



## MOLDS

### **Alternaria**

Often found in carpets, textiles and on horizontal surfaces in building interiors. Often found on window frames. Outdoors it may be isolated from samples of soil, seeds and plants. It is commonly found in outdoor samples.

### **Aspergillus**

Comes in many varieties (species). Many of the varieties produce toxic substances. It may be associated with symptoms such as sinusitis, allergic bronchiopulmonary aspergillosis and other allergic symptoms. Inhalation of conidia and mycelium of aspergillus can lead to several diseases, the severity of which depends on the host's immune response. It is found in soils, leaf, and plant litter, decaying vegetable and roots, bird droppings, tobacco and stored sweet potatoes.

### **Botrytis**

This world wide mold predominantly occurs in humid and sub tropical regions. It is seen as the gray mold on cabbage, red clover, lettuce, sugar beet, beans, barley, wheat, onion and tomato. It is especially seen in connection with soft fruits like strawberries and grapes. In the wine industry, the growth of botrytis on wine grapes has been known to give an added effect to the bouquet of certain wines.

### **Candida Albicans**

Is a yeast infestation, from a parasite that thrives in warm-blooded animals. In the allopathic world of medicine it is referred as a fungus. This fungus can cause thrush and vaginal infections and spread to any part of the body that is weakened. We all have intestinal Candida and when in balance it helps maintain and aid our immune system by controlling the unfriendly organisms. However, Candida albicans takes advantage of circumstances in the body. This single cell fungi multiplies and develops toxins, which circulate in the blood stream and may cause an array of maladies.

### **Cephalosporium**

Is a mold found in decomposing vegetation and soil. It is also found in dust from textile plants, soil when gardening, bathrooms, and damp old houses. A gray/green color, it is also occasionally found in patients sensitive to Candida albicans.

### **Cladosporium Herbarum**

This is a mold which is found most commonly on dying or dead plant substrates, especially on leaves and stems of ferns, mosses, and desert and aquatic plants. It is found in various soil types and on food items such as cereals, cucumbers, tomatoes and peaches. It has also been found in fuel tanks, face creams, paints and textiles.

### **Curvularia Specifera**

This mold is dark brown in color with a velvety appearance. It is allergenic and can be found in interior building materials, soil, castor beans, cotton, rice, barley, wheat and corn. It seems to thrive well in most tropical countries. It may cause hay fever, asthma and fungal sinusitis.

### **Epicoccum Nigrum**

*Epicoccum pupurascens* is a saprophyte of worldwide distribution. It is a very common invader of many different plant types, also infecting seeds from barley, oats, wheat and corn. Moldy paper discoloration is frequently caused by *Epicoccu*.

### **Fusarium**

Is a large genus of filamentous fungi widely distributed in soil and in association with plants. Most species are harmless saprobes and are relatively abundant members of the soil microbial community. Some species produce toxins in cereal crops that can affect human and animal health if it enters the food chain.

### **Helminthosporium**

This mold occurs seasonally and spores are released on dry, hot days. It is a parasite of cereals and grasses. Frequently found on grains, grasses, sugar cane, soil and textiles.

### **Hormodendrum**

[*Cladosporium*] Most commonly identified outdoor fungus. The outdoor numbers are reduced in the winter. The numbers are often high in the summer. Often found indoors in numbers less than outdoor numbers. It is a common allergen. Indoor *Cladosporium* may be different than the species identified outdoors. It is commonly found on the surface of fiberglass duct liners in the interior of supply ducts. A wide variety of plants are food sources for this fungus. It is found on dead plants, woody plants, food, straw, soil, paint and textiles.

### **Mucor Racemosus**

This mold has worldwide distribution and is primarily a soil fungus but has been found in horse manure, plant remains, grains, vegetables and nuts. In the tropics it is found at higher altitudes and often seen on soft fruit, fruit juice and marmalade.

### **Penicilium**

It has a fruity odor, suggesting apples or pineapples. It is found in the soil of citrus plantations and has been isolated from decaying cabbage and barley plants, stored seeds of cereals, grapes, nuts, dried fruits and fruit juices. It is one of the most dominant and important house molds; the indoor mold can be readily seen on stale bread, citrus fruits and apples. It is frequently found in wine cellars. It is the source of several antibiotics significantly penicillin.

### **Phoma Herbarum**

This mold is commonly found in different soils, dead plant tissues and potatoes. It grows indoors in association with bio deterioration of wall paints, and produces pink or purple colored spots. This mold has also been isolated from moldy shower curtains.

### **Pullularia**

[*Aureobasidium*] This yeast-like fungus is commonly found on caulk or damp window frames in bathrooms. *Pullularia* may be pink or black in color. Although it seldom causes infections, it can be allergenic. This is one type of mold that is a type of mildew. It will grow in cooler climates and along with *cladosporium* is commonly found growing on siding.

### **Rhizopus Nigrican**

Frequently found in house dust, soil, fruits, nuts and seeds. *Rhizopus* often grows in fruit and vegetable garbage, or in forgotten leftover food. Exposure to large numbers of *rhizopus* spores has reportedly caused respiratory complications. *Rhizopus* can be an allergen and opportunistic pathogen for immune-compromised individuals, especially those with diabetic ketoacidosis, malnutrition, severe burns, or in some cases, the common cold.

**Rhodotorula**

[Rubra] Reddish yeast typically found in moist environments such as carpeting, cooling coils and drain pans. In some countries it is the most common yeast genus identified in indoor air. This yeast has been reported to be allergenic. Positive skin tests have been reported. It has colonized terminally ill patients.

**Spondylocladium**

This is a mold that is found in moist and damp environment. They are found on plants and around window sills and air conditioning ducts. They are indoors and outdoors.

**Sporobolomyces**

A yeast commonly isolated from environmental sources, such as air, tree leaves and orange peels. The natural habitats are humans, mammals, birds, the environment and plants. Sporobolomyces may cause infections, particularly in immuno-supressed patients.

**Monilia Sitophila**

This mold grows on contaminated milling and baking equipment, and may be found in stale breads and other grains. Occasionally, it can become airborne with other dusts and molds.

**Trichoderma**

Is commonly found in soil, dead trees, pine needles, paper and unglazed ceramics. It often will grow on other fungi. It produces antibiotics that are toxic to humans. It has been reported to be allergenic. It readily degrades cellulose.

## Environmental Chemicals

### **Ammonium Chloride**

Uses include a feed supplement for cattle, in hair shampoo, in textile printing, in the glue that bonds plywood, as an ingredient in nutritive media for yeast, in cleaning products, and as cough medicine. It is the active ingredient in many antiperspirants, usually used in aerosol antiperspirants.

### **Benzene**

Is a colorless and flammable liquid with a sweet smell and a relatively high melting point. It is carcinogenic and its use as additive in gasoline is now limited, but it is an important industrial solvent and precursor in the production of drugs, plastics, synthetic rubber, and dyes. May cause drunken behavior, light headaches, disorientation, fatigue and loss of appetite.

### **Chlorine**

Drinking water, bleach, and disinfectants contain chlorine. It induces pain and inflammation of mouth, throat, and stomach. It can also cause confusion, delirium, respiratory tract irritation, pulmonary edema, skin eruptions, and vomiting. Exposure to chlorine has been linked to an increase in blood pressure, diabetes, anemia's, heart disease, gastrointestinal and urinary tract cancer and asthma.

### **Deltamethrin**

Deltamethrin products are among some of the most popular and widely used insecticides in the world; helpful in eliminating and preventing a wide variety of household pests, especially spiders, fleas, ticks, carpenter ants, cockroaches and bedbugs. Deltamethrin, however, should always be treated with caution. When care is not taken, deltamethrin poisoning can occur.

### **Fluoride**

Is commonly found in toothpaste and water. Clinical studies have shown that fluoride contributes to osteoporosis and long-term exposure produces osteosclerosis.

### **Formaldehyde**

Is found in household detergents and cleaners, and is also used in photographic chemicals, paint and rubber production, textile finishes and conditioners, pesticides and vermicides, diesel exhaust, toilet, burning charcoal and cigarette smoke. It may produce such symptoms as irritability, disorientation and depression.

### **Glyphosate**

Glyphosate is a broad-spectrum herbicide useful on essentially all annual and perennial plants including grasses, sedges, broad-leaved weeds and woody plants. Trade names for products containing glyphosate include Roundup, Rodeo and Pondmaster. It may be used in formulations with other herbicides. Glyphosate is rate least dangerous in comparison to other herbicides and pesticides.

### **Orris Root**

Once important in western herbal medicine, it is now used mainly as a fixative and base note in perfumery, as well as an ingredient in many brands of gin. This is also the substance left out of products that are labeled hypo-allergenic.

### **Phenol**

Phenol is used primarily in the production of phenolic resins and in the manufacture of nylon and other synthetic fibers. It is also used in slimicides (chemicals that kill bacteria and fungi in slimes), as a disinfectant and antiseptic and in medicinal preparations such as mouthwash and sore throat lozenges. Short-term exposure to phenol in the air can cause respiratory irritation, headaches and burning eyes. People who had skin exposure to high amounts of phenol had skin burns, liver damage, dark urine and irregular heart beat.

### **Toluene**

Toluene is a common solvent, able to dissolve: paints, paint thinners, many chemical reactants, rubber, printing ink, adhesives (glues), lacquers, leather tanners and disinfectants. Inhalation of toluene fumes can be intoxicating, but in larger doses nausea-inducing.

## Food Additives and Food Colorings

### **Aspartame**

No calorie artificial sweetener aspartame, which is sold under the brand name NutraSweet in the United States and is used in more than 6,000 products. Aspartame may change levels of chemicals in the brain that affect behavior. May also cause headaches/migraines, dizziness, seizures, nausea, numbness, muscle spasms, weight gain, rashes, depression, fatigue, irritability, tachycardia, insomnia, vision problems, hearing loss, heart palpitations, breathing difficulties, anxiety attacks, slurred speech, loss of taste, tinnitus, vertigo, memory loss and joint pain.

### **Benzoic Acid**

A white, crystalline organic compound belonging to the family of carboxylic acids, widely used as a food preservative and in the manufacture of various cosmetics, dyes, plastics and insect repellents. It can cause temporary distress through gastrointestinal irritation.

### **Blue # 1**

[Patent Blue] This blue dye is a derivative of coal-tar and it is used in bottled soft drinks, ice cream, ices, dry drink powders, candy, baked products, cereals, and puddings. It is also found in face powders, other cosmetics and hair colorings. This dye has been a suspect of many allergic reactions.

### **Blue # 2**

[Indigo Carmine] This is a dark-blue powder which is a derivative of coal-tar. This dye is used in such food products as bottled soft drinks, bakery goods, cereals, candy, confections and dry drink powders. It is also employed in mint-flavored jelly and frozen desserts. It is recognized as a sensitizer in allergic patients.

### **Butylated hydroxyanisole (BHA)/ Butylated hydroxytoluene (BHT)**

Butylated hydroxyanisole (BHA) and the related compound butylated hydroxytoluene (BHT) are phenolic compounds that are often added to foods to preserve fats. HA is generally used to keep fats from becoming rancid. BHA is found in butter, meats, cereals, chewing gum, baked goods, snack foods, dehydrated potatoes, and beer. It is also found in animal feed, food packaging, cosmetics, rubber products, and petroleum products. BHT also prevents oxidative rancidity of fats. It is used to preserve food odor, color and flavor. Many packaging materials incorporate BHT. It is also added directly to shortening, cereals, and other foods containing fats and oils.

### **Erythritol**

A naturally-derived sugar substitute that looks and tastes very much like sugar, yet has almost no calories. Erythritol has not been found to affect blood sugar or insulin levels and has a zero glycemic index. In reasonable amounts, erythritol doesn't cause digestive upset and diarrhea that other sugar alcohols like sorbitol and xylitol are known to cause. Erythritol isn't metabolized by oral bacteria, which means that it doesn't contribute to tooth decay.

### **Green # 3**

[Fast Green] This dye is used in foods, drug, and cosmetics (except in products which are used in the area around the eye). It is used in coloring in mint-flavored jelly, frozen desserts, gelatin desserts, candy, confections, baked goods and cereals. Green # 3 has been a suspect as a sensitizer in allergic patients.

### **MSG**

Monosodium glutamate (MSG) is used as a flavor enhancer in a variety of foods prepared at home, in restaurants and by food processors. Its use has become controversial in the past 30 years because of reports of adverse reactions in people who've eaten foods that contain MSG. Research on the role of glutamate – a group of chemicals that includes MSG – in the nervous system also has raised questions about the chemical's safety.

### **Polysorbate 80**

Commercially also known as Tween® 80, it is a nonionic detergent and emulsifier derived from polyoxylated sorbitol and oleic acid, which is often used in foods. Polysorbate 80 is often used in ice cream to prevent milk proteins from completely coating the fat droplets. This allows them to join together in chains and nets, to hold air in the mixture, and provide a firmer texture, holding its shape as the ice cream melts. Polysorbate 80 is also used in commercial pickle products.

### **Potassium Nitrite**

Used as a food additive, also is used as a preservative in a manner similar to that of sodium nitrite. Potassium nitrite is a strong oxidizer and contact with skin or clothing, as well as inhalation and ingestion, should be avoided. Potassium nitrite is also used in the manufacturing of heat transfer salts.

### **Red # 1**

[Crystal Ponceau] This dye is used in dyeing wool. It may be used in foods, drugs, and cosmetics; as a special note, it has been de-listed by the FDA from further production in foods, drugs or cosmetics.

### **Red # 40**

[Allura Red] In the United States, Allura Red AC is approved by the Food and Drug Administration for use in cosmetics, drugs and food. It is used in some tattoo inks and is used in many products, such as orange soda.

### **Saccharine**

Saccharin is typically used as a sweetener in low calorie soft drinks, dietetic ice cream, and other low calorie foods. Saccharin is best known in the pink packet form of Sweet ,N Low.

### **Sodium Sulfit**

Used as a preservative to prevent dried fruit from discoloring, and for preserving meats. Also used for reducing chlorine levels in pools. It can cause a decrease in vitamin B1 or destruction of thiamine in the body and can cause asthmatic reactions.

### **Sorbic Acid**

Its mineral salts, such as sodium sorbate, potassium sorbate and calcium sorbate, are antimicrobial agents often used as preservatives in food and drinks to prevent the growth of mold, yeast and fungi.

### **Sucralose**

Sucralose is a calorie free sweetener which can be used in place of sugar. Sucralose is made by adding chlorine to the sugar molecule during the manufacturing process which alters the sugar molecule to create a calorie free sweetener. Sucralose can be found in more than 4,500 food and beverage products, such as candy, soft drinks and breakfast bars.

### **Yellow # 5**

[Tartrazine] The most widely used color additives in foods (candy, desserts, cereals, soft drinks and dairy products), drugs and cosmetics. Tartrazine appears to cause the most allergic and intolerance reactions of all the azo dyes, particularly amongst those with an aspirin intolerance and asthmatics. Reactions can include anxiety, migraine, clinical depression, blurred vision, itching, rhinitis, urticaria, general weakness, palpitations and sleep disturbance.

### **Yellow # 6**

[Sunset Yellow] It may be found in orange squash, orange jelly, marzipan, swiss roll, apricot jam, citrus marmalade, lemon curd, sweets, hot chocolate mix and packet soups, trifle mix, breadcrumbs and cheese sauce mix and soft drinks. It appears to cause allergic or intolerance reactions, particularly amongst those with aspirin

**Xylitol**

A sugar alcohol sweetener used as a naturally occurring sugar substitute. It is found in the fibers of many fruits and vegetables, including various berries, corn husks, oats, and mushrooms. It is known to be "tooth friendly" and found in many chewing gums. Absorbed more slowly than sugar, it does not contribute to high blood sugar levels or the resulting hyperglycemia caused by insufficient insulin response. It also shows potential as a treatment for osteoporosis, ear and upper respiratory infections, Candida and infections.