HYCON® Agar Strips S

Technical Data Sheet

Ordering number: 1441020025

HYCON® Agar Strips S are ready-to-use culture media for assessment of airborne Staphylococci with HYCON® Microbial Air Samplers, i.e. RCS® High Flow Touch, RCS® High Flow, RCS® Plus, RCS® Plus Ex, and RCS® Standard.

Each agar strip is individually sealed in the transparent, primary package. The agar is filled in a flexible backing film. The formulation of the Mannitol Salt Agar complies with the recommendations of the European, Japanese and US Pharmacopoeia.

Mode of Action

Mannitol salt phenol-red agar is a modified version of the selective agar proposed by Chapman (1945) for the isolation and presumptive identification of Staphylococcus aureus.

The composition of Mannitol Salt Agar supports the growth of *Staphylococcus aureus* whereas many other microorganisms are inhibited by the high salt content of 7.5 %. Some halophilic Enteroccci and Vibriones are able to grow on Mannitol Salt Agar.

In contrast to the most other staphylococci *S. aureus* is able to build acids from mannitol. Therefore, they build up yellow colonies with yellow zones. *S. capitis, S. simulans, S. carnosus, S. scuri, S. lentus, S. gallinarum* are also mannitol positive.

Appearance of Colonies:

- Surrounded by bright yellow zones, abundant growth: Mannitol-positive, e.g. *Staphylococcus aureus*
- No color change, growth is usually poorer: Mannitol-negative, e.g. *Staphylococcus epidermidis*

Typical Composition

Pancreatic Digest of Casein	5 g/l
Peptic Digest of Animal Tissue	5 g/l
Beef Extract	1 g/l

D-Mannitol	10 g/l
Sodium Chloride	75 g/l
Agar	15 g/l
Phenol Red	0.025 g/l
Supplements such as buffer	

The appearance of the medium is clear and red. The pH value is in the range of 7.3 to 7.7. The medium can be adjusted and/or supplemented according to the performance criteria required.

Application and Interpretation

Prior to use the agar strip should be equilibrated to room temperature. Please check each agar strip before use to verify sterility and take care on aseptic handling in order to avoid false positive results. Contaminated or dehydrated agar strips should not be used for sampling.

Open the wrapper approximately at 1/3 by pealing back the plastic seal at the rounded side of the wrapper. Remove the agar strip with the coated side facing downwards. Insert the agar strip into the opening of the rotor, or the impeller drum according to the directions outlined in the user manual of the respective microbial air sampler. Place the instrument into required position, choose the appropriate sample volume and start the air sampling procedure.

When sampling is finished, remove the agar strip and place it back into the original wrapper. Seal the wrapper with an adhesive tape or Cover Slides (Order. No. 1.44111.0100). Label the wrapper e.g. with a waterproof pen for identification. The closed agar strips are transferred to an incubator.

Incubate up to 3 days at 30-35 °C aerobically.

Finally, the number of CFU per slide is examined.

Grown colonies may be identified using suitable methods related to root cause analysis programs or to support sanitizing management.

Important Notes

- Practice aseptic technique when handling agar strips.
- The coated surface of the agar strips should face down during incubation in order to avoid the formation of satellites by condensing water.

Storage

The product can be used until the expiry date if stored in the original box, protected from light and properly sealed at the temperature range indicated on the box label. The total shelf from the date of production is 6 months.

Condensation can be prevented by avoiding quick temperature shifts and mechanical stress. Upon storage agar strips should not be placed near heat sources such as refrigerators with heat-emitting condensers. Boxes should be stored with the coated side of the agar strip facing downwards.

Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121°C, disinfect, incinerate etc.).

Quality Control

Control Strains	ATCC #	Inoculum	Incubation	Recovery
Staphylococcus aureus	6538	10-100 CFU	24-48h at 30-35°C	50-200%
Staphylococcus epidermidis	14990	10-100 CFU	24-48h at 30-35°C	50-200%
Escherichia coli	8739	> 1 0 CFU	24-48h at 30-35°C	≤ 30%

Please refer to the actual batch related Certificate of Analysis.

Quality

This product is manufactured in a Millipore SAS facility whose quality management system is approved by an accredited registration body to ISO 9001 quality standard.

This product is manufactured in a Millipore SAS facility whose environmental management is approved by an accredited registration body to the appropriate ISO 14001 systems standard.

Literature

Chapman, G.H. (1945): The significance of sodium chloride in studies of Staphylococci. J. Bact. 50: 201-203.

EN ISO 6888-2 (1999) + A1 (2003): Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) – Part 2: Technique using rabbit plasma fibrinogen agar medium.

European Directorate for the Quality of Medicines and Healthcare. (2014): The European Pharmacopoeia. 8th Ed. Chapter 2.6.13 Microbiological examination of non-sterile products: Test for specified products. Strasbourg, France.

Japanese Ministry of Health, Labour and Welfare. (2011): The Japanese Pharmacopoeia. 16th Ed. Chapter 4.05 Microbial Limit Test II. Microbiological examination of non-sterile products: Test for specified products. Japanese Ministry of Health, Labour and Welfare. Tokyo, Japan.

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