

Envirocheck® Contact DC Disinfection Control

Ordering number: 1.02147.0001

Our Envirocheck® dip slides, for semi-quantitative detection of microorganisms on surfaces and in liquids, are flexible paddles that are coated with different nutrient media. After sampling and incubation, the results of side A and side B allow any of five parameters to be determined, depending on the slide used. Envirocheck™ dip slides are available for a range of tests including *E. coli*, coliforms, yeast and molds, Enterobacteriaceae, Total Viable Count and disinfection control.

Content: 10 slides/pack

Typical Composition

Slide A

Coated with CASO (Tryptic Soy) Agar; the medium is clear and colorless and is recommended for use in microbial limits testing specified by the United States and European Pharmacopoeia. Result on this medium: total viable (aerobic) count.

Slide B

Coated with CASO (Tryptic Soy) Agar containing neutralizers:

- Polysorbat 80 neutralizes hexachlorophene and mercurial compounds.
- Sodium thiosulfate neutralizes halogen compounds.
- Lecithin neutralizes chlorhexidines.
- Histidine (in combination with Polysorbat 80 and lecithin) neutralizes aldehydes and phenolic compounds.

Quaternary ammonium compounds are also neutralized by the combination of Polysorbat 80 and lecithin. The use of neutralizers allows growth of bacteria that were held in bacteriostasis after sanitation/disinfection but still viable.

Application and Interpretation

Envirocheck contact slides can be used for both surface and liquid testing.

Unscrew the cap and remove Envirocheck slide from the tube taking care not to touch the agar surfaces. Check for any dehydration or contamination before use.

Surface testing

With two fingers hold the terminal end of the paddle against the surface to be tested. Press down on the spike to bend the paddle still holding the slide by the cap.

Press one medium against the surface to be tested. Take care not to smear the agar over the test area.

Repeat the procedure with the other side of the paddle on an area adjacent to the initial test site.

Put the slide back into the tube and close tightly.

Liquid testing

Dip the Envirocheck slide for about 5 – 10 seconds into the test fluid. Both agar surfaces should become totally covered. In case of insufficient liquid, pour over both surfaces of the slide. Tip the slide on a clean absorbent paper to drain any excess of fluid. Put the slide back into the tube and close tightly.

Incubation

Incubate in upright position at 35-37°C for 24-48h hours. Check for growth after 24 and 48 hours.

Interpretation of the results

Count the number of colonies on both sides of the paddle

CASO Agar: count the number of colonies for obtaining the microbial load before disinfection.

CASO Agar with neutralizers: count the number of colonies to obtain the microbial load of surviving microorganisms after disinfection. Growth indicates that disinfection was either not adequate (too low concentration of disinfectant) or the effective time was too short.

Surface testing

The colony count on each agar side can be calculated into CFU per cm² as follows:

$$\text{CFU (actual count)} / 9.4 \text{ cm}^2 = \text{CFU/ cm}^2$$

Information on the recovery rates of dip slides for surface monitoring can be found at Salo et al

Liquid testing

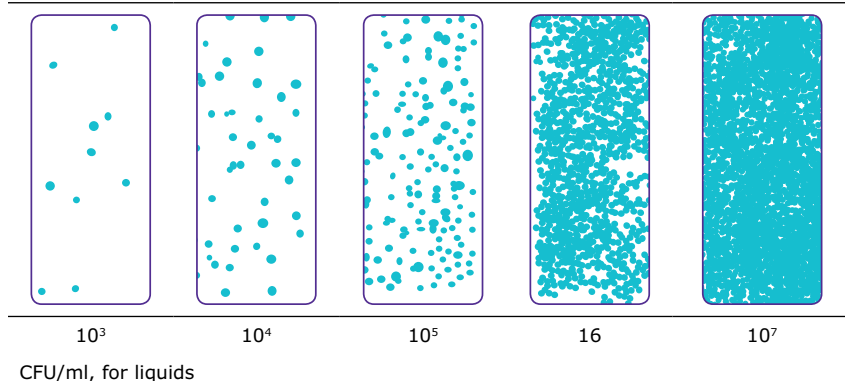
The density on each agar side can be compared to the model density chart.

Typical Cultural Response

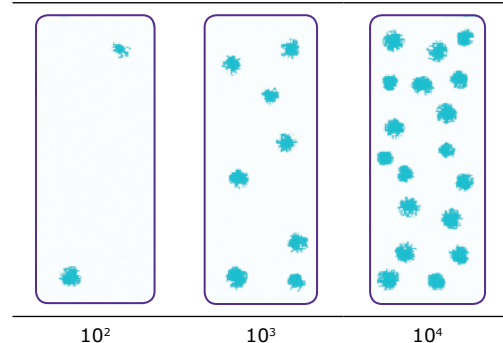
| Organism | CASO Agar | CASO Agar with neutralizers |
|-----------------------------------|-------------|-----------------------------|
| <i>E. coli</i> , ATCC 8739 | Good growth | Good growth |
| <i>Staph. aureus</i> , ATCC 6538 | Good growth | Good growth |
| <i>C. albicans</i> , ATCC 10231 | Good growth | Good growth |
| <i>Bac. subtilis</i> , ATCC 6633 | Good growth | Good growth |
| <i>Ps. aeruginosa</i> , ATCC 9027 | Good growth | Good growth |
| <i>Asp. niger</i> , ATCC 16404 | Good growth | Good growth |

Density Charts

Bacteria and Yeasts



Moulds



Storage

Please store the product protected from light at 3 to 15°C and avoid freezing. Frozen agar shows a dimpled or fuzzy surface and cannot be used anymore.

Condensation can be prevented by avoiding quick temperature shifts and mechanical stress. Upon storage the dip slides should not be placed near heat sources such as refrigerators with heat-emitting condensers.

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.).

References

Salo S, Laine A, Alanko T, Sjöberg A-M, Wirtanen G. Validation of the Microbiological Methods Hygicult Dipslide, Contact Plate, and Swabbing in Surface Hygiene Control: A Nordic Collaborative Study. *Journal of AOAC International* 2000; 83(6): 1357-1365.

Salo S, Alanko T, Sjöberg A-M, Wirtanen G. Validation of the Hygicult® E Dipslides Method in Surface Hygiene Control: A Nordic Collaborative Study. *Journal of AOAC International* 2002; 85(2): 388-394

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