Mycobacterium spp. (other than M. tuberculosis, M. bovis, M. avium,...

http://www.phac-aspc.gc.ca/msds-fiss/msds102e.html

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MATERIAL SAFETY DATA SHEET - INFECTIOUS SUBSTANCES

SECTION I - INFECTIOUS AGENT

NAME: Mycobacterium spp. (other than M. tuberculosis, M. bovis, M. avium, M. leprae)

SYNONYM OR CROSS REFERENCE: Atypical mycobacteria, MOTT, M. kansasii, M. xenopi, M. simiae, M. szulgai, M. fortuitum, M. scrofulaceum, M. marinum, M. ulcerans, M. chelonii, M. smegmatis

CHARACTERISTICS: Gram positive rods, acid-fast staining, aerobic, Runyon groups (Group I, photochromogens; Group II, scotochromogens; Group III, nonphotochromogens; Group IV, rapid growers)

SECTION II - HEALTH HAZARD

PATHOGENICITY: Pulmonary disease resembling tuberculosis may be associated with M. kansasii, M. avium-intracellulare; lymphadenitis may be associated with M. scrofulaceum, M. avium complex; skin ulcers and soft tissue wound infections may be associated with M. fortuitum, M. chelonii, M. ulcerans and M. marinum

EPIEMIOLOGY: Not well delineated; factors such as host tissue damage or immunodeficiency may predispose to infection

HOST RANGE: Humans, domestic and wild animals

INFECTIONOUS DOSE: Unknown

MODE OF TRANSMISSION: Skin or mucous membrane contamination originating in the environment cause local soft tissue infections; in pulmonary and disseminated disease the mode of transmission is often not clear (may represent a reactivation of dormant lesions)

INCUBATION PERIOD: Long incubation period

COMMUNICABILITY: No evidence of person-to-person transmission

SECTION III - DISSEMINATION

RESERVOIR: Ubiquitous in nature - soil, water, milk, dust, tissues of domestic animals

ZOONOSIS: None

VECTORS: None

SECTION IV - VIABILITY

DRUG SUSCEPTIBILITY: Combination drug therapy - drug susceptibility tests should be performed on isolated organisms
Mycobacterium spp. (other than M. tuberculosis, M. bovis, M. avium,...

**SUSCEPTIBILITY TO DISINFECTANTS:** Greater resistance to disinfectants and require longer contact times for most disinfectants to be effective; 5% phenol, 1% sodium hypochlorite (low organic matter and longer contact times), iodine solutions (high concentration of available iodine), glutaraldehyde and formaldehyde (longer contact time) are effective

**PHYSICAL INACTIVATION:** Sensitive to moist heat (121°C for at least 15 min)

**SURVIVAL OUTSIDE HOST:** Carcass and organs - up to 1 year; cereals - 3 years; soil - 2 years; water - 2 years; manure - up to 154 days; sawdust - 230 days

**SECTION V - MEDICAL.**

**SURVEILLANCE:** Cross-reactivity with standard tuberculin test (although react most intensely to the PPD from homologous organism)

**FIRST AID/TREATMENT:** Combination antibiotic therapy; surgical excision may be more effective in some cases

**IMMUNIZATION:** Not usually administered

**PROPHYLAXIS:** Not usually administered

**SECTION VI - LABORATORY HAZARDS**

**LABORATORY-ACQUIRED INFECTIONS:** 40 cases of non-pulmonary tuberculosis related to accidents in the laboratory or autopsy room

**SOURCES/SPECIMENS:** Sputum, exudates from lesions, tissues, environmental samples (soil, water)

**PRIMARY HAZARDS:** Direct contact of skin or mucous membranes with infectious materials; ingestion; accidental parenteral inoculation

**SPECIAL HAZARDS:** Infectious aerosols created during manipulation of both cultures or tissue homogenates, of organisms associated with pulmonary disease also pose hazards to laboratory personnel

**SECTION VII - RECOMMENDED PRECAUTIONS**

**CONTAINMENT REQUIREMENTS:** Biosafety level 2 practices, containment equipment, and facilities for activities with clinical materials and cultures; animal biosafety level 2 practices and facilities for animal studies

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

**OTHER PRECAUTIONS:** Appropriate practices and precautions to minimize the production of infectious aerosols

**SECTION VIII - HANDLING INFORMATION**

**SPILLS:** Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towels and apply 5% phenol, starting at perimeter and working towards the centre; allow sufficient contact time (30 min) before clean up

**DISPOSAL:** Decontaminate before disposal; steam sterilization, chemical disinfection, incineration

**STORAGE:** In sealed containers that are appropriately labelled
SECTION IX - MISCELLANEOUS INFORMATION

Date prepared: September, 1996 Prepared by: Office of Biosafety

LCDC

Although the information, opinions and recommendations contained in this Material Safety Data Sheet are compiled from sources believed to be reliable, we accept no responsibility for the accuracy, sufficiency, or reliability or for any loss or injury resulting from the use of the information. Newly discovered hazards are frequent and this information may not be completely up to date.

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Important Notices