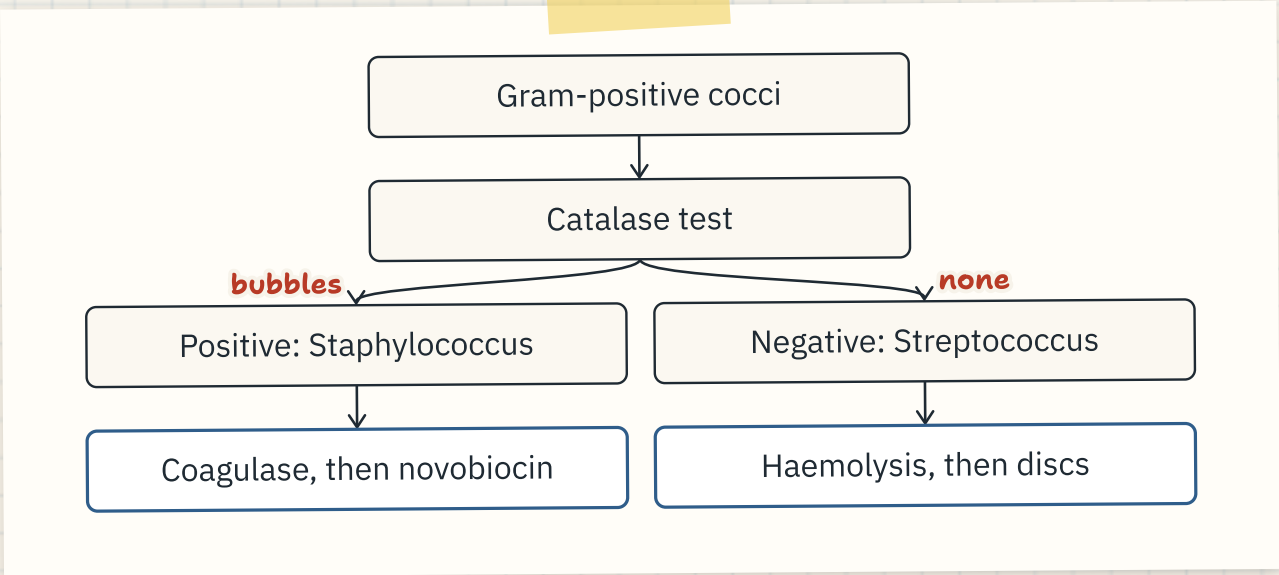
Staph vs strep: lab ID

Catalase first, then one fork per genus



Step by step

1. Gram stain: cocci in clusters or chains
2. Catalase: bubbles = Staphylococcus
3. Staph: coagulase, then novobiocin
4. Strep: haemolysis, then bacitracin or optochin
5. Gamma: e.g. enterococci, bile esculin +

Organism	Key result
S. aureus	Coagulase +; ferments mannitol
S. epidermidis	Novobiocin sensitive
S. saprophyticus	Novobiocin resistant
S. pyogenes (group A)	Bacitracin S; PYR +
S. agalactiae (group B)	Bacitracin R; CAMP +
S. pneumoniae	Optochin S; bile soluble

Key discriminating result

Rule of thumb

Catalase splits the genera
Beta: bacitracin; alpha: optochin
Viridans: optochin resistant

Exam traps

- Coagulase and novobiocin are for staphylococci only.
- Haemolysis comes before bacitracin or optochin.
- Enterococci: bile esculin +, grow in 6.5% NaCl.

Staph vs strep: catalase, coagulase and haemolysis

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/microbiology/staphylococcus-vs-streptococcus-lab-identification

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
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