Pathogen Safety Data Sheet

Section 1 - Infectious Agent

Agent Name: **Kocuria rosea**

Agent Type: Bacteria

Taxonomy:

Family: Micrococcaceae Genus: Kocuria

Species: *K. rosea*

Subspecies/Strain/Clonal Isolate:

Synonym/Cross Reference

Characteristics

Brief Description: Gram-positive coccoid aerobic bacteria usually found in tetrads, irregular clusters and cubical packets of eight. Colonies are pigmented.

Properties:

Section 2 - Hazard Identification

Pathogenicity/Toxicity

They are generally considered to be nonpathogenic saprophytes of skin, mucosa, and oropharynx. Have been known to be an opportunistic pathogen, in rare cases of infections in people with compromised immune systems and serious underlying conditions.

Predisposing Factors: Compromised immune system.

Communicability

Contaminated catheters in a hospital setting.

Epidemiology

Widespread in nature and are commonly found on the skin of humans and other mammals.

Host Range

Natural Host(s): Humans and animals

Other Host(s): List other hosts, including experimentally infected hosts, if applicable.

Infectious Dose

If available in the literature, list the number of organisms or concentration of organisms required to cause disease (typically ID50) in the natural host(s). If no information is available or if the number of organisms cannot be determined (e.g., from TCID50), enter “unknown”.

Incubation Period

What is the duration between contact with the infectious agent and presentation of the earliest clinical signs of the disease in the natural host(s) (usually measured in days)?

Section 3 - Dissemination

Reservoir

Human and animal skin.

Vectors

None

Zoonosis / Reverse Zoonosis
None

Section 4 - Dissemination

Drug Susceptibility
Clinical and Laboratory Standards Institute guidelines report sensitivity to penicillin, oxacillin, erythromycin, clindamycin, ciprofloxacin, levofloxacin, trimethoprim/sulfamethoxazole, vancomycin, teicoplanin, and linezolid.

Drug Resistance
Norfloxacin, penicillin and ampicillin.

Susceptibility to Disinfectants
70% ethyl alcohol or 0.125% glutaraldehyde, all with a contact time of 1 minute or 5mg/L of hypochlorite with a contact time of 5 minutes.

Physical Inactivation
Inactivated by heat (100 degrees C for 1 min.) and gamma irradiation.

Survival Outside Host
Unknown.

Section 5 - First Aid and Medical

Surveillance
Recovery of the organism in contaminated sites, such as sputum and wounds, must be analyzed in the context of the patient's clinical state to determine if it represents colonization or infection.

First Aid / Treatment
Medical care of K. rosea infection is based on the site and severity of infection. In addition to antibiotics, provide supportive care, such as hydration, adequate oxygenation, and blood pressure support, if indicated.

Immunization
None.

Prophylaxis
None.

Section 6 - Laboratory Hazards

Laboratory Acquired Infections
None reported.

Sources / Specimens
May be isolated from medical preparations

Primary Hazards
None.

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 RG1 Animal Risk Group Classification RG1

Containment Requirements

Containment Level: CL1

Containment Zone Requirements:

Containment Level 1 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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References

Risk Group determination from "PHAC Biological Agent Search".

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Paul, M. Gupta, R., et. al. Kocuria rosea: An emerging pathogen in acute bacterial meningitis Case report. (2015). J. Microbiology and Antimicrobial Agents 1(1):4-7.