Mycotoxins and Related Mold Species

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Welcome to our comprehensive compilation of mycotoxins and their corresponding mold species, aimed at identifying potential sources and health implications. This table provides valuable insights into the origins and impacts of various mycotoxins, making it an invaluable resource for our clients, healthcare professionals, and those interested in understanding these issues. Explore this collection of data to enhance your knowledge of mycotoxins and their relationship with mold species, impacting both human health and the environment.

Mycotoxin	Mold Species Detected in ERMI 36 Species	Leading Source from Building Material	Leading Source from Food	Health Concerns
Ochratoxin A	Aspergillus ochraceus, niger; Eurotium (Asp.) Amstelodami; Penicillium glabrum	Damp building materials (wood and walls) that may have experienced water damage	Dried foods such as dried fish, various dried beans, pulses (legumes), nuts, oilseeds, coffee. Can be prevalent in spices, onions, cereal ingredients (rice, barley, wheat, maize)	Immunosuppression, BEN (Balkan endemic nephropathy), Lung disease
Aflatoxins	Aspergillus flavus, oryzae, parasiticus; Eurotium (Asp.) Amstelodami	Damp walls, wallpaper, floor and carpet dust, tarred wooden flooring, humidifiers, HVAC, cotton fabrics, paintings	Agricultural crops such as maize (corn), peanuts, cottonseed, and tree nuts.	Liver pathology and cancer, immune toxicity, neurotoxicity
Trichothecenes (Includes Satratoxin)	Stachybotrys chartarum	Water-damaged building materials with high cellulose content, including fiberboard, gypsum board, wallpaper, canvas, and paper	Corn, cereal grains	Respiratory bleeding, protein synthesis inhibition, neurotoxicity, cytotoxicity, immune toxicity

Gliotoxin	Trichoderma viride; Aspergilllus fumigatus, terres, flavus, niger	Soil, compost, water-saturated wood items, cellulose-rich materials such as gypsum walls, wallpapers, air-conditioning filters, and carpet and mattress dust	Vegetables	Immune toxicity, immune suppression, neurotoxicity
Zearalenone	Fusarium graminearum, verticillioides	Water-damaged building materials	Cereal ingredients, such as wheat, barley, maize, sorghum, rye, rice, corn silage, sesame seed, hay, flour, malt, soybeans, beer, corn oil, pasta	Reproductive system diseases (prostate, cervical, or breast cancer)
Chaetomomium; Chaetoglobosin A and C	Chaetomium globosum	Paper and cellulose-containing material, including wet drywall, wallpaper, carpets, window frames, baseboards	High-fiber food ingredients, including whole-grain bread, pasta, quinoa, and brown rice	Cytotoxicity, Cell division
Patulin	Penicillium crustosum, glabrum; Aspergillus penicilliodes; Eurotium (Asp.) Amstelodami; Paecilomyces variotii	Water damaged carpet, wallpaper, floor, mattress, and insulation	Apples and apple products, pears, apricots, peaches, grapes, primarily in rotten regions- Also common in seeds and nuts	Immune toxicity, cytotoxic, tremors
Penitrem A	Penicillium crustosum, glabrum	N/A	Pome fruits (apples, pears, and quince), cheese, nuts, seeds	Tremors, ataxia, seizures
Cyclopiazonic acid	Penicillium chrysogenum	Floor dust, mattress dust, wood, wall paper, paint, gypsum (as in wall board) artwork, optical lenses	Fruits, vegetables, cereal grains, cured meat, margarine, cheese, and dairy products	In animals (rats, dogs, pigs, and chickens): anorexia, diarrhea, yrexia, dehydration, weight loss, ataxia, immobility
Rubratoxin B	Penicillium purpurogenum	Plants, optical lenses, vinyl wall covering, cotton yarn, dextrin paste	Strawberries, walnut kernels	Liver and spleen damage, teratogenic and reproductive effects

Fumagillin	Aspergillus fumigatus	House dust, garbage, compost, potted plants, humidifiers, and HVAC	Fruits, beans, vegetables, and vegetables	Lung disease, neurotoxicity, tremors, immune toxicity
Alternariol and alternariol monomethyl ether	Alternaria alternata	Damp building materials, including textiles, canvas, cardboard and paper, electric cables, polyurethane	Fruits, vegetables, cereals, and grain	Vomiting, erythema, convulsions, gastrointestinal hemorrhage
Citrinin	Aspergillus restrictus, penicilliodes; Penicillium verrucosum	House dust, furniture, carpets, clothing	Stored grains (beans, fruit, olives, herbs, spices)	Liver deterioration, carcinogenic, embryotoxic
Sterigmatocystin	Aspergillus versicolor; Eurotium (Asp.) Amstelodami	Damp building materials, including wallboards, insulation, textiles, ceiling tiles, and manufactured wood	Cocoa, coffee beans, powdered spices, maize, date fruits, grains, peanut, vegetables	Live pathology and cancer
Mycophenolic Acid	Penicillium brevicompactum	Water damaged carpet, wallpaper, floor, mattress, and insulation	Apples, grapes, mushrooms, cassava, potatoes, and ginger	Cyotoxic, mutagen
Fumonisins	Fusarium verticillioides	Water-damaged building materials	Corn, corn by-products, cereal, wheat, barley, oat, sorghum	CNS birth defects
Unknown	Wallemia sebi	Textiles, rotting paper, floor dust, mattress dust, soil, hay	Rock salt, bacon, salted foods, jam, jellies, fruits	Allergenic, causes respiratory problems and is known to colonize human lungs, bones, and skin

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