

Working Alone Policy
University of Notre Dame
Department of Chemistry & Biochemistry
Spring 2022

A. Definitions and details

A.1. Working alone is defined as a situation where it is unlikely that a second person will be present or within earshot of the researcher to respond to any potential emergencies.

A.2. After-hours is defined as **after normal working hours** (defined as 6 AM to 6 PM per full staffing of ND emergency response personnel), **weekends**, or **when it is highly unlikely that others will be present**.

A.3. High-Risk activities are those involving operations that create the potential for serious injury, hazardous chemical exposure, explosion, fire, electrocution or other serious physical harm. The Department strongly discourages researchers from conducting High-Risk activities while working alone.

High-Risk activities might include:

- highly toxic chemicals. See Appendix D1 in:
https://chemistry.nd.edu/assets/469364/list_of_lists_compiled_april_2022.pdf
- pyrophoric chemicals
- highly reactive chemicals
- explosive salts and chemicals
- transferring large quantities (> 1L of class 1A, > 2L of class 1B and 1C, and > 4L of class 2 and 3) of flammable solvents
- chemical reactions involving high pressures (> 100 psi) and/or temperatures (>350 °C)
- large-scale (> 500 mL volume) reactions, non-routine reactions, reactions without precedent in the literature, or reactions not previously performed by the researcher
- scaling up existing reactions from < 1g of reactant(s), < 25 mL solvent to 1-15 g of reactant(s), 25 – 500 mL solvent
- radioisotopes of high specific activity; any actinide
- high-energy (Class IV) ultraviolet, visible and infrared lasers
- laboratory equipment that could pose a risk of entanglement, amputation or other serious bodily harm.
- manipulations performed under high vacuum
- heavy cryogen use in small areas
- handling of pathogens

Note that this list is not exhaustive and that individual laboratories may engage in additional High-Risk activities as defined by the PI.

- **PIs** have the responsibility and authority to determine whether researchers under their direction can **work alone** (documented in an *annual* consent form submitted to the Department).

- **PIs** have the responsibility and authority to determine whether researchers under their direction can **work alone** on **High-Risk activities**, irrespective of when the High-Risk activity takes place (documented in an *annual* consent form submitted to the Department).
- **Undergraduate researchers** are forbidden from working alone on High-Risk activities.
- **Minors** are forbidden from working alone in research laboratories, regardless of risk classification.

A.4. Non-High-Risk activities are defined as routine scientific activities that do not fall into the High-Risk category stated above. These activities include:

- Paperwork: reading papers; working on manuscripts; updating notebooks.
- Housekeeping: general housekeeping that does not involve the handling/disposal of hazardous chemicals.
- Sample preparation and analyses: routine sample preparation or cell culture work; instrumental analyses in research laboratories or other university facilities (NMR, HPLC, plate reader assays, mass spectrometry, etc.)
- Routine laboratory experiments and activities not covered under the above High-Risk designation.

B. Working alone on activities deemed Non-High-Risk

Researchers may work alone on activities deemed Non-High-Risk, at will and at the discretion of the PI. PI consent is documented in an *annual* consent form submitted to the Department.

C. PI consent for researchers working alone on High-Risk activities or working alone on High-Risk activities after-hours

High-Risk activities, conducted while working alone or working alone after-hours, constitute a special risk class. This merits a higher degree of approval from both PIs and researchers. PIs may *provide consent* to researchers under their direction to work alone on High-Risk activities if the following criteria are met:

- Working alone on High-Risk activities is **voluntary** and can only be undertaken under mutual agreement with individual researchers.
- If working alone on High-Risk activities is permitted, the PI will have **reviewed** risk mitigation and safety strategies with the researcher prior to the individual working on stated activities.
- **Written confirmation** of both the approval and review of risk mitigation/safety strategies is required *annually* from the PI and must be filed with the Department (see attached).
- **Written confirmation** from individual researchers intending to work alone on High-Risk activities, stating that they understand the safety issues and risk mitigation strategies of these activities, is required *annually* and must be filed with the Department (see attached).
- Researchers must adhere to the general **standard operating procedures (SOPs)** listed in **Section F**.
- For **High-Risk, after-hours** activities, specific SOPs for intended activities will be **created** and will be accessible in the research laboratory at all times. Individual PIs are encouraged to develop specific High-Risk, after-hours activity SOPs in consultation with researchers in their laboratories and with related research laboratories in the Department.

- After-hours policies of University user facilities (e.g. ND Energy Materials Characterization Facility, Magnetic Resonance Research Center) **supersede** those described herein.

D. Monitoring of researchers working alone, regardless of risk classification

Protocols for monitoring employees working alone are encouraged.

For Non-High-Risk activities:

- **Non-High-Risk activities:** Suggested notification of others by the researcher that the researcher is working alone. Suggested periodic check-ins via text, voice, personal contact by a second designated person, or other appropriate means.

For all High-Risk activities (**Mandatory**):

- **Working alone on High-Risk activities:** Regardless of whether the High-Risk activity takes place after-hours, notification of a second individual by the researcher conducting the activity is required. The second individual may include: the PI, other researchers in the same research group or other researchers in the same research division. The frequency of check-ins is at the discretion of the lab PI but is not to exceed 1 hour between check-ins.

E. Liability

- All employees of the University, including graduate students, are eligible for Worker's Compensation care, per the State of Indiana Worker's Compensation guidelines. This applies to injuries sustained in the workplace outside of normal business hours.
- All employees who have engaged in good faith efforts to perform their responsibilities at Notre Dame are indemnified per University policy: <https://treasury.nd.edu/risk-and-insurance-management/programs-and-resources/defense-and-indemnification-of-employees/>

F. General Standard Operating Procedures (SOPs)

The researcher will adhere to the following general SOPs:

- All required PPE and requisite attire will be worn (e.g., gloves, lab coat, safety glasses, closed-toe shoes).
- All efforts will be made to minimize the quantity of handled chemicals and materials.
- All attempts will be made to avoid working with highly toxic, corrosive, reactive, pyrophoric and/or explosive materials.
- All attempts will be made to avoid working with laboratory equipment presenting sizable risks for entanglement, amputation, electrocution, or other serious bodily harm.
- All efforts will be made to utilize appropriate risk mitigation equipment (e.g., conducting work in a hood, using the sash, using shields when needed) and strategies (e.g., avoid working in confined spaces).

G. Summary of required actions by personnel for working alone on High-Risk activities

Principal Investigator

- Establishes whether researchers under their supervision will be allowed to **work alone**. If permitted, establishes whether researchers can **work alone** on **High-Risk** activities, irrespective of when such High-Risk activity takes place.

- Annually reviews safety protocols and risk mitigation strategies with all researchers intending to work alone on High-Risk activities.
- For all **working alone** on **High-Risk** activities, files with the Department an annual consent form and signed statement of having reviewed safety protocols/risk mitigation with all researchers intending to conduct High-Risk activities while alone. This includes researcher acknowledgement of general Departmental SOPs (**Section F**).
- For **working alone** on **High-Risk, after-hours** activities generates more specific High-Risk/after-hours SOPs and ensures that they are accessible in the laboratory at all times.

Researcher

- Provides written confirmation attesting to understanding the safety issues and risk mitigation strategies of intended High-Risk activities.
- Reviews safety protocols/risk mitigation with the PI for all High-Risk activities.
- Notifies a designated second person (the PI, a researcher in the same research group or a researcher in the same division) when working alone on a High-Risk activity. The researcher is responsible for checking in periodically with the designated second person during the time the activity is being carried out.
- For all Non-High-Risk activities, the researcher is encouraged to notify a second person that they are working alone.

Principal Investigator Consent Form for Working Alone and Working Alone on High-Risk Activities
University of Notre Dame
Department of Chemistry & Biochemistry

A. No Consent for Working Alone

I do not consent to any of my research personnel to work alone.

If A is checked Skip B, C, and D

B. No Consent for Working Alone on High-Risk Activities

I do not consent to any of my research personnel to work alone on High-Risk activities.

If B is checked, Skip C and D

C. No Consent for Working Alone on High-Risk Activities after-hours

I do not consent to any of my research personnel to work alone on High-Risk activities after-hours.

D. I consent to the following to work alone on High-Risk activities with the stipulated restriction in C if checked:

D1. Postdoctoral/Visiting researchers

- All postdocs and visiting researchers in my laboratory:
- The following postdocs and visiting researchers in my laboratory:

_____	_____
_____	_____
_____	_____
_____	_____

D2. Graduate students

- All graduate students in my laboratory signed up for CHEM98698 or 98699 or 98700:

The following graduate students in my laboratory signed up for CHEM98698 or 98699 or 98700:

_____	_____
_____	_____
_____	_____
_____	_____

I have reviewed relevant safety protocols and risk mitigation strategies with each individual identified above who has been allowed to conduct these activities. For High-Risk, after-hours activities, I have also created specific SOPs that are kept on file in the Laboratory. I have also required my personnel to follow the general SOPs listed in **Section F** of the Working Alone Policy.

Signature of PI (Type in name as a digital signature)

Date

Researcher Consent Form for Working Alone on High-Risk Activities

*University of Notre Dame
Department of Chemistry & Biochemistry*

- I understand that I am not obligated to work alone on High-Risk activities.
- I understand the risks involved in working on High-Risk activities and those risks are increased when working alone where limited assistance exists in the case of an emergency.
- I will not work alone on High-Risk activities without first having reviewed appropriate safety protocols and risk mitigation strategies with my PI.
- I will always adhere to specific High-Risk SOPs.
- I understand that the Department's working alone policy on High-Risk activities requires that I enlist a second person to check in with periodically while conducting these activities.
- I understand that, in the event I sustain an injury in the laboratory outside of normal business hours, I am still eligible for Worker's Compensation care per the State of Indiana Worker's Compensation guidelines.
- I understand that if I have engaged in good faith efforts to perform my research responsibilities, I will be indemnified per University policy:
<https://treasury.nd.edu/risk-and-insurance-management/programs-and-resources/defense-and-indemnification-of-employees/>
- I have been informed of my laboratory's specific safety/working alone policies and will abide by these.
- I will always adhere to the following general SOPs but in particular when working alone:
 1. All required PPE and requisite attire will be worn (e.g., gloves, lab coat, safety glasses, closed-toe shoes).
 2. All efforts will be made to minimize the quantity of handled chemicals and materials.
 3. All attempts will be made to avoid working with highly toxic, corrosive, reactive, pyrophoric and/or explosive materials.
 4. All attempts will be made to avoid working with laboratory equipment presenting sizable risks for entanglement, amputation, electrocution, or other serious bodily harm.
 5. All efforts will be made to utilize appropriate risk mitigation equipment (e.g., conducting work in a hood, using the sash, using shields when needed) and strategies (e.g., avoid working in confined spaces).

Signature of Researcher (Type in name as a digital signature)

Date

Name of Principal Investigator

Email to Mary Prorok: mprorok@nd.edu

PI Working Alone task flow chart

Highlighted items PI responsibility

