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Office of
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Security

MSDS

MATERIAL SAFETY DATA SHEET - INFECTIOUS SUBSTANCES**SECTION I - INFECTIOUS AGENT****NAME:** *Aspergillus* spp.**SYNONYM OR CROSS REFERENCE:** *Aspergillus fumigatus*, *A. niger*, *A. flavus*, Aspergillosis, Farmer's lung**CHARACTERISTICS:** Rapidly growing mold with septate hyphae and conidia; differentiation on basis of conidiophores and conidia**SECTION II - HEALTH HAZARD****PATHOGENICITY:** Variety of forms of infection depending on species involved, i.e. aspergilloma, aspergillosis pneumonia; aspergillosis is characterized by pulmonary infiltrates, eosinophilia and a rise in IgG; immunosuppressed individuals are prone to develop an acute pneumonia with multifocal infiltrates expanding to consolidation; dissemination to other organs (eg. cardiac valve) is common; most common cause of otomycosis; clinical manifestation and severity are largely determined by the general immunologic state of the patient**EPIDEMIOLOGY:** Worldwide; uncommon; hospital air and airducts associated with nosocomial outbreaks; high aflatoxin and other mycotoxins produced by *A. flavus* correlated to hepatocellular cancer in Africa and Southeast Asia**HOST RANGE:** Humans**INFECTIOUS DOSE:** Not known**MODE OF TRANSMISSION:** Inhalation of airborne conidia**INCUBATION PERIOD:** Variable; few days to weeks**COMMUNICABILITY:** Not transmitted from person to person**SECTION III - DISSEMINATION****RESERVOIR:** Widely distributed in nature; in soil, cereal grains, hay and other plant material or foodstuff**ZOOZOSIS:** None**VECTORS:** None**SECTION IV - VIABILITY**

DRUG SUSCEPTIBILITY: Susceptible to amphotericin B, itraconazole or voriconazole

SUSCEPTIBILITY TO DISINFECTANTS: Susceptible to 1 % sodium hypochlorite, 2% glutaraldehyde; susceptibility to 70% ethanol and phenolics questionable (0.4% chlorine for 2 min has been recommended for surface disinfection of food samples)

PHYSICAL INACTIVATION: Inactivated by heat and irradiation

SURVIVAL OUTSIDE HOST: Spores are very resistant; survive in soil and decaying matter for a long time

SECTION V - MEDICAL

SURVEILLANCE: Monitor for symptoms; confirm microscopically using potassium hydroxide.

FIRST AID/TREATMENT: Administer amphotericin B; reduce immunosuppressive therapy where possible; surgical intervention in unusual "solid" lesion cases

IMMUNIZATION: None available

PROPHYLAXIS: None available

SECTION VI - LABORATORY HAZARDS

LABORATORY-ACQUIRED INFECTIONS: None reported to date (many non-laboratory occupationally-acquired infections have been reported).

SOURCES/SPECIMENS: Sputum; soil and environmental samples may contain infectious conidia

PRIMARY HAZARDS: Inhalation of conidia

SPECIAL HAZARDS: None

SECTION VII - RECOMMENDED PRECAUTIONS

CONTAINMENT REQUIREMENTS: Biosafety level 2 practices and containment facilities for activities involving the fungus or infectious body fluids and tissues

PROTECTIVE CLOTHING: Laboratory coat; gloves when skin contact with infectious materials is unavoidable

OTHER PRECAUTIONS: None

SECTION VIII - HANDLING INFORMATION

SPILLS: Allow aerosols to settle; wearing protective clothing gently cover spill with absorbent paper towel and apply 1% sodium hypochlorite starting at the perimeter and working towards the centre; allow sufficient contact time (30 min) before clean up

DISPOSAL: Decontaminate all wastes before disposal; steam sterilization,

chemical disinfection, incineration

STORAGE: In sealed containers that are appropriately labelled

SECTION IX - MISCELLANEOUS INFORMATION

Date prepared: November 1999

Prepared by: Office of Laboratory Security, PHAC

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