

Chemical Safety Guidance Series

February 2020

Chemical Laboratory: Inspection Checklist

Occupational Health and Safety Service
HSD185C



UNIVERSITY OF
CAMBRIDGE

Chemical Laboratory Safety Inspection Checklist

Note: In view of the specialised nature of laboratory inspections they should be undertaken by, or in the presence of, personnel familiar with the inherent dangers involved and the safety precautions necessary in each area. Where appropriate also consult the relevant University Health and Safety Documents (HSDs) on the Safety Office website.

Area of inspection:	
Person responsible:	
Please indicate whether there were any personnel present at the time of the inspection? Personnel present ☐ Personnel absent ☐	
Inspection carried out by:	Date:

Only complete those sections of the checklist below which are relevant to the work conducted in the area of inspection; enter N/A if not applicable.

	Yes	No	N/A	Comments
A Information, signs and labels:				
1. Laboratory Management & Safety Plan available within the area of inspection				
2. Current Departmental Safety Handbook available within the area of inspection				
3. Laboratory responsibilities clearly identified and understood by all				
4. Statutory safety signs and notices clearly displayed				
5. Chemical hazard signage				
6. Standard operating procedures for routine operations / risk assessments available and current (reviewed regularly)				
7. Is there evidence that the risk assessments are being complied with				
8. Training records kept & up to date				
9. ALL those working with chemicals have been on the University Chemical Safety Course				

	Yes	No	N/A	Comments
B Housekeeping / general lab safety:				
10. Walkways and floor area clear and uncluttered and free from trip hazards				
11. Work areas tidy and free from obstructions: include bench kneeholes				
12. Bench tops free of excess storage and any materials not in use				
13. Bench tops and coverings free of visible contamination				
14. Balance areas clean and free from visible contamination				
15. Sinks clear of clutter, glassware				
16. Heat sources switched off at mains when not in use				
17. Shelves accessible, properly secured and loaded				
18. Storage above eye level minimised to light weight items				
19. All portable electrical equipment tested (include radios / private items)				
20. No trailing cables / leads, or overloaded multi-gang adaptors				
21. All electrical equipment placed so as to avoid risk of damage				
22. Vacuum lines covered with mesh				
23. Rotary evaporators have plastic coating or covered with mesh				
24. Pressure systems documented and checked (HSD046P / HSD194P)				
25. All fridges / freezers have had ignition sources removed and are labelled to this effect 'spark-free'				
26. Fridge boxes used and labelled				
27. Fridges and freezers do not need defrosting				
28. Waste properly segregated (glass, sharps, chemical etc)				

	Yes	No	N/A	Comments
29. Hand washing facilities available and free from contamination				
30. No evidence of eating and drinking in lab (HSD004M)				
31. No storage of food and drink in lab and lab fridges / freezers unless needed for work and then clearly labelled 'Not for human consumption'				
C Personal protective equipment:				
32. Eye protection available and worn in line with University Policy (HSD071C)				
33. Chemical resistant gloves available and worn (HSD168C)				
34. Protective clothing available and worn (laboratory coats etc)				
35. Appropriate respiratory protection available if needed (HSD009C)				
36. Respirators 'Face Fit Tested' in accordance with COSHH				
37. Respirators regularly inspected, cleaned, and stored appropriately				
D Chemicals / chemical storage:				
38. ChemInventory system is in use and 'up-to-date' for all chemicals				
39. Storage areas neat and clean				
40. Containers clearly labelled with chemical names (in English), CAS Numbers, percent composition (for mixtures), and hazard warnings				
41. Containers labelled with receipt date and group name				
42. Chemicals are segregated and stored according to chemical compatibilities [flammables away from oxidizers, acids separate from bases, incompatible acids separated (e.g., nitric and sulfuric acid not with acetic acid), etc – (HSD051C)				
43. All chemical storage cabinets banded / spill trays used				

	Yes	No	N/A	Comments
44. Acids stored in acid cabinets				
45. Flammable liquids stored in approved fire-resistant cabinets				
46. Flammable liquid stored in a single laboratory is not in excess of 50 litres unless 90 minute fire resistant cabinet(s) to BS14470/1 are used				
47. Minimum quantity of flammable liquid stored on open bench				
48. Ignition sources avoided when using / storing flammables				
49. Storage of chemicals above eye level avoided				
50. Chemicals stored away from light and heat sources				
51. Chemical containers are in good condition, labels intact, metal cans free of rust				
52. Containers closed unless actively adding / removing contents				
53. Water and air reactive compounds are sealed against exposure to water / air and stored appropriately				
54. Large containers stored near floor				
55. Winchester and glass bottles are not stored / left on floor				
56. Winchester bottle carriers utilized when transporting hazardous chemicals between work areas				
57. All personnel know the location of chemical inventory, Safety Data Sheets, and related reference material				
58. All personnel familiar with physical and health hazards of chemicals				
59. All personnel know how to protect themselves and others from effects of hazardous materials				
60. Chemical waste properly segregated and labelled (HSD018C)				
61. Chemical waste not allowed to accumulate				

	Yes	No	N/A	Comments
E Fume cupboards / Local Exhaust Ventilation systems (LEV):				
62. Are there any fume cupboards or LEV within the area inspected, see (HSD029C, HSD103C and HSD115C)				
If the answer to the above is NO or N/A, move onto Section F				
63. Fume cupboards free of clutter				
64. Large pieces of equipment in fume cupboards raised on short legs				
65. Procedures conducted at least 150mm inside cupboard				
66. Sash lowered to optimum setting and closed when left unattended				
67. Local exhaust ventilation / fume extraction systems operating correctly				
68. All extraction systems inspected and tested in last 14 months (COSHH)				
F Compressed gases:				
69. Are compressed gases used or stored in area (HSD032C / HSD121C)				
If the answer to the above is NO or N/A, move onto Section G				
70. Cylinders stored upright and properly secured at all times				
71. Correct regulators used for type of gas and pressure used (both cylinder and delivery pressures)				
72. Regulators 'in-date' , checked and display current valid test label				
73. Cylinders clearly labelled				
74. Empty and 'not-in-use' cylinders promptly removed from lab				
75. Flammable gases separated from oxidising gases				
76. Pipe work in good condition and appropriate for the gas in use				
77. All ancillary equipment / safety devices tested and 'in-date'				
78. Waste gas vented to a safe place				

	Yes	No	N/A	Comments
G. Cryogenics:				
79. Are cryogenics / cryogen derived gases used or stored in area i.e. liquid nitrogen, liquid helium, liquid carbon dioxide, dry ice etc. (HSD053C)				
If the answer to the above is NO or N/A, move onto Section H				
80. Appropriate PPE available to handle cryogenics				
81. Oxygen depletion monitoring necessary for foreseeable helium and/or nitrogen releases				
82. Carbon dioxide monitoring necessary for foreseeable releases				
83. Monitors are functional, tested and calibrated.				
84. Monitors in the correct locations for the gases that could be released				
85. Emergency ventilation				
86. People know what to do if the alarm(s) is activated.				
87. Alarms audible / visible from outside the area at entrances				
88. Appropriate warning signs both in the area and at entrances to it				
H. Emergency:				
89. Emergency fire numbers and procedures clearly on display and understood by staff				
90. Emergency first aid numbers and procedures clearly on display and understood by staff				
91. Fire doors maintained and kept clear and NOT 'wedged open'				
92. Fire extinguishers / fire blankets in designated place, clearly visible and unobstructed				
93. Appropriate fire extinguishers for hazard classification(s)				
94. Have fire extinguishers been maintained in last 12 months				

[illegible]

Recommendations / action(s) to be taken, by whom and by when?

Signed:

Date:

Any faults noted above should be corrected as soon as possible and within four weeks of this inspection. If any action takes longer the reasons should be recorded and followed up. The Departmental Safety Officer (DSO) must be notified of any corrective action taken. A follow-up visit should be undertaken at an appropriate interval to ensure all points noted above have been addressed and recorded

History>

Reviewed without change 2020



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