

Detection of Airborne Mold Spores with Easygel®

Introduction

Air quality is becoming more and more important. Air quality can vary greatly depending on circulation, ventilation and level of filtration. In order to optimize the level of quality, air should be checked on a regular basis. With the Easygel system, this is a simple and inexpensive procedure. The Easygel bottles and special petri dishes are sterile. Handle them carefully.

Procedure

1. For each test, pour the contents of one bottle of Easygel® into one pretreated dish, swirl to cover the dish bottom and allow to stand on a level surface for 40-45 minutes until solidified.
2. Label the dish containing the solidified medium appropriately. (Such as date, test location, time of test.)
3. Position the dish in the chosen test location and remove the lid to expose the medium surface to the open air so that any spores floating in the air will stick to the moist medium surface if they touch that surface by landing on it.
(Suggested locations include airflows from heating/cooling ducts, areas of high traffic in the building, or areas undergoing cleaning or other activities.)
4. After a predetermined exposure time, replace the lid to cover the dish and place the closed dish in a warm spot to allow growth of any mold spores you have captured. In 36-60 hours, check for the presence of fuzzy, filamentous circular mold colonies. As colonies mature and reach larger size, they may develop color in the center of the colony (usually black, green, brown) which usually indicates spore production. Keep the lid on the dish so that these spores will not be dispersed into your environment and be potential trouble-makers.
5. Count the number of mold colonies growing on each dish, noting if they are all the same or if there are different types. There are no strictly established standards for numbers or types of molds constituting acceptable or unacceptable levels in the air, but if you have more than 2-3 molds growing on a dish after an hour of exposure to your test environment, there may be reason for concern. Your tests will allow you to pinpoint the sources of molds growing in your environment so that appropriate clean-up can be done to eliminate the problem. (Molds are commonly found in humidifiers, air conditioner fins and ducts, rugs and carpets, and damp basement walls.)
6. **DISPOSAL:** It is important that you destroy live molds growing in your test dishes so that they do not contribute to further contamination of your environment. There are several options which can effectively accomplish this goal.
 - A. Add enough household bleach (5% sodium hypochlorite -- Known by the trade name Clorox or other names in the grocery) to cover the molds growing in the dishes and allow to stand for 15 minutes. The bleach will kill the molds and the spores so that the dishes can be disposed of in the garbage.
 - B. Place the dishes in an ovenproof bag (obtainable at grocery stores), seal and heat to 350 F. in your oven for 1 hour. This will also kill the molds and spores and you may then dispose of the dishes in the garbage.
 - C. Autoclaving the dishes for 15 min. at 15 lb pressure .
7. If you have reason for concern after running your tests, you may want to contact experts to determine the identity of the molds in your dishes and to advise you on appropriate procedures for eliminating the molds from your home. One good place to start is your city or county health department. If they cannot help you directly, they may be able to direct you to a local laboratory that can give you the information you want. Local institutions of higher learning may have departments of biology with microbiologists who are capable of helping you also.

Micrology Laboratories, LLC.

PO Box 340 Goshen, Indiana 46527-0340

Call toll free 888.327.9435

Internet www.micrologylabs.com **E-mail** micrologylabs@juno.com

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