



Summary of Results

External Quality Assessment of Food Microbiology

Public Health Scheme

Distribution Number: PH6
Sample Numbers: PH0031, PH0032, PH0033,
PH0034, PH0035, PH0036

Distribution Date:	March 2015
Results Due:	10 April 2015
Report Date:	21 April 2015
Samples prepared and QC tested by:	Morolake Adedeji Stephanie Foster Thamayanthy Ramesh Aneta Stranc Anitha Tallam
Data Analysed by:	Manchari Rajkumar Nita Patel
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If you require general information about the scheme please refer to:

Scheme Guide:

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

For more specific information about results assessments, scoring systems, statistics, and guidance on analysing your results for the proficiency testing samples please refer to:

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:

$$Z = \frac{(x-X)}{\sigma}$$

x = participants' result (expressed as a log₁₀ value)
X = assigned value (participants' consensus median (expressed as a log₁₀ value))
σ = the fixed standard deviation for the examination (calculated by FEPTU)

The σ-value expresses the acceptable difference between the individual participant's result and the participants' consensus median. The σ-value used for calculating z-scores for all parameters in the Public Health 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, PHE recommends that all questionable and unsatisfactory results are investigated.

FEPTU Quality Control: To demonstrate homogeneity of the sample, a minimum of 10 LENTICULE® discs, selected randomly from a batch, are tested in duplicate for parameters requiring enumeration and 10 LENTICULE discs are examined for pathogen detection.

To demonstrate stability of the sample, a minimum of nine LENTICULE discs, 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

If you experience difficulties with any of the examinations please refer to section 17.0 of the Scheme Guide <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 pathogen from food or swab 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.

Please contact FEPTU staff for advice and information:

Repeat samples	Carmen Gomes or Kermin Daruwalla	Tel: +44 (0)20 8327 7119
Data Analysis	Manchari Rakumar or Nita Patel	Fax: +44 (0)20 8200 8264
Microbiological advice	Nita Patel or Morolake Adedeji	Email: foodeqa@phe.gov.uk
General comments and complaints	Nita Patel or Morolake Adedeji	
Scheme consultants	Nicola Elviss and Melody Greenwood	
Scheme Co-ordinator	Nita Patel	

Outbreak details: On the 23 February late afternoon, 13 people visited the local emergency department complaining of gastrointestinal illness with on-set 2-3 hours after attending a birthday meal. All 13 had reported chills without a fever, five had nausea and 12 had vomiting. The emergency department contacted the local public health department, who initiated an outbreak investigation. The meal was held at a local Community Centre and was attended by 50 people. The food was made by an external catering company. The duration of the illness was about 11 hours.

Leftover food samples were collected for microbiological examination from the Community Centre and a number of swabs were collected from various areas of the catering company. It was noted at the catering premises the food handlers did not wear gloves.



Accreditation: PHE Public Health EQA Scheme is accredited by the United Kingdom Accreditation Service (UKAS) to ISO/IEC Guide 17043:2010

0006

Food Sample: PH0031

Sample type: Chicken and mayonnaise sandwiches made on 22 February 2015. The sandwiches were removed from the fridge early morning at 7.00am on the 23 February and left at ambient temperature until consumed.

Request: Examine samples following your routine protocol for the above outbreak – enter the examination carried out and the results obtained below

Contents:

Staphylococcus aureus (wild strain), *Enterobacter cloacae* (wild strain), *Klebsiella oxytoca* (wild strain), *Bacillus pumilus* (wild strain), *Lactobacillus plantarum* (wild strain)

Expected Results:

Examination	Expected Result	Your Result	Score for performance assessment	Z-score
Coagulase-positive staphylococci	1.23x10 ⁴ - 1.23x10 ⁵ cfu g ⁻¹		N/A	N/A
Aerobic Colony Count (30°C)	1.26x10 ⁴ - 1.26x10 ⁵ cfu g ⁻¹		N/A	N/A
<i>Enterobacteriaceae</i>	1.09x10 ² - 1.09x10 ³ cfu g ⁻¹		N/A	N/A
<i>Escherichia coli</i>	<10 cfu g ⁻¹		N/A	N/A

Comments on Performance:

Coagulase-positive staphylococci

Total number of participants examining the sample for Coagulase-positive staphylococci	7
Participants reporting correctly	7
Total participants reporting for Coagulase-positive staphylococci	7
Assigned value (participants' median)	3.90x10 ⁴ cfu g ⁻¹ (4.59 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.06
Participants' mean	4.05x10 ⁴ cfu g ⁻¹ (4.61 log ₁₀)
*Standard deviation of participants' results	0.15 log ₁₀ cfu g ⁻¹
FEPTU QC median	3.40x10 ⁴ cfu g ⁻¹ (4.53 log ₁₀)

Aerobic Colony Count (30°C)

Total number of participants examining the sample for Aerobic Colony Count (30°C)	5
Participants reporting correctly	5
Total participants reporting for Aerobic Colony Count (30°C)	5
Assigned value (participants' median)	4.00x10 ⁴ cfu g ⁻¹ (4.6 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.06
Participants' mean	3.71x10 ⁴ cfu g ⁻¹ (4.57 log ₁₀)
*Standard deviation of participants' results	0.1 log ₁₀ cfu g ⁻¹
FEPTU QC median	3.40x10 ⁴ cfu g ⁻¹ (4.53 log ₁₀)

Enterobacteriaceae

Total number of participants examining the sample for <i>Enterobacteriaceae</i>	7
Participants reporting correctly	7
Total participants reporting for <i>Enterobacteriaceae</i>	7
Assigned value (participants' median)	3.45x10 ² cfu g ⁻¹ (2.54 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.07
Participants' mean	3.17x10 ² cfu g ⁻¹ (2.5 log ₁₀)
*Standard deviation of participants' results	0.15 log ₁₀ cfu g ⁻¹
FEPTU QC median	1.60x10 ² cfu g ⁻¹ (2.2 log ₁₀)

Escherichia coli

Total number of participants examining the sample for <i>Escherichia coli</i>	7
Participants reporting correctly	7

Total sent samples

8

Not examined

1

Non returns

0

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

* Robust SD based on median absolute deviation about the participants' median (MAD).

Note: enumeration parameters with less than 10 participants results are not scored. Please see explanation in the comments section.

** No expected range calculated for this parameter due to the low number of participants reporting a results for this test.

Food Sample: PH0032

Sample type: Chicken and sausage stew containing onions and seasonings. Stew was made the evening of 22 February and left at room temperature overnight. On the 23 February the stew was transferred to a slow cooker for re-heating and fresh herbs were added prior to consumption.

Request: Examine samples following your routine protocol for the above outbreak – enter the examination carried out and the results obtained below

Contents:

Staphylococcus aureus (wild strain), *Klebsiella aerogenes* (wild strain), *Lactococcus lactis* (wild strain)

Expected Results:

Examination	Expected Result	Your Result	Score for performance assessment	Z-score
Coagulase-positive staphylococci	$1.58 \times 10^4 - 1.58 \times 10^5 \text{ cfu g}^{-1}$		N/A	N/A
Aerobic Colony Count (30°C)	$1.39 \times 10^4 - 1.39 \times 10^5 \text{ cfu g}^{-1}$		N/A	N/A
<i>Enterobacteriaceae</i>	$5.0 \times 10^1 - 5.05 \times 10^2 \text{ cfu g}^{-1}$		N/A	N/A
<i>Escherichia coli</i>	$< 10 \text{ cfu g}^{-1}$		N/A	N/A

Comments on Performance:

Coagulase-positive staphylococci

Total number of participants examining the sample for Coagulase-positive staphylococci	7
Participants reporting correctly	7
Total participants reporting for Coagulase-positive staphylococci	7
Assigned value (participants' median)	$5.00 \times 10^4 \text{ cfu g}^{-1}$ (4.7 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.04
Participants' mean	$4.95 \times 10^4 \text{ cfu g}^{-1}$ (4.69 log ₁₀)
*Standard deviation of participants' results	0.08 log ₁₀ cfu g ⁻¹
FEPTU QC median	$4.20 \times 10^4 \text{ cfu g}^{-1}$ (4.62 log ₁₀)

Aerobic Colony Count (30°C)

Total number of participants examining the sample for Aerobic Colony Count (30°C)	5
Participants reporting correctly	5
Total participants reporting for Aerobic Colony Count (30°C)	5
Assigned value (participants' median)	$4.40 \times 10^4 \text{ cfu g}^{-1}$ (4.64 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.04
Participants' mean	$4.47 \times 10^4 \text{ cfu g}^{-1}$ (4.65 log ₁₀)
*Standard deviation of participants' results	0.07 log ₁₀ cfu g ⁻¹
FEPTU QC median	$4.20 \times 10^4 \text{ cfu g}^{-1}$ (4.62 log ₁₀)

Enterobacteriaceae

Total number of participants examining the sample for <i>Enterobacteriaceae</i>	7
Participants reporting correctly	7
Total participants reporting for <i>Enterobacteriaceae</i>	7
Assigned value (participants' median)	$1.60 \times 10^2 \text{ cfu g}^{-1}$ (2.2 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.04
Participants' mean	$1.51 \times 10^2 \text{ cfu g}^{-1}$ (2.18 log ₁₀)
*Standard deviation of participants' results	0.09 log ₁₀ cfu g ⁻¹
FEPTU QC median	$1.30 \times 10^2 \text{ cfu g}^{-1}$ (2.11 log ₁₀)

Escherichia coli

Total number of participants examining the sample for <i>Escherichia coli</i>	7
Participants reporting correctly	7

Total sent samples	8
Not examined	1
Non returns	0

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

* Robust SD based on median absolute deviation about the participants' median (MAD).

Note: enumeration parameters with less than 10 participants results are not scored. Please see explanation in the comments section.

** No expected range calculated for this parameter due to the low number of participants reporting a results for this test.

Food Sample: PH0033

Sample type: Seafood paella with parmesan. Food was prepared early morning of 23 February and re-heated prior to consumption.

Request: Examine samples following your routine protocol for the above outbreak – enter the examination carried out and the results obtained below

Contents:

Enterobacter cloacae (wild strain), *Escherichia coli* (wild strain), *Pantoea agglomerans* (wild strain), *Enterococcus durans* (wild strain)

Expected Results:

Examination	Expected Result	Your Result	Score for performance assessment	Z-score
Coagulase-positive staphylococci	<10 cfu g ⁻¹		N/A	N/A
Aerobic Colony Count (30°C)	N/A**		N/A	N/A
<i>Enterobacteriaceae</i>	1.83x10 ² - 1.83x10 ³ cfu g ⁻¹		N/A	N/A
<i>Escherichia coli</i>	1.29x10 ² - 1.30x10 ³ cfu g ⁻¹		N/A	N/A

Comments on Performance:

Coagulase-positive staphylococci

Total number of participants examining the sample for Coagulase-positive staphylococci	7
Participants reporting correctly	7

Aerobic Colony Count (30°C)

Total number of participants examining the sample for Aerobic Colony Count (30°C)	5
Participants reporting correctly	4
Total participants reporting for Aerobic Colony Count (30°C)	4
Participants reporting a low censored value	1
FEPTU QC median	5.70x10 ² cfu g ⁻¹ (2.76 log ₁₀)

Enterobacteriaceae

Total number of participants examining the sample for <i>Enterobacteriaceae</i>	7
Participants reporting correctly	7
Total participants reporting for <i>Enterobacteriaceae</i>	7
Assigned value (participants' median)	5.80x10 ² cfu g ⁻¹ (2.76 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.03
Participants' mean	5.70x10 ² cfu g ⁻¹ (2.76 log ₁₀)
*Standard deviation of participants' results	0.08 log ₁₀ cfu g ⁻¹
FEPTU QC median	3.70x10 ² cfu g ⁻¹ (2.57 log ₁₀)

Escherichia coli

Total number of participants examining the sample for <i>Escherichia coli</i>	7
Participants reporting correctly	7
Total participants reporting for <i>Escherichia coli</i>	7
Assigned value (participants' median)	4.10x10 ² cfu g ⁻¹ (2.61 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu g ⁻¹)	0.07
Participants' mean	3.84x10 ² cfu g ⁻¹ (2.58 log ₁₀)
*Standard deviation of participants' results	0.15 log ₁₀ cfu g ⁻¹
FEPTU QC median	3.50x10 ² cfu g ⁻¹ (2.54 log ₁₀)

Total sent samples	8
Not examined	1
Non returns	0

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

* Robust SD based on median absolute deviation about the participants' median (MAD).

Note: enumeration parameters with less than 10 participants results are not scored. Please see explanation in the comments section.

** No expected range calculated for this parameter due to the low number of participants reporting a results for this test.

Swab Sample: PH0034

Sample type: Template area swab (10cm x 10cm) of kitchen cloth

Request: Examine samples following your routine protocol for the above outbreak – enter the examination carried out and the results obtained below

Contents:

Staphylococcus aureus (wild strain), *Escherichia coli* (wild strain), *Hafnia alvei* (wild strain), *Microbacterium luteolum* (NCIMB 9568), *Pseudomonas fluorescens* (wild strain)

Expected Results:

Examination	Expected Result	Your Result	Score for performance assessment	Z-score
Coagulase-positive staphylococci	8.5x10 ¹ - 3.16x10 ³ cfu per cm ²		N/A	N/A
Aerobic Colony Count (30°C)	N/A**		N/A	N/A
<i>Enterobacteriaceae</i>	7 - 7.5x10 ¹ cfu per cm ²		N/A	N/A
<i>Escherichia coli</i>	3 - 1.43x10 ² cfu per cm ²		N/A	N/A

Comments on Performance:

Coagulase-positive staphylococci

Total number of participants examining the sample for Coagulase-positive staphylococci	7
Participants reporting correctly	7
Total participants reporting for Coagulase-positive staphylococci	7
Assigned value (participants' median)	5.20x10 ² cfu per cm ² (2.72 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu per cm ²)	0.15
No. of outlying counts	2 (0 low / 2 high)
Participants' mean	5.91x10 ² cfu per cm ² (2.77 log ₁₀)
*Standard deviation of participants' results	0.39 log ₁₀ cfu per cm ²
FEPTU QC median	5.20x10 ² cfu per cm ² (2.72 log ₁₀)

Aerobic Colony Count (30°C)

Total number of participants examining the sample for Aerobic Colony Count (30°C)	4
Participants reporting correctly	4
Total participants reporting for Aerobic Colony Count (30°C)	4
FEPTU QC median	7.10x10 ² cfu per cm ² (2.85 log ₁₀)

Enterobacteriaceae

Total number of participants examining the sample for <i>Enterobacteriaceae</i>	7
Participants reporting correctly	7
Total participants reporting for <i>Enterobacteriaceae</i>	7
Assigned value (participants' median)	2.4x10 ¹ cfu per cm ² (1.38 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu per cm ²)	0.02
No. of outlying counts	2 (1 low / 1 high)
Participants' mean	2.3x10 ¹ cfu per cm ² (1.38 log ₁₀)
*Standard deviation of participants' results	0.07 log ₁₀ cfu per cm ²
FEPTU QC median	2.3x10 ¹ cfu per cm ² (1.36 log ₁₀)

Escherichia coli

Total number of participants examining the sample for <i>Escherichia coli</i>	7
Participants reporting correctly	7
Total participants reporting for <i>Escherichia coli</i>	7
Assigned value (participants' median)	2.3x10 ¹ cfu per cm ² (1.36 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu per cm ²)	0.20
No. of outlying counts	1 (0 low / 1 high)
Participants' mean	1.9x10 ¹ cfu per cm ² (1.29 log ₁₀)
*Standard deviation of participants' results	0.4 log ₁₀ cfu per cm ²
FEPTU QC median	2.1x10 ¹ cfu per cm ² (1.32 log ₁₀)

Total sent samples

8

Not examined

1

Non returns

0

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

* Robust SD based on median absolute deviation about the participants' median (MAD).

Note: enumeration parameters with less than 10 participants results are not scored. Please see explanation in the comments section.

** No expected range calculated for this parameter due to the low number of participants reporting a results for this test.

Swab Sample: PH0035

Sample type: Random area swab of the kitchen sink

Request: Examine samples following your routine protocol for the above outbreak – enter the examination carried out and the results obtained below

Contents:

Serratia liquefaciens (wild strain), *Staphylococcus epidermidis* (wild strain), *Pseudomonas putida* (wild strain)

Expected Results:

Examination	Expected Result	Your Result	Score for performance assessment	Z-score
Coagulase-positive staphylococci	<100 cfu per swab		N/A	N/A
Aerobic Colony Count (30°C)	N/A**		N/A	N/A
<i>Enterobacteriaceae</i>	<100 cfu per swab		N/A	N/A
<i>Escherichia coli</i>	<100 cfu per swab		N/A	N/A

Comments on Performance:

Coagulase-positive staphylococci

Total number of participants examining the sample for Coagulase-positive staphylococci	7
Participants reporting correctly	7

Aerobic Colony Count (30°C)

Total number of participants examining the sample for Aerobic Colony Count (30°C)	1
Participants reporting correctly	1
Total participants reporting for Aerobic Colony Count (30°C)	1
FEPTU QC median	5.50x10 ³ cfu per swab (3.74 log ₁₀)

Enterobacteriaceae

Total number of participants examining the sample for <i>Enterobacteriaceae</i>	7
Participants reporting correctly	5

Escherichia coli

Total number of participants examining the sample for <i>Escherichia coli</i>	7
Participants reporting correctly	7

Total sent samples	8
Not examined	1
Non returns	0

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

* Robust SD based on median absolute deviation about the participants' median (MAD).

Note: enumeration parameters with less than 10 participants results are not scored. Please see explanation in the comments section.

** No expected range calculated for this parameter due to the low number of participants reporting a results for this test.

Swab Sample: PH0036**Sample type:** Template area swab (10cm x 10cm) of a staff member's apron**Request:** Examine samples following your routine protocol for the above outbreak – enter the examination carried out and the results obtained below**Contents:***Staphylococcus aureus* (wild strain), *Saccharomyces cerevisiae* (wild strain), *Staphylococcus epidermidis* (wild strain)**Expected Results:**

Examination	Expected Result	Your Result	Score for performance assessment	Z-score
Coagulase-positive staphylococci	2.6×10^1 - 9.56×10^3 cfu per cm ²		N/A	N/A
Aerobic Colony Count (30°C)	1.18×10^2 - 1.18×10^3 cfu per cm ²		N/A	N/A
<i>Enterobacteriaceae</i>	<1 cfu per cm ²		N/A	N/A
<i>Escherichia coli</i>	<1 cfu per cm ²		N/A	N/A

Comments on Performance:

Coagulase-positive staphylococci

Total number of participants examining the sample for Coagulase-positive staphylococci	7
Participants reporting correctly	7
Total participants reporting for Coagulase-positive staphylococci	7
Assigned value (participants' median)	5.00×10^2 cfu per cm ² (2.7 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu per cm ²)	0.28
Participants' mean	5.84×10^2 cfu per cm ² (2.77 log ₁₀)
*Standard deviation of participants' results	0.64 log ₁₀ cfu per cm ²
FEPTU QC median	6.20×10^2 cfu per cm ² (2.79 log ₁₀)

Aerobic Colony Count (30°C)

Total number of participants examining the sample for Aerobic Colony Count (30°C)	5
Participants reporting correctly	5
Total participants reporting for Aerobic Colony Count (30°C)	5
Assigned value (participants' median)	3.74×10^2 cfu per cm ² (2.57 log ₁₀)
Uncertainty of assigned value (Ux= log ₁₀ cfu per cm ²)	0.02
Participants' mean	3.74×10^2 cfu per cm ² (2.57 log ₁₀)
*Standard deviation of participants' results	0.06 log ₁₀ cfu per cm ²
FEPTU QC median	6.20×10^2 cfu per cm ² (2.79 log ₁₀)

Enterobacteriaceae

Total number of participants examining the sample for <i>Enterobacteriaceae</i>	7
Participants reporting correctly	7

Escherichia coli

Total number of participants examining the sample for <i>Escherichia coli</i>	7
Participants reporting correctly	7

Total sent samples

8

Not examined

1

Non returns

0

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

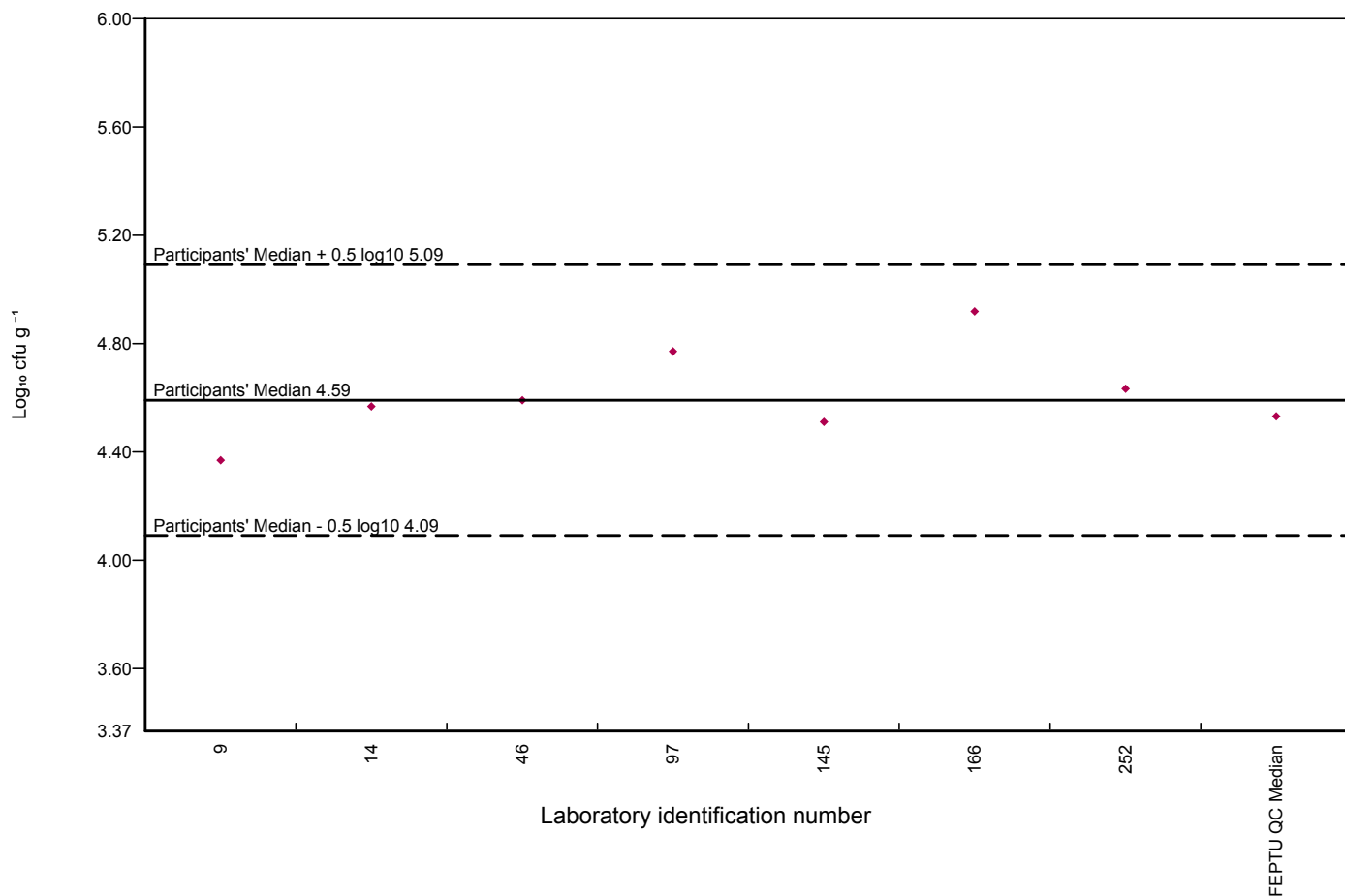
* Robust SD based on median absolute deviation about the participants' median (MAD).

Note: enumeration parameters with less than 10 participants results are not scored. Please see explanation in the comments section.

** No expected range calculated for this parameter due to the low number of participants reporting a results for this test.

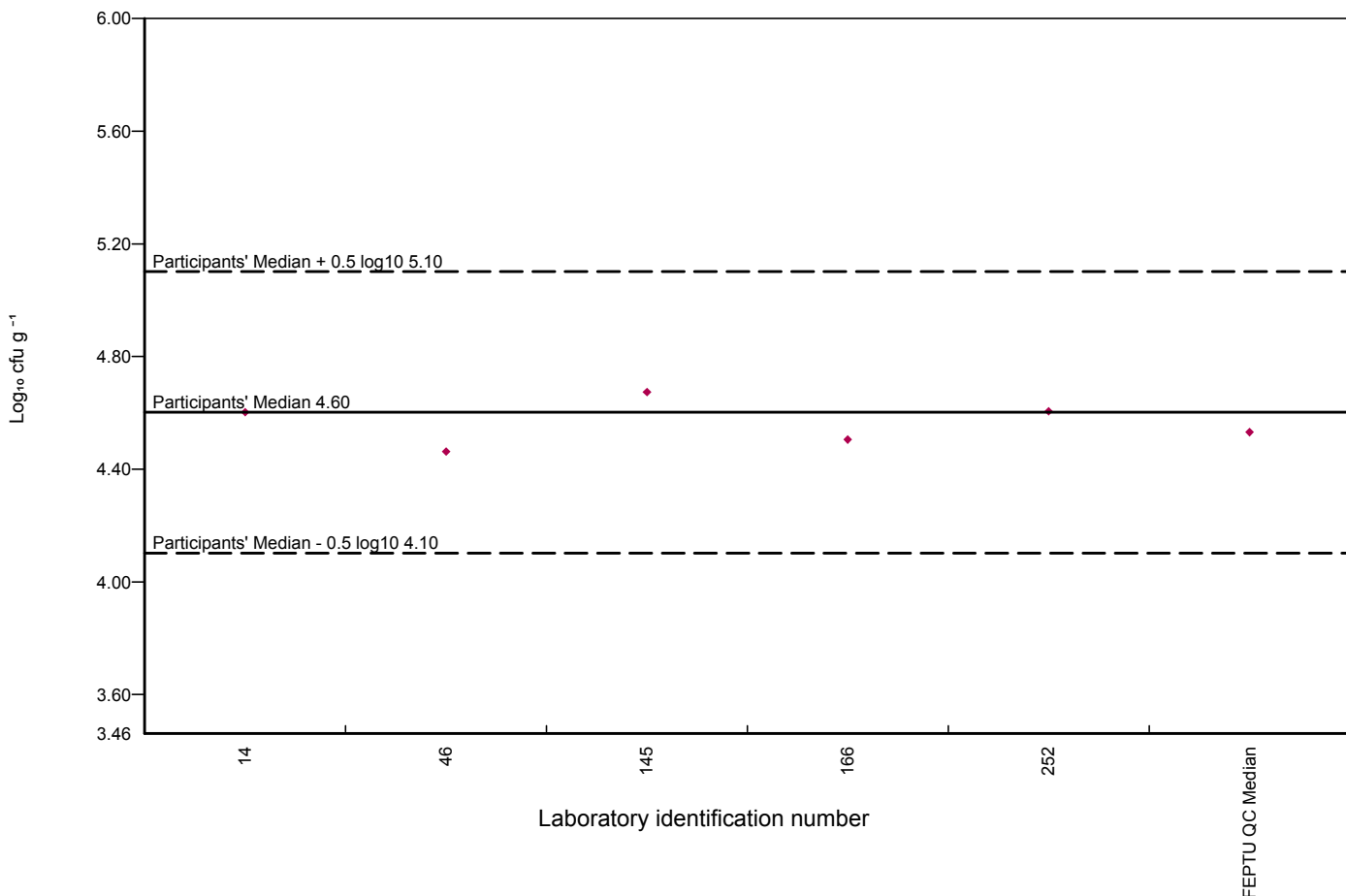
PH0031 - Coagulase-positive staphylococci

Key: ♦ Reported result



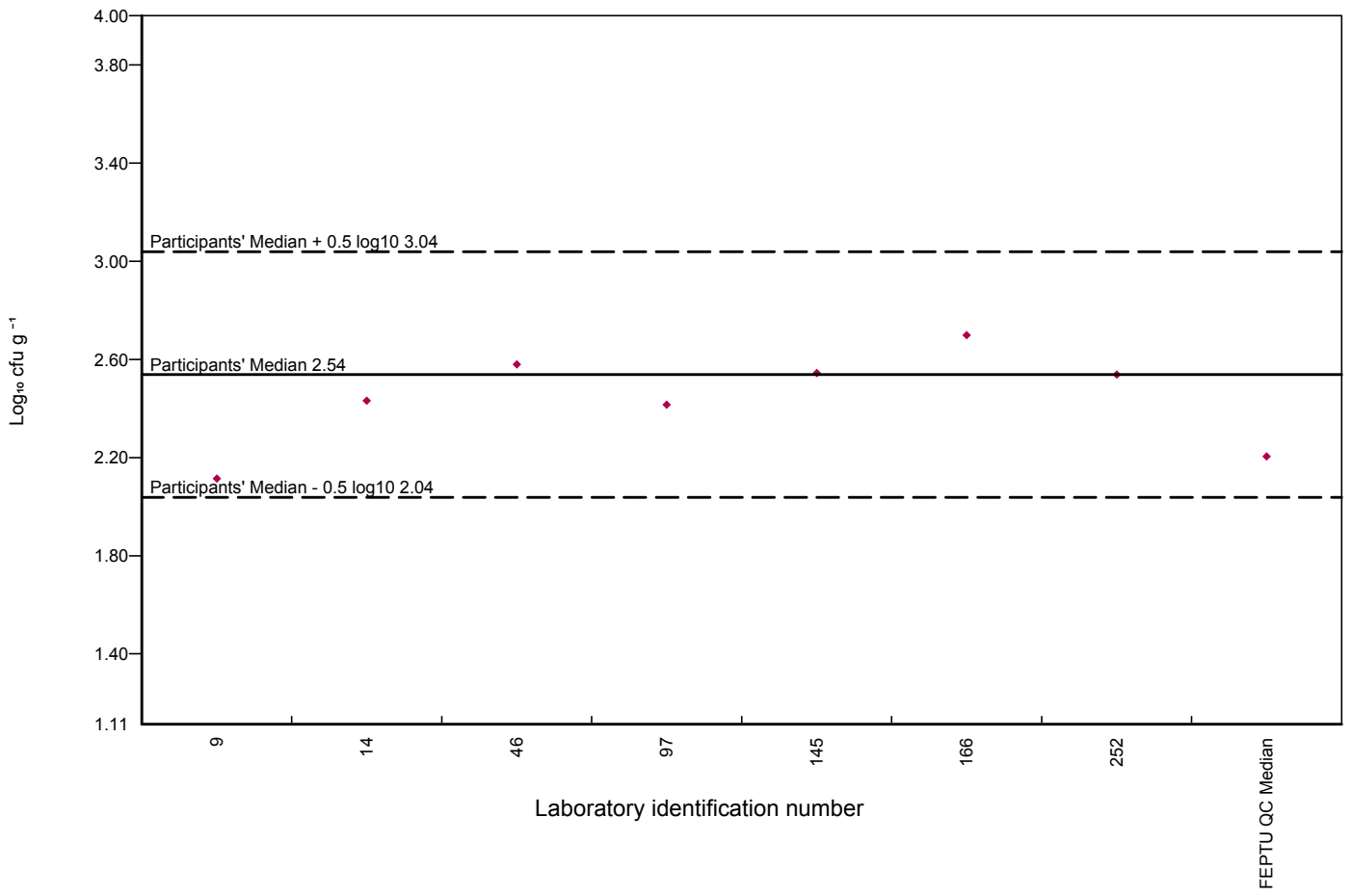
PH0031 - Aerobic Colony Count (30°C)

Key: ♦ Reported result



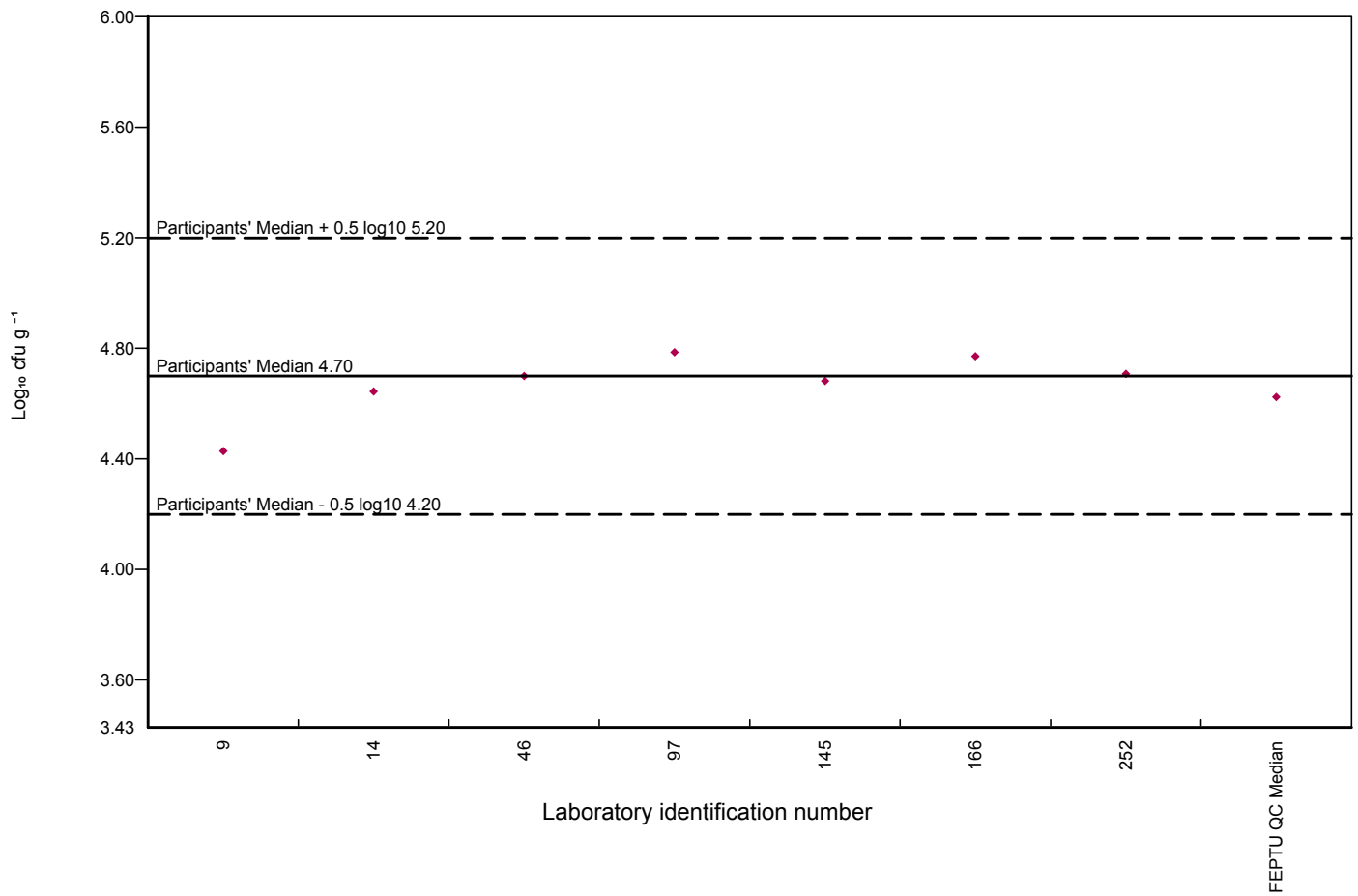
PH0031 - *Enterobacteriaceae*

Key: ♦ Reported result



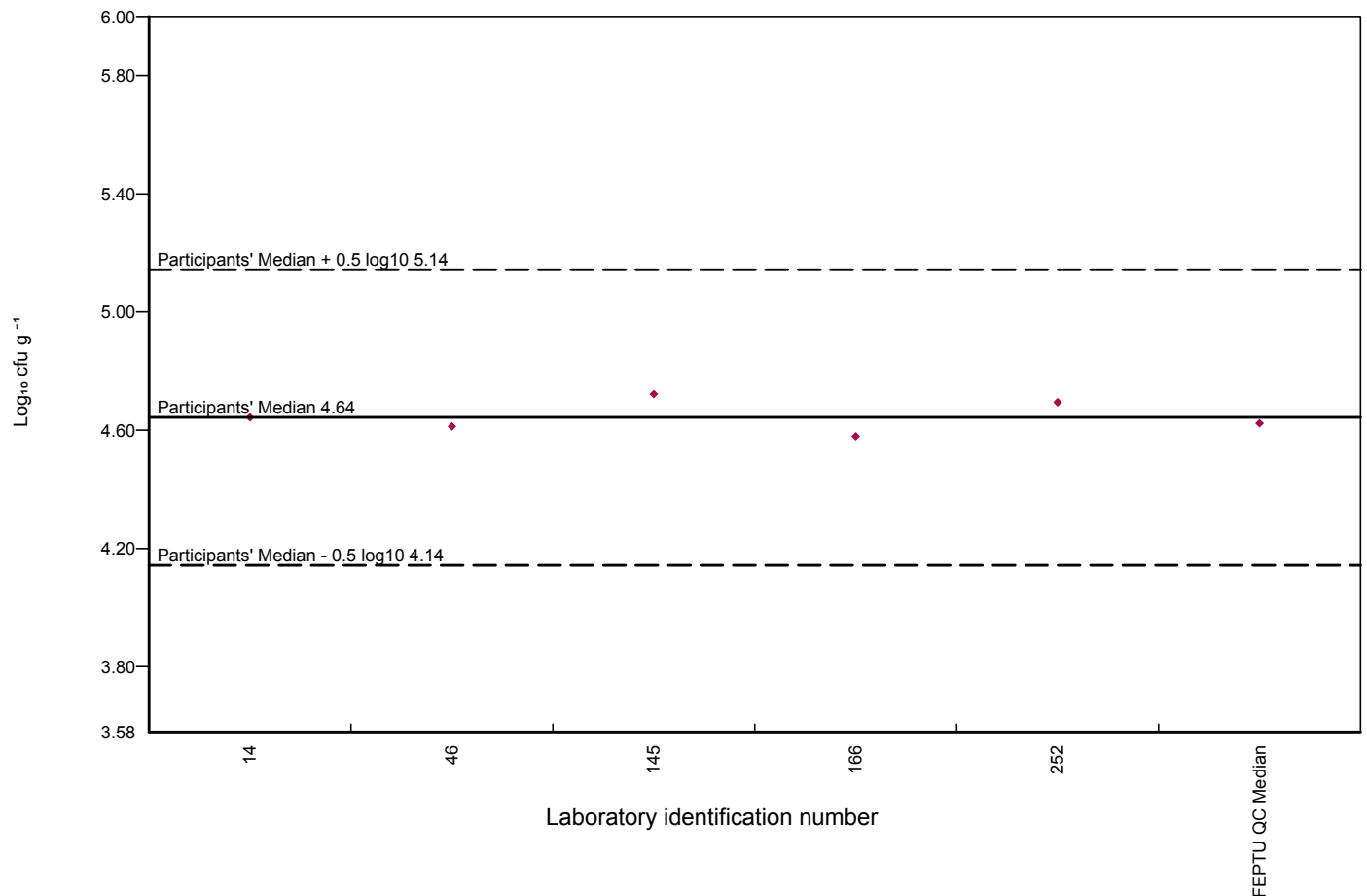
PH0032 - Coagulase-positive staphylococci

Key: ♦ Reported result



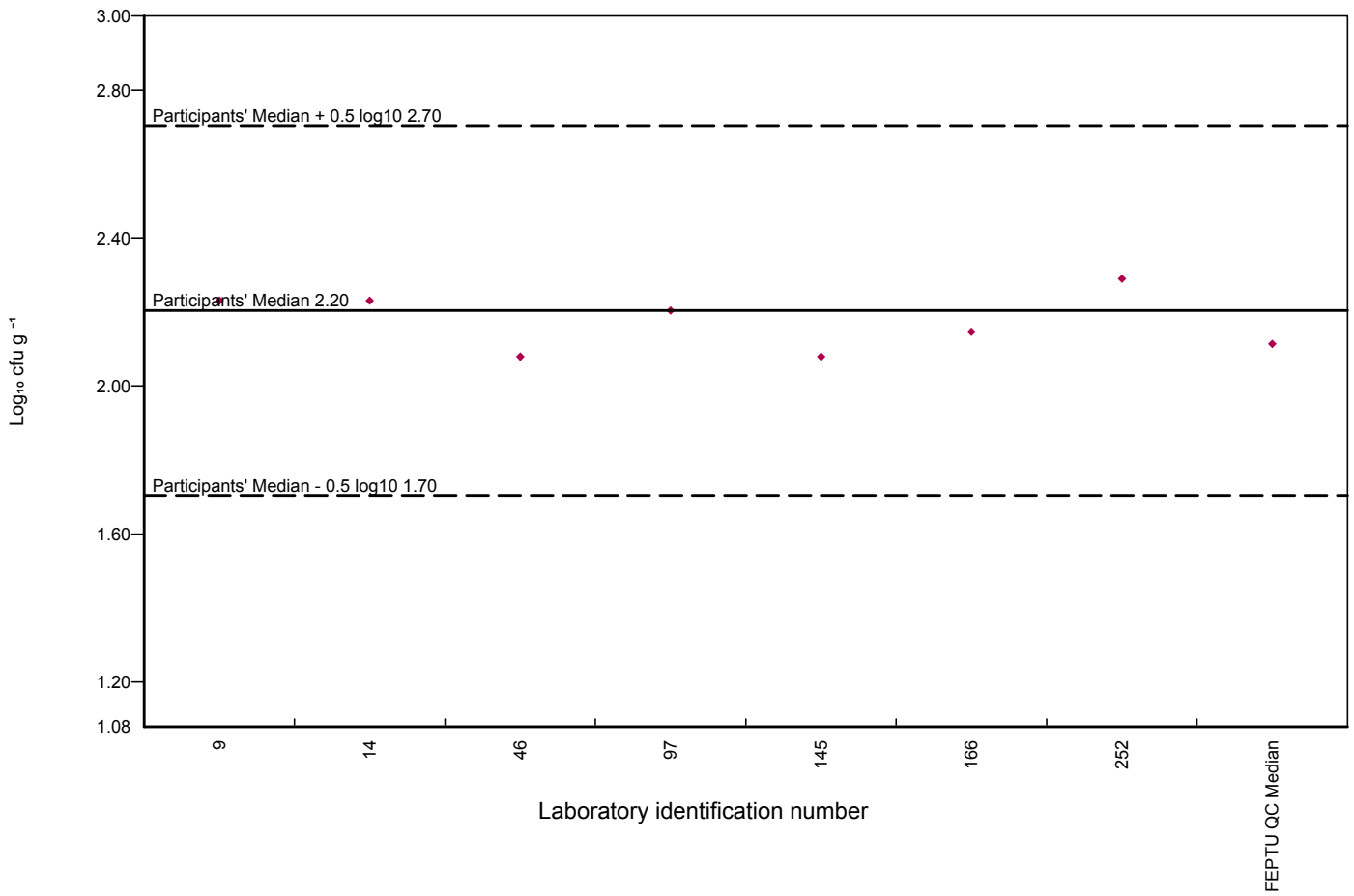
PH0032 - Aerobic Colony Count (30°C)

Key: ♦ Reported result



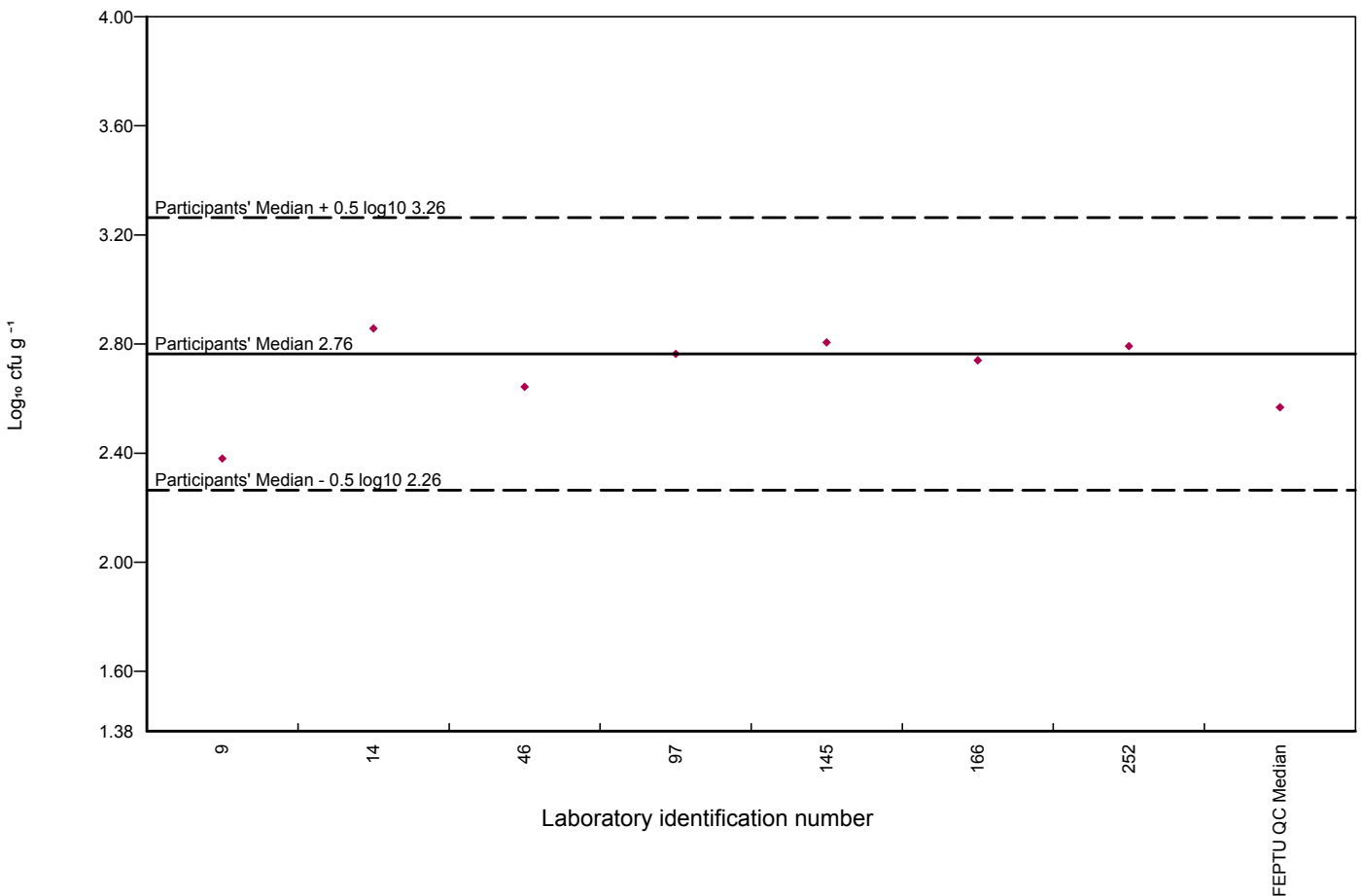
PH0032 - *Enterobacteriaceae*

Key: ♦ Reported result



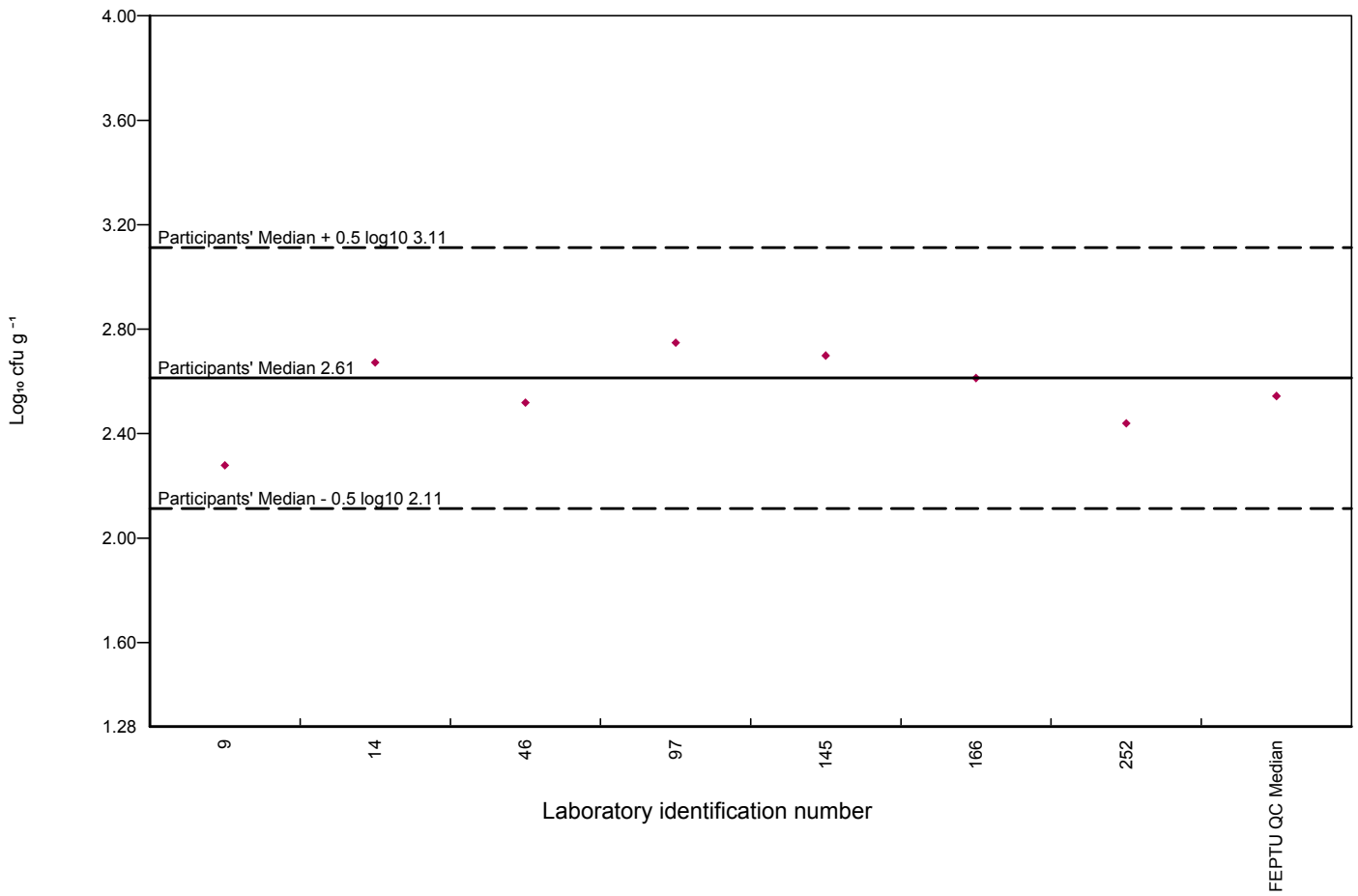
PH0033 - *Enterobacteriaceae*

Key: ♦ Reported result



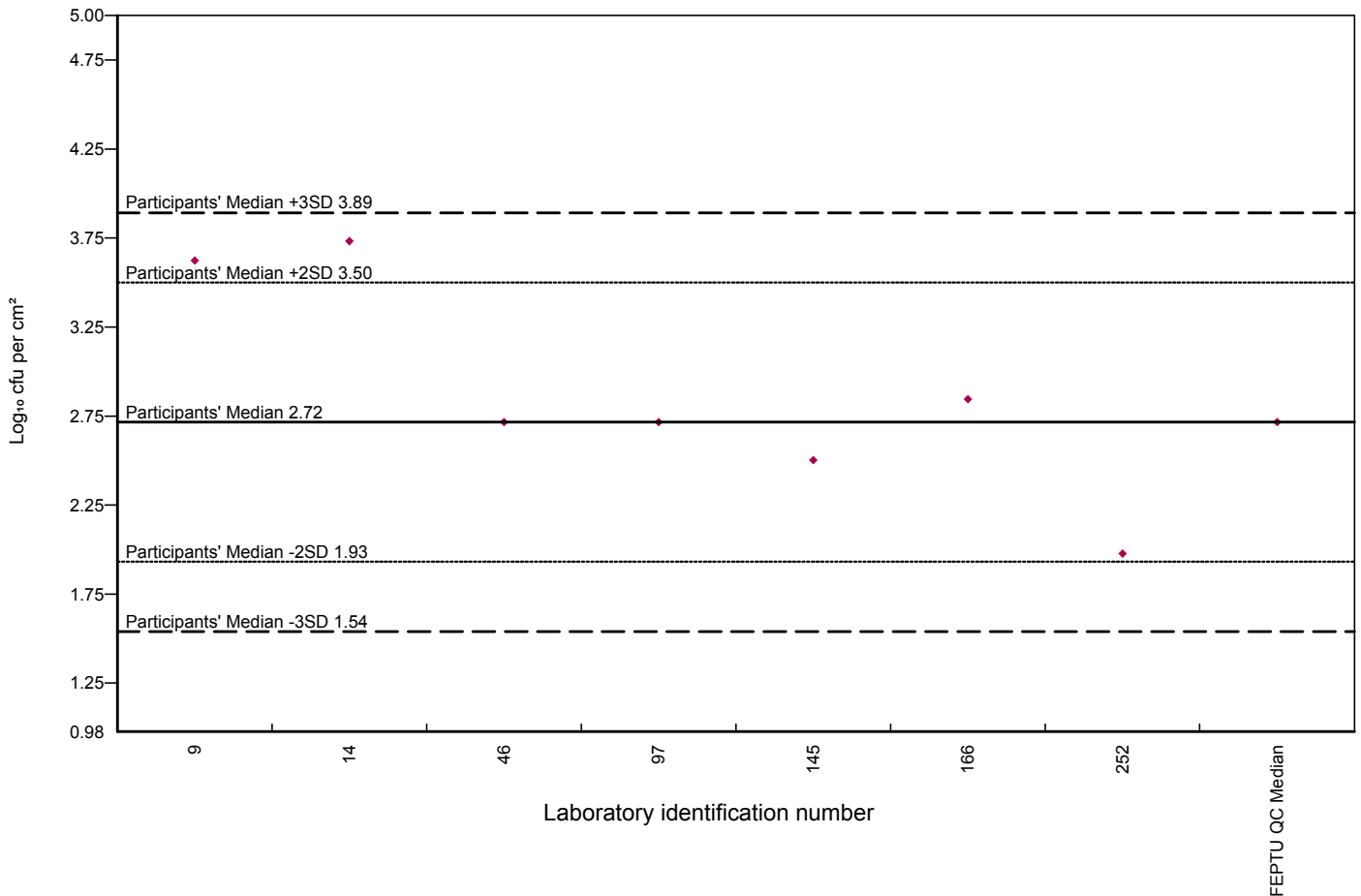
PH0033 - *Escherichia coli*

Key: ♦ Reported result



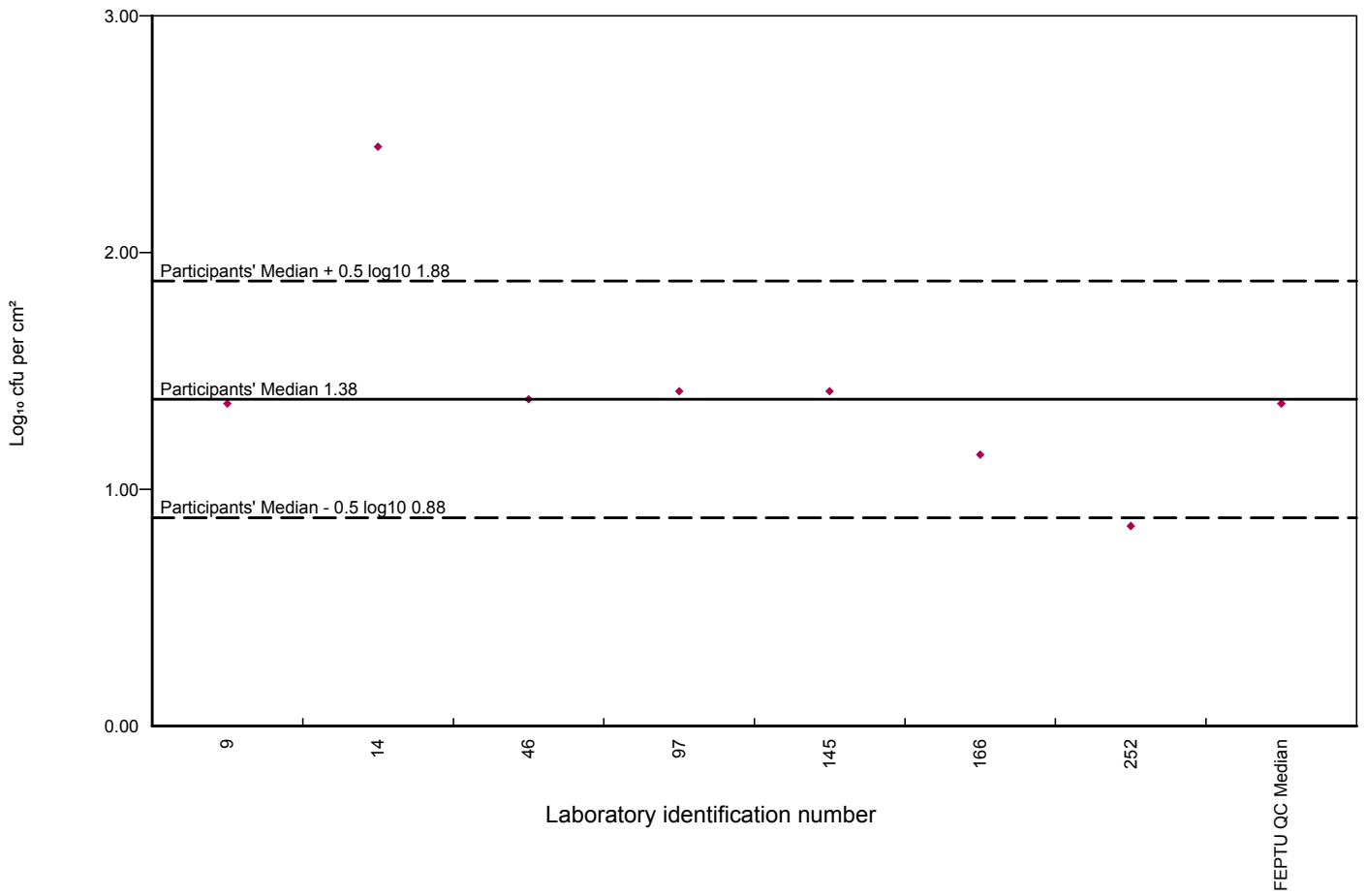
PH0034 - Coagulase-positive staphylococci

Key: ♦ Reported result



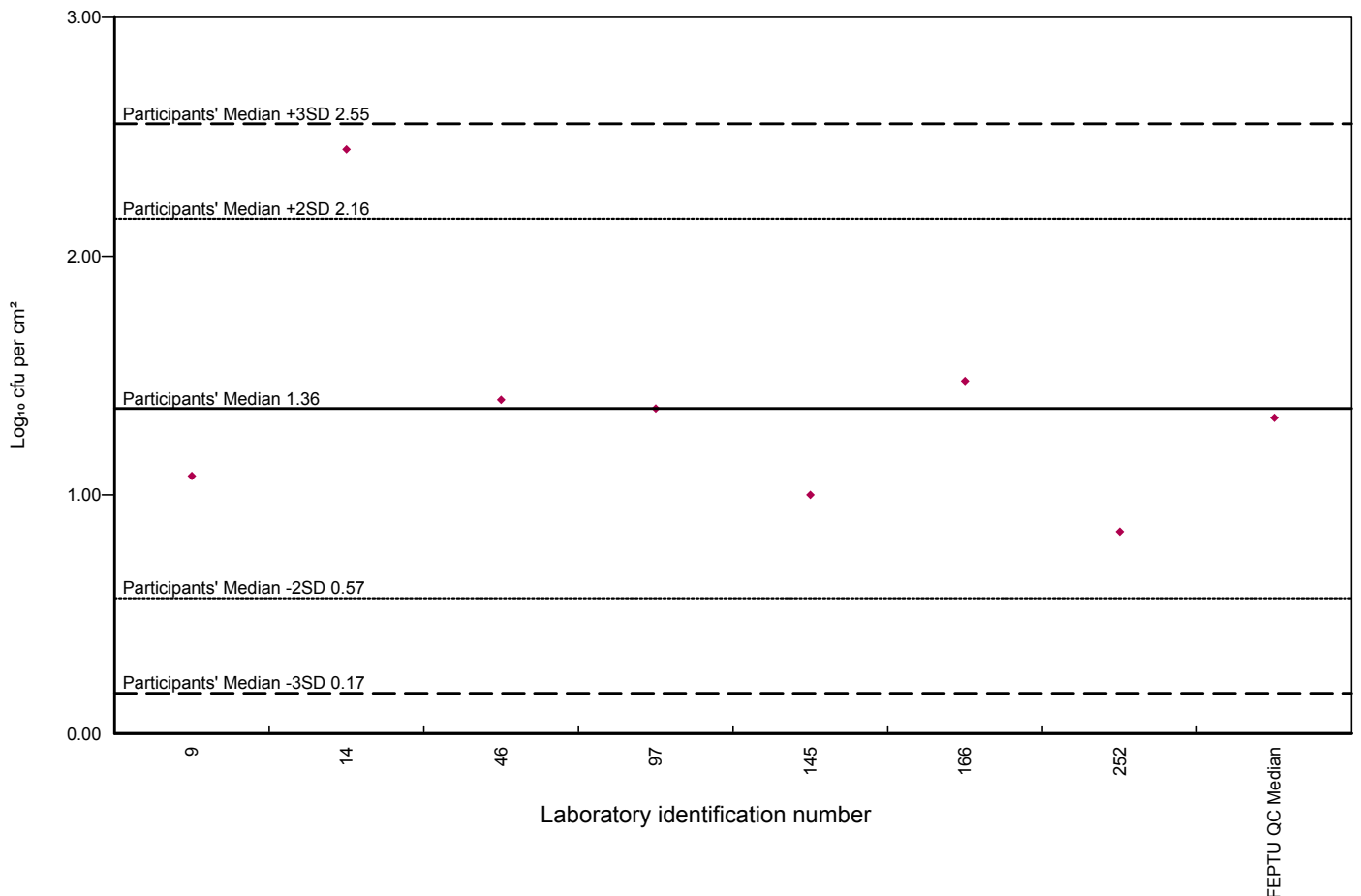
PH0034 - *Enterobacteriaceae*

Key: ♦ Reported result



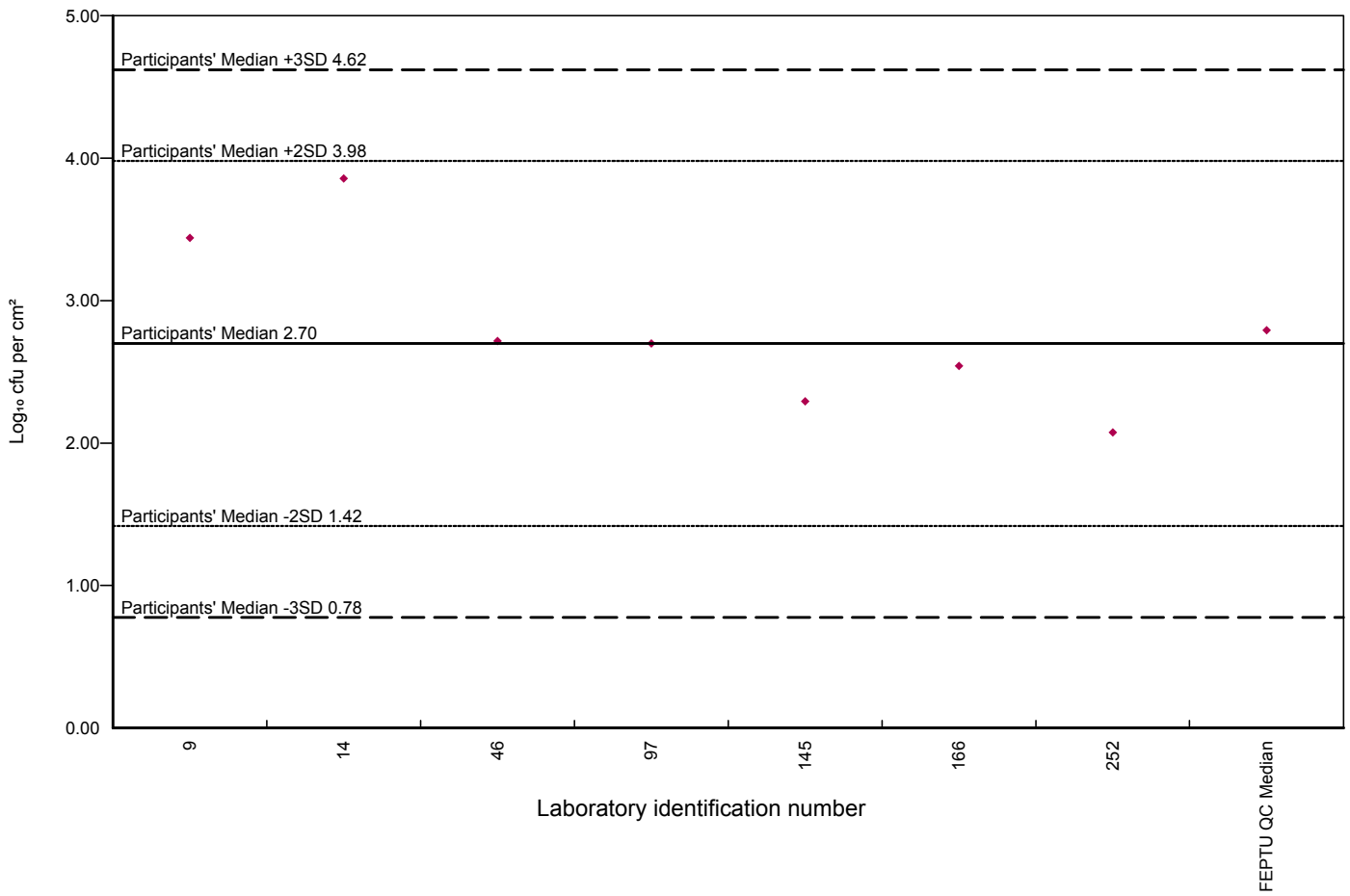
PH0034 - *Escherichia coli*

Key: ♦ Reported result



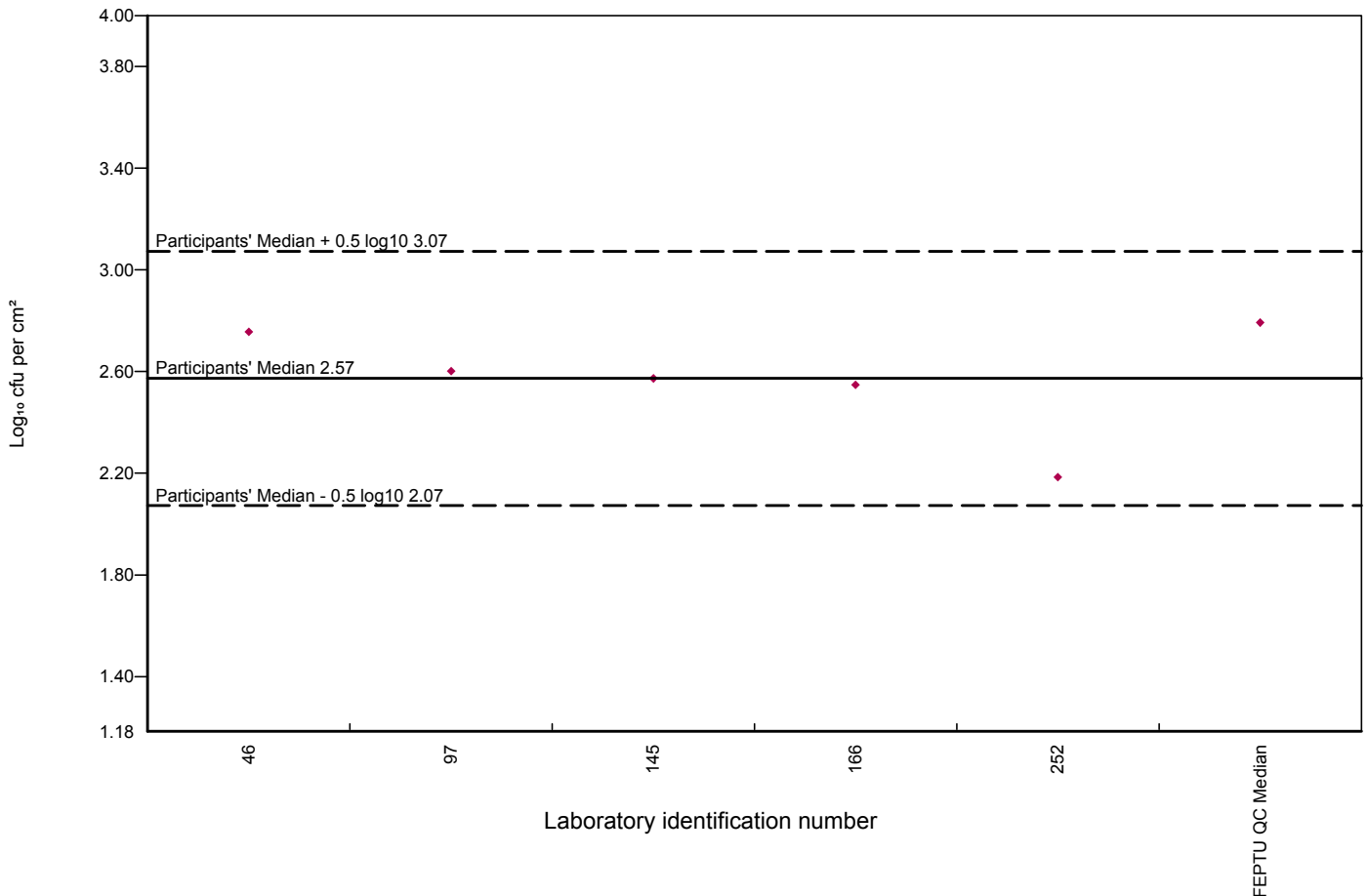
PH0036 - Coagulase-positive staphylococci

Key: ♦ Reported result



PH0036 - Aerobic Colony Count (30°C)

Key: ♦ Reported result



Comments for distribution PH6

Seven laboratories analysed the samples from this distribution. All laboratories identified that *Staphylococcus aureus* was the main food borne pathogen causing this outbreak.

The table below shows the additional examinations carried out by the participants and the reported results. Any incorrect results reported are shown in red.

Additional examination	Number of laboratories examining	Reported results	Number of laboratories examining	Reported results
	Sample PH0031 (Chicken mayonnaise sandwich)		Sample PH0032 (Chicken and sausage stew)	
<i>Bacillus</i> spp.	1	<100 (1)	1	< 100 (1)
<i>Bacillus cereus</i>	6	<10 (1) <20 (3) <100 (1) <1000 (1)	6	<10 (1) <20 (3) < 100 (1) <200 (1) <1000 (1)
<i>Clostridium perfringens</i>	5	<10 (5)	7	<10 (7)
<i>Listeria</i> spp. (including mono)	5	<10 (4) Not detected (1)	4	<10 (3) Not detected (1)
<i>Listeria monocytogenes</i>	3	<10 (1) <20 (2)	3	<10 (1) <20 (2)
<i>Salmonella</i> spp.	3	Not detected (3)	3	Not detected (3)

	Sample PH0033 (Seafood paella with parmesan)		Sample PH0034 (Template area swab of kitchen cloth)	
<i>Bacillus</i> spp.	1	<100 (1)		
<i>Bacillus cereus</i>	7	<10 (1) <20 (3) <100 (1) <1000 (1) <200 (1)	3	<2 (3)
<i>Clostridium perfringens</i>	5	<10 (5)	2	<1 (2)
<i>Listeria</i> spp. (including mono)	4	<10 (3) Not detected (1)	2	<1 (2)
<i>Listeria monocytogenes</i>	2	<10 (1) <20 (1)		
<i>Salmonella</i> spp.	3	Not detected (3)	1	Not detected (1)
<i>Vibrio</i> spp.	2	<20 (2)		
<i>Vibrio parahaemolyticus</i>	1	<10 (1)		

	Sample PH0035 (Random area swab of the kitchen sink)		Sample PH0036 (Template area swab of a staff member's apron)	
<i>Bacillus cereus</i>	3	<200 (3)	3	<2 (2) 2 (1)
<i>Clostridium perfringens</i>	2	<100 (2)	2	<1 (2)
<i>Listeria</i> spp. (including mono)	2	<100 (2)	2	<1 (2)
<i>Salmonella</i> spp.	1	Not detected (1)	1	Not detected (1)

Additional comments:

Reporting results for swabs

Participants are advised that the standard international reporting of results where no growth is obtained in a swab sample is <100 from a random area swab and <1 from a template area swab (100sq cm).

Statistical evaluation

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 result, they should be interpreted with caution as they may be overly influenced by outlying results. When there are fewer than 10 reported results, the statistics are not considered robust enough to enable scoring. Therefore for this scheme, participants will notice that for some sample parameters, the statistics have been calculated for information and is not scored.

Participants are informed that due to the low number of participation the Public Health Scheme has now been withdrawn.

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. Therefore, we will post generic reports on the website, which will be available for 12 months after the distribution has closed, so you can access the missing data.

End of report

