Audit/inspection Standards	
Risk Assessments/Documentation	
Are assessments available for activities undertaken /hazards encountered in the areas	Risk assessments should be accessible to staff in the laboratory, Best practice would be to have an area where all safety documentation is kept and that lab staff know where it is. The folder should be so organised that assessments and other documentation can be easily accessed.
GM	All work involving the production, use, storage, transport & disposal of GM organisms must be covered by an assessment that has been approved by the local GMSC. This includes already modified organisms imported form outside the university. Areas where GMOs are used should have a local code of practice to cover activates within the area - e.g. where & how the GMO,s used in the area can be handled, grown, stored and details of disposal and disinfection regimes.
COSHH	Work involving the use of chemical substances, allergens and biological agents [non modified] must have risk assessments. The approach for chemical substances in many areas is to have hazard assessments for the substance and then a risk assessment for the process in which it is used. This should result in the production of a SOP - which should be appended to the RA. When assessing if they are suitable and sufficient ensure that the control measures follow the correct hierarchy.
Radioactive sources	Work with radiation sources has to have been subject to risk assessment and approval by the safety office. In addition to RA documents there should also be a copy of the Local Rules & the Environment agency authorisation in the radiation area. There should be documented evidence of recording usage, disposal [ISOSTOCK] and environmental monitoring.
Liquid Nitrogen	RAs should address the hazards of asphyxiation, cold burns, manual handling and transport.
UV sources	RAs should address the hazards skin and eye exposure of both the operator and of others in the area. There is a guidance document on SO web site which can be used to produce a local SOP - check for evidence of this in the area.
Lab gases	RAs should address the hazards of stored energy/pressure, the gas [toxic/ashyxiant/flammable] , manual handling and transport.
DSE & Office activities	All work stations used by individual users should have a DSE RA checklist completed - multi user PCs and ISCRAS should have evidence of suitable information to users about correct set up and a generic RA.
manual handling activities	Any activities that involve the movement of significant loads on a regular basis should have a RA that addresses the load, individual, task and the environment where the activity takes palce. Control measures should consider provision of a mecahnical aid to lift the load or reducing the load where practicable and not just focus on training as the main control measure.
Are they reviewed periodically	Assessments should be reviewed periodically and if procedure changes. Frequency will depent on whether the frequency with whihc the procedure changes and the nature of the hazards and risk involved. High risk require more frequent review than low risk. Look for evidence of assessment being reviewed on a regular basis.
Are they suitable and sufficient for the activity/hazard	RAs should identify key hazards in the process and assign suitbale controls to minimis risks.
Are they supported by written procedures where appropriate	SOPs should be avaiolable for more complex and higher risk activities/procedures
Are they readily available and do staff know where to access them?	RAs should be readily accessible -signed hard copy in lab or easily accessible via computer. Ask staff in lab where they are kept.
TRAINING Are staff/visitors inducted in the area?	There should be documented evidence of staff receiving training in emergency procedures and general lab procedures [e.g. disposal]
Are staff/visitors instructed and trained in safe use of equipment and other safety procedures.	Individuals should be given job specific training by a competent individual - Ask staff in lab about their training to check this being achieved
Are records of training maintained where appropriate	Training & attainment of competence should be documented. Both trainer and trainee should sign document
General conditions	
Is area apparently well maintained	Check the general fabric of the building - any evidence of poor maintenance.
Are corridors and circulation routes clear of obstruction?	Check to ensure that there are no items of furniture or boxes impeding corridors. Circulation areas in labs should be free of trip hazards
Are emergency exits clear?	Fire doors and fire exits must not be obstructed. Doors should not be wedged open other than with a proprietary door holding device.
Is there adequate workspace for the numbers of staff/activities undertaken.	Areas should be uncluttered and occupancy numbers should not be such as to present a hazard or obstruct circulation routes etc.
Are standards of housekeeping acceptable.	Waste bins etc. should not be overflowing. HWB should be clean and there should be soap and towels available. Floors should be at an acceptable level of cleanliness - if not check on cleaning regime.
Is space used properly	Does the area seem over crowded [too many people to operate safely]. Is there any unsafe storage of materials at high level.

Are there any temperature /ventilation problems/	Problems may be obvious at time of inspection but it will also be necessary to ask staff in the area.

Materials/substances [Chemicals, BAs, GMMs, Radioactivity]	
Chemicals	
Fume cupboards	FCs should not be cluttered with items of equipment/substances not in current use. There should be no items near the front or on the front aerofoil that could impede the sash being shut in an emergency. These should be no items close to or in front of FC that could impede airflows [see recommendations of BS 7528]. FCs should be serviced and airflows tested annually - this should be documented on the FC itself and service sheets should be available for inspection. There should also be documented evidence of interim checks on airflow at suitable frequencies by lab staff [using vane anemometer]
Balance/prep areas	Should be clean and tidy - no evidence of unidentified powders on or around balances. Weighings should be recorded. If toxic chemicals and carcinogens are dispensed this should be done in an enclosed facility [FC or Weigh safe]
Storage of toxic chemicals/carcinogens	Should be in a locked storage facility
Flammable storage	In spirit cabinet - ideally vented under a FC. No more than 50litres in the room. Quantities on benches should be <500ml and have hazard label. NO ACIDS/oxidising agents. Check dates on di-ethyl ether and other agents that can generate peroxides. Is there some procedure of recording date a bottle is first opened and of ensuring it is not kept beyond the recommended date. Is BENZENE stored - if so ask for justification of use.
Acids	Ideally in vented cabinet - no flammables.
Labelling	Any decanted bottles of acids/alcohols etc should have appropriate hazard sign
ETHIDIUM BROMIDE	Powder should not be in use. Obtain in concentrated liquid [preferred] or table form. Use in defined areas, contained within trays. There should be specific arrangements for disposal of waste. Check for obvious signs of contamination in areas - deposits on visors and screens. There should be regular cleaning as part of housekeeping routine.
DISPOSAL of Et Br	There should be specific procedures for disposal of chemicals that fall into the category of hazardous waste - this would include Eth Br.
Biological/GM	
Bench handling areas.	Handling areas should be clear of clutter - no evidence of papers/pens. Ideally use of trays to contain spills. Benches should be impervious and seals around sinks etc of good quality. Racks should be available and in use to hold tubes etc. Plates and cultures should be secure and not at risk of being knocked over. e.
MSC and unidirectional laminar flow hoods [ULF]	MSCs should not be cluttered, night doors should be in place if not in use. Bunsen burners should not be used. Alcohol must not be sprayed in cabinet as this may generate explosive atmosphere. MSCs should be serviced and airflows tested at least annually - this should be documented on the MSC itself and service sheets should be available for inspection. There should also be documented evidence of interim checks on airflow at suitable frequencies by lab staff [using vane anemometer]. ULFs must not be used for growth of any hazardous [ACDP/ACGM 2] material. Check what they are used for. Signs to that effect are a good idea if there is a mixture of hazards in the room.
Growth facilities	Incubators - should be clean with no evidence of untreated spillage. Segregation of organisms /cell lines of different hazard groups. Culture to be clearly labelled as to content and so ownership can be verified. There should be a regime in place for regularly checking and
Storage conditions	Wherever possible dedicated fridges or freezers to be used, or have designated shelf . Double containment and use of racks for liquid cultures in tubes. Plates in secure stacks. In cold rooms separation of viable material/cultures from 'clean' items. Use of secondary containment . For full details see University COP. There should be a regime in place for regularly checking and cleaning facilities.
Labelling	All biological agents should bear name of organism/strain/date and owner.
DISPOSAL Are there arrangements for safe disposal?	**General :** It is good practice for there to be information about the local lab disposal arrangements & procedures available in the lab e.g. a wall chart.
Biological/GM material	There should be fresh [in date] solution of the disinfectant [normally Trigene/Virkon] available. Pipette steeps & immersion baths should contain sufficient disinfectant to ensure good contact. Autoclave waste to be in leak proof containers with safe means of transport from lab to autoclave. Procedure for ensuring cycle has completed.
Chemicals/solvents	Flammable solvent waste should be safely stored [see above] and separated into halogenated and non halogenated. Quantity will contribute to the 50l limit. There should be regular collections and safe transfer to external store. There should be specific procedures for disposal of chemicals that fall into the category of hazardous waste.
Radioactive materials	Refer to local rules. Check that disposal is recorded via isostock

SPILLS Are there arrangements in place to deal with spillage?	Is there a spill kit available ? If not should there be or are quantities such as to not warrant one.

Evidence of safe use of:			
UV sources [SOP, PPE]	There should be an SOP adjacent to the equipment. [available on SO web site] Ideally source should be in cabinet and door interlocked with the UV light. Where open sources are used they should be positioned to prevent accidental exposure of others in the lab. There should be UV opaque visor available - clearly labelled for use with UV. There should not be any evidence of dried on buffer on visors or other Perspex screens. UV source should have correct hazard warning signs.		
Microwave [SOP, PPE]	There should be an SOP adjacent to the equipment. [available on SO web site] It is good practice for there to be times and power settings for items that are regularly microwaved There should be face visor and thermal gloves available.		
Autoclave [SOP/ AU/ PPE]	There should be an SOP adjacent to the equipment and a list of authorised users. There should be face visor and thermal gloves available. Autoclaves should be subject to regular checks under the Pressure Systems Regulations - this is carried out by Allianz on behalf of the UoN. Check that this has been done. It should also be subject to regular validation and calibration by a competent person - this is mandatory for an autoclave used to inactivate biological waste. Check that this has been done to the required frequency.		
Liquid Nitrogen [O2 Mon, PPE]	rooms containing large quantities of LN may require Oxygen monitoring - if this is not in place ask to see the risk assessment that concludes it was not required. If Ox monitoring in place is the equipment serviced and checked in accordance with the manufacturers recommendations. Pressurised dewars fall under Pressure Systems Regs so require annual check [see above]. Thermal gloves and visors to be available. If Dewar's have to be lifted manually there should be a manual handling assessment.		
Cylinders [AU list, regs insp]	Ideally cylinders should be located in external stores. If internal they must be secured by rings or chains. Regulators should be inspected annually and replaced every 5 years unless risk assessment determines a different frequency. A list of those authorised to change regulators should be adjacent to cylinders. Manifolded systems may be subject to Pressure Systems regs - see above. Flash back arrestors should be used for flammable gases. Regulators should be compatible with the type of gas.		
Centrifuges - clean? Rotors insp	Check bowl and buckets for any evidence of corrosion or contamination. There should be a regime of regular cleaning. On large and high/ultra speed machined rotors should be inspected annually by a competent person [often service engineer] so there should be a service contract in place. There should be written procedures on what to do in event of a centrifuge accident/imbalance.		
Work conditions			
Are noise levels within safe limits?	If it possible to hold a conversation easily with a person a few feet away levels are probably OK. If not a more formal noise assessment will be required .		
Are there adequate and correct safety signs?	Any safety sign should be a combination of words and pictogram. Words alone are not acceptable.		
Are electrical appliances checked regularly - give date of last check.	Check dates on PAT stickers. There should be formal arrangement sin place to ensure new equipment does not get overlooked.		
PPE			
Lab coats - evidence of use, adequate storage?	In bio labs Howie style coats should be the standard. It is good practice to adopt this style for all laboratories. Coats should appear clean and there should be some formal regime of ensuring regular changing. There should be adequate hanging facilities inside laboratories [not on corridors]. Coats should not be double hung on hooks or be hung on backs of chairs.		
Gloves	Powdered latex gloves should not be in use, Nitrile are less allergenic and should be available for use.		
HYGIENE/WELFARE			
Handwash facilities	HWBs should be available in all labs near to entrance/exit. It should be clean and there should be a stock of soap and towels. In CL 2 and above taps should be elbow operated/or by PIR		
First aid kit /first aiders.	There should be a list of first aiders in the room or nearby. First aid kits should be fully stocked and a regular regime of checking contents in place. Eye wash bottles if present should be in date.		
Shower flushing	Emergency eye and drench showers must be subject to regular weekly flushing - this should be recorded in the lab		