HYGIENE

Hygiene Surface Monitoring PT Scheme

Scheme Description

LGC
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Record of issue status and modifications

ISSUE	ISSUE DATE	DETAILS	AUTHORISED BY
10	Jun 2017	Added info on SDPA for HY01 Amended sample format for samples HY01 and HY02 and indicated these two samples are not currently accredited by UKAS	A.S.Eden
11	Sept 2017	Removal of sample 4 – Test using dipslides. Incorporated into QWAS scheme as sample 428.	T. Pullan
12	Nov 2017	Added sample 7 Staphylococcus aureus contact plate. Added Enterobacteriaceae in sample HY01.	A.S.Eden
13	Jan 2018	Samples HY01 and HY02 now accredited. Removed ** 'The SDPA is determined after assessing the distribution of participant results.' Added coliforms and *Escherichia coli* to sample HY01 as trial non accredited analytes. Added Listeria monocytogenes as an analyte on HY02	A.S.Eden
14	Sept 2018	Method section updated, HY01 coliforms and E.coli parameters accredited.	R.Smith
15	Nov 2018	Sample 6 is now included in our UKAS scope of accreditation	A McCarthy
16	Aug 2019	New analyte organism ID added to sample HY03; updated format of contact plate samples.	R.Smith
17	May 2020	Updated UKAS logo Sample 7 now accredited	A McCarthy
18	June 2020	Included new sample 08 for SARS-COV-2 testing from surfaces	T.Noblett
19	Sept 2020	Included new Air filter sample HY09 and new swab rinsate samples HY10 and HY11	R. Smith
20	July 2021	Updated email address and UKAS logo HY09 add Yeast and Mould parameters to sample, Sample 08 changed to 2X dry swabs.	A Collins K.Osbiston
21	Aug 2021	Removed all diluents from the relative samples.	K.Osbiston.
22	Sept 2022	Addition of sample 12, 13 and 14. Split sample 08 into the two different formats	A.S.Eden

Notes:

Where this document has been translated, the English version shall remain the definitive version

Scheme Aims and Organisation

The primary aim of the Hygiene Surface Monitoring Proficiency Testing Scheme (HYGIENE) is to enable laboratories performing workplace environmental monitoring of surfaces to monitor their performance and compare it with that of their peers. HYGIENE also aims to provide information to participants on technical issues and methodologies relating to microbiological workplace testing.

The scheme year operates from January to December. Further information about the scheme, including test material availability, round despatch dates and reporting deadlines, are available on the current scheme application form.

Test Materials

Details of test materials available in HYGIENE are given in Appendix A. The test parameters are continually reviewed to ensure they meet the needs of current laboratory testing and regulatory requirements.

Test material batches are tested for homogeneity for at least one test parameter where deemed appropriate. Details of homogeneity tests performed and results are given in the Scheme Reports.

Some aspects of the scheme, such as test material production, homogeneity testing and stability assessment, can from time to time be subcontracted. When subcontracting occurs, it is placed with a competent subcontractor and LGC is responsible for this work. The planning of the scheme, the evaluation of performance and the authorisation of the final report will never be subcontracted.

Statistical Analysis

Information on the statistics used can be found in the General Protocol and in the Scheme Report. Methods for determining assigned values and the values for SDPA used for individual samples are given in Appendix A.

Methods

Methods are listed in PORTAL. Please select the most appropriate method from the list. If none of the methods are appropriate, then please report your method as ‘Other’ and record a brief description in the Comments Section in PORTAL.

The time and temperature of incubation does not need to be reported.

Results and Reports

HYGIENE results are returned through our electronic reporting software, PORTAL, full instructions for which are provided by email.

HYGIENE reports will be available on the website within 10 working days of round closure. Participants will be emailed a link to the report when it is available.

APPENDIX A - Description of abbreviations used

Assigned Value (AV)

The assigned value may be derived in the following ways:

- From the robust mean (RMean). This is the median of participant results after the removal of test results that are inappropriate for statistical evaluation, e.g. miscalculations, transpositions and other gross errors. Generally, the assigned value will be set using results from all methods, unless the measurement is considered method-dependant, in which case the assigned value will be set by method as illustrated in the report tables.

  For some analytes, where there is a recognised reference method for that type of measurement, this may be used as the assigned value for a particular analyte i.e. it would be applied to results obtained by any method.

  Traceability: Assigned values which are derived from the participant results, or a sub-set of the results are not traceable to an international measurement standard. The uncertainty of assigned values derived in this way is estimated from the participant results, according to ISO 13528.

- From a formulation value (Formulation). This denotes the use of an assigned value derived from sample preparation details, where known and exact quantities of analyte have been used to prepare the sample.

  Traceability: Assigned values calculated from the formulation of the test sample are traceable, via an unbroken metrological traceability chain, to an international measurement standard. The measurement uncertainty of the assigned value is calculated using the contributions from each calibration in the traceability chain.

- From a qualitative formulation (Qual Form). This applies to qualitative tests where the assigned value is simply based on the presence/absence of the analyte in the test material.

  Traceability: Assigned values calculated from the qualitative formulation of the test sample are traceable to a certified reference standard or a microbiological reference strain.

- From expert labs (Expert). The assigned value for the analyte is provided by an 'expert' laboratory.

  Traceability: Assigned values provided by an 'expert' laboratory may be traceable to an international measurement standard, according to the laboratory and the method used. The uncertainty of measurement for an assigned value produced in this way will be provided by the laboratory undertaking the analysis. Details of traceability and the associated uncertainty will be provided in the report for the scheme/round.

Range

This indicates the concentration range at which the analyte may be present in the test material.

SDPA

SDPA represents the 'standard deviation for proficiency assessment' which is used to assess participant performance for the measurement of each analyte. This may be a fixed value (as stated), a percentage (%) of the assigned value or based on the robust standard deviation of the participant measurement results, either across all methods or by method depending on whether the measurement made is method dependent (see assigned value).

Units
This indicates the units used for the assessment of data. These are the units in which participants should report their results. For some analytes in some schemes participants may have a choice of which units to report their results, however, the units stipulated in this scheme description are the default units to which any results reported using allowable alternative results will be converted to.

DP
This indicates the number of decimal places to which participants should report their measurement results.

APPENDIX A

Sample PT-HY-01 **Surface testing using swabbing techniques – Hygiene indicators**
Supplied as: Plastic surface with a lyophilised tablet.

Analyte	Method	AV	Range	SDPA	Units	DP
Total aerobic mesophilic count	All	RMean	0 to 10000	Greater of robust SD or 0.35 log_{10}	cfu/plate or cfu/cm^2	0
Enumeration of yeast						
Enumeration of mould						
Enumeration of yeast and mould						
Enumeration of Enterobacteriaceae						
Enumeration of Coliforms						
Enumeration of *Escherichia coli*						

Sample PT-HY-02 **Surface testing using swabbing techniques - Pathogens**
Supplied as: Plastic surface with a lyophilised tablet.

Analyte	Method	AV	Range	SDPA	Units	DP
Detection of *Listeria* species	All	RMean	0 to 100	NA	cfu/plate	0
Detection of *Listeria monocytogenes*						
Detection of *Salmonella* species						

Sample PT-HY-03 **Surface testing using contact plates - TAMC**
Supplied as: Plastic surface with a lyophilised tablet.

Analyte	Method	AV	Range	SDPA	Units	DP
Total aerobic mesophilic count	Contact plate	RMean	0 to 300	log_{10} 0.35	cfu/plate or cfu/cm^2	0
Identification of organism	All	Qual Form	0 to 300	N/A	N/A	N/A

Sample PT-HY-05* **ATP**
Supplied as: 2 x lyophilised tablet/s to be added to sterile water

Analyte	Method	AV	Range	SDPA	Units	DP
ATP	ATP meter (various)	RMean	TBC	TBC	Rlu/plate	0

Sample PT-HY-06 **Surface testing using contact plates**
Supplied as: Plastic surface with a lyophilised tablet.

Analyte	Method	AV	Range	SDPA	Units	DP
Enumeration of yeast: mould: yeast and mould	Contact plate	RMean	0 to 300	$\log_{10}$ 0.35	cfu/plate or cfu/cm^2	0

Sample PT-HY-07 **Surface testing using contact plates**
Supplied as: Plastic surface with a lyophilised tablet.

Analyte	Method	AV	Range	SDPA	Units	DP
Enumeration *of Staphylococcus aureus*	Contact plate	RMean	0 to 300	$\log_{10}$ 0.35	cfu/plate or cfu/cm^2	0

Sample PT-HY-08 (A & B)* **Testing for variants of SARS-CoV-2 (molecular)** non-infectious, fully extractable specimen
Supplied as: **08DY**- 2 x dry swab
08LQ – 2 x 1.5ml liquid suspension

Analyte	Method	Range	AV	SDPA	Units	DP
SARS-CoV-2	Molecular	Positive/Negative	Qual Form	NA	NA	NA

Sample PT-HY-09 **Air filter testing**
Supplied as: 2 x Dry 0.45µm membrane filter

Analyte	Method	AV	Range	SDPA	Units	DP
Total viable count	All	RMean	0 to 300	$\log_{10}$ 0.35	cfu/filter	0
Enumeration of yeast: mould; yeast and mould						

* Test material currently not included in LGC's UKAS Scope of Accreditation.

Sample PT-HY-10 **Swab rinsate sample**
Supplied as: Lyophilised tablet and 10ml diluent

Analyte	Method	AV	Range	SDPA	Units	DP
Total aerobic mesophilic count	All	RMean	0 to 10000	Greater of robust SD or 0.35 log_{10}	cfu/ml	0
Enumeration of yeast						
Enumeration of Enterobacteriaceae						
Enumeration of Coliforms						
Enumeration of *Escherichia coli*						

Sample PT-HY-11 **Swab rinsate sample**
Supplied as: Lyophilised tablet and 10ml diluent

Analyte	Method	AV	Range	SDPA	Units	DP
Detection of *Listeria* species	All	RMean	0 to 100	NA	cfu/ml	0
Detection of *Listeria monocytogenes*						
Detection of *Salmonella* species						
Detection of *E.coli* O157						

Sample PT-HY-12 **Surface testing using contact plates**
Supplied as: Plastic surface with a lyophilised tablet.

Analyte	Method	AV	Range	SDPA	Units	DP
Enumeration of Enterobacteriaceae	Contact plate	RMean	0 to 300	log_{10} 0.35	cfu/plate or cfu/cm^2	0

Sample PT-HY-13* **Sponge for detection of Salmonella**
Supplied as: 1 x ready to test sponge

Analyte	Method	AV	Range	SDPA	Units	DP
Detection of *Salmonella* species	ALL	Formulation	0 to 300	NA	Cfu/sponge	0

* Test material currently not included in LGC's UKAS Scope of Accreditation.

Sample PT-HY-14* **Sponge for detection of Listeria**
Supplied as: 1 x ready to test sponge

Analyte	Method	AV	Range	SDPA	Units	DP
Detection of *Listeria* species	ALL	Formulation	0 to 300	NA	Cfu/sponge	0
Detection of *Listeria monocytogenes*	ALL	Formulation	0 to 300	NA	Cfu/sponge	0

* Test material currently not included in LGC's UKAS Scope of Accreditation.