

STANDARD OPERATING PROCEDURE

Procedure:	Use of Pertussis Toxin (PTx)
School/Department:	School of Molecular Bioscience
SOP prepared by:	Markus Hofer
Version:	SMB057.2

Section 1 - Personal Protective Equipment (PPE)

1. Lab coat or lab gown (buttoned up)
2. Proper enclosed shoes
3. Safety glasses, face protection and mask if handled outside a biosafety cabinet
4. Gloves

Section 2 – Potential Hazards + Safety precautions

1. PTx is a potent human and mouse toxin. Inhalation, contact with skin, swallowing and injection of PTx.
2. PPE to be worn at all times.
3. PTx to be handled inside biosafety cabinet if possible
4. Workers with pre-existing medical conditions (e.g. allergy, immunocompromised state, chemical sensitivity) and workers who are pregnant or expecting pregnancy must consult with their supervisor AND medical specialist AND the university's WHS services before performing this procedure. If there are any serious concerns expressed by any of these individuals, this task must not be performed.

Section 3 – Procedure

Pertussis toxin (PTx) is used in the mouse model Experimental Autoimmune Encephalomyelitis (EAE). PTx is usually purchased as a lyophilized powder and is dissolved in water or buffer and then injected intraperitoneally into mice.

Dissolve PTx inside a biosafety cabinet and wear required PPE.

When injecting PTx wear required PPE; hold needle away from body/face and do not recap needles. Cages of mice that have received PTx are to be autoclaved.

Section 4 – Disposal / Spills / Incidents

1. Dispose of PTx and contaminated syringes/needles/container in sharps container and autoclave prior to disposal.
2. Remove spills with paper towel and dispose of in autoclave waste. Add bleach on spill to deactivate toxin.
3. Report any accidents/incidents on Riskware.
4. The toxin is harmful by inhalation, contact with the skin, or swallowed. However, PTx is degraded by the low pH in the gut and is not absorbed. If swallowing occurs, induce vomiting. If skin pricking should occur, induce bleeding and flush with copious amounts of water. If i.v. or i.m. injection should occur, consult a physician. Attempt to obtain hyperimmune globulin to pertussis. In an adult immunized against whooping cough, no long term ill effects are likely to result.

Section 5 – Certification / Training

1. Handling requires completion of the Working with Chemicals training.
2. Handling of mice requires additional training (see webpages of LAS and AEC).

Section 6 – Relevant Material safety data sheets

1. Pertussis Toxin

Section 7 - References

1. AEC documentation on Experimental Autoimmune Encephalomyelitis

SOP Consultation, Training and Approval

Print names and enter signatures and dates to certify that the persons named in this section have been consulted/trained in relation to the development and implementation of this Standard Operating Procedure. WHS Representative (WHS Committee) certifies that consultation has taken place.

Position	Name	Signature	Date
Supervisor			
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Name Authorising (Printed): DIANNE FISHER

Signature:  **Date:** 30/3/15

WHS Committee Representative Name (Printed): MARKUS HOFER

Signature:  **Date:** 30/3/15