MATERIAL SAFETY DATA SHEET - INFECTION SUBSTANCES

SECTION I - INFECTIOUS AGENT

NAME: Chlamydia trachomatis

SYNONYM OR CROSS REFERENCE: TRIC agents, Bedsonia

CHARACTERISTICS: Gram negative bacilli, obligate intracellular bacteria, non-motile

SECTION II - HEALTH HAZARD

PATHOGENICITY: Causes lymphogranuloma venereum (LGV), trachoma and inclusion conjunctivitis; nongonococcal urethritis, epididymitis, cervicitis, urethritis, infant pneumonia, pelvic inflammatory diseases (PID), Reiter's syndrome (arthritis) and neonatal conjunctivitis

EPIDEMIOLOGY: Worldwide; still endemic in impoverished parts of dry hot Mediterranean countries and Far East, and among American Indians; C. trachomatis is the most common sexually transmitted bacterial agent

HOST RANGE: Humans

INFECTION DOSE: Not known

MODE OF TRANSMISSION: Direct contact with discharges from infected persons, or materials soiled therewith; venereal transmission

INCUBATION PERIOD: 7 to 14 days for genital infection; 5 to 12 days for infant conjunctivitis; 6 to 19 days for adult conjunctivitis; 3 to 30 days for lymphogranuloma venereum; 5 to 12 days for trachoma

COMMUNICABILITY: Unknown for genital disease

SECTION III - DISSEMINATION

RESERVOIR: Humans

ZOOONOSIS: None

VECTORS: None

SECTION IV - VIABILITY

DRUG SUSCEPTIBILITY: Resistant to penicillin; sensitive to doxycycline, tetracycline, erythromycin, and azithromycin

SUSCEPTIBILITY TO DISINFECTANTS: Susceptible to 1% sodium hypochlorite, 70% ethanol, 2% glutaraldehyde, formaldehyde

PHYSICAL INACTIVATION: Susceptible to moist heat (121°C for at least 15 min) and dry heat (160-170°C for at least 1 hour)
SURVIVAL OUTSIDE HOST: Carcass and organs - 1 to 7 days; glass - 30 min; water (50°C) - 30 min

SECTION V - MEDICAL

SURVEILLANCE: Demonstration of intracytoplasmic inclusion bodies in epithelial cells of conjunctiva or isolation of organism; examination of endocervical or intraurethral swab by direct immunofluorescence, EIA, DNA probe or cell culture

FIRST AID/TREATMENT: Flush exposed area of eye with water; topical or oral treatment with antibiotics

IMMUNIZATION: None

PROPHYLAXIS: Antibiotic prophylaxis

SECTION VI - LABORATORY HAZARDS

LABORATORY-ACQUIRED INFECTIONS: Chlamydia is the fifth most commonly reported infection (most are psittacosis); 6 reported cases of infection with C. trachomatis up to 1987; usually manifested as conjunctivitis, however severe cases of pneumonia have occurred through exposure to aerosols

SOURCES/SPECIMENS: Genital, bubo and conjunctival fluids

PRIMARY HAZARDS: Accidental parenteral inoculation; direct and indirect exposure of mucous membranes of the eyes, nose, and mouth to infected fluids (see above), cell culture materials and fluids from infected eggs; infectious aerosols are a potential source of infection

SPECIAL HAZARDS: None

SECTION VII - RECOMMENDED PRECAUTIONS

CONTAINMENT REQUIREMENTS: Biosafety level 2 practices and containment for the diagnostic examination of tissues known or potentially infected with C. trachomatis; Biosafety level 3 may be indicated for activities with high potential for droplet or aerosol production or production quantities

PROTECTIVE CLOTHING: Laboratory coat; gloves when direct contact with infectious materials is unavoidable; gown (tied wrists and tie in back) and gloves for work in biosafety cabinet

OTHER PRECAUTIONS: Do not rub eyes while handling chlamydia-infected materials

SECTION VIII - HANDLING INFORMATION

SPILLS: Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 1% sodium hypochlorite, 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 labelled appropriately

SECTION IX - MISCELLANEOUS INFORMATION
Date prepared: November 1999

Prepared by: Office of Laboratory Security, PHAC

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Important Notices