

## Section 1 - Infectious Agent

**Agent Name:** Escherichia coli B

**Agent Type:** Bacteria

**Taxonomy:**

**Family:** Enterobacteriaceae

**Genus:** Escherichia

**Species:** *E. coli*

**Subspecies/Strain/Clonal Isolate:** *Strain B*

### Synonym/Cross Reference

E.coli B wildtype strain; Escherichia coli PC

### Characteristics

**Brief Description:** Escherichia coli is a Gram-negative straight rod, which either uses peritrichous flagella for mobility or is nonmotile. E. coli B is a common laboratory strain used in molecular biology and bacteriophage work.

**Properties:** It is a facultatively anaerobic chemoorganotroph capable of both respiratory and fermentative metabolism.

## Section 2 - Hazard Identification

### Pathogenicity/Toxicity

Not pathogenic

**Predisposing Factors:** Not applicable

### Communicability

Fecal-oral route; Contaminated food or water.

### Epidemiology

Worldwide distribution - it colonizes the lower gut of animals and survives when released to the natural environment, allowing widespread dissemination to new hosts.

### Host Range

**Natural Host(s):** If possible, identify primary (definitive), secondary (intermediate), and dead-end hosts.

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

### Infectious Dose

Unknown.

### Incubation Period

Unknown.

## Section 3 - Dissemination

### Reservoir

Humans and other endotherm animals

### Vectors

None.

### Zoonosis / Reverse Zoonosis

None.

## Section 4 - Dissemination

### Drug Susceptibility

None required

### Drug Resistance

None

### 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

Survives in the natural environment

## Section 5 - First Aid and Medical

### Surveillance

Infection can be confirmed by culturing and identification of bacteria from the infection site. Note: All diagnostic methods are not necessarily available in all countries

### First Aid / Treatment

None required

### Immunization

None

### Prophylaxis

None

## Section 6 - Laboratory Hazards

### Laboratory Acquired Infections

None reported

### Sources / Specimens

Not applicable

### 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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