

1. INTRODUCTION

This guidance material can be used in conjunction with completing a plant risk assessment for an autoclave. It includes those categories in Step 3 of the [Plant risk assessment form](#) that may be applicable when completing the risk assessment.

2. CATEGORIES

2.1 Cut, stabbed and punctured

Examples may include:

- broken glassware (handling whilst removing from autoclave, handling after removal); and
- broken or loose sharps.

2.2 Struck

Examples may include:

- ejection of physically hazardous contents (utensils, sharps, glass etc);
- ejection of biologically hazardous contents (bacterium, virus, micro-organism); and
- unexpected opening of chamber door whilst under pressure.

2.3 Slip, trip or fall

Examples may include:

- steam condensing on the floor; and
- electrical cables or other items located on the floor.

2.4 Electrical

Examples may include:

- poorly maintained electrical cables;
- water and steam near electrical systems or damaged electrical controls; and
- lack of isolation during cleaning, maintenance and repair.

2.5 Explosion

Examples may include:

- disintegration of pressure chamber;
- pressure relief valve fails; and
- corrosives or flammable liquids/gasses enter autoclave leading to damage to vessel.

2.6 High temperature or fire

Examples may include:

- steam from opening door;
- heat from contents;
- steam from pipe or source;
- heat from tray;
- steam escaping from door seal;
- heat from external surfaces; and
- opening of chamber door whilst under pressure.

2.7 Fluids or gases under high pressure

Examples may include:

- high pressure steam escaping from the chamber or pipes.

2.8 Ergonomic (including manual handling)

Examples may include:

- awkward postures whilst inserting and removing contents;
- using force to open interlocked doors;
- difficult to access operational controls; and
- design leads to common operating errors (non-intuitive controls/instruments).

2.9 Radiation

Examples may include:

- incomplete cleaning of contaminated material prior to autoclaving.

2.10 Other

Examples may include:

- contaminated equipment from solvents, volatile or corrosive substances;
- inadequate ventilation to extract hazardous gases;
- contaminated sharps;
- incorrect cycle time pressure temperature – autoclave contamination; and
- biological contamination from waste.

For use in conjunction with the [Regulated plant risk management procedure](#).

For further information, refer to <http://safety.unimelb.edu.au/hazard-topics/plant-and-equipment> or contact your Local Health & Safety contact.