

MEDICAL MICRODEVICE ENGINEERING RESEARCH LAB

DEPARTMENT OF CHEMICAL ENGINEERING AT MICHIGAN TECHNOLOGICAL UNIVERSITY

Biosafety Contract for μM.D. – ERL (updated 14 Jan 2026)

I, _____, as a student/faculty/staff worker in the Medical microDevice Engineering Research Laboratory (μM.D. - ERL), have participated in Biosafety Training on _____. I understand I must repeat this training each semester to continue working in μM.D.-ERL. I have discussed, understood, and will abide by the following essential safety practices:

- ____ 1) I agree not to eat, drink, chew gum/tobacco, rinse dishes/food in the lab sink, or handle contact lenses in the lab; I will only use mechanical pipetting devices and will not use my mouth; I will store food/drinks only in the student offices.
- ____ 2) I agree to wear long pants & closed-toed, full-foot shoes at all times in the lab. Upon entering the lab, I will wear proper personal protective equipment (PPE) (lab coat, safety glasses, gloves). I agree to tie back long hair to ensure it is not a contamination carrier concern.
- ____ 3) I know where the eyewash station and shower are located and how to use them. Dr. Minerick, with the help of Purity Angwenyi, will coordinate our lab's monthly testing and the university's annual inspections.
- ____ 4) In accordance with chemical safety, I will obtain SDSs for any chemical I order (use Chem. Stores and online database), date the SDS, place it in the lab's SDS folder, and add the label to the proper storage cabinet (verify with Natalia Krakhaleva). Before handling or using any existing chemical, I will consult the SDS for proper handling guidelines.
- ____ 5) I will dispose of chemicals in the proper hazardous waste container, which I will help keep clearly labeled with "HAZARDOUS WASTE," the Resource Conservation and Recovery Act (RCRA) # with contents, name(s), date, and will keep the container capped at all times. The satellite accumulation area for this waste is located next to the back chemical hood inside the plastic bin. Flammable waste is stored on the designated blue mat in the flammables cabinet.
- ____ 6) I will not handle broken glassware with my hands but instead use a broom & dustpan. I will place all sharps (slides, coverslips, glass pipettes, tips, capillary tubes, needles, etc.) in the biohazards sharps container. Date new sharps containers & dispose every 3 months with university pickups. NOTE: Precision tips are not needles and should not be discarded!
- ____ 7) I understand contaminated sharps, any biofluids, solutions of biofluids, or materials that have come in contact with a biofluid, and all material in the biohazard disposal bag must be decontaminated by autoclaving/chemically treating with fresh (<1 week old) 10% bleach solution for >20 minutes before disposal; follow the building's autoclave procedure & sign usage log. I agree to follow the lab's cleaning schedule organized by Natalia.
- ____ 8) I will immediately report any spills or accidents to the supervisor, Dr. Minerick, and am familiar with the posted contact information. (Office: 906-487-2796, Cell: 231-2012, minerick@mtu.edu). For small spills, I will wear full PPE plus protective gloves and use paper towels to clean up liquid. I will use the spill kit at the entrance for large spills. For all biohazard spills, I will use a fresh 10% bleach solution (or 70% ethanol for any metal surfaces) to disinfect the entire area, allowing for >20 minutes of contact time, then place all materials in a labeled biohazard bag for disposal. Sharps injuries will be kept confidential between the injured, Dr. Minerick, and Environmental Health and Safety (EHS). A separate log will be kept, and the injured should follow μM.D.-ERL's Exposure Control Plan.
- ____ 9) I will wash my hands before exiting the lab, after removing gloves, and before eating. Further, all computer keyboards/mice/instrument controls in the lab require the use of gloves. Pay attention so that contamination on the gloves is not transferred to doorknobs or other surfaces typically touched with a bare hand. Do not touch the hand-washing sink with gloved hands.
- ____ 10) I understand that gloves, a lab coat, and safety glasses must be worn at all times when handling any biofluid or equipment and that a facemask is available for centrifugation. Any researcher may request a respirator in place of the facemask. The centrifuge has sealed safety cups within which I will place my sample vial; when done, remove this entire cup & open it only in the Biosafety Cabinet (BSC).
- ____ 11) I understand that all blood/cell pipetting, blood/cell solution preparation, and other must be completed in the BSC (all other PPE still applies) following BSC usage procedures.

MEDICAL MICRODEVICE ENGINEERING RESEARCH LAB

DEPARTMENT OF CHEMICAL ENGINEERING AT MICHIGAN TECHNOLOGICAL UNIVERSITY

- _____ 12) When transporting biofluids to or from this lab, I will enclose the container in a leak-proof plastic bag and then inside a padded container that prevents leakage. I will store all biofluids in the refrigerator (blood, tears)/freezer (plasma), as appropriate.
- _____ 13) In accordance with IRB regulations, I will refer to blood and tear samples only by type and will not disclose the donor's identity.
- _____ 14) I will mark every chemical bottle with the date received and the day opened. I will label every vial or container with the contents, my name, & the date. Any biofluid contents require a '**biohazard**' sticker.
- _____ 15) I will not use the same pen with my gloves in the lab as I use outside the lab. Contaminated pens are provided in the laboratory and cannot be removed. I will not place pens behind my ear or in my mouth. I will place my lab notebook or portable computer in a decontaminated area and minimize contamination to it. Do not touch with gloved hands and wipe down with a towel soaked with 70% ethanol prior to exiting the lab.
- _____ 16) I understand that microscopes, their controls, & computers will only be operated with gloves. The microscope's stages are biohazard zones. Disinfection of all computers and microscopes must be performed using 70% ethanol (no bleach!) on a Kimwipe/towel (do not spray directly onto the computers or microscopes) to protect the equipment.
- _____ 17) I agree not to answer or handle my phone while on the lab side of the orange line. Gloves must be removed and hands washed before answering any calls or texting. I will not use earbuds; music may be played through speakers. Sandwich bags are available for you to hold your phone if using it in the lab.
- _____ 18) I have been taught by Dr. Minerick (or the video)within the last 8 months how to properly remove gloves (<https://youtu.be/Dux4wqySF50>) without contaminating my hands & will immediately place them in the biohazard disposal bin.
- _____ 19) I will use only the provided lab coats and **not exit the BL 2 labs wearing any PPE**. Use blue lab coats only to transport samples to other labs. Lab coats must be bleached before exiting the labs, after which they may be laundered. Coats are washed at the beginning of each semester (coordinated by Purity).
- _____ 20) I will decontaminate my work surface when I am done and will wipe off all work surfaces to decontaminate them **daily** and then sign the Decontamination Log located near the entrance. I will decontaminate equipment, the Biosafety Cabinet, and safety glasses with 70% ethanol and not bleach. Natalia will coordinate cleaning and Decon Day assignments, and I am responsible for completing the entire lab decontamination on my assigned day. Safety glasses must be decontaminated monthly. Anyone wearing contacts should place a red dot on the safety glasses. The fridge will be cleaned out at the beginning of each semester.
- _____ 21) I have begun/completed/declined the Hepatitis B shots. If I decline the HBV vaccine, I know I must provide a signed statement of declination (statement must be resubmitted each year so that any researcher feels comfortable to obtain the vaccine at any time). I have been advised to regularly request HIV tests and understand that this information remains confidential.
- _____ 22) I feel comfortable discussing any safety concerns with Dr. Minerick and will not hesitate to express concerns to her.
- _____ 23) I also agree to only allow visitors in the lab who have written or oral permission directly from Dr. Minerick and will ensure they abide by all BioSafety Level 2 practices. All visitors must sign the log. I understand this is for my safety and for the safety of my colleagues in the lab. For this reason, I will not allow my laboratory techniques to become negligent and endanger anyone's health.
- _____ 24) I have read/reread **Chemical Engineering's Safety Manual** on _____ (date < 9 months). I have completed OSHA's Bloodborne Pathogen Training Module and Canvas Quiz on _____ (date within the last 9 months) and will remain certified during the entire current semester.

The Environmental Health and Safety (EHS) website (**where Safety Data Sheets (SDS's), safety guidelines, and all other safety resources are available**) is <https://www.mtu.edu/ehs/> 906-487-2118.

Signature _____ Date _____ Supervisor (Adrienne Minerick) _____