Coagulase Test

Intended Use:
Differentiates *Staphylococcus aureus* from other Staphylococcus species.

Principle:
The coagulase test detects the presence of free and bound staphylcoagulase. This enzyme is excreted extracellularly by human strains of *Staph. aureus*. The mechanism of action is unknown.

Test Procedure:
1. Thaw a tube of 0.5 mL rabbit plasma.
2. Inoculate a loop-full of organism into the tube. Chose a well isolated colony.
3. Ideally you should incubate the tube at 35°C for 4 hours checking every 30 minutes for clot formation. We incubate them overnight and put them in the refrigerator until the next lab period with comparable results.
4. Check for clot formation.
5. Dispose of the tube in the biohazard container.

Results:
The formation of a clot in the bottom of the tube is considered a positive result. The clot will not move as you tilt the tube. Unclotted plasma will flow in the tube.

Limitations:
- Methicillin resistant *Staph. aureus* have reduced clumping factor.
- Do not shake or agitate the tube as this could break up the clot.
- Some staphylococci strains produce fibrolysin after prolonged incubation at 35°C that can break up the clot resulting in false negative. Incubate the tube overnight at room temperature if you do not get a clot in 4 hours.
- Some other rarely encountered staph species are also coagulase positive by the tube method.