



Aflatoxin Pathogen Safety Data Sheet

Pathogenicity/Toxicity

Aflatoxins are various poisonous carcinogens and mutagens that are produced by certain molds, particularly *Aspergillus* species. Children are particularly affected by aflatoxin exposure, which is associated with stunted growth, delayed development, liver damage, and liver cancer. The most common signs and symptoms of aflatoxin poisoning are: nausea, yellowing of skin and sclera (icterus), itching, vomiting, bleeding, abdominal pain, lethargy, convulsions, coma and death.

Hazard Identification

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| Epidemiology | Worldwide. |
| Host Range | No animal species is known to be immune to the acute toxic effects of aflatoxins. |
| Transmission | Direct contact, mucous membranes, ingestion, percutaneous. |
| Infectious Dose | Very small, lethal dose between 0.03 and 18 mg/kg body weight. |
| Incubation Period | Not existent |
| Communicability | Not possible |

Stability/Viability

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| Physical Inactivation | Treat with fresh sodium hypochlorite at 1–2.5% (w/v) for 30 minutes (commercially available bleach solutions typically contain 3–6%); treat with a combination of 0.25% sodium hypochlorite and 0.25N sodium hydroxide for 30 minutes |
| Survival Outside Host | Aflatoxins are relatively stable to heat, and are not destroyed by boiling water, pasteurization, or autoclaving. |

First Aid/Medical

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| Immunization | None |
| Prophylaxis | Biomonitoring program. |
| Treatment | Acute aflatoxicosis has no known antidote, the management is mainly focused on symptomatic and supportive care. |

Laboratory Hazards

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| Laboratory Acquired Infections (LAIs) | No cases reported. |
| Primary Hazards | Accidental parenteral inoculation or ingestion and aerosols. |
| Special Hazards | Handling of sharps, splash/droplet-creating activities, equipment contamination and exposed skin/uncovered wounds. |

Exposure Controls

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| Containment | BSL-2 facilities, equipment and practices for work with infectious materials animals or cultures. |
| Required PPE | At minimum, gloves, closed toed shoes and lab coat, eye protection when potential splashes or aerosol. |
| Other Precautions | Use of BSC for procedures that may produce aerosols & those that involve high concentrations/large volumes; limited sharps usage |

Exposure Procedures

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| Personnel Exposure | In the event that a substance enters the mouth, eyes, lungs, or penetrates/makes contact with skin: <ul style="list-style-type: none"> Alert others in the lab Remove contaminated PPE & clothing Flush eyes/mouth with water for 5 min or wash exposed skin with soap & water |
| Reporting | Report immediately to the PI or lab/facility manager. Report to the Biosafety Office with 48 hours. Complete an Employee Injury Report form (if required) and submit to EHS. |
| Emergency Assistance | Emergency assistance can be obtained by dialing 911. |
| Medical Follow-up | <u>During Business Hours</u> University Health Services 1202 W. Farm Road Stillwater, OK 74078 <u>After Business Hours</u> Stillwater Medical Center ER 1323 W. 6 th Ave. Stillwater, OK 74074 |

OSU Biosafety Office Contacts

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| Biosafety Officer | (405) 744-3736 |
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