

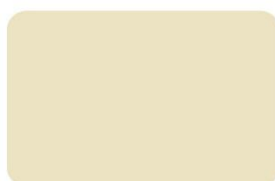
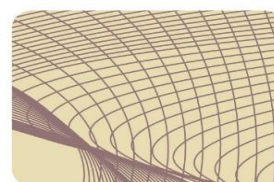
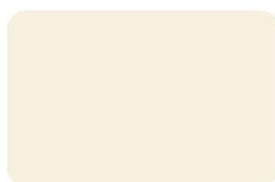
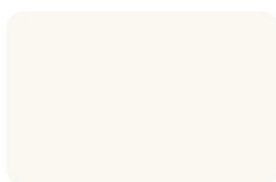


UK Health
Security
Agency

UK Standards for Microbiology Investigations

Review of users' comments received by
Working group for bacteriological identification and test
procedures

ID 7 - Identification of *Staphylococcus* species,
Micrococcus species and *Rothia* species



This publication was created by UK Health Security Agency (UKHSA) in partnership with the partner organisations.

Recommendations are listed as ACCEPT/ PARTIAL ACCEPT/DEFER/ NONE or PENDING

Consultation: 28/05/2026 – 11/06/2026

Version of document consulted on: UK SMI ID 7 dm+

Comments on Section 3 - Scope of Document

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 1

Date received: 10/06/2026

1. Paragraph 2 - Capitalise and italicise 'staphylococcus'
2. Paragraph 4 - the very first use of MRSA is abbreviated... many other terms have have been stated in full at least once prior to using their abbreviation throughout.

Recommended Action

1. ACCEPT. The change has been made to capitalise and italicise *Staphylococcus*.
2. ACCEPT. Methicillin-resistant *Staphylococcus aureus* (MRSA) has been written in full at first use before abbreviation.

Comments on Section 4 - Introduction

Countess of Chester NHS Trust

Comment number: 2

Date received: 01/06/2026

1. Virulence rather than virulent
2. Coagulase negative staphs in generally can cause infective endocarditis and pacemaker infections. Particularly in patients with prosthetic heart valves. In the trust we consider all CoNS as having the potential to cause IE in patients with pacemakers or prosthetic valves. Also consider all CoNS as having the ability to cause line infections
3. Staph lugdunensis-similar pathogenicity to staph aureus

Recommended Action

1. ACCEPT. The wording has been revised to use “virulence” instead of “virulent”.
2. ACCEPT. The text has been updated to reflect that CoNS can cause infective endocarditis and line infections.
3. ACCEPT. The wording has been updated to state that *Staphylococcus lugdunensis* has similar pathogenicity to *Staphylococcus aureus*.

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 3

Date received: 10/06/2026

4.2 Taxonomy and characteristics

This section as is says practically nothing on the characteristics of these organisms... Further identification of these organisms are listed in section 6 so rename this section 4.2 to just 'Taxonomy'?

Recommended Action

PARTIALLY ACCEPT. Section title retained and expanded to include additional characteristics.

Comments on Section 5 - Safety Considerations

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 4

Date received: 10/06/2026

1. "Hazard group 2 organisms"

Only S.aureus is listed as hazard group 2 by the ACDP Approved list... CoNS, Micrococcus etc are not even listed implying Hazard Group 1. Maybe reword this initial sentence to: 'None of the organisms within this document have been classified higher than hazard group 2 by the Advisory Committee on Dangerous Pathogens.'

2. "Laboratory acquired infections should be reported"

To who? Amend sentence to: ""Laboratory acquired infections should be reported to the Health and Safety Executive"

Recommended Action

1. ACCEPT. The wording has been revised to clarify that none of the organisms are classified higher than Hazard Group 2 by the ACDP.
2. ACCEPT. The wording has been amended to specify that laboratory-acquired infections should be reported to the Health and Safety Executive.

Comments on Section 6 - Identification

RMCHRC, KANPUR UTTAR PRADESH

Comment number: 5

Date received: 01/06/2026

In the first paragraph under preliminary identification, Gram staining has been mentioned. Consider adding the catalase test performed on the colony as part of the preliminary identification process.

Recommended Action

1. ACCEPT. Catalase testing has been added as part of the preliminary identification process.

Countess of Chester NHS Trust

Comment number: 6

Date received: 01/06/2026

Should coagulase test be mentioned as 1st test to distinguish Staph aureus and CoNS once gram is seen?

Recommended Action

1. NONE. The current order reflects standard microbiological practice, with catalase performed before coagulase. The algorithm is intended for colony-based identification, and while alternative workflows may be used locally, the guidance remains appropriate as written.

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 7

Date received: 10/06/2026

1. Capitalise the 's' in both CoNs in paragraph 3.
2. Section 6.1 - include Gram stain result for Micrococcus spp. and Rothia spp. (Rothia spp. can be pleomorphic and in the literature are sometimes described as cocco-bacilli or bacilli)
3. Section 6.2 - Does not state anything regarding culture media for Micrococcus or Rothia... perhaps change sentence "Most staphylococci grow on a range of media" to "Staphylococci and other related organisms may be recovered using a range of media and under different atmospheric conditions"
4. Sentence: "Staph/Strep agar can be useful in mixed primary culture, particularly where swarming organisms such as Proteus species are present." Suggest removal of sentence. The paragraph below already states as such by saying additional media can be used to enhance recovery... include the Staph/Strep agar there
5. Sentence: "...for the detection of MRSA." Please add 'presumptive' before MRSA in this sentence.
6. The whole paragraph beginning "However, some non-aureus staphylococci..." can be removed - all chromogenic media inserts state that their use is for presumptive ID only so all isolates on these agar should be ID confirmed anyway.
7. Title of Table 1 - please insert 'selected' between 'of' and 'Staphylococcus' so it matches Table 2s title.
8. Italicise 'Staphylococcus' in the title of Table 1.
9. Colony size - this obviously varies given time and conditions of incubation... no mention of either for this table so listing the colony sizes seems pointless. Stating 'large' and 'small' is subjective too (and from experience, colony sizes from the same species even on standard blood agar under the same conditions can vary in size)! It's not particularly worthwhile/useful to have this column.
10. 'Notes' column - feels like some notes have been put in for the sake of having a note. Little value for some of these comments! Why bother if not particularly relevant or helpful on the bench or for ID/presumptive ID to then follow up on?
11. Disagree on the note 'better growth anaerobically' for S.aureus. Though facultative, it's typically better seen under plates grown under aerobic/CO2 enhanced conditions. Sometimes it does not even come through anaerobically!

(Journal of Food Protection, Vol. 65, No. 1, 2002, Pages 199–204 Research Note: *Staphylococcus aureus* Growth and Enterotoxin A Production in an Anaerobic Environment)

12. Small colony variants of *S.aureus* should be mentioned if its mentioned for *S.argenteus* in the table. The table should acknowledge these SCV strains (which are especially relevant in cystic fibrosis patients and chronic infections) and recovery may take longer than a typical 48 hour incubation.
13. Section 6.4 - Suggest inclusion of antibiotic discs as tests in presumptively differentiating Staph sp. under this section e.g. novobiocin (*S.saprophyticus* are resistant, other Staph are susceptible), bacitracin (*Micrococcus* are susceptible whilst Staph are resistant), Mupirocin (*Micrococcus* are resistant). Further for *S.lugdunensis* specifically, the antibiotic profile currently can serve as a good indicator of the species when faced with a CoNS prior to speciation. *S.lugdunensis* generally retains high levels of susceptibility to across antimicrobial classes w/ low beta lactam resistance. A very susceptible abx profile therefore can raise suspicions.
(doi: 10.1128/JCM.00740-08. Epub 2008 May 14)
(<https://doi.org/10.1128/spectrum.02749-24>)
14. Section 6.4.2 - Rare cases of catalase negative *S.aureus* have been noted.
15. Sentence to state why DNase test is useful i.e. presumptively IDing *S.aureus* from other CoNS (where most are negative).

Recommended Action

1. ACCEPT. Corrected capitalisation for consistency with terminology.
2. ACCEPT. Added to improve completeness of preliminary identification guidance.
3. ACCEPT. The wording is broadened to reflect recovery of related organisms under varied conditions.
4. ACCEPT. Removed the text to avoid duplication, with content streamlined into general statement.
5. ACCEPT. The word 'presumptive' has been added to reflect appropriate interpretation of chromogenic media.
6. PARTIALLY ACCEPTED. Wording was simplified as chromogenic media are presumptive only; however, a brief statement was retained to emphasise this for clarity.
7. ACCEPT. Amended for consistency with formatting and alignment with Table 2.
8. ACCEPT. '*Staphylococcus*' italicised in the title of Table 1.
9. ACCEPT. The column was removed due to variability and limited diagnostic usefulness; instead, a short explanatory statement with general examples was added to retain context without implying consistency.
10. NONE. Retained as it provides supplementary context and interpretive guidance despite variable perceived value.

- 11.ACCEPT. Corrected to reflect typical growth characteristics supported by evidence.
- 12.ACCEPT. Added due to clinical relevance, particularly in chronic infections.
- 13.PARTIALLY ACCEPTED. The use of antimicrobial susceptibility as an adjunct was acknowledged; however, detailed examples and specific test descriptions were removed as susceptibility patterns are not considered reliable for identification due to evolving antimicrobial resistance.
- 14.ACCEPT. Included as a recognised rare but important exception.
- 15.ACCEPT. Added to clarify its role in presumptive identification of *S. aureus*.

Comments on Section 7 - Storage

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 8

Date received: 10/06/2026

1. Saving significant isolates on beads and stored in a -20C or -70C freezer is better for long term storage than a slope.
2. Why is it necessary to state storage conditions for chromogenic media specifically? This section does not state storage conditions for any other media - if it is assumed unnecessary as laboratory staff should already know for those types then they should already know how to store different types of media including chromogenic! Why not just state: 'For agar plates follow manufacturer's instructions for storage and use.'?
3. Sentences on sending unusual resistances isolates does not need to be in this section - this information is in section 9.

Recommended Action

1. ACCEPT. The wording has been updated to reflect best practice for long-term storage using bead systems at appropriate temperatures.
2. ACCEPT. Media storage wording was removed as inconsistent and unnecessary, and the section refocused on organism storage only.
3. ACCEPT. The sentences have been removed from this section to avoid duplication, as this information is already covered in Section 9.

Comments on Section 8 - Reporting

Italian translator

Comment number: 9

Date received: 01/06/2026

We don't know if MALDI-TOF technology is as widespread in the UK as it is in Italy, and whether the coagulase test is actually still the first and fundamental step. In any case, in section 8, it should be clarified that the reporting should reserve the indication "*Staphylococcus aureus complex*" if phenotypic tests (coagulase positive) are used, reserving the term "*Staphylococcus aureus*" or "*Staphylococcus argenteus*"

and so on if the etiological diagnosis is made with MALDI or a molecular method. Similarly, the term "Staphylococcus coagulase negative" should be recommended in the case of phenotypic identification, indicating the species name if the identification is made with MALDI or a molecular method.

Recommended Action

1. NONE. The document already addresses both workflow and reporting appropriately.

Comments on Section 9 - Referral to reference or specialist testing laboratories

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 10

Date received: 10/06/2026

Can this section include reference to the EUCAST document (Expected susceptible phenotypes) for unusual resistances in Staphylococci - how would a person reading this SMI know where to look, or what to look out for, for 'unusual resistance' otherwise?

Recommended Action

1. ACCEPT. Reference to the EUCAST expected susceptible phenotypes document has been added to guide identification and interpretation of unusual resistance patterns in *Staphylococcus* spp.

Comments on the Algorithm/s

Countess of Chester NHS Trust

Comment number: 11

Date received: 01/06/2026

Should coagulase test be mentioned before catalase test to distinguish Staph aureus and CoNS once gram is seen?

Recommended Action

1. NONE. The current order reflects standard microbiological practice, with catalase performed before coagulase. The algorithm is intended for colony-based identification, and while alternative workflows may be used locally, the guidance remains appropriate as written.

University Hospitals of Leicester NHS Trust Department of Microbiology

Comment number: 12

Date received: 10/06/2026

Nowhere in the document does it state that *S.aureus* ssp *anaerobius* is a strict anaerobe!

Recommended Action

1. ACCEPT. This has been added to Table 1.

Respondents indicating they were happy with the contents of the document

Overall number of comments: 2			
Date received	31/05/2026	Lab name	Central Laboratory
Date received	11/06/2026	Professional body	IBMS