Risk Assessment for School Science Activities

Name and nature of activity	Operating a pressure cooker and autoclave
Location and date of activity	
Name of teacher/technician	Science ASSIST example risk assessment
Activity type	☒Technician procedure ☐Teacher demonstration ☐Student activity – Student year group

Physics and general equipment	**Type of hazard**	**Controls and other measures**
Electric pressure cooker Autoclave Hotplate (for non-powered steriliser or pressure cooker) Use heat resistant equipment including borrosilicate glassware.	☐ Radiation  ionising  laser ☒ Electrical  ☒ Thermal ☐ Projectiles ☐ Sharps ☒ Other – Pressure vessel	☒ Relevant signage ☐ Perspex safety shield ☐ Sharps container ☒ Glassware free from cracks or chips ☒ Safety glasses ☒ Thermally insulated gloves ☒ Other – Ensure that the pressure vessel is not under pressure when opening.

Chemicals used and produced	**Type of hazard**		**Controls and other measures**
NA	 ☐ Explosive  ☐ Flammable  ☐ Oxidising  ☐ Gases under pressure  ☐ Corrosive	 ☐ Acute toxicity  ☐ Health hazards  ☐ Chronic health hazards  ☐ Environmental ☐ Other –	☐ Limit quantity/concentration ☐ Perspex safety shield ☐ Ventilation: natural/exhaust ☐ Fume cupboard ☐ Safety glasses ☐ Laboratory coat/apron ☐ Gloves: latex/nitrile/neoprene/PVC ☐ Safety shower ☐ Other –

Biological/geological materials used	**Type of hazard**	**Controls and other measures**
Microbial cultures	☒ Biohazard  ☐ Dust/aerosols ☐ Sharps ☐ Manual handling  ☐ Other –	☒ Steriliser ☐ Disinfectant ☐ Sharps container ☐ Dust mask ☐ Safety glasses ☐ Gloves ☐ Other –

Waste produced	**Waste disposal procedure**
Sterilised petri dishes containing agar. Excess agar.	☒ Pre-treatment of waste – All microbial and agar waste materials should be sterilised and double bagged prior to disposal in regular waste ☐ Sink with water – ☒ Regular waste – ☐ Licenced hazardous waste company – ☐ Other –

Standard Operating Procedures

☒ I have read the relevant Standard Operating Procedure.
☒ I am experienced/trained in using all the equipment listed.
☒ All chemicals used and produced are approved for use.
☒ I have read the current SDSs for all hazardous chemicals used and produced.
☒ I am aware of safety guidelines for using all chemicals, materials and equipment.
☒ I will follow local guidelines for waste disposal (water authority, local council, EPA).
☒ I am aware of first aid procedures if required.

Other comments: Pressure cookers and autoclaves are used for sterilising and do not produce waste as such, but all microbial and agar waste materials should be sterilised and double bagged before disposing in the regular waste.

Conclusion:

☐ Risks not significant now and not likely to increase.
☒ Risks significant but effectively controlled at the moment.
☐ Risks significant and not adequately controlled at the moment.
☐ Uncertain about risks; more detailed assessment required.

Assessment carried out by: Science ASSIST	Signature:	Date: **March 2016**
Assessment approved by:	Signature:	Date:
Next assessment due:		

This Risk Assessment assumes that the activity will be conducted in a science teaching area with the following facilities: electricity, running water, emergency shut-offs for electricity, gas if applicable, and water, regular testing and tagging of portable appliances; emergency contingencies such as evacuation/emergency plans, appropriate fire extinguishers, spill kits, hand washing facilities, eyewash/safety shower and first aid supplies. It is also assumed that all the necessary licencing requirements and approvals are obtained prior to the activity.