NASA TECH BRIEF

Development and Test of Flexible Film Coupon Strips for Use as a Sampling Technique

The problem:

To design a flexible, water soluble microbiological assay coupon for clean room use.

The solution:

Develop a film that consists of a gelatin base and that is nontoxic to microorganisms. The film should also be capable of remaining unchanged during periods of storage.

How it's done:

A mixture of 100 milliliters (ml) of water, 3 grams microbiological grade gelatin, and 0.8 ml chemically pure glycerin is brought to 40°C until the gelatin is dissolved. While the mixture is still warm, it is poured onto a flat plexiglass surface at the ratio of 200 ml of solution for each square foot of surface.

The resulting film is allowed to cool (under ambient conditions) for 3 days; then it is stripped off and cut to appropriate size. The film is then packed in a paper envelope and sterilized with ethylene oxide at ambient temperature for 24 hours. Film developed by this method has been stored for over a year, and, when tested, it had lost none of the required properties.

Note:

1. This innovation may be of interest to personnel working in virology research and pathogenic, hospital, air pollution, and drug laboratories.
2. Documentation is available from:
   Clearinghouse for Federal Scientific and Technical Information
   Springfield, Virginia 22151
   Price $3.00
   Reference: TSP69-10339

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D. C. 20546.

Source: C. Aldridge of
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Category 03