

Minors in Research Laboratories and Animal Facilities Policy



Office of Environmental Health & Safety

5425 Woodward, Suite 300

Detroit, MI 48202

313-577-1200

[www.oehs.wayne.edu](http://www.oehs.wayne.edu) updated 8/14

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# Purpose:

The purpose of this policy is to identify when minors will be allowed to work or conduct research in a Wayne State University research laboratory, greenhouse or animal facility.

# Definitions:

**Minor:** any person who has not attained the age of 18 years.

**Visitor:** any person who enters a laboratory, greenhouse or animal facility upon the express or implied invitation of the laboratory principal investigator/supervisor.

**Volunteer:** any person who, of his or her own free will, provides services to Wayne State University with no monetary or material compensation.

# Scope:

This policy covers all Wayne State University research laboratories, greenhouses, animal facilities, animal procedure rooms, animal housing areas and clinical laboratories.

# Policy:

This policy applies to all minors, including; students, employees, and/or volunteers.

**Visiting minors, not previously approved as part of a Sponsored Wayne State University program or science fair, are not allowed in WSU research facilities for any reason\***

If you are a minor or not enrolled as a Wayne State University student you are not allowed to work or conduct research in Wayne State University research laboratories, greenhouses or animal facilities except as identified specifically below:

##  All minors are prohibited from working or in the following areas:

### Any laboratory or facility designated as BSL-3, ABSL-3 or higher for recombinant or infectious organisms.

### Any laboratory where select agents or explosives are used or stored.

### Any work requiring respiratory protection.

### Any animal care facilities or procedure area/lab/facility. (Note that this does not apply to individual Principal Investigator animal research laboratories).

##  Committee approval is necessary for minor working with any of the following materials.

* + 1. Radioactive materials or radiation (X-rays)
		2. Acute Toxins and Select Agents

**Submit completed Appendix A&B forms to WSU Office of Environmental Health & Safety, 5425 Woodward, Ste. 300. These will be forwarded to the appropriate committee for review.**

##  Minors are allowed to work or conduct research in laboratories (not listed in Section 4.1 above) if the following requirements are met in full**:**

1. Wayne State University ***Minors in Research Laboratories and Animal Facilities Policy*** has been read and understood.
2. The potential hazards information & signature sheet has been reviewed, signed by the parent/legal guardian and returned to OEH&S by mail: 5425 Woodward, Ste 300, Detroit Michigan 48202 or by fax to 313-993-7469.
3. A Minors Research Proposal Registration Form is submitted and approved by the Institutional Biosafety Committee or the Radiation Safety Committee.
4. Hazard specific safety training is completed by the Principal Investigator/Sponsor with the minor as approved by OEH&S.
5. Personal protective equipment, specific to the hazard, is provided to the minor with instructions for use and disposal.
6. The minor is supervised in the laboratory at all times and never left alone.
7. Hours of work comply with Federal Regulation 29 CFR 570.35 (a) Except as provided in paragraph (b) of 29 CFR 570.35, employment in any of the occupations to which this subpart is applicable shall be confined to the following periods.
8. Outside school hours;
9. Not more than 40 hours in any 1 week when school is not in session;
10. Not more than 18 hours in any 1 week when school is in session;
11. Not more than 8 hours in any 1 day when school is not in session;
12. Not more than 3 hours in any 1 day when school is in session;
13. Between 7 a.m. and 7 p.m. in any 1 day, except during the summer (June 1 through Labor Day) when the evening hour will be 9 p.m.
14. The laboratory is in full compliance with all applicable Wayne State University safety programs and regulations.

# Appendix A: Minor Registration and Approval Form

*Proposals are due at the Office of Environmental Health and Safety at least 2 weeks prior to beginning the work.*

Principal Investigator/Sponsor:

Department:

Campus Address:

Phone:       Email:

Student/Minor Name:

Date of birth:

School:

**Is this project (check one)**

[ ]  Science Fair Project

[ ]  Employment

[ ]  Volunteering

[ ]  Part of a WSU Sponsored Program. Program Name:

[ ]  Other - describe here:

Project Title:

This work will be performed in (room & building):

**Materials and Equipment to be Used - Check AND LIST all that apply:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **[ ]**  | **Chemicals** | **[ ]**  | **Biological Material** | **[ ]**  | **Equipment** |
| [ ]  | Flammable | [ ]  | Recombinant DNA | [ ]  | Chemical Fume Hood |
| [ ]  | Reactive | [ ]  | Bacteria | [ ]  | Biological Safety Cabinet |
| [ ]  | Carcinogenic | [ ]  | Viruses | [ ]  | Centrifuge |
| [ ]  | Toxic | [ ]  | Fungi | [ ]  | Analytical Instruments |
| [ ]  | Corrosive | [ ]  | Parasites | [ ]  | Industrial Machinery |
| [ ]  | Oxidizer | [ ]  | Human Material (blood, tissue, etc.) | [ ]  | Noise Producing Equipment |
| [ ]  | Cryogenic | [ ]  | Insects | [ ]  | Laminar Clean Bench |
| [ ]  | Pharmaceuticals | [ ]  | Plants | [ ]  | Autoclave |
| [ ]  | Gases | [ ]  | Animals | [ ]  | Other Equipment |
|  |  |  |  |  |  |
| [ ]  | **Radioactive** |
| [ ]  | **Other - List Here:**  |

**Project Description: (attach separate sheet if necessary):**

**I agree to sponsor (name of minor)** **, and by my signature below, I agree that:**

[ ]  I have read, understand, and will adhere to WSU “Minors in Research Laboratories or Animal Facilities” Policy. The potential hazard information signature sheet is attached.

[ ]  I have completed this Minor’s Hazard Specific Safety Training. Training was conducted by doing the following:

[ ]  Personal protective equipment appropriate for, and specific to, laboratory hazards will be provided.

[ ]  This individual will be supervised at all times while in the laboratory and never left alone.

[ ]  Their hours of work will comply with Federal Regulation 29 CFR 570.35.

[ ]  My laboratory is in full compliance with all applicable Wayne State University safety programs and regulations.

Name of Principal Investigator/Sponsor:

Signature:

Date:

I have read, understand, and will adhere to the WSU “Minors in Research Laboratories or Animal Facilities” Policy

Name of Minor:

Signature:

Date:

**RETURN FORM TO:**

WSU Office of Environmental Health & Safety (OEH&S)

5425 Woodward, Ste. 300

Detroit, Michigan 48202

fax: (313) 993-4079, phone: (313) 577-1200

***OEH&S USE ONLY***

Approved By: Date:

# Appendix B: Potential Hazard Information & Signature Sheet

Scientific research involves exposure to various hazards. When deciding to allow your child to participate in research projects conducted in Wayne State University laboratories, greenhouses and animal facilities, you need to be aware of the potential hazards he or she may encounter. The following information provides the most common potential hazards, but is not intended to be an exhaustive list of all potential hazards.

**Definitions:**

* Allergens – substances capable of producing an allergic reaction.
* Carcinogens – substances capable of producing cancer.
* Pathogens – bacteria, viruses, Prions, fungi, parasites capable of causing diseases.
* Recombinant materials – DNA that has been genetically engineered (altered), usually incorporating DNA from more than one species of organism.
* Transgenic – an organism that has had genes from another organism inserted into its genes.
* Toxins – poisonous substances produced by living organisms, plants and animals.
* Zoonotic diseases – diseases that can be passed from animals to humans.

**Potential Hazards:**

Your child’s research project may involve one or more of the following potential hazards.

* Chemicals – can be unstable, making them reactive and prone to explosion. Potential injuries include skin and eye burns, respiratory problems, allergic reactions, skin, eye, and mucous membrane irritation, and illnesses.
* Pathogens – found in human, animal and plant tissue can cause infections and acute or chronic illnesses.
* Recombinant materials/technology – can interact with the human body and its cells and produce potentially hazardous results.
* Mechanical/electrical equipment and instrumentation – can cause electrocution, burns, cuts, scrapes and injuries from pinch points. High noise levels can cause hearing loss.
* Radiation/irradiation – can cause skin and eye damage, cellular damage and long-term health problems.
* Animals – can bite, scratch, and transmit zoonotic diseases, such as rabies, toxoplasmosis, pox virus, cat bite fever, rat bite fever, and various parasitic infections or release allergens.
* Gas cylinders/compressed gasses – gas cylinders with compressed gasses can explode, causing injury from high speed projectiles. Released gasses can cause eye and skin irritations, respiratory problems, light-headedness, asphyxiation and fainting.

**AgreemenT:**

I HAVE READ AND UNDERSTAND the Potential Hazard Information Sheet describing the potential risks and dangers associated with my child’s research project.

I AGREE AND UNDERSTAND that my child’s research project may be suspended at any time, at the discretion of Wayne State University and its officers, agents, and employees, if the safety of my child, the employees and other volunteers of Wayne State University become a concern. I shall indemnify Wayne State University, its officers, directors, agents and employees from all claims, demands and causes of action including expenses of defense for personal injury, disease or death and loss or damage of property arising out of, or in any manner connected with or related to the performance of my child’s research, except to the extent caused by the willful misconduct of Wayne State University.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Child

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Parent or Legal Guardian

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date

Please return the signed sheet by mail or fax to:

WSU Office of Environmental Health & Safety

5425 Woodward, Ste. 300

Detroit, Michigan 48202

Fax: 313-993-4079

**Appendix C: Definitions**

|  |  |  |
| --- | --- | --- |
| **Definition** | **Hazards** | **Examples** |
| **Chemicals**  | Refined compound that could be in the form of a solid, liquid or gas. These may or may not be hazardous. Some compounds may have numerous hazard classifications (flammable, toxin & carcinogen )  | Carcinogens: may cause some sort of cancer with long term exposure - usually many years in the future  | Benzene  |
| Teratogen: shown to affect the reproductive system of males & females & may cause birth defects in the developing fetus. | Alcohol, thalidomide, X-rays |
| Neurotoxins: may affect the nervous system.  | Ethidium Bromide, snake venom  |
| Flammables: will burn or explode  | Acetone, Xylene, Alcohol  |
| Reactives: will react explosively  | Peroxides, acrylamide  |
| Corrosives: will cause tissue damage with contact through inhalation, eye, skin, etc  | Acids & bases  |
| Toxins: May cause illness or death on exposure.  | Cyanide  |
| **Compressed Gases**  | High-pressure cylinders that hold gases. These are usually large & heavy. Gas may be harmless, toxic, corrosive, flammable. | Explosion hazard if they rupture, Asphyxiant hazard if they vent gas to an area & it displaces oxygen | Asphyxiant: Nitrogen, helium, any other non-oxygen gas Flammable: Hydrogen Toxic: Ammonia |
| **Radiation/ Radioactive Materials** | High energy particles (alpha & beta) or waves (X-rays)  | Tissue & Organ damage with high doses  | Uranium, Phosphorus32, Sodium35, X-rays  |
| **Physical hazards**  | Hazards from noise, machinery, heat, cold, etc.  | Tissue damage, hearing loss, heat, cold, etc. | Scrapes, cuts, noise, cold (liquid nitrogen, dry ice), heat (burners, autoclaves) |
| **Biological Agents** | Living organisms or products of living organisms such as Viruses, Bacteria, Fungi, Prions & Parasites. Hazards from infection with these agents are organism dependent & can range from mild treatable to severe untreatable. Classification of hazard in four groups called Biological Safety Levels (BSL) ranging from 1-4. | BSL 1 - No hazard | Baker’s Yeast & E. coli K12 |
| BSL 2 - Mild to severe illness | Influenza, Polio & Salmonella |
| BSL 3 – Severe illness & possible death | Tuberculosis & AIDS |
| BSL 4 – Not allowed at Wayne State University | Haemorrhagic fever |
| **Recombinant DNA** | Genetically modified organisms with variations in genes within the organism. | Often unknown consequences once introduced to the human body. | Viral vectors like Adeno & Adeno-associated viruses used to transfect or express genes. |
| **Toxins – Microbial, Plant, Animal** | Poisons produced by plants, living organisms or animals. | Tissue & organ damage or death. | Plant – Ricin Animal – Fish & Snake venom Microbial – Staph, Tetanus |

# Appendix D: Rules for Minors Working in Laboratories and Animal Facilities

1. Never work alone in any laboratory environment without direct, immediate adult supervision from the sponsor or someone designated by the sponsor.

2. Always follow the instructions of the sponsor or laboratory supervisor.

3. Always report any accident (regardless of severity) immediately to the sponsor or laboratory supervisor.

4. Always wear the personal protective equipment as directed and dispose of it appropriately. This personal protective equipment includes glasses, gloves, coats/gowns, and other face/body protection as dictated by the hazard being worked with or around.

5. Always keep your hands away from your face and wash them well with soap and water prior to leaving any laboratory area.

6. Never eat, drink, chew gum, apply lip balm, or touch contact lenses while in any laboratory environment.

7. Always wear closed-toe shoes while in any laboratory.

8. Always tie back long hair to keep it out of all the hazards listed above.

9. Always wear clothing that reduces the amount of exposed skin.

10. Always ask questions if you don’t understand the safety requirements.