



Français	Contact Us	Help	Search	Canada Site
PPHB Home	Centres	Publications	Guidelines	A-Z Index
Child Health	Adult Health	Seniors Health	Laboratories	Surveillance

Population and Public Health Branch (PPHB)

Office of Laboratory Security

[\[Material Safety Data Sheets - Index\]](#)

MATERIAL SAFETY DATA SHEET - INFECTIOUS SUBSTANCES

SECTION I - INFECTIOUS AGENT

NAME: *Adenovirus types 40 and 41*

SYNONYM OR CROSS REFERENCE: Adv 40, Adv 41, Mastadenovirus h40, Mastadenovirus h41, subgenus F, enteric adenovirus

CHARACTERISTICS: *Adenoviridae*; double-stranded, linear DNA genome, 70-90 nm diameter, non-enveloped, icosahedral

SECTION II - HEALTH HAZARD

PATHOGENICITY: Local replication in intestine causes a mild disease with clinical symptoms of nausea, vomiting, diarrhea, malaise; virus show restricted replication; tissues of the eye and respiratory tract; asymptomatic infection common (virus in faeces of healthy individuals)

EPIDEMIOLOGY: Worldwide; in outbreaks and sporadic cases; cause severe cases in infants and young children; infections occur throughout the year with no clear peaks

HOST RANGE: Humans; experimentally infected rabbits, pigs and calves

INFECTIOUS DOSE: Unknown

MODE OF TRANSMISSION: presumably person-to-person by the fecal-oral route; respiratory route

INCUBATION PERIOD: 3 to 10 days

COMMUNICABILITY: During acute stage of disease; healthy adults may be carriers

SECTION III - DISSEMINATION

RESERVOIR: Humans

ZOONOSIS: None

VECTORS: None



SECTION IV - VIABILITY

DRUG SUSCEPTIBILITY: Not applicable

SUSCEPTIBILITY TO DISINFECTANTS: Susceptible to 1% sodium hypochlorite, glutaraldehyde, formaldehyde; some non-lipid viruses are only moderately resistant to disinfectants, i.e. 70% ethanol

PHYSICAL INACTIVATION: Susceptible to heat (56°C for at least 30 min); infectivity sensitive to ionizing radiation; stable to lipid solvents

SURVIVAL OUTSIDE HOST: Stable for some time in the environment

SECTION V - MEDICAL

SURVEILLANCE: Watch for symptoms of respiratory or gastrointestinal illness

FIRST AID/TREATMENT: Electrolyte and fluid replacement in severe cases

IMMUNIZATION: None available

PROPHYLAXIS: Not available

SECTION VI - LABORATORY HAZARDS

LABORATORY-ACQUIRED INFECTIONS: Low potential infection risk to laboratory personnel; 10 reported cases up to 1974

SOURCES/SPECIMENS: Nasopharageal secretions, eye exudates, fecal specimens, urine specimens

PRIMARY HAZARDS: Ingestion; accidental parenteral inoculation; droplet exposure of the mucous membranes of the eyes, nose, or mouth; inhalation of concentrated aerosolized material

SPECIAL HAZARDS: None

SECTION VII - RECOMMENDED PRECAUTIONS

CONTAINMENT REQUIREMENTS: Biosafety level 2 practices, containment equipment and facilities for activities utilizing known or potentially infectious clinical materials or cultures

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

OTHER PRECAUTIONS: Procedures that are likely to generate aerosols should be conducted in a biosafety cabinet

SECTION VIII - HANDLING INFORMATION

SPILLS: Allow aerosols to settle; wearing protective clothing, gently cover spill with an absorbent material (paper towel) and then apply 1% sodium

hypochlorite, starting at the perimeter and working towards the centre; allow sufficient contact time (30 min) before clean up

DISPOSAL: Decontaminate before disposal - steam sterilization, incineration, chemical disinfection

STORAGE: In sealed containers with appropriate labelling

SECTION IX - MISCELLANEOUS INFORMATION

Date prepared: November 1999

Prepared by: Office of Laboratory Security, PPHB

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[\[Material Safety Data Sheets - Index\]](#)

top ↑

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[Important Notices](#)

[\[Français\]](#) [\[Contact Us\]](#) [\[Help\]](#) [\[Search\]](#) [\[Canada Site\]](#)

[\[PPHB Home\]](#) [\[Centres\]](#) [\[Publications\]](#) [\[Guidelines\]](#) [\[A-Z Index\]](#)

[\[Child Health\]](#) [\[Adult Health\]](#) [\[Seniors Health\]](#) [\[Laboratories\]](#) [\[Surveillance\]](#)