

# Starch Agar



Medium used for the differentiation of aerobic *Actinomycetes* in the basis of starch hydrolysis.

## • CONTENTS (Liter)

|                               |        |
|-------------------------------|--------|
| Pancreatic Digest of Gelatin  | 5.0 g  |
| Beef Extract                  | 3.0 g  |
| Sodium Chloride               | 8.0 g  |
| Potato Starch                 | 10.0 g |
| Agar                          | 15.0 g |
| Final pH = 6.6 ± 0.2 at 25°C. |        |

## • PROCEDURE

Suspend 41.0 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45-50°C in water bath. Mix well. Dispense in petri dishes.

## • INTERPRETATION

Starch Agar is a medium used for the differentiation of aerobic *Actinomycetes* in the basis of starch hydrolysis. Pancreatic digest of gelatin, beef extract and starch provide nitrogen, carbon, vitamins, minerals and nutrients for growth of microorganisms. Sodium chloride maintains the osmotic balance. Agar is the solidifying agent. Starch hydrolysis is indicated by colorless zone around colonies after flooding with Iodine Solution (MB-11809) on the surface of medium.

## • TECHNIC

Inoculate the plates with spreading the specimen on surface of the medium using a sterile loop. Incubate at 28 ± 0.5°C for 7 days. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: light beige.

### Prepared medium

Appearance: clear, slightly opalescent.

Color: light amber.

Incubation conditions: 28 ± 0.5°C / 7 days

| Microorganism               | ATCC  | Inoculum CFU                     | Growth | Hydrolysis |
|-----------------------------|-------|----------------------------------|--------|------------|
| <i>Streptomyces albus</i>   | 3004  | 10 <sup>2</sup> -10 <sup>3</sup> | good   | +          |
| <i>Streptomyces rimosus</i> | 10970 | 10 <sup>2</sup> -10 <sup>3</sup> | good   | +          |
| <i>Nocardia asteroides</i>  | 19247 | 10 <sup>2</sup> -10 <sup>3</sup> | good   | -          |

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

## • REFERENCES

1. Land, G.A. 1992. Aerobic actinomycetes, p. 4.0.1-4.1.9. In H.D. Isenberg (ed.), Clinical microbiology procedures handbook, vol. 1. American Society for Microbiology, Washington, D.C.
2. Beaman, B.L., M.A. Saubolle, and R.J. Wallace. 1995. Nocardia, Rhodococcus, Streptomyces, Oerskovia and other aerobic actinomycetes of medical importance, p. 379-399. In P.R. Murray, E.J. Baron, M.A. Pfaller, F.C. Tenover and R.H. Tenover (ed.), Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
3. Holt, J.G., N.R. Krieg, P.H.A. Sneath, J.T. Staley and S.T. Williams (ed.). 1994. Bergey's Manual of determinative bacteriology, 9th ed. Williams & Wilkins, Baltimore.

## • PACKAGE

|                                   |       |
|-----------------------------------|-------|
| Cat. No : MB-S0845<br>Starch Agar | 500 G |
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