



Summary of Results

External Quality Assessment of Water Microbiology Endoscope Rinse Water Scheme

Distribution Number: EW32

Sample Numbers: EW32A, EW32B

Distribution Date:	January 2023
Results Due:	03 February 2023
Report Date:	08 February 2023
Samples prepared and quality control tested by:	Divya George Nafeesa Hussain Cansev Katar Margaret Njenga Zak Prior Jake Videlefsky
Data analysed by:	Joanna Donn Nita Patel
Report compiled by:	Joanna Donn Nita Patel
Authorised by:	Nita Patel

This report must not be reproduced without permission of the organisers.

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 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 (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 Endoscope Rinse 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 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 enumeration.

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

UK Health Security Agency uses methods stipulated in (Health Technical Memorandum 01-06: Decontamination of flexible endoscopes: Part E - Testing methods - March 2016).

The FEPTU results are used for guidance in the preliminary intended results notification, dispatched immediately after every distribution.

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 an incorrect or false negative results 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 Endoscope Rinse Water is accredited by the United Kingdom Accreditation Service (UKAS) to ISO/IEC 17043:2010.



0006

Sample: EW32A

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-scores is **0.35** for all parameters.

Results	
FEPTU median (MF)*	68
No. results returned	70
Assigned value (Participants median all results)	65
Conclusion based on assigned value**	Risk assessment required
Uncertainty of assigned value	2
Participants mean (all results)	63
Expected Range	41 - 89
Standard deviation***	13
No of outlying counts	8
False positives	N/A
False negatives	2
Your result	
Your conclusion	
Score for performance assessment	
Z-score	

* Membrane filtration

** Reference: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/553303/HTM01-06_PartE.pdf

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

Examination	Expected Result	Your Result	Your Score
<i>P.aeruginosa</i>	Not detected		

<i>P.aeruginosa</i>	
Total participants reporting for <i>P.aeruginosa</i>	66
Participants reporting correctly the absence of <i>P.aeruginosa</i>	66 (100%)

Examination	Expected Result	Your Result	Your Score
Yeast/Moulds	Detected		

Yeast/Moulds	
Total participants reporting for Yeast/Moulds	49
Participants reporting correctly the presence of Yeast/Moulds	41 (83%)
Total sent samples	78
Not examined	2
Non returns	6

Sample: EW32B

Contents:

Pseudomonas aeruginosa (19) (wild strain), *Saccharomyces cerevisiae* (9) (wild strain) - levels are per 100mL. Please note to refer to the comment on page 7 of this report for yeast/mould examination.

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-scores is **0.35** for all parameters.

Results	
FEPTU median (MF)*	31
No. results returned	70
Assigned value (Participants median all results)	45
Conclusion based on assigned value**	Risk assessment required
Uncertainty of assigned value	2
Participants mean (all results)	48
Expected Range	18 - 72
Standard deviation***	14
No of outlying counts	6
False positives	N/A
False negatives	1
Your result	
Your conclusion	
Score for performance assessment	
Z-score	

* Membrane filtration

** Reference: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/553303/HTM01-06_PartE.pdf

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

Examination	Expected Result	Your Result	Your Score
<i>P.aeruginosa</i>	Detected		

<i>P.aeruginosa</i>	
Total participants reporting for <i>P.aeruginosa</i>	66
Participants reporting correctly the presence of <i>P.aeruginosa</i>	65 (98%)

Examination	Expected Result	Your Result	Your Score
Yeast/Moulds	Detected		

Yeast/Moulds	
Total participants reporting for Yeast/Moulds	45
Participants reporting correctly the presence of Yeast/Moulds	26 (57%)
Total sent samples	78
Not examined	2
Non returns	6

Performance Assessment Sheet

Distribution	Sample	Total Viable Counts 28°C - 32°C for 5 days score
EW32	EW32A	
	EW32B	
EW31	EW31A	
	EW31B	
EW30	EW30A	
	EW30B	
Total maximum possible score		
Total percentage		

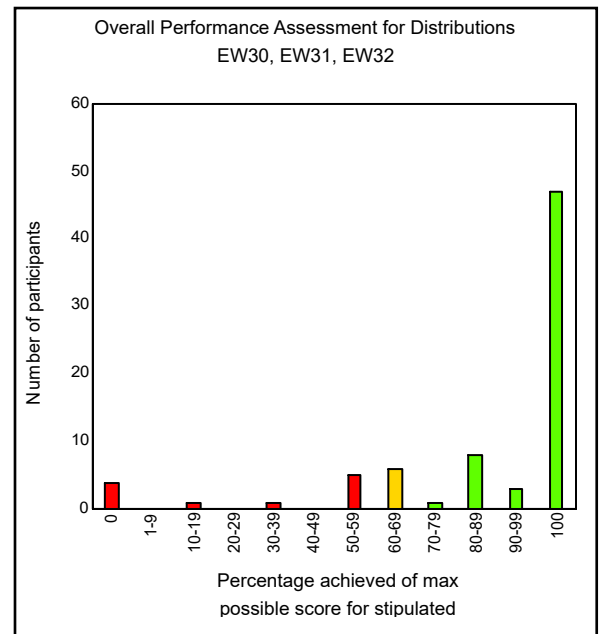
Performance Assessment Comment:

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 and previous two distributions for the Endoscope Rinse 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 endoscope rinse water proficiency testing samples for the current and previous two distributions is collated in the chart to the right.



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:

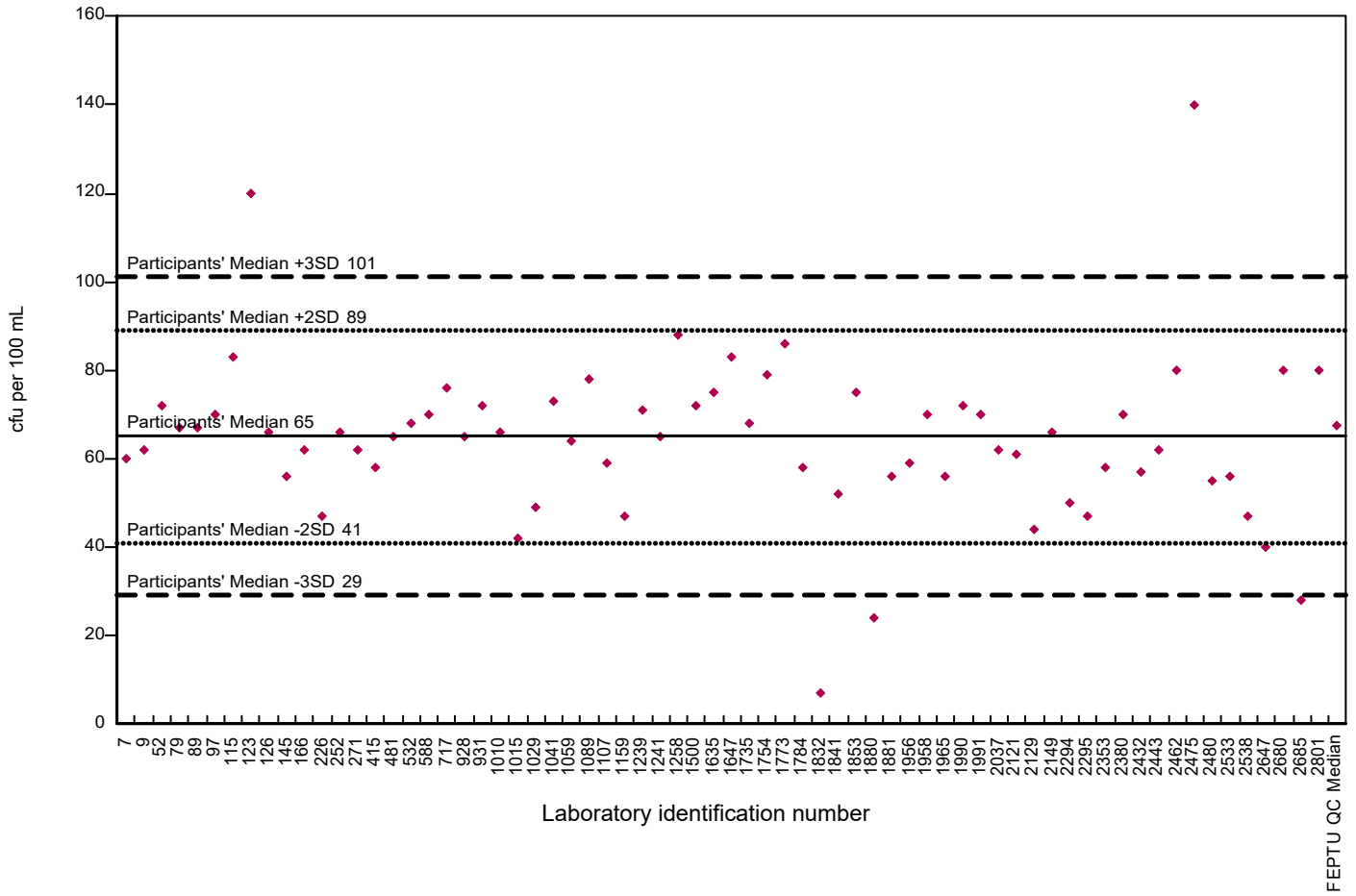
a) refer to the relevant distribution reports for sample-specific comments

b) 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>

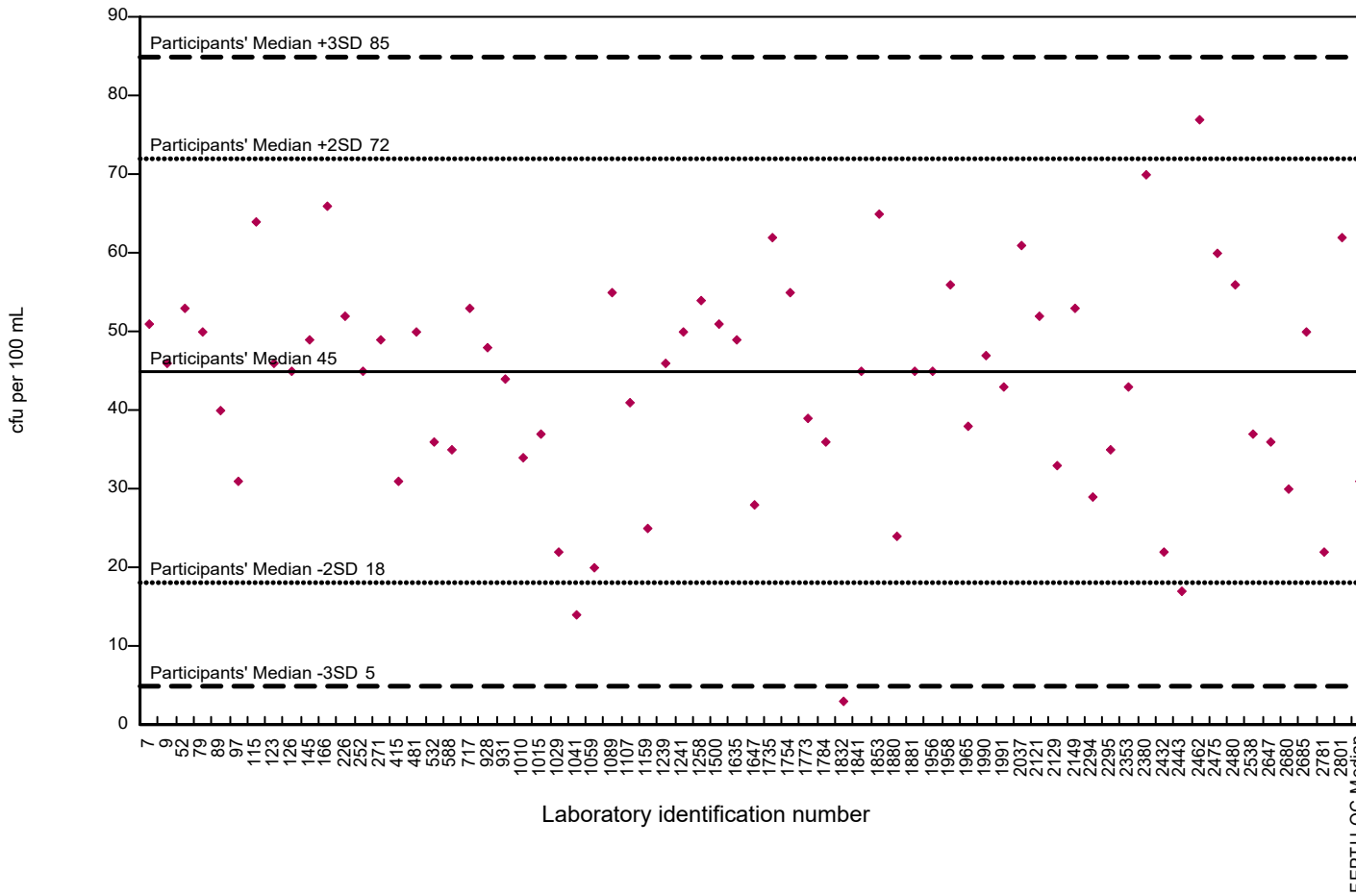
EW32A - Total Viable Counts 28°C - 32°C for 5 days

Key: ♦ Reported result



EW32B - Total Viable Counts 28°C - 32°C for 5 days

Key: ♦ Reported result



Sample specific comment:

EW32B: Yeast/Moulds

19/45 (42%) of the laboratories reported a false negative result for this examination. The sample contained a *Saccharomyces cerevisiae* at low levels (9 colony forming units per 100 mL). Participants reporting a false negative result have been excluded from scoring. In the FEPTU laboratory small white colonies were observed on Tryptic soy agar (TSA) agar 5 days of incubation and a simple wet prep of the colonies confirmed that these were yeasts and not bacteria. Participants reporting a false negative for this examination are encouraged to undertake the required confirmation test/s before reporting results. Free of charge repeats can be ordered from the FEPTU team for your internal investigation.

EW32A: 45 laboratories provided an actual conclusion on the results obtained; responses are shown in the tables below:

Colony forming counts reported per 100mL	Conclusion reported by the laboratories (number of laboratories)
Range reported 0 - 76	Acceptable/Satisfactory (5)
Range reported 40 - 120	Risk assessment required (23)
Range reported 28 - 140	Unsatisfactory/Unacceptable (17)
Range reported 42 - 83	Not routinely reported (25)

EW32B: 45 laboratories provided an actual conclusion on the results obtained; responses are shown in the tables below:

Colony forming counts reported per 100mL	Conclusion reported by the laboratories (number of laboratories)
Range reported 0 - 53	Acceptable/Satisfactory (3)
Count reported 25 - 65	Risk assessment required (22)
Count reported 3 - 77	Unsatisfactory/Unacceptable (20)
Range reported 14 - 386	Not routinely reported (25)

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

One laboratory's count for EW31B was excluded from the analysis due to very high counts being reported. Their result will be shown as >100 in the scheme report.

In the UK the interpretation of test results can be found in this document on page 15. https://www.england.nhs.uk/wp-content/uploads/2021/05/HTM01-06_PartE.pdf. However, 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. Please contact us if you require this information on foodeqa@ukhsa.gov.uk.

One laboratory's data has been amended to >100 cfu per mL as the results obtained were extremely high for both samples.

End of report

