



Summary of Results

External Quality Assessment of Water Microbiology Hospital Tap Water Scheme

Distribution Number: HTW26

Sample Numbers: HTW26A, HTW26B

Distribution Date:	February 2023
Results Due:	17 March 2023
Report Date:	21 March 2023
Samples prepared and quality control tested by:	Divya George Nafeesa Hussain Zak Prior Jake Videlefsky
Data analysed by:	Joanna Donn Nita Patel
Report compiled by:	Joanna Donn Nita Patel
Authorised by:	Nita Patel

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UK Health Security Agency
Food and Environmental Proficiency Testing Unit (FEPTU)
61 Colindale Avenue
London
NW9 5EQ
Tel: +44 (0)20 8327 7119
Fax:

For further information about 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 in the Hospital Tap Water 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 ± 2.0 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 LENTICULE® discs, selected randomly from a batch, are tested in duplicate for the enumeration test.

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

FEPTU results are determined using the method stated in the UK Department of Health document: Health Technical Memorandum 04-01: Safe water in healthcare premises Part C: Pseudomonas aeruginosa - advice for augmented care units (2016).

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>

Participants are reminded that reporting incorrect or false negative results for water samples could have serious public health implications.

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: foodeqa@ukhsa.gov.uk
General comments and complaints	Nita Patel or Zak Prior	FEPTU's website
Scheme consultants	Caroline Willis	
Scheme Co-ordinator	Nita Patel	

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



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Sample: HTW26A

Contents:

Micrococcus luteus (30) (wild strain), *Penicillium chrysogenum* (10) (wild strain), *Providencia rettgeri* (30)
(NCTC 7475) - levels are per 100mL

Expected Results:

All counts are expressed as colony forming units (cfu) per 100mL.

The fixed standard deviation value (σ_{pt} value) used for calculation of the z-score is **0.35** for this parameter.

Results	
FEPTU median (MF) ¹	0
No. results returned	43
Assigned value (Participants' median all results)	0
Interpretation based on assigned value*	Satisfactory
Uncertainty of assigned value	N/A
Participants' mean (all results)	N/A
Expected Range	N/A
Standard deviation**	N/A
No of outlying counts	N/A
False positives	0
False negatives	
Your result	
Your interpretation	
Score for performance assessment	
Z-score	

¹ Membrane filtration

* Reference: [HTM 04-01 part B](#)

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

Total sent samples	46
Not examined	1
Non returns	2

Sample: HTW26B

Contents:

Pseudomonas aeruginosa (28) (wild strain), *Saccharomyces cerevisiae* (9) (wild strain) - levels are per 100mL

Expected Results:

All counts are expressed as colony forming units (cfu) per 100mL.

The fixed standard deviation value (σ_{pt} value) used for calculation of the z-score is **0.35** for this parameter.

Results	
FEPTU median (MF) ¹	29
No. results returned	43
Assigned value (Participants' median all results)	46
Interpretation based on assigned value*	Risk-assess and retest (pre-/post-flush) as stated in HTM 04-01 part B
Uncertainty of assigned value	2
Participants' mean (all results)	45
Expected Range	25 - 67
Standard deviation**	10
No of outlying counts	4
False positives	
False negatives	0
Your result	
Your interpretation	
Score for performance assessment	
Z-score	

¹ Membrane filtration

* Reference: [HTM 04-01 part B](#)

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

Total sent samples	46
Not examined	1
Non returns	2

Performance Assessment Sheet

Distribution	Sample	<i>Pseudomonas aeruginosa</i> score
HTW26	HTW26A	
	HTW26B	
HTW25	HTW25A	
	HTW25B	
HTW24	HTW24A	
	HTW24B	
Total maximum possible score		
Total percentage		

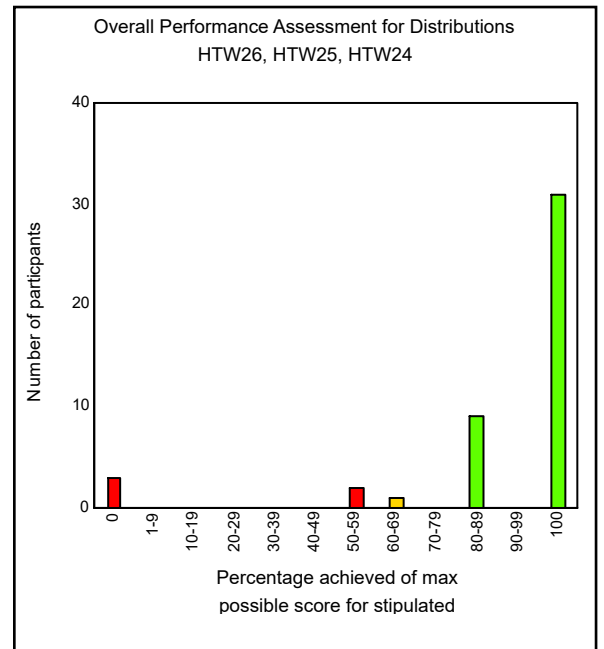
Performance Assessment Comment:

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 alert participants to on-going problems with their examinations and are provided after every distribution. Scores are allocated to results reported for every parameter, for every sample to help assess performance.

Cumulative scores are calculated for the current distribution for the Hospital Tap Water Scheme. Participants' cumulative scores for each of the examinations are compared with the maximum possible scores after every distribution.

Your overall performance with the enumerations in the hospital tap water proficiency testing samples for the current distribution is collated in the chart to the right.



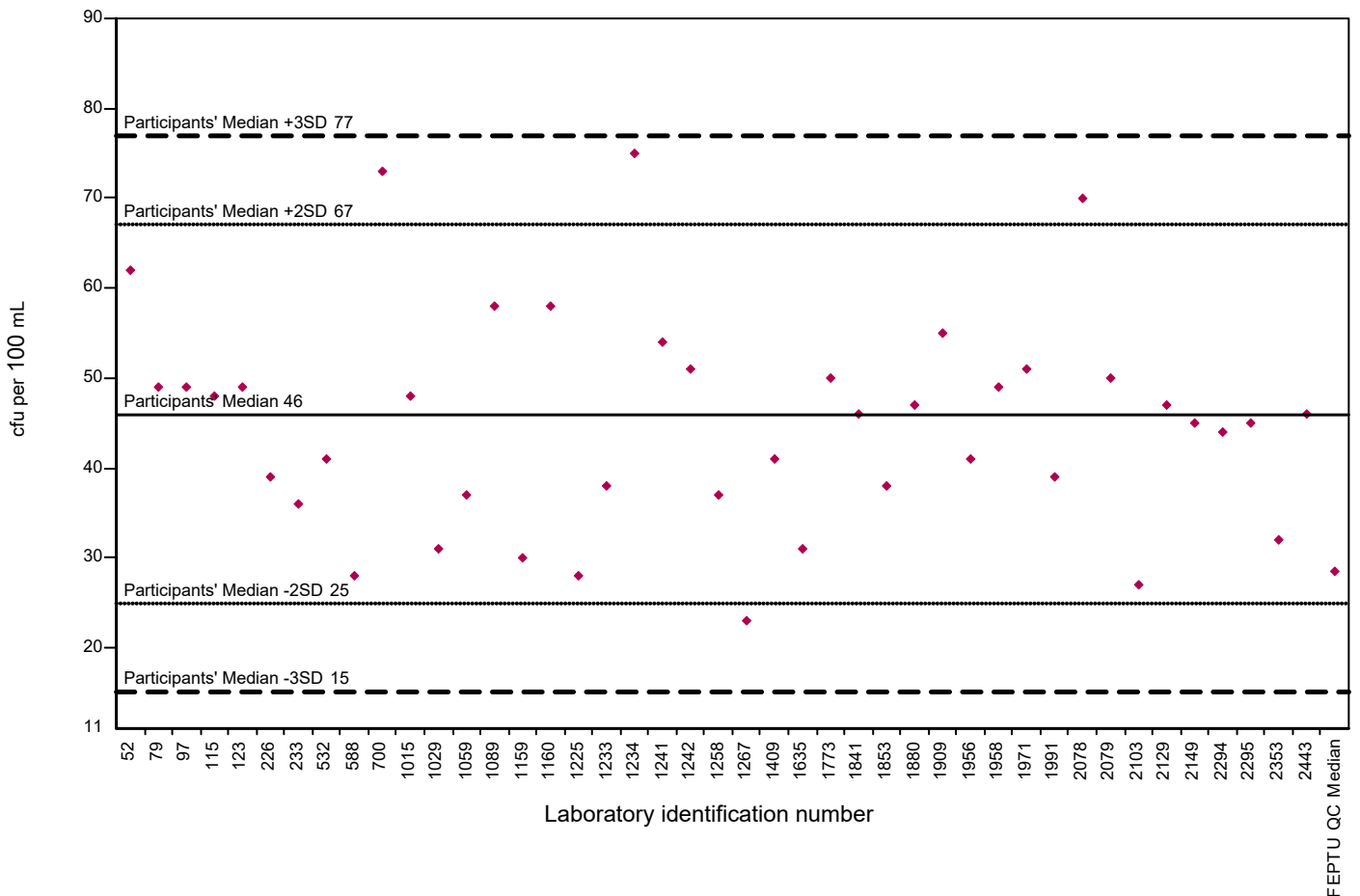
HTW26A - *Pseudomonas aeruginosa*

Key: ♦ Reported result

No data for graph

HTW26B - *Pseudomonas aeruginosa*

Key: ♦ Reported result



Sample specific comment:

HTW26A: 33 laboratories provided a conclusion on the results reported, responses are shown in the table below:

Colony forming counts reported per 100mL	Conclusion reported by the laboratories (number of laboratories)
Count reported 0	Satisfactory (22)
Count reported 0	No further action required (1)
Count reported 0 Censored value <1	No comments/interpretation by laboratory provided (8) (2)

HTW26B: 34 laboratories provided a conclusion on the results reported, responses are shown in the table below:

Colony forming counts reported per 100mL	Conclusion reported by the laboratories (number of laboratories)
Range reported 27 - 73	Risk-assess and retest (pre-/post-flush) as stated in HTM 04-01 part B (11)
Range reported 51 - 58	Satisfactory (2)
Range reported 30 - 70	Unsatisfactory (10)
Range reported 31 - 75	No comments/interpretation by laboratory provided (11)

Participants are reminded to only report a conclusion on a test result if this is part of your reporting procedures.

In the UK, the following document provides information on the requirements for the quality assurance of water systems, microbiological testing and interpretation/conclusions of test results:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/524882/DH_HTM_0401_PART_B_acc.pdf

The Interpretation/conclusions of microbiological test results in your country may vary to those published in this document.

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. To access the missing data contact us on foodeqa@ukhsa.gov.uk.

End of report.

