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**Mast
Group**

Plasma Coagulase Citrated MAST® SELECTAVIAL

SV80 Series

Intended use

For the detection of coagulase enzyme activity in staphylococci.

FOR IN VITRO DIAGNOSTIC USE ONLY

Contents

Available as packs of 10 or 6 vials of MAST® SELECTAVIAL.

Formulation

Plasma Coagulase Citrated MAST® SELECTAVIAL contains lyophilised rabbit plasma with sodium citrate.

Storage and shelf life

Store unopened at 2 to 8°C until expiry date shown on pack label. Reconstituted Plasma Coagulase can be stored at 2 to 8°C for 5 days. Alternatively it can be aliquotted into 0.5 mL amounts, frozen promptly and stored at minus 20°C for up to 30 days.
DO NOT THAW AND RE-FREEZE.

Precautions

For *in vitro* diagnostic use only. Observe approved biohazard precautions and aseptic techniques. To be used only by adequately trained and qualified laboratory personnel. Sterilise all biohazard waste before disposal. Refer to Product Safety Data sheet.

Materials required but not provided

Standard microbiological supplies and equipment such as loops, MAST® culture media, swabs, applicator sticks, incinerators and incubators, etc., as well as serological and biochemical reagents and additives such as blood.

Procedure

Tube coagulase test:

1. Rehydrate the vial using the diluent specified on the pack label.
2. Shake the vial to ensure the Plasma Coagulase is completely reconstituted.
3. Aliquot 0.5 mL reconstituted Plasma Coagulase into suitable sterile tubes using a sterile pipette.
4. Using a culture less than 24 hours old, inoculate the Plasma Coagulase by emulsifying one loopful (2 to 4 colonies) of bacteria, from a non-inhibitory agar plate, into the tube of plasma.
5. Incubate the inoculated tube at 37°C for 4 hours.
6. Examine for clot formation.

Slide agglutination test:

1. Place a drop of rehydrated Plasma Coagulase onto a clean, dry glass slide.
2. Place a drop of sterile water onto the slide to act as a control.
3. Using a sterile loop emulsify an amount of the isolated colony being tested into each drop, inoculating the water first. Try to create a smooth suspension.
4. Observe for clumping in the Plasma Coagulase and note appearance in the control.

Interpretation of results

Tube coagulase test:

Results should be read at 4 hours. A positive test for coagulase production results in a clotting of the rabbit plasma. Any degree of clotting is a positive test. Results can be reported across a range of 0 to 4+, 0 being negative (plasma remains liquid, no clot). A positive result of 4+ means that the plasma has hardened and the clot is not displaced when the tube is gently inverted (the consistency of an agar), due to strong coagulase activity. Negative tests at 4 hours should be left at room temperature overnight and examined again for clot formation.

Slide agglutination test:

Clumps that will not mix uniformly into Plasma Coagulase represent a positive slide coagulase test and are indicative of *S. aureus*. A negative reaction is recorded when colonies mix smoothly into a homogenous suspension. Clumping in both the Plasma Coagulase and the control indicate that the organism autoagglutinates and is unsuitable for the slide coagulase test (tube coagulase test should be used as an alternative).

Quality control

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate a positive reaction and at least one organism to demonstrate a negative reaction. Do not use the product if the reactions with the control organisms are incorrect. The list below illustrates a range of performance control strains which the end user can easily obtain.

Test Organisms	Result
<i>Staphylococcus aureus</i> ATCC® 9144	Weak positive
<i>Staphylococcus aureus</i> ATCC® 25923	Positive
<i>Staphylococcus aureus</i> ATCC® 33591	Positive
<i>Staphylococcus aureus</i> ATCC® 6538	Positive
<i>Staphylococcus epidermidis</i> ATCC® 14990	Negative
<i>Staphylococcus epidermidis</i> ATCC® 12228	Negative

References

Bibliography available on request.