



# Working Safely in Physical Containment Level 2 (PC2) Laboratories

**Presenter: Tony Della**

**Course objectives:** Participants can demonstrate an understanding of the theory of working safely in PC2 laboratories.

**Methodology:** Participants will be directly involved in the training by examining and assessing a case study of a laboratory-acquired infection. Active participation in the training will occur in small work groups and by group discussions. Each session will be supported by relevant materials that cover different aspects of good microbiological practices.

All participants will be supplied with a folder containing the course training notes, relevant papers and sections of AS/NZS 2243.3 (2002) *Safety in Laboratories. Part 3: Microbiological aspects and containment facilities*.

**Course Assessment:** A Certificate of Attendance and a Certificate of Competency will be issued on 'Safe Work in PC2 Laboratories (Theoretical Aspects)' to participants who achieve an 80% pass rate for the written assessment and a Pass for their assignment. A Certificate of Attendance will be issued for those who did not meet these requirements.

## Course Outline

Time	Topic
8.30-9.00	Registration and tea/coffee
9.00-9.30	Welcome and introduction Participants introduce each other
9.30-10.10	Training sessions: <ul style="list-style-type: none"><li>• Review of contents of AS/NZS 2243 series and referenced standards</li><li>• Overview of PC2 laboratory construction/design</li></ul> <i>Learning outcomes:</i> <i>Awareness of relevant Standards, understanding of construction/design principles of PC2 laboratories</i>
10.10-10.30	Morning tea/coffee
10.30-11.30	Training sessions (cont.) <ul style="list-style-type: none"><li>• Risk Groups of microorganisms</li><li>• Principles of contamination control</li><li>• Laboratory-Acquired Infections (LAIs) and aerosols</li></ul>

*Learning outcomes:*  
*Classification of microorganisms (Risk Groups), Control of hazards in microbiological laboratories, involvement of aerosols in LAIs*

- 11.30-12.30 Laboratory-acquired infections:  
Case Study *E.coli* O157:H7  
*Summary description and methodology:*  
Laboratory worker infected by bacteria being manipulated by another worker in same laboratory. Participants will be presented with description of incident and each group will determine and discuss the issues. These will be posted on cards, grouped under categories and then discussed by all. Each table group is then given one of the categories to determine appropriate actions for all the issues in their category. Actions are to be recorded on cards and then presented. Findings to be discussed by all participants as a single group.
- 12.30-1.15 Lunch
- 1.15-1.45 Laboratory-acquired infections:  
• *E. coli* O157:H7 (cont.) – see details above
- 1.45-2.40 Training sessions:  
• Management issues  
• Reporting of incidents  
• Disinfectants and treatment of waste  
• Treatment of spills  
*Learning outcomes:*  
*roles of management (incl training), reporting of incidents, disinfectants & treatment of waste, response to spills*
- 2.40-3.00 Afternoon tea/coffee
- 3.00-3.50 Training sessions:  
• BSCs  
• Laboratory Animal Allergy (LAA) and zoonoses  
• Safety signage  
*Learning outcomes:*  
*knowledge of different types, operation and use of Biological Safety Cabinets (BSCs), awareness of LAA and prevention, understanding of zoonoses, requirements for safety signage*
- 4.00-5.00 Course assessment: written short-answer open-book assessment, 80% pass required
- 5.00-5.30 Course wrap-up and close
- Post-Course Workplace Assignment**      **Carry out safety inspection in own laboratory and return report to Bio2ic within 2 weeks; Pass or Fail only**