

Lipopolysaccharide (LPS, Endotoxin) Standard Operating Procedure

OVERVIEW

HAZARD CHARACTERISTICS

Pyrogen

Induces a strong immune response

Inhalation can exacerbate asthmatic symptoms

May cause allergic skin reaction

- LPS is a component of the cell wall of gram-negative bacteria.
- It is often purchased as lyophilized powder which presents exposure risks from aerosols.
- LPS suspensions may result in severe local or systemic adverse reactions. Depending upon the concentration, this can be quite harmful.

GENERAL

- It is the responsibility of the PI to assure the safe use of LPS by laboratory staff. The PI is responsible for the appropriate training of research personnel for the safe use of this product in the species approved on the protocol.
- Personnel using LPS must be familiar with the Safety Data Sheet (SDS), which must be readily available in the lab.

LABORATORY USE AND PREPARATION

- Preparation must occur in a profiled chemical fume hood or certified biosafety cabinet.
- PPE: Disposable gloves, lab coat, safety glasses/goggles.
- Work should be done over absorbent pads.

TRANSPORTATION

- Containers and bottles must be labeled.
- Transport chemicals in a leak-proof primary container packaged in a secondary container, cushioned with absorbent material.
- Container must be labeled with the PI's name and contact information.

ADMINISTRATION TO ANIMALS

- Administration should be conducted in a profiled chemical fume hood or certified biosafety cabinet.
- Safe sharps should be utilized when injecting LPS.
- Standard caging is appropriate for animals exposed to LPS.
- Once LPS is injected, animals, animal waste and bedding are neither hazardous nor infectious. Dispose of carcasses following standard ACS procedures.

WASTE DISPOSAL

- Prevent runoff from entering waterways or sewers as it may cause long-term adverse effects in the aquatic environment.
- Liquid waste must be treated with bleach before drain disposal.
- Contaminated solids (PPE, towels, etc.) should be packaged and disposed of as non-regulated solid waste.
- Contaminated sharps must be discarded in a sharps container, closed once 3/4 full, and discarded into a biohazard box.

SPILLS

- Evacuate personnel and allow aerosols to settle. Follow the EH&S guidance for chemical spill clean-up. Call **EH&S (352.392.1591)** for support with large spills.

FIRST AID

- Reference the manufacturer's SDS.