Biohazard Spill Response Matrix

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Highlight the rows that include the types of biohazardous materials your laboratory handles

Risk Group/Biological Safety Level of laboratory	Spilled Material	Spill Location, Spill Volume Where Applicable	Appropriate PPE	Preliminary actions	Waste disposal and follow-up
RG1/BSL1	Microbial agents with no infectious or pathogenic potential to humans or other mammals; recombinant constructs, cloning hosts, and non-infectious vectors, waste materials such as spent culture media that have been in contact with RG1 agents	All	Lab coat, gloves, eye protection	Conduct risk assessment[1]	Deposit waste in clear autoclave bags or sharps containers, autoclave the bags and dispose to landfill, request a sharps pickup from Safety Services, notify Biological Safety Office of incident and clean-up results
RG2/BSL2	Human or non-human primate source materials such as established cell lines, primary cell cultures, tissues, blood, and body fluids, infectious or pathogenic agents that cause disease in humans which is usually not serious and for which treatments are often available, viral vectors derived from agents capable of infecting humans; plasmids that include coding sequences for oncogenes, toxins, or virulence factors, and other recombinant constructs normally used at BSL2; waste materials such as spent culture media that have been in contact with RG2 agents or materials	Biological safety cabinet, <10ml	Lab coat or Tyvek gown, double gloves, goggles or face shield	Conduct risk assessment[1]	Deposit waste in red medical waste bags and biohazard sharps containers, transport closed bags to a medical waste accumulation site, permanently close sharps containers and disinfect exterior surfaces, request a sharps pickup from Safety Services, notify Biological Safety Office of clean-up results
		Biological safety cabinet, >10ml	Lab coat or Tyvek gown, double gloves, goggles or face shield, and a surgical mask or professionally fit-tested N95 respirator to entrain droplets	Conduct risk assessment,[1] notify Biological Safety Office	
		In laboratory, outside of BSC		Evacuate the laboratory, notify the Biological Safety Office, conduct risk assessment,[1] wait 30 minutes before clean-up	Handle waste as described above for other RG2 agents, **decontaminate the entire interior of the unit**, notify Biological Safety Office of clean-up results, seek medical follow-up
		Discovered in centrifuge or refrigerator			
		In public area		Evacuate the area, divert foot traffic, notify the Biological Safety Office, conduct risk assessment,[1] wait 30 minutes before clean-up	Deposit waste in red medical waste bags and biohazard sharps containers, transport closed bags to a medical waste accumulation site, permanently close sharps containers and disinfect exterior surfaces, request a sharps pickup from Safety Services, notify Biological Safety Office of clean-up results
RG2/BSL2 aerosol transmissible pathogens	Enteric and viral RG2 agents designated in Cal-OSHA Standard 5199 App. D as potentially aerosol transmissible pathogens;[2] viral vector preparations incorporating oncogene, toxin, or virulence factor coding sequences; waste materials that have been in contact with these agents	Any	Solid front lab coat or Tyvek gown, double gloves, face shield or goggles, and a professionally fit-tested respirator (at least N95).	Evacuate the laboratory or other area, divert foot traffic, notify the Biological Safety Office, conduct risk assessment,[1] wait 30 minutes before clean-up	Handle waste as described above for other RG2 agents, notify Biological Safety Office of clean-up results, seek medical follow-up
RG3/BSL3	All	Any	As determined and pre-approved by the Institutional Biosafety Committee		

[1] Consider all risks that the uncontained agents or materials entail, determine whether your training is adequate to ensure complete clean-up of the spill and decontamination of all surfaces, determine whether an immediate response such as immediate application of absorbent material is needed to prevent escalation of the spill hazard

[2] e.g., Salmonella sp., Shigella sp., E. coli O157: H7, HIV in clinical samples, consult the Biological Safety website for the complete list