3.3×10^2) (wild strain)
Salmonella Infantis 6,7,14:r;1,5 (1.50×10^2 per disc) (wild strain)
Lactococcus lactis (1.60×10^5) (wild strain)
Listeria innocua (8.70×10^2) (wild strain)
Staphylococcus xylosum (1.00×10^3) (wild strain)

All levels are presented as colony forming units (cfu) per g/ml reconstituted sample unless otherwise stated.

Required examinations: *Listeria monocytogenes* and *Salmonella* spp.

Examination 1 – *Listeria monocytogenes*

Examination	Expected Result	Your result	Your score
Applicable food category	1.3		
Name of examination	<i>Listeria monocytogenes</i>		
Stipulated method*	EN ISO 11290-2*		
Amount of sample examined	-	-	
No. of samples from a batch required for compliance	5		
Expected result	$1.29 \times 10^2 - 1.29 \times 10^3$ cfu g ⁻¹		
Limits for compliance	m=100 cfu g ⁻¹ ; M=100 cfu g ⁻¹ ; C=0		
Conclusion about this examination from result obtained	Your conclusion has been scored in relation to your reported result		
* The most recent edition of the standard should be used			Total score out of

Comments on Performance:

Number of participants correctly reporting a count for <i>Listeria monocytogenes</i> as part of food category 1.3	8
Number of participants correctly stating that <i>Listeria monocytogenes</i> test is required as part of food category 1.3 but did not undertake the testing	1
Number of participants incorrectly reporting a count for <i>Listeria monocytogenes</i> as part of food category 1.2	8
Number of participants incorrectly stating that <i>Listeria monocytogenes</i> test is required as part of food category 1.2 but did not undertake the testing	1
Number of participants correctly using EN ISO 11290-2:2017	16

Assigned value (participants' median)	4.08×10^2 cfu g ⁻¹ (2.61 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10}$ cfu g ⁻¹)	0.05
Number of outlying count	1 high
Participants mean	4.12×10^2 cfu g ⁻¹ (2.62 log ₁₀)
Standard deviation of participants results *	0.15 log ₁₀ cfu g ⁻¹
FEPTU QC median	3.40×10^2 cfu g ⁻¹ (2.53 log ₁₀)

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

Sample specific comment

This food sample was an Italian salami made with mixed spices, sampled from the fridge of a local delicatessen whilst on sale. The water activity for this sample type is normally low and therefore food category 1.3 would apply. However, as this information was not provided as part of the sample type, this part of the parameter has not been scored.

Sample: EFL209 (continued)

Examination 2 – *Salmonella* spp.

Examination	Expected Result	Your result	Your score
Applicable food category	1.8		
Name of examination	<i>Salmonella</i> spp.		
Stipulated method*	EN ISO 6579-1*		
Amount of sample examined	25g		
No. of samples from a batch required for compliance	5		
Expected range	Detected		
Limits for compliance	Not detected		
Conclusion about this examination from result obtained	Your conclusion has been scored in relation to your reported result		
* The most recent edition of the standard should be used			Total score out of

Comments on Performance:

Number of participants correctly reporting a detected result for <i>Salmonella</i> spp. as part of food category 1.8	9
Number of participants incorrectly reporting a detected result for <i>Salmonella</i> spp. as part of food category 1.4	5
Number of participants incorrectly reporting a detected result for <i>Salmonella</i> spp. as part of food category 1.6	2
Number of participants correctly using EN ISO 6579-1:2017	16
Number of participants not stating that <i>Salmonella</i> spp. testing is not required for compliance	2

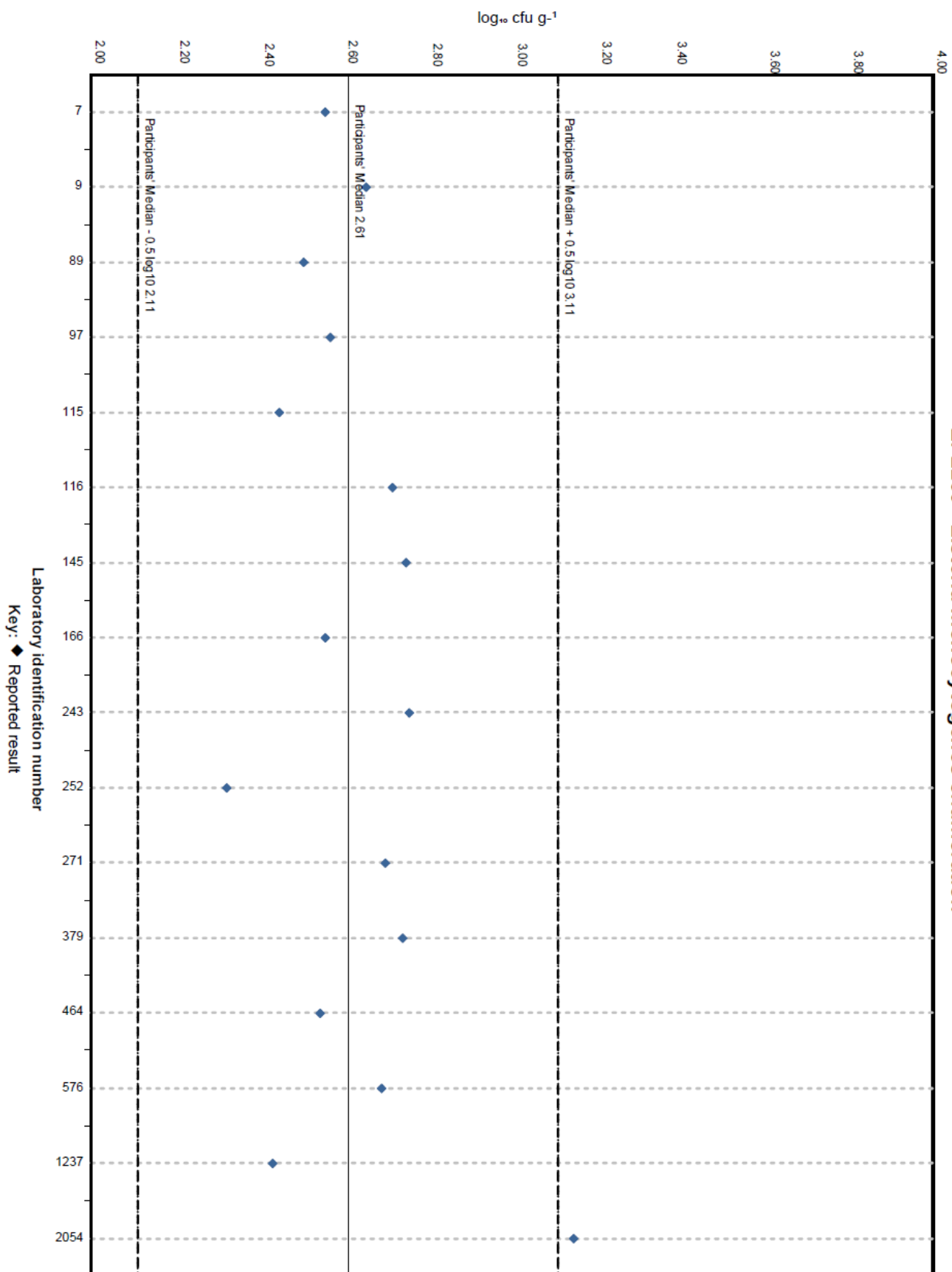
Sample specific comment

Salami meat is categorised as 'A meat preparation' which is defined as "fresh meat, including meat that has been reduced to fragments, which has had foodstuffs, seasonings or additives added to it or which has undergone processes insufficient to modify the internal muscle structure of the meat and thus eliminate the characteristics of fresh meat". Therefore for *Salmonella* compliance food category 1.8 would apply.

Two laboratories additionally examined this sample for *Escherichia coli*; this test is not required to determine compliance with the legislation for this sample whilst on sale.

	Your result	Your score
Overall batch conclusion		
Bonus score		

EFL209 - *Listeria monocytogenes* enumeration



Sample: EFL210

Sample Details:

Mechanically separated meat sampled at the end of the manufacturing process.

Sample Request:

Test to determine whether this sample complies with the relevant criteria stipulated in Commission Regulation (EC) No. 2073/2005 as amended.

Applicable food category is 2.1.7

Batch Conclusion:

Unsatisfactory. The batch does not comply with the Process Hygiene Criteria

Contents:

Escherichia coli (2.02×10^4) (wild strain)
Pseudomonas aeruginosa (1.90×10^5) (wild strain)
Staphylococcus aureus (1.60×10^5) (wild strain)

All levels are presented as colony forming units (cfu) per g/ml reconstituted sample unless otherwise stated.

Required examination: Aerobic colony count and *Escherichia coli*

Examination 1 – Aerobic colony count

Examination	Expected Result	Your result	Your score
Applicable food category	2.1.7		
Name of examination	Aerobic colony count		
Stipulated method*	EN ISO 4833-1*		
Amount of sample examined	-	-	
No. of samples from a batch required for compliance	5		
Expected range	$5.31 \times 10^5 - 5.31 \times 10^6$ cfu g ⁻¹		
Limits for compliance	m= 5×10^5 cfu g ⁻¹ M= 5×10^6 cfu g ⁻¹ ; C=2		
Conclusion about this examination from result obtained	Your conclusion has been scored in relation to your reported result		
* The most recent edition of the standard should be used <div style="float: right;">Total score out of</div>			

Comments on Performance:

Number of participants correctly reporting a count for Aerobic colony as part of food category 2.1.7	18
Number of participants correctly using EN ISO 4833-1:2013	15
Number of participants incorrectly using EN ISO 4833-2:2013	2
Number of participants using an in-house method	1

Assigned value (participants' median)	1.68×10^6 cfu g ⁻¹ (6.23 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10}$ cfu g ⁻¹)	0.04
Number of outlying count	1 low
Participants mean	1.66×10^2 cfu g ⁻¹ (6.22 log ₁₀)
Standard deviation of participants results *	0.12 log ₁₀ cfu g ⁻¹
FEPTU QC median	5.50×10^5 cfu g ⁻¹ (5.74 log ₁₀)

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

Sample: EFL210 (continued)

Examination 2 – *Escherichia coli*

Examination	Expected Result	Your result	Your score
Applicable food category	2.1.7		
Name of examination	<i>Escherichia coli</i>		
Stipulated method*	EN ISO 16649-1 or EN ISO 16649-2*		
Amount of sample examined	-	-	
No. of samples from a batch required for compliance	5		
Expected range	$5.88 \times 10^3 - 5.88 \times 10^4$ cfu g ⁻¹		
Limits for compliance	m=50 cfu g ⁻¹ ; M=500 cfu g ⁻¹ ; C=2		
Conclusion about this examination from result obtained	Your conclusion has been scored in relation to your reported result		
* The most recent edition of the standard should be used <div style="float: right;">Total score out of</div>			

Comments on Performance:

Number of participants correctly reporting a count for <i>Escherichia coli</i> as part of food category 2.1.7	18
Number of participants correctly using EN ISO 16649-1:2018	5
Number of participants correctly using EN ISO 16649-2:2001	12
Number of participants using an in-house method	1

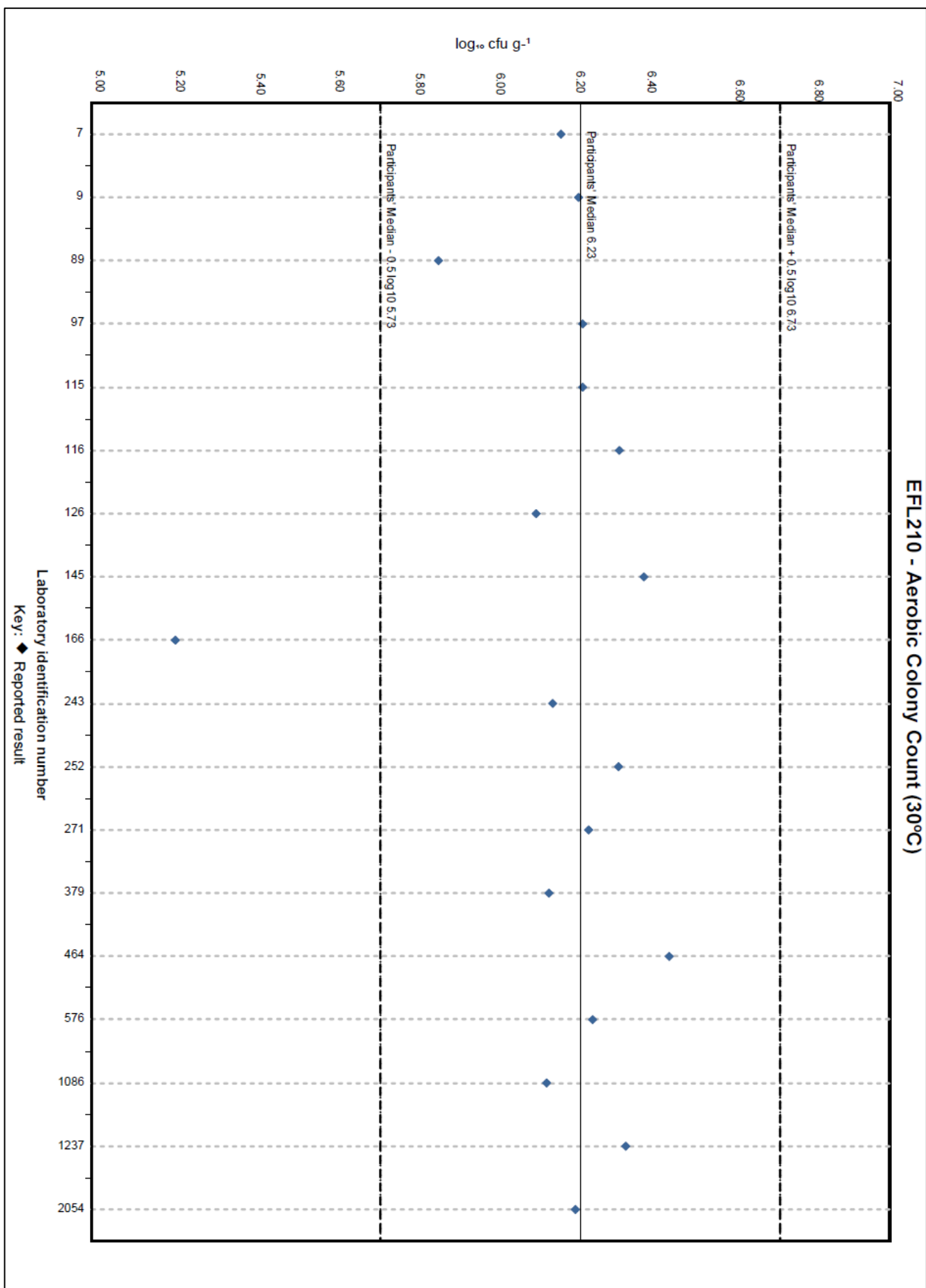
Assigned value (participants' median)	1.86×10^4 cfu g ⁻¹ (4.27 log ₁₀)
Uncertainty of assigned value ($U(X_{pt}) = \log_{10}$ cfu g ⁻¹)	0.02
Participants mean	1.87×10^4 cfu g ⁻¹ (4.27 log ₁₀)
Standard deviation of participants results *	0.08 log ₁₀ cfu g ⁻¹
FEPTU QC median	2.02×10^4 cfu g ⁻¹ (4.31 log ₁₀)

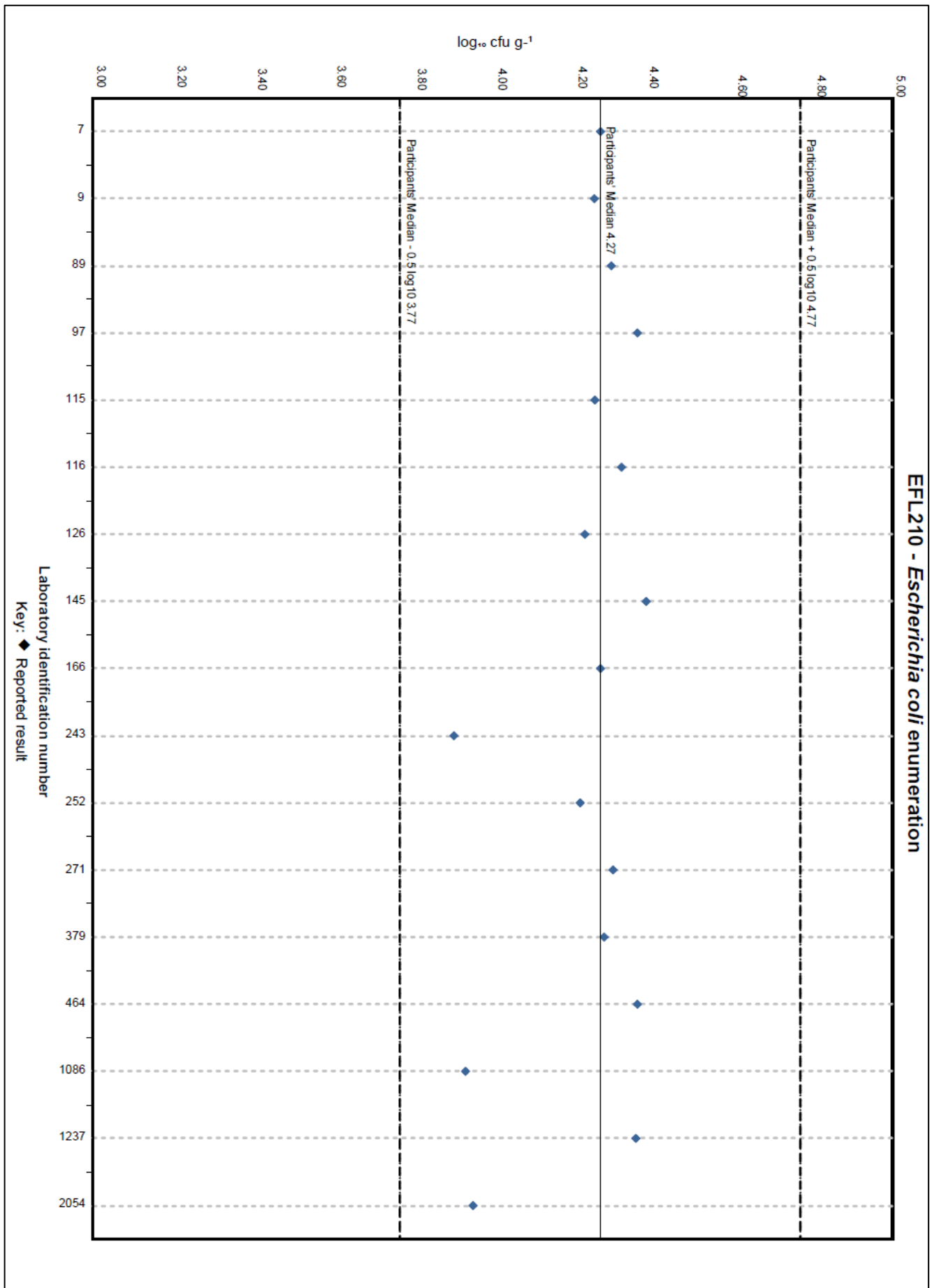
* Robust S* based on median absolute deviation about the participants' median (MADe)

Sample specific comment

Two laboratories additionally examined this sample for *Salmonella* spp. and one for *Listeria monocytogenes*; these tests are not required to determine compliance with the legislation for this sample when taken at the end of the manufacturing process.

	Your result	Your score
Overall batch conclusion		
Bonus score		





Performance Assessment Sheet

Previous distribution scores are provided in your previous scheme report.

Distribution	Sample	Examination	Your score	Your % score overall for the sample
EFL70	EFL208	<i>Listeria monocytogenes</i>		
	EFL208	<i>Escherichia coli</i>		
	EFL208	Overall batch conclusion		
	EFL208	Bonus score		
	EFL209	<i>Listeria monocytogenes</i>		
	EFL209	<i>Salmonella</i> spp.		
	EFL209	Overall Batch Conclusion Score		
	EFL209	Bonus Score		
	EFL210	Aerobic colony count		
	EFL210	<i>Escherichia coli</i>		
	EFL210	Overall Batch Conclusion Score		
	EFL210	Bonus Score		

Performance Assessment Comment:

Participants are reminded that to take advantage of the performance assessment over time 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 three distributions. Participants' cumulative scores for each of the examination types are compared with the maximum possible scores after every distribution.

Performance Assessment Comment:

Laboratories that achieve <70% of the maximum possible score are likely to be experiencing significant problems with their tests and are advised to:

- refer to the relevant sample reports for specific comments
- refer to the website guidance documents: [Scheme Guide - Food and Environmental Proficiency Testing Unit](#) contact the organisers for advice.

General comment:

Participants are reminded that decisions on appropriate testing should be based on fact, not assumptions.

Please refer to pages 13 and 14 of the guide to scoring document for more information. [Scoring - Food and Environmental Proficiency Testing Unit](#).

It is important that when entering your results all fields where a score is applied are correctly completed.

Participants are reminded to at least record the applicable food category with the name of the organism / examination if you do not carry out a test. This will demonstrate your understanding of the legislation requirements and for your laboratory to be awarded the bonus scores.

Participants are advised that for a robust statistical evaluation at least 20 reported results are required for a parameter. When statistical calculation is based on 10 – 19 results, they should be interpreted with caution as they may be overly influenced by outlying results. This is the reason why the standard deviation of the enumeration results reported can be wide.

New website

We are pleased to announce the launch of our new website: <https://www.feptu.org.uk/>. Please refer to this website to obtain the latest information for your proficiency testing.

Information of importance

To understand more about the proficiency testing schemes, please use the following links for information on:

1. Report format explained: [Annotated report](#)
2. Performance rating: [Performance-over-time](#) and [Scheme guide](#) (section 16.0)
3. Scoring and statistics used: [Scoring information and stats](#)
4. Homogeneity and stability: [Scheme guide](#) (section 9.0)
5. Complaints and appeal process: [Scheme guide](#) (section 20.0 and 21.0)

For further information about the operation of the service including confidentiality and terms of participation, please refer to the Scheme Guide: [Scheme guide](#)

End of report.