

Requirements for Laboratories. Containment levels 1 to 4

Guidelines	Physical containment level			
	1	2	3	4
Tagged level of containment	Yes	Yes	Yes	Yes
Danger area marked with biological hazard signpost	-	Yes	Yes	Yes
Sufficient space for each worker	Yes	Yes	Yes	Yes
Laboratories should have doors for access control	No	Yes	Yes (lockable)	Yes (separate area)
Entry to laboratory via airlock	No	No	Optional	Yes
Observation window or an alternative	No	Yes	Yes	Yes
Bench surfaces impervious to water, easy to clean and resistant to acids, solvents and disinfectants	Yes (bench top)	Yes (bench top)	Yes (bench top and floor)	Yes (bench top floor wall and ceiling)
Hand washing facilities	Yes	Yes	Yes	Yes
Hands-free sink	Optional	Yes	Yes	Yes
Showers for Laboratory personnel	Optional	Optional	Optional	Yes (In airlock system)
Hands disinfection facilities	Optional	Yes	Yes	Yes
Well-defined place in Laboratory or area for protective equipment storage	Optional	Yes	Yes	Yes
Ventilation systems				
- Equipment to maintain an air pressure negative to atmosphere	No	No	Optional	Yes
- Extracting the laboratory air to the outside air with a HEPA filter	No	No	Yes	Yes (through 2 HEPA filters)
Supply air to the laboratory pass through HEPA filter	No	No	No	Yes
An alarm system to notify personnel of changes in air pressure	No	No	Yes	Yes
Laboratory sealable for decontamination	No	Optional	Yes	Yes
Laboratory designed to permit control of disease vectors as insects and rodents, etc..	No	Optional	Yes	Yes
Laboratory to contain its own equipment, for internal use	No	No	Yes	Yes
Microbiological safety cabinet	Optional	Optional	Yes	Yes (Class III)
Automatically activated Emergency power source	No	No	Optional	Yes
Appropriate communication systems between the laboratory and the outside (e.g. Voice, telephone)	No	No	Optional	Yes
Autoclave				
- readily accessible in the laboratory area	No	No	Yes	-
- in the laboratory suite, a double-door one	-	-	Optional	Yes
Waste				
- recorded	No	Yes	-	-
- approved	-	-	Yes	Yes
Liquid waste handling	No	Optional	Yes	Yes

1) These guidelines are based on existing National codes of practice for biotechnological areas. See also Appendix C [1] e [2].

2) Yes: required

3) No: Not required

4) Optional: required when the risk assessment shows they are necessary.