Risk Assessment Prompt Sheet

Ref:PS:047:01	**Re: Biological Agents COVID-19 Risk Assessment for Laboratories**				
Issue date:	May 2020	**Revised date:**	August 2023	**Version No:**	2
Author(s):	National Health & Safety Function (NHSF)				
Note: Legislation:	Under Section 19 of the ***Safety, Health and Welfare at Work Act, 2005*** and associated Regulations**,** it is the duty of the employer to identify the hazards and assess the associated risks in the workplace. In addition to this requirement, the Biological Agents Regulations require that the employer assesses any risk to the safety and health of employees resulting from any activity at that employer's place of work likely to involve a risk of exposure of any employee to a biological agent. It is the employer's duty to determine the nature, degree and duration of any employee's exposure to a biological agent and to lay down the measures to be taken to ensure the safety and health of such employees. All risk assessments must be in writing and the necessary control measures to eliminate or minimise the risks documented and implemented.				
Scope:	Prevention of exposure to a biological agent is an underlying principle of the Safety Health and Welfare at Work (Biological Agents) Regulations 2013 and 2020. To ensure this preventative principle is followed a documented biological agent's risk assessment must be undertaken to determine if existing workplace controls are adequate. The Biological Agents Risk Assessment form is available to download here. The following non-exhaustive list of prompts based on the HPSC/HSE Biosafety guidance for diagnostic laboratories handling specimens from individuals with possible or confirmed infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), World Health Organisation (WHO) Laboratory biosafety guidance related to coronavirus disease (COVID-19) and World Health Organisation (WHO) Laboratory biosafety manual has been developed to support managers in consultation with their employees to review and update their Biological Agents COVID-19 Risk Assessments for Laboratories. **Note 1:** This prompt sheet **is not** a risk assessment form. The completed prompt sheet can be referenced and appended to the Biological Agents Risk Assessment Form to provide evidence of existing control measures in place.				

Key Amendments	
Section	**Amendments**
Note	Workwell logo removed.
Scope – Note 1	Inserted "Biological Agents" to Risk Assessment form. Note 1 updated to include HSE Biological Agent website hyperlink under Biological Agents Risk Assessment Form. https://healthservice.hse.ie/staff/health-and-safety/biological-agents/
Q.61	Removed "HPSC/HSE Interim Guidance for Coronavirus - Healthcare Worker Management by Occupational Health"
Q.62	Health and Safety Authority hyperlink updated in question 62. https://www.hsa.ie/eng/Publications_and_Forms/Forms/

No.	Hazard controls to be considered when carrying out your risk assessment	Yes	No	N/A	If yes, Document Evidence
Section 1 - Good microbiological practice and procedure (GMPP)					
1	Food, drink or personal items such as coats and bags are not stored in the laboratory. **Note:** Activities such as eating, drinking, smoking and/or applying cosmetics are not permitted in the laboratory.				
2	Materials such as pens, pencils or gum are not placed in the mouth while in the laboratory, regardless of having gloved hands or not.				
3	Hands are washed thoroughly preferably with warm running water and soap after handling any biological material, before leaving the laboratory, and any time contamination is known or suspected to be present on the hands.				
4	Open flames or heat sources are not placed near flammable supplies and are never left unattended.				
5	Coverings are placed over any cuts or broken skin prior to entering the laboratory.				
6	Supplies of laboratory equipment and consumables, including reagents, PPE and disinfectants, are sufficient and appropriate for the activities being performed.				
7	Supplies are stored safely and according to storage instructions to reduce the chance of incidents such as spills, trips or falls.				
8	All biological agents, chemical and radioactive material are appropriately labelled.				
9	Written documents are protected from contamination using barriers (such as plastic coverings), particularly those that may need to be removed from the laboratory.				
10	Work is performed with care, in a timely manner and without rushing. **Note:** Working when fatigued should be avoided.				

11	Work areas are kept tidy, clean and free of non-essential objects and materials.				
12	Use of earphones, which can distract personnel and prevent equipment or facility alarms from being heard are prohibited.				
13	Jewellery that could tear glove material, easily become contaminated or act as a fomite for infection are covered or removed. **Note:** If worn regularly, cleaning and decontamination of the jewellery or spectacles should be considered.				
14	Portable electronic devices (for example, mobile telephones, tablets, laptops, flash drives, memory sticks, cameras and/or other portable devices, including those used for DNA/RNA sequencing) are not used when laboratory procedures are being performed.				
15	Permitted mobile electronic devices are kept in areas where they could not easily become contaminated or act as a fomite for infection. **Note:** Where close proximity of such devices to biological agents is unavoidable, ensure they are protected by a physical barrier or decontaminated before leaving the laboratory.				

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Section 2 - Technical procedures					
16	GMPP techniques are used to minimise the formation of aerosols and droplets when manipulating specimens in order to avoid inhalation of biological agents.				
17	Ingestion of biological agents and contact with the skin and eyes are avoided.				
18	Disposable gloves are always worn at all times when handling specimens.				
19	Contact with gloved hands with the face is avoided.				
20	Shield or otherwise protect the mouth, eyes and face during procedures where splashes may occur.				
21	Glassware is replaced with plastic ware, whenever possible.				
22	For work requiring scissors, scissors with blunt or rounded ends in preference to those with pointed ends are used.				
23	Sharps, syringes and needles are handled, with care to prevent injury and injection of biological agents.				
24	Ampoule openers are used for the safe handling of ampoules.				
25	Needles are never re-capped, clipped or removed from disposable syringes.				
26	Sharps materials (for example, needles, needles combined with syringes, blades, broken glass) are disposed in puncture-proof or puncture-resistant containers fitted with sealed covers.				

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27	Precautions as follows are taken to prevent dispersal of biological agents: - Discard specimens and cultures for disposal in leak-proof containers with the tops appropriately secured before disposal in dedicated waste containers. - Consider opening tubes with disinfectant-soaked pad/gauze. - Decontaminate work surfaces with a suitable disinfectant at the end of the work procedures and if any material is spilled or obviously contaminated. - Ensure the disinfectant is efficacious against the pathogen being handled and is left in contact with infectious waste materials for sufficient time to effect complete inactivation.				

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Section 3 - Personal competence and training					
General familiarisation and awareness training					
28	General training including an introduction to laboratory layout, codes of practice, local guidelines, safety manuals, risk assessments, legislative requirements and emergency response procedures are provided.				
Job specific training					
29	All personnel involved in the handling of biological agents are trained on GMPP.				
30	Competency and proficiency assessments are used and verified before working independently, followed by regular review and refresher training.				
31	Relevant information (e.g. new procedures) is communicated to appropriate personnel.				
Safety and Security Training					
32	All personnel are aware of the hazards present in the laboratory and their associated risks as well as safe working procedures; security measures; and emergency preparedness and response.				

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Section 4 - Facility Design					
33	Ample space and designated hand-washing basins are provided, with appropriate restricted access.				
34	Laboratory walls, floors and furniture are smooth, easy to clean, impermeable to liquids and resistant to the chemicals and disinfectants normally used in the laboratory.				
35	Doors are appropriately labelled with the international biohazard warning symbols as per Schedule 3 (Biohazard sign) of the Biological Agents Regulations  **Figure 1 Biohazard sign**				
36	Mechanical laboratory ventilation, where provided (including heating/cooling systems and especially fans/local cooling spilt-system air conditioning units – specifically when retrofitted) is adequate for the environment and serviced in accordance with manufacturer's instructions. **Note:** Consideration must be made of resultant airflow speeds and directions, and turbulent airflows should be avoided; this applies also to natural ventilation.				
37	Laboratory space and facilities are adequate and appropriate for safe handling and storage of infectious and other hazardous materials such as chemicals and solvents.				
38	Facilities for eating and drinking are provided outside the laboratory, and first-aid-facilities must be accessible.				
39	Appropriate methods for decontamination of waste, for example disinfectants and autoclaves, are available in proximity to the laboratory.				

40	Management of waste is considered in the laboratory design. **Note:** Safety systems must cover fire, electrical emergencies and emergency/incident response facilities, based on risk assessment.				
41	Emergency situations are considered in the design, as indicated in the local risk assessment.				
No.	**Hazard controls to be considered when carrying out your risk assessment**	**Yes**	**No**	**N/A**	**If yes, Document Evidence**
Section 5 - Specimen receipt and storage					
42	Specimen receipt, storage and processing is carried out in line with requirements available from HPSC/HSE Biosafety guidance for diagnostic laboratories handling specimens from individuals with possible or confirmed infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)				
43	Personnel unpacking and receiving specimens are adequately trained in: - awareness of the hazards involved - how to adopt necessary precautions according to GMPP described above - how to handle broken or leaking containers to prevent exposure to biological agents, and how to handle spills and use disinfectants to manage any contamination				
44	Specimens are stored in approved containers with adequate strength, integrity and volume to contain the specimen, leak-proof when the cap or stopper is correctly applied; made of plastic whenever possible; free of any biological material on the outside of the packaging; correctly labelled, marked and recorded to facilitate identification; and made of an appropriate material for the type of storage required				

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Section 6 - Decontamination and waste management					
45	Any surface or material known to be, or potentially be, contaminated by biological agents during laboratory operations are disinfected to control infectious risks.				
46	Processes are in place for the identification and segregation of contaminated materials before decontamination and/or disposal.				
47	Where decontamination cannot be performed in the laboratory area or onsite, the contaminated waste is packaged in an approved (that is, leak-proof) manner, for the transfer to another facility with decontamination capacity.				
48	Patient specimens from suspected or confirmed cases are transported as UN3373, “Biological Substance Category B”. Viral cultures or isolates should be transported as Category A, UN2814, “infectious substance, affecting humans”.				
49	Infectious laboratory waste is handled, transported and disposed of in accordance with the Department of Health Segregation, Packaging and Storage Guidelines for Healthcare Risk Waste available from http://www.lenus.ie/hse/handle/10147/120929 **Note:** All disposable waste should be autoclaved.				

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Section 7 - Personal Protection Equipment					
50	Laboratory staff wear appropriate PPE when conducting work in the laboratory. PPE removed on leaving the laboratory, with careful attention to hand hygiene. **Note:** The choice and selection of PPE are based on risk assessment and in line with Current recommendations for the use of Personal Protective Equipment (PPE) in the context of the COVID-19 pandemic				
51	Footwear is worn in the laboratory and designed to minimize slips and trips and reduce the likelihood of injury from falling objects and exposure to biological agents.				
52	Respiratory protection is worn as required in line with local risk assessment.				

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Section 8 – Laboratory Equipment					
53	Laboratory equipment is maintained as per manufacturer's instructions.				
54	Records are kept detailing equipment use, any maintenance performed, and any validation/calibration procedures undertaken and their results.				
55	Staff working in the laboratory and who are responsible for maintaining equipment are trained and able to demonstrate proficiency.				

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Section 9 - Emergency/Incident Response					
56	Emergency Response Plan is in place and is communicated to personal.				
57	Staff are trained on Emergency Response.				
58	First-aid kits, including medical supplies such as bottled eye washes and bandages, are available and easily accessible to personnel. **Note:** First-aid kits are checked routinely to ensure products are within their use-by dates and are in sufficient supply.				
59	There is a system in place for reporting and managing incidents (including COVID-19) in line with the HSE Incident Management Framework **Note:** Any incident must be reported and investigated in a timely manner and taken into consideration when updating laboratory procedures and emergency response plans**.**				
60	Spill kits, including disinfectants, are easily accessible to personnel. **Note:** Depending on the size, location, concentration and/or volume of the spill, different protocols may be necessary. Written procedures for cleaning and decontaminating spills must be developed for the laboratory and followed by suitably trained personnel.				
61	There are arrangements in place for a Manager to notify the Health and Safety Authority when they become aware of a confirmed case of COVID-19 or death of an employee (e.g. informed by a medical practitioner, public health or other				

	health professional) as a result of the employee carrying out work with the coronavirus (SARS-CoV-2) https://www.hsa.ie/eng/Publications_and_Forms/Forms/				

Use the columns below to document any local existing control measures not referenced above	
No.	