



Sulpha Sensitivity Test Agar

M308

Sulpha Sensitivity Test Agar is used to test the susceptibility of common pathogens to sulphonamides.

Composition**

Ingredients	Gms / Litre
Beef extract	10.000
Casein enzymic hydrolysate	10.000
Disodium phosphate	0.660
Monopotassium phosphate	0.300
Agar	15.000
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 36 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour in sterile Petri plates.

Principle And Interpretation

Trimethoprim/sulfamethoxazole or co-trimoxazole is a sulfonamide antibiotic. Combination of trimethoprim and sulfamethoxazole, in the ratio of 1 to 5, used in the treatment of a variety of bacterial infections (2). Mueller Hinton Agar is recommended for the diffusion of antimicrobial agents impregnated on paper disc through an agar gel as described in CLSI Approved Standard (3). Sulpha Sensitivity Test Agar is used for determination of susceptibility of microorganisms to sulphonamides (1).

Casein enzymic hydrolysate and beef extract provide nitrogenous compounds, carbon, sulphur and other essential nutrients. Disodium phosphate and monopotassium phosphate buffer the medium well. A standardized suspension of the organisms is swabbed over the entire surface of the medium. Paper discs impregnated with certain amount of specific antibiotics are placed on the surface of the medium. The plates are incubated and the zones of inhibition around each disc are measured.

Quality Control

Appearance

Light yellow coloured homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured clear gel forms in Petri plates

Reaction

Reaction of 3.6% w/v aqueous solution at 25°C. pH : 7.3±0.2

pH

7.10-7.50

Cultural Response

M308: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Zones of inhibition with Sulfosomidine	Zones of inhibition with Sulphamethoxy-pyridiazine	Zones of inhibition with Sulphadiazine
Cultural Response						
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	≥70%	SO (300 mcg) -22mm	ST (300 mcg) -20mm	SZ (100 mcg) -20mm
<i>Staphylococcus aureus</i> ATCC 25923	50-100	luxuriant	≥70%	SO (300 mcg)-26 mm	ST (300 mcg)-26mm	SZ (100 mcg)-28mm

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. McCoy and Pelczar 1961, Antimicrobial Agents and Chemotherapy, ASM., Detroit, Michigan.
2. Brumfitt W, Hamilton-Miller JM (December 1993). Reassessment of the rationale for the combinations of sulphonamides with diaminopyrimidines". J. Chemother 5 (6):465-9. PMID 8195839.
3. NCCLS Approved Standard: ASM-2, 1979, Performance Standards for Antimicrobial disc Susceptibility Tests, 2nd Ed., National Committee for Clin. Lab. Standards.

Revision : 1 / 2011



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