Pathogen Safety Data Sheet

Section 1 - Infectious Agent

Agent Name: **Streptococcus gallolyticus**

Agent Type: Bacteria

Taxonomy:

Family: Streptococcaceae Genus: Streptococcus

Species: *S. gallolyticus*

Subspecies/Strain/Clonal Isolate:

Synonym/Cross Reference

Streptococcus bovis, biotype I., Bovis group, group D non-enterococci

Characteristics

Brief Description: S. bovis is a catalase-negative and oxidase-negative, nonmotile, nonsporulating, Gram-positive lactic acid bacterium that grows as pairs or chains of cocci.

Properties:

Section 2 - Hazard Identification

Pathogenicity/Toxicity

S. gallolyticus portal of entry for bacteremia is the gastrointestinal tract, urinary tract, hepatobiliary tree and oropharynx. S. galloytycus, with or without endocarditis, is strongly associated with an underlying malignancy or premalignant lesions of the colon.

Predisposing Factors: Compromised immune system.

Communicability

Outline the various ways in which the infectious agent can be transmitted from one host to another: ingestion, injection (including vectors), mucous membrane/skin contact (or genitourinary), inhalation (airborne or aerosols). What is the likelihood of transmission by direct (intimate, casual) or indirect (fomites, vectors) contact? Is the same true for humans and animals? What is the preferred mode of transmission (e.g., influenza viruses typically are transmitted by inhalation of infectious aerosols)?

Epidemiology

World-wide. Found in the gastrointestinal tract of birds, ruminants, and a small proportion (2.5%–15%) of humans.

Host Range

Natural Host(s): Humans, birds, ruminants.

Other Host(s): Not applicable.

Infectious Dose

Unknown.

Incubation Period

Unknown.

Section 3 - Dissemination

Reservoir

Humans, birds, ruminants.

Vectors
None.

Zoonosis / Reverse Zoonosis
None.

Section 4 - Dissemination

Drug Susceptibility
Penicillin G., ceftrlaxone, vancomycin, and gentamicin.

Drug Resistance
Erythromycin, clarithromycin, tetracycline.

Susceptibility to Disinfectants
Gram positive bacteria are generally susceptible to a number of disinfectants, including phenolic compounds, hypochlorites (1% sodium hypochlorite), alcohols (70% ethanol), formaldehyde (18.5 g/L; 5% formalin in water), glutaraldehyde, iodines (0.075 g/L)

Physical Inactivation
Bacteria are generally sensitive to moist heat and dry heat.

Survival Outside Host
Unknown.

Section 5 - First Aid and Medical

Surveillance
Basic laboratory studies to evaluate for Streptococcus infections should include CBC count, electrolyte evaluation, creatinine level, and LFTs as well as antibiotic sensitivity testing.

First Aid / Treatment
Treat with antibiotic therapy based on antibiotic sensitivity testing.

Immunization
None.

Prophylaxis
None.

Section 6 - Laboratory Hazards

Laboratory Acquired Infections
None reported.

Sources / Specimens
Hospital acquired infection through direct contact with contaminated fomites.

Primary Hazards
Likelihood of infection is low; however, avoid accidental parenteral inoculation, ingestion, and inhalation of infectious droplets.

Special Hazards
None.

Section 7 - Exposure Controls and Personal Protection

Risk Group Classification

What is the Risk Group classification in humans and animals for the pathogen?

Human Risk Group Classification RG2 Animal Risk Group Classification RG2

Containment Requirements

Containment Level: CL2

Containment Zone Requirements:

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potentially infectious materials, animals, or cultures.

Protective Clothing

Lab coat. Gloves when direct skin contact with infected materials or animals is unavoidable. Eye protection must be used where there is a known or potential risk of exposure to splashes.
If there are no special hazards for this agent enter “none”.

Other Precautions

All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC). The use of needles, syringes, and other sharp objects should be strictly limited. Additional precautions should be considered with work involving animals or large scale activities.

Section 8 - Handling and Storage

Spills

Allow aerosols to settle. Wearing protective clothing, gently cover the spill with absorbent paper towel and apply suitable disinfectant, starting at the perimeter and working towards the centre. Allow sufficient contact time before clean up.

Disposal

Decontaminate all wastes that contain or have come in contact with the infectious organism by autoclave, chemical disinfection, gamma irradiation, or incineration before disposing.

Storage

The infectious agent should be stored in appropriately labelled leak-proof containers in a locked area. Containers of infectious material or toxins stored outside the containment zone must be labelled, leakproof, impact resistant, and kept either in locked storage equipment or within an area with limited access.

Section 9 - Regulatory Information

The import, transport, and use of pathogens in Canada is regulated under many regulatory bodies, including the Public Health Agency of Canada, Health Canada, Canadian Food Inspection Agency, Environment Canada, and Transport Canada. Users are responsible for ensuring they are compliant with all relevant acts, regulations, guidelines, and standards.

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Revisions were made to Sections:

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References

Risk Group determination from "PHAC Biological Agent Search".

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