TUBE COAGULASE TEST

Principle

This test is used to speciate staphylococci by determining the ability of an isolate to clot plasma by producing the enzyme coagulase.

Reagents

Rabbit plasma

1. Reconstitute one vial at a time with sterile distilled water (volume determined by vial size).

2. Store refrigerated before and after reconstitution. Use within 72 hours of reconstitution.

Other Materials

Sterile glass tubes (tube method)
Culture loop or wooden applicator stick

Procedure

1. Add 0.5 mL of plasma to a sterile glass tube.

2. Emulsify a large loopful of a pure colony of *Staphylococcus* into the plasma.

3. Incubate at 35^{o}C for 4 hr, observing every 30 minutes for clot formation.

4. If there is no visible clot at the end of 4 hours, leave at room temperature overnight and observe for clot formation.

Interpretation

Positive: Clot formation

Negative: No clot formation

Precautions

1) When observing the tube, do not shake or agitate the tube.

Quality Control

Each time a coagulase test is performed, known positive and negative cultures must be tested.

Positive: *S. aureus* (ATCC 25923)
Negative: *S. epidermidis* (ATCC 12228)

References

1. MacFaddin, J.F., Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore MD, 1980, pgs. 64-77.