MATERIAL SAFETY DATA SHEET - INFECTIOUS SUBSTANCES

SECTION I - INFECTIOUS AGENT

NAME: *Enterobacter* spp.

SYNONYM OR CROSS REFERENCE: *E. aerogenes*, *E. cloacae*, *E. gergoviae*, *E. amnigenus*, *E. asburiae*, *E. intermedius*, *E. hormaechei*, *E. cancerogenus*, *E. sakazkii*, *E. agglomerans* (new genus *Pantoea agglomerans*).

CHARACTERISTICS: Gram negative rods, peritrichous flagella, some encapsulated, facultatively anaerobic; family *Enterobacteriaceae* - 14 species.

SECTION II - HEALTH HAZARD

PATHOGENICITY: Associated with a variety of infections including those of nosocomial origin; urinary, pulmonary, wound and bloodstream infections; often as a secondary or opportunistic infection.

EPIDEMIOLOGY: Worldwide; often associated with hospitals; nationwide epidemic of sepsis caused by contaminated IV products in 1971; increasingly recognized opportunistic pathogen in a wide variety of settings.

HOST RANGE: Humans.

INFECTIOUS DOSE: Not known.

MODE OF TRANSMISSION: Contact of mucous membranes with contaminated medical equipment and personnel; fecal-oral transmission.

INCUBATION PERIOD: Not clearly defined.

COMMUNICABILITY: As long as viable organisms are shed.

SECTION III - DISSEMINATION

RESERVOIR: Soil, water, sewage, intestinal tract of humans and animals, dairy products.

ZOONOSIS: None.

VECTORS: None.

SECTION IV - VIABILITY

DRUG SUSCEPTIBILITY: Sensitive to aminoglycosides, chloramphenicol, tetracyclines, TMP-SMX, nalidixic acid, nitrofurantoin.

DRUG RESISTANCE: Most strains of *E. cloacae* and *E. aerogenes* are resistant to cephalothin; resistance to ampicillin.

SUSCEPTIBILITY TO DISINFECTANTS: Susceptible to many disinfectants - 1% sodium hypochlorite, 70% ethanol, 2% glutaraldehyde, iodines, phenolics,
formaldehyde

PHYSICAL INACTIVATION: Sensitive to moist heat (121° C for at least 15 min) and dry heat (160-170° C for at least 1 hour)

SURVIVAL OUTSIDE HOST: Buttermilk - 10 days; cheese - 7-21 days; survives well in water-reservoirs of medical equipment (oxygenators, nebulizers, incubators etc.)

SECTION V - MEDICAL

SURVEILLANCE: Monitor for symptoms

FIRST AID/TREATMENT: Antibiotic therapy as indicated

IMMUNIZATION: None

PROPHYLAXIS: Not usually administered

SECTION VI - LABORATORY HAZARDS

LABORATORY-ACQUIRED INFECTIONS: None reported to date

SOURCES/SPECIMENS: Feces, urine, blood, wound exudates, sputum

PRIMARY HAZARDS: Inhalation of infectious aerosols, direct contact of mucous membranes, accidental parenteral inoculation, ingestion

SPECIAL HAZARDS: None

SECTION VII - RECOMMENDED PRECAUTIONS

CONTAINMENT REQUIREMENTS: Biosafety level 2 practices, facilities and containment equipment are recommended for all activities involving known or potentially contaminated clinical specimens and cultures of *E. aerogenes*

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

OTHER PRECAUTIONS: Good personal hygiene

SECTION VIII - HANDLING INFORMATION

SPILLS: Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towels 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 appropriately labelled

SECTION IX - MISCELLANEOUS INFORMATION

Date prepared: March, 2001

Prepared by: Office of Laboratory Security, PHAC

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.

Copyright ©
Health Canada, 2001

[Material Safety Data Sheets - Index]

Last Updated: 2001-04-23

Important Notices