HYCON® Agar Strips C

Technical Data Sheet

Ordering number: 1440990025

HYCON® Agar Strips C are ready-to-use culture media for assessment of airborne coliforms and E. coli 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 MacConkey Agar complies with the recommendations of European, Japanese and US Pharmacopoeia.

Mode of Action

MacConkey Agar is a weak selective medium for isolation of coliforms and E. coli. Bile salts and crystal violet largely inhibit the growth of the gram-positive microbial flora. Lactose and the pH indicator neutral red are used to detect lactose degradation. Bacteria degrading lactose to acids grow in pink to red colored colonies. Additionally, Escherichia coli and other acid forming bacteria will show a zone of precipitated bile salt around the colonies. Bacteria not degrading Lactose will grow colorless.
Appearance of Colonies Microorganisms:

- Colorless, translucent: *Salmonella*, *Shigella* and others
- Large, red, surrounded by turbid zone: *Escherichia coli*
- Large, pink, mucoid: *Enterobacter, Klebsiella*
- Very small, opaque, isolated colonies: *Enterococci, Staphylococci* and others

Typical Composition

Pancreatic digest of gelatine	17 g/l
Peptone (50% meat and 50% casein)	3 g/l
Lactose	10 g/l
Sodium Chloride	75 g/l
Bile Salts No. 3	1.5 g/l

Neutral Red	30 mg/l
Crystal Violet	1 mg/l
Agar	13.5 g/l
Supplements such as buffer	

The appearance of the medium is clear and red-brown to dark-red. The pH value is in the range of 6.9 to 7.3.
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.

According to the pharmacopoeia recommendation incubate for 18 to 24 hours at 30-35 °C aerobically.

Finally, the number of CFU per slide is examined.

Grown colonies indicate the probable presence of E. coli and 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
Escherichia coli	8739	10-100 CFU	24-48h at 30-35°C	50-200%
Klebsiella pneumonia	DSM 30104	10-100 CFU	24-48h at 30-35°C	50-200%
Staphylococcus aureus	6538	> 100 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

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.

MacConkey, A. (1905): Lactose-fermenting bacteria in faeces. J. Hyg. 8: 333-379.

MacConkey, A. (1908): Bile salt media and their advantages in some bacteriological examinations. J. Hyg. 8: 322-334.

United States Pharmacopoeia 38 NF 33 (2015): <62> Microbiological examination of non-sterile products: Tests for specified microorganisms.

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