



NEW JERSEY INSTITUTE OF TECHNOLOGY

**LABORATORY HAZARD ASSESSMENT  
FOR NEW OR MODIFIED PROCESSES OR  
PROCEDURES\***

Requestor: \_\_\_\_\_ Date of Request: \_\_\_\_\_

Telephone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Name of Project: \_\_\_\_\_

Department Chair: \_\_\_\_\_ Department: \_\_\_\_\_

Building / Room: \_\_\_\_\_

Chair Telephone: \_\_\_\_\_ E-mail: \_\_\_\_\_

**PERSONNEL PROPOSED FOR THIS PROJECT**

All personnel authorized to handle hazardous materials, biological agents or radiological material must complete NJIT safety training. List the personnel participating in the proposed activity and the required training:

<b>Personnel</b>	<b>Training Completion Date</b>	<b>Other Applicable Training</b>

**LABORATORY OPERATIONS, PROCEDURES OR ACTIVITY**

Briefly describe the operation, procedures or activity. You can also attach activity description or other NJIT Laboratory Application.

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\*29 CFR 1910.1450 - "The circumstances under which a particular laboratory operation, procedure or activity shall require prior approval from the employer or the employer's designee(s) before implementation"

## POTENTIAL HAZARDS

Review the Hazard Description (column 3) of each Exposure Condition (column 2) and check the ones that are present (column 1). For every condition present, review the Examples of Engineering Controls and Personal Protective Equipment (column 4) and then complete the Specific Engineering Controls and PPE (column 5) that you intend to use to reduce or eliminate the hazard.

Check if Present	Exposure Condition	Hazard Description	Examples of Engineering Controls and Personal Protective Equipment (PPE)	Specific Engineering Controls and Personal Protective Equipment (PPE)
<b>Biological Hazards</b>				
<input type="checkbox"/>	Animals (vertebrate)	Splash, bites, exposure to animal body fluids; injuries due to animal size, caging, allergies, and disease transmission	Requires approval by IACUC, May require IBC Approval	
<input type="checkbox"/>	Animals (invertebrate)	Splash, bites, exposure to animal body fluids; injuries due to animal size, caging, allergies, and disease transmission	May require IBC approval	
<input type="checkbox"/>	Carcinogens	Cancer	May require IBC approval. Posted work areas, glove box, fume hood, special handling, and gloves	
<input type="checkbox"/>	Human Blood or other potentially infectious materials	Disease transmission	May require IRB and IBC approval; Blood-borne Pathogen training, and Universal Precautions	
<input type="checkbox"/>	Infectious Pathogens	Disease transmission	Will require IBC approval. Good microbiological methods, engineering controls, gloves	
<input type="checkbox"/>	Nano-particles	Unknown health hazards due to small size	Will require IBC approval. Containment, respirators	
<input type="checkbox"/>	Recombinant DNA	Depends on nature of DNA segments, host vector systems. Introduction of foreign genetic materials into personnel or environment	Requires IBC Approval; Good microbiological methods, engineering controls, gloves	

Check if Present	Exposure Condition	Hazard Description	Examples of Engineering Controls and Personal Protective Equipment (PPE)	Specific Engineering Controls and Personal Protective Equipment (PPE)
<input type="checkbox"/>	Select agents and toxins	Infectious agents and toxins with potential to pose a severe threat to human health.	Contact EHS/IBC Requires IBC approval. See <a href="http://www.selectagents.gov">www.selectagents.gov</a>	
<b>Chemical Hazards</b>				
<input type="checkbox"/>	Chemicals, low hazard with low splash probability	Skin and eye irritation	Safety glasses, chemical resistant gloves, lab coat, closed shoe of good structure, long pants; Be aware of the nearest eyewash and shower	
<input type="checkbox"/>	Compressed gases	Asphyxiation, accidental tip over, content release and pinch points	Gas cylinders must be secured to stationary objects in a safe location away from danger or impact; Safety glasses and gloves	
<input type="checkbox"/>	Controlled Substances	Drugs and certain other chemicals (narcotic and non-narcotic)	Proper training, handling & dispensing procedures, recordkeeping, safety glasses; Under the jurisdiction of federal and state laws	
<input type="checkbox"/>	Corrosive liquids w/reasonable probability of splash	Skin and eye damage	Chemical splash goggles or face shield, neoprene gloves, lab coat, closed shoes, chemical resistant apron	
<input type="checkbox"/>	Cryogenic liquids, ultra-cold freezers, dry ice	Asphyxiation, skin, eye and tissue damage, frostbite	Ventilation, safety glasses, goggles or face shields for splash hazards, insulated gloves, closed shoes	
<input type="checkbox"/>	Organic solvents	Skin/eye damage, absorption through skin, organ damage	Chemical splash goggles or face shield, heavy resistant gloves, lab coat, closed shoes, chemical resistant apron, eyewash and shower	
<input type="checkbox"/>	Volatile hazardous or highly hazardous chemicals	Inhalation of toxic vapors, skin contact	Fume hood, glove box, safety glasses, and gloves	

Check if Present	Exposure Condition	Hazard Description	Examples of Engineering Controls and Personal Protective Equipment (PPE)	Specific Engineering Controls and Personal Protective Equipment (PPE)
<input type="checkbox"/>	Regulated Wastes	Exposure, environmental release	Safety glasses, gloves, proper storage and disposal procedures; Training and safe handling procedures	
<input type="checkbox"/>	Special cleaning agents	Exposure, allergies	Material Safety Data Sheets, hazard communication training, proper procedures, gloves, safety glasses	
<input type="checkbox"/>	Toxic Substances	Poisons, neurotoxins, teratogens, mutagens, carcinogens, and subsequent environmental impact.	Proper training, procedures, storage, and disposal	
<input type="checkbox"/>	Washing glassware	Skin lacerations from broken glass	Safety glasses, rubber gloves, lab coat.	

### Radiological Hazards

<input type="checkbox"/>	Ionizing Radiation	Cancer, teratogenic	Time, distance, shielding; Permit and controls approved by Radiation Safety Committee	
<input type="checkbox"/>	Non-Ionizing Radiation	Eye or skin damage, burns, heat, cancer.	Training, curtains (welding), signage, interlocks, beam blocks, safety eyewear	

### Physical Hazards

<input type="checkbox"/>	Compression (pressure)	Injury from sudden release of energy from valves, compression chambers	Energy control, safety classes, shields, body position	
<input type="checkbox"/>	Confined Spaces	Exposure, falls, dangerous atmospheres, asphyxiation, noise, vibration	Buddy system, lanyards, ventilation, monitoring	
<input type="checkbox"/>	Elevated heights	Fall injury	Lanyards, anchors	
<input type="checkbox"/>	Energized Equipment	Pinch, crush, caught, pulled in, electrocution	Energy control, signage, guards, no jewelry, tie back long hair	
<input type="checkbox"/>	Extreme Environmental Conditions	Hypothermia (cold), frostbite (cold), heat exhaustion (heat) or heat stroke.	Training, physiological monitoring. Rest cycles and fluid replacement	

Check if Present	Exposure Condition	Hazard Description	Examples of Engineering Controls and Personal Protective Equipment (PPE)	Specific Engineering Controls and Personal Protective Equipment (PPE)
<input type="checkbox"/>	Impact	Injury to head or body	Hard hat, impact resistant toed shoes, body position	
<input type="checkbox"/>	Manipulation of large objects	Injury, death	Training, proper lifting equipment, procedures, inspections, buddy system	
<input type="checkbox"/>	Material Handling	Physical injury, strains, sprains	Training, buddy system, gloves, standard operating procedures	
<input type="checkbox"/>	Noise	Deafness, hearing damage, inability to communicate	Noise monitoring, hearing protection, training, and engineering controls (e.g., enclosures, baffles, mufflers)	
<input type="checkbox"/>	Penetration	Injection, wounds	Training, padding of surfaces, signage, and body position	
<input type="checkbox"/>	Respirable Dust	Lung damage	Local exhaust ventilation. monitoring, respirator	
<input type="checkbox"/>	Vibrating Equipment	Cumulative trauma disorders.	Gloves, protective shoes, hearing protection	

**Additional notes and information:**

**CHEMICAL/BIOLOGICAL/RADIOLOGICAL MATERIALS TO BE USED**

Name	CAS #	Synonym	Storage Location	Frequency of Use	Maximum Quantity Stored	Hazard

**Attach Safety Data Sheet for each listed material.**

**CONTROL PROCEDURES** - Describe controls that will be employed to protect the individuals participating in this research or attach IBC application.

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**DECONTAMINATION PROCEDURES** (surfaces, materials, instruments, personnel, equipment, etc.) or reference IBC application:

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**DISPOSAL PROCEDURES** (wastes and unused stock):

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The information above is accurate and complete. I agree to abide to all applicable NJIT, federal, state and local regulatory requirements.

Requestor: \_\_\_\_\_  
Signature

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Reviewed by Department Head (Required)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by EHS (Required)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by Vice Provost for Research (If applicable)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by Facilities (If applicable)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by IBC (If applicable)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by IRB (If applicable)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by IACUC (If applicable)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed by Risk Management (If applicable)

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Approval Conditions**

(To be verified by EHS Department)

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

**See Attachment for additional conditions.**