

Stock Culture Agar

Intended Use

Stock Culture Agar is used for maintaining stock cultures of bacteria, particularly streptococci.

Summary and Explanation

Ayers and Johnson¹ reported a medium that gave luxuriant growth and extended viability of streptococci and other organisms. The success of their medium can be attributed to its semisolid consistency, added casein, buffered environment and dextrose, which serves as a readily available source of energy. This study reported that pathogenic streptococci remained viable for at least four months at room temperature (24°C) in the medium. Organisms such as *Streptococcus pneumoniae*, *Mycobacterium* spp. and others, grew well on their medium. Stock Culture Agar is prepared to duplicate the medium described by Ayers and Johnson.¹

Stock Culture Agar may also be prepared with L-asparagine (1 g/L) for the maintenance of pathogenic and nonpathogenic bacteria, especially streptococci.²

Principles of the Procedure

Infusion from beef heart, peptone, gelatin and isoelectric casein provide the nitrogen, vitamins and amino acids in Stock Culture Agar. Dextrose is a carbon source. Disodium phosphate is a buffering agent. Sodium citrate acts as a preservative. Agar is the solidifying agent.

Formula

Difco™ Stock Culture Agar

Approximate Formula* Per Liter

Beef Heart, Infusion from 500 g	10.0	g
Proteose Peptone	10.0	g
Gelatin	10.0	g
Isoelectric Casein	5.0	g
Dextrose	0.5	g
Disodium Phosphate	4.0	g
Sodium Citrate	3.0	g
Agar	7.5	g

*Adjusted and/or supplemented as required to meet performance criteria.

Directions for Preparation from Dehydrated Product

1. Suspend 50 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 121°C for 15 minutes.
4. Test samples of the finished product for performance using stable, typical control cultures.

User Quality Control

Identity Specifications

Difco™ Stock Culture Agar

Dehydrated Appearance:	Light tan, free-flowing, homogeneous.
Solution:	5.0% solution, soluble in purified water upon boiling. Solution is medium amber, opalescent.
Prepared Appearance:	Medium amber, opalescent.
Reaction of 5% Solution at 25°C:	pH 7.5 ± 0.2

Cultural Response

Difco™ Stock Culture Agar

Prepare the medium per label directions. Stab inoculate with fresh cultures and incubate at 35 ± 2°C for 18-48 hours.

ORGANISM	ATCC™	RECOVERY
<i>Neisseria meningitidis</i>	13090	Good
<i>Staphylococcus aureus</i>	25923	Good
<i>Streptococcus pneumoniae</i>	6305	Good
<i>Streptococcus pyogenes</i>	19615	Good

Procedure

See appropriate references for specific procedures.

Expected Results

Refer to appropriate references and procedures for results.

References

1. Ayers and Johnson. 1924. J. Bacteriol. 9:111.
2. Atlas. 1997. Handbook of microbiological media, 2nd ed. CRC Press, Inc., Boca Raton, Fla.

Availability

Difco™ Stock Culture Agar

Cat. No. 254100 Dehydrated – 500 g