



ENVIRONMENTAL PERSPECTIVES

HOMEGUARD
ENVIRONMENTAL

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Biologically Derived Contaminates (Commonly called Mold & Fungus)

INTRODUCTION:

During recent years, increasing attention has been given to the horrors of mold and fungus. Mistakenly, this common terminology really addresses a broader issue of biologically derived contaminants which takes in a greater area of concern than just mold and fungus, but also includes viruses, bacteria, endotoxins, and mycotoxins.

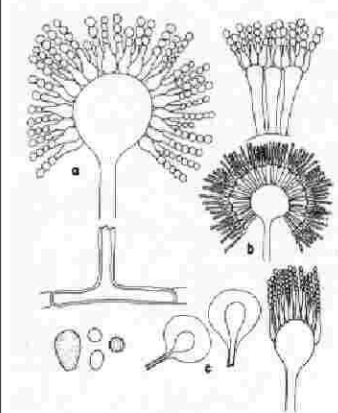
HOW DO BIOLOGICALLY DERIVED CONTAMINATES FORM?

Biologically derived contaminants spores are present in the air we breathe and are on surfaces in our environment. In order to grow, they wait for perfect conditions of high humidity (moisture) appropriate temperatures, and food. Food sources consist of substances such as dust, wood, ceiling tiles, drywalls insulation, carpets and paper products. When the spores meet with a sources of moisture such as



Typical bath room window
with mold

those caused from a pipe leak, flood, poor drainage, etc, the results can be quite disastrous. Mold can grow quickly and at an increasing rate, therefore, a rapid and effective response is needed in reaction to specific incidents that cause the build-up of moisture. If untreated, mold can not only be seen on surfaces, but can infiltrate behind walls, under carpets and floor tiles, and into other areas that are not as obvious.



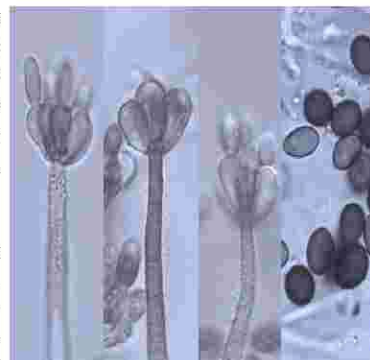
Aspergillus

WHY ARE THESE ORGANISMS A PROBLEM?

Biologically derived contaminants themselves are not necessarily a problem. After all, some of the finest cheeses, and penicillin both rely on mold. But when in an uncontrolled or unfriendly environment, molds can make you severely ill. Unless highly allergic, most people don't react to common molds. However, there are certain

types of molds such as stachybotris atra, also known as stachyas, that are toxic molds which secrete mycotoxins, are toxic bi-products of fungi and can cause serious illness.

Mycotoxins can enter the body through the nose, mouth or skin and accumulate in the blood or lungs. While some health issues such as headaches,



Stachybotris

asthma, and other respiratory problems may show up quickly, others such as rashes, memory loss, chronic fatigue, nose bleeds and cancer can take much longer to surface.

While different people may react to different exposures to mold and mold related contamination, there is a clear cause and effect.



Why Should I Worry Now?



Mold growing on a closet wall.

Biologically derived contaminants have been around forever. In fact archeologists have found, and scientists have identified fossilized mold spores from the days of the dinosaurs. There are even references in the Bible to mold.

In recent years the mold issue has hit the news. Thousands are suing homebuilders, landlords,

and insurance companies for damages to their property and compromises to their health. In fact, in June 2001, California was the first state to pass mold legislation, establishing standards for acceptable levels of mold, along with a homeseller's requirement of disclosure.

Maybe, recently you've noticed strong musty

odors when you enter your basement, or notice large surface areas covered with stains or a strange growth. Do you feel ill after you start the ventilation system?

If you or other members of your family have not been feeling well lately, possibly its time to have your home tested to determine if there is a problem.

What can be done to correct a biologically derived contaminates problem?

First, before undertaking a mold remediation project, an assessment must be undertaken to determine if in fact there is a problem, and if so, to what extent, and what the cause is.

There are three basic ways to gather samples to test for the presence of biologically derived contaminants. They are bulk sample, bioaerosol (air samples), and lift samples (dermal contact).

After samples have been taken following rather strict and specific protocols, they are placed into secure and sterile containers and transported to a lab for culturing. Culturing is a process where

the lab grows the sample to better analyze it in respect to its type and quantity.

If the biologically derived contaminate is of a type that is of concern, then it needs to be cleaned up.

The clean-up project can consist of many steps, depending on the nature and extent of the contamination.

Prior to remediation, the cause of the problem, such as a leaky roof, defective sump pump, or broken water pipe must be fixed, otherwise the remediation will be in vain.

Porous building compo-

nents such as carpeting and carpet padding, sheet rock or plaster walls and ceilings, insulation, wood floors and sub-flooring, drop ceiling or acoustical ceiling tiles or panels, if infiltrated, would most likely be demolished (removed) and disposed of.

Other items composed of paper or cloth-based materials, including furniture, if infiltrated would normally be slated for disposal as well, depending of course upon the severity of the problem.

After removal of the contaminated material is completed, the entire area would be HEPA vacuumed, and then a biocide applied.

"Prior to remediation, the cause of the problem, such as a leaky roof, defective sump pump, or broken water pipe must be fixed"

The biocide is usually sprayed onto the nonporous surface and carefully and thoroughly wiped off. The surfaces would then be HEPA vacuumed (The HEPA Filter traps microscopic particles) to capture any residue from the dead organisms.

Following this, a series of tests would be undertaken to verify successful remediation.



HOW DO YOU FIND A QUALIFIED MICROBIAL REMEDIATION CONTRACTOR?

In some respects this can be very difficult, and in other respects rather easy. Unlike other environmental fields such as Asbestos and Lead, currently not only is there no licensing of companies, but there are no required training programs for workers nor is there mandatory independent oversight in this area.

The most successful and

competent companies often are those that have been engaged in Asbestos and Lead remediation and have proven themselves competent in these highly specialized environmental areas.

Homeguard Environmental, a division of Envirotech Environmental Services, Inc. has been engaged in the environmental remediation area

since 1985, and has vast experience in Asbestos and Lead abatement, and decontamination. In recent years Homeguard has developed a proficiency in solving mold problems. Homeguard has excellent working relationships with some of the leading mold consultants serving this area, and can work closely with them to help solve whatever problems you



LABORATORIES THAT CONDUCT BIOLOGICAL CONTAMINATION TESTING AND ASSESSMENTS

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Stamford, CT 06902

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(203) 324-9857 (Fax)

Contact:
Robert Brown

Environmental Assessments & Solutions

41 Boulder Ridge Road
Scarsdale, NY 10583

(914) 478-1717
(914) 693-5059 (Fax)

Contact:
Charles Schwartz

Brooks Laboratories

9 Isaac Street
Norwalk, CT 06850

(203) 853-9792
(203) 853-0273 (Fax)

Contact:
Michael Zubarev



Ceiling infiltrated with microbial contamination

GENERAL COST GUIDELINES

It is very difficult to provide blanket cost estimates for microbial decontamination, due to different circumstances from project to project. Costs are comprised of amongst other things, work area preparation, disposal or cleaning of contaminated items, demolition of walls and ceilings, application of bio-cides and

clean-up.

Cost for standard demolition of walls and ceilings can run between \$1.25—\$2.00 per square foot. Application of the bio-cide generally costs from between \$.35-.50 per square foot.

Of course, reconstruction and replacement costs must be estimated and added to the project



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INSULATION SERVICES

LEAD RISK ASSESSMENT & CONSULTING

LEAD PROJECT PLANNING

OIL TANK SERVICES

DECONTAMINATION OF BIOLOGICALLY
DERIVED CONTAMINATES

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TO:

ABOUT ENVIROTECH...

Our Company has been specializing in Residential and Small Commercial abatement since 1985. Serving parts of Connecticut and New York, **HOMEGUARD** provides a variety of Environmental Services for Homeowners, Condominiums, Cooperatives, Apartment Buildings, General Contractors, Architects, Engineers, Fuel Oil Companies, Banks, Insurance Companies, and others involved with Real Estate or Real Estate based services.

The Company has completed over 3,000 projects some of which include the **Sears Mansion**, and **Ralph Loren's Estate**, the current or former homes of: **Ivan Lendl**, **George C. Scott**, **J. Stillman Rockefeller**, **Sam Champion**, **Marcia Kramer**, **Chuck Scarborough**, **Michelle Marsh**, **Pat Reilly**, **Pete Gogolak**, and **Malcolm Pray**, **The Wilton Historical Society**, **The Bolivar** on the Upper West Side of Manhattan on Central Park West, **Surprise Lake Camp** in Cold Springs, NY. Additional projects include: **Cablevision**

of CT, **Silver Hill Hospital** in New Canaan, **Country Club of Darien**, **Stamford Hospital** and **St. Joseph's Medical Center**, **Mobil Oil**, **Canyon Ranch** in the Berkshires, and **United Artists Theaters**, **King & Low Heywood Thomas School**, **Temple Sinai** - Stamford; **United Methodist** and **First Congregational Churches** - New Canaan; **St. Peter's Church** - Norwalk, the **Second Congregational Church** and **Greenwich Synagogue** - Greenwich; and the **Perrott Memorial Library**, **Old Greenwich**; **Stamford Center for the Performing Arts Palace Theatre**, and **Crown Theatres**.

HOMEGUARD follows all applicable EPA, OSHA, CT Department of Health Services, and NY State Department of Labor regulations, as applicable. All of the company's environmental technicians and supervisors are fully trained as required. The Company carries Worker's Compensation Insurance, General Liability Insurance, as well as Asbestos and Lead Liability Insurance.

Our company has been complimented often by our clients, not only for the high quality of work which we performed, but also for the very courteous and sensitive manner in which we work with our clients to accommodate any of their special needs and/or concerns.

Numerous Real Estate Brokers and Agents, Property and Facility Managers, as well as General, Boiler, Roofing, Plumbing, and HVAC Contractors, and Fuel Oil Companies have chosen to work with **HOMEGUARD** on a repeat basis. These organizations have recognized our dedication to our clients, along with the unsurpassed service, which we provide.

We are certain that you, and anyone associated with the project, will be very pleased with our company, its employees, and the manner in which we complete the project. We hope that you'll select **HOMEGUARD** as your Environmental Contractor.