Public Health England

UK Standards for Microbiology Investigations

Review of users' comments received by Working group for microbiology standards in clinical bacteriology

ID 04 Identification of Streptococcus species, Enterococcus species and morphologically similar organisms

NICE accredited www.nice.org.uk/accreditation

"NICE has renewed accreditation of the process used by **Public Health England (PHE)** to produce **UK Standards for Microbiology Investigations**. The renewed accreditation is valid until **30 June 2021** and applies to guidance produced using the processes described in **UK standards for microbiology investigations (UKSMIs) Development process, S9365', 2016**. The original accreditation term began in **July 2011.**"

This publication was created by Public Health England (PHE) in partnership with the NHS. Recommendations are listed as ACCEPT/ PARTIAL ACCEPT/DEFER/ NONE or PENDING

Consultation: 19/05/2021 – 02/06/2021

Version of document consulted on dh+

Proposal for changes

Section for comments: 4.1 Taxonomy and characteristics

Comment number: 1

Date received: 21/05/2021
Laboratory/organisation name: SRUC Veterinary Services

a) 4.1 para 3 Cell size should be less than 2 um (Bergey on-line)
b) Lancefield group B includes Str. halichoeri subsp. hominis, a non-haemolytic sub-species reported from human infections (Shewmaker et al., J Clin Microbiol).
c) Lancefield group C and G includes Str. dysgalactiae subsp. dysgalactiae, an alpha or non-haemolytic sub-species recovered from bovine mastitis and other animal infections, as well as occasional human infections (Park et al., Knee Sur Relat Res 24, 120).
d) Str. canis also causes human infections (Galperine et al., J Inf 55, 23) and several additional animal species (Pinho et al., Front Microbiol doi: 10.3389/fmicb.2019.00631.
e) Str. equi subsp. equi is a significant respiratory diseae of horses that has been reported in human infection (Elsayed et al., Clin Microbiol Inf 9, 869) Enterococcus species: there can only be one type species of a genus.
f) The comment on E. faecium as a type species is therefore inappropriate and needs rewording to retain the emphasis of it for AMR.
g) Streptococcus suis: reassortment of the species has resulted in new species; Str. parasuis (for former Str. suis serotypes 20, 22 and 26 from pigs), ruminantium (for former Str. suis serotype 33, recovered from ruminants)
h) Add Vagococcus to 4.1 and 7.3

Recommended action

a) ACCEPTED: this has been updated in the document
b) ACCEPTED: this has been updated in the document
c) ACCEPTED: this has been updated in the document
d) ACCEPTED: this has been updated in the document
e) ACCEPTED: this has been updated in the document
f) ACCEPTED: this has been updated in the document
g) ACCEPTED: this has been updated in the document
h) ACCEPTED: this has been updated in the document

Comment number: 2

Date received: 02/06/2021
Laboratory/organisation name: Institute of Biomedical Science

a) Page 5, Penultimate line of second paragraph of section 4.1 Streptococcus needs to be in italics.
b) Lancefield Group D, Enterococcus species: Page 9, 3rd sentence. Clarification is possible needed for even 10C is this up to, under, over?
c) Page 9, sentence 11 and so on. Consider the use of more scientific terminology end the sentence after fermented products.
d) Streptococcus bovis group: Should Microscopically read Macroscopically?
e) Non-Lancefield groups, Helcococcus species: Page 12, second paragraph third sentence change on non-blood containing medium to either a non-blood containing medium or non-blood containing media

Recommended action

a) ACCEPTED: this has been updated in the document
b) ACCEPTED: this has been updated in the document
c) ACCEPTED: this has been updated in the document
d) ACCEPTED: this has been updated in the document
e) ACCEPTED: this has been updated in the document

Comment number: 3

Date received: 04/06/2021
Laboratory/organisation name: Society for Applied Microbiology

a) A number of tests are referred to by abbreviations. PYR is used throughout and is defined on page 7 but is also given as PYRase page 7 (Lancefield group B third paragraph). There is also a PYRA test referred to on page 11 (Aerococcus species) and it is not clear if this is the same or a different test.
b) Some of the other tests which are abbreviated are not explained. CAMP - is perhaps well know as the CAMP test for Listeria but may need a small clarification, SXT is not explained. Both of these are page 7 paragraph 5

Recommended action

a) ACCEPTED: this has been updated in the document
b) ACCEPTED: this has been updated in the document

Section for comments: 5.3 Catalase test

Comment number: 4

Date received: 21/05/2021
Laboratory/organisation name: SRUC Veterinary Services

a) 5.3 pseudocatalase in enterococci can be avoided by testing from MacConkey or other non-blood containing media.

Recommended action

a) ACCEPTED: this has been updated in the document

Section for comments: 7.1 Target organisms

Comment number: 5

Date received: 21/05/2021
Laboratory/organisation name: SRUC Veterinary Services

a) 7.1 Consider adding some of species listed in comments on 4.1

Recommended action
a) ACCEPTED: this has been updated in the document

Section for comments: 8.3 Colonial appearance

Comment number: 6

Date received: 04/06/2021
Laboratory/organisation name: Society for Applied Microbiology

a) Regarding catalase testing for these organisms, there is a comment on page 17 that Enterococcus species are catalase negative, but some strains reveal pseudocatalase activity when cultivated on blood-containing agar media. It has always been my understanding that catalase tests should never be done on blood cultured isolates as the medium itself can cause a positive catalase test. This is important as this whole group of genera are often cultured on blood plates and their catalase negative characteristic is key in distinguishing them.

Recommended action
a) ACCEPTED: note added to say that ‘care should be taken when using blood containing agar’

General comments

Comment number: 7

Date received: 04/06/2021
Laboratory/organisation name: Society for Applied Microbiology

a) This document seems a bit dated, which is a particular issue for the molecular methods. For example, there isnt anything on whole genome sequencing and the comments on MLST are seriously outdated.
b) In addition, the link to the PubMLST database is no longer correct - it should be https://pubmlst.org/organisms for the organism-specific links and https://pubmlst.org/species-id specifically for species identification.
c) There are a number of grammatical/ typographical errors in the document, but the ones of significance are: Genus names written without a capitol letter eg facklamia page 11, globicatella and streptococcus page 12 (in same paragraph), leuconostoc page 13 Genus/ species names not fully italicised eg Streptococcus, A. defectivus, G. adiacens page 10, Enterococcus in flow chart appendix 1 plus some species names in the side text of the figure. Incorrect italicisation of names like

streptococci, streptococcal, staphylococci, lactococci eg pages 13, 14 and in flow chart appendix 1. These are written as unitalicised elsewhere, so this is inconsistent.

Recommended action

a) ACCEPTED: this has been updated in the document
b) ACCEPTED: this has been updated in the document
c) ACCEPTED: this has been updated in the document

Comment number: 8

Date received: 02/06/2021
Laboratory/organisation name: Institute of Biomedical Science

a) Standardise the space between a number and C and between a number and hr as sometimes there is a space and sometimes there is not.

Recommended action

a) ACCEPTED: this has been updated in the document

Respondents indicating they were happy with the contents of the document

Overall number of comments: 0			