Risk Assessment Form (3)

Must be completed before experimentation.

Student's Name(s) Izza Malik and Candace Arneaud

Title of Project WHICH PLANT, ASTER AMELLUS OR CAREX MORROWII, WILL BE ABLE TO ABSORB METALS FROM THE GROUNDWATER MOST EFFECTIVELY WHILE MAINTAINING ITS OWN HEALTH?

To be completed by the Student Researcher(s) in collaboration with Designated Supervisor/Qualified Scientist:
(All questions must be answered; additional page(s) may be attached.)

1. List all hazardous chemicals, activities, or devices that will be used; identify microorganisms exempt from pre-approval (see Potentially Hazardous Biological Agent rules).
   Bruker X1 Titan XRF (X-Ray Fluorescence Machine) Ag 10 ppm, As 100 ppm, Ba 50 ppm, Cd 50 ppm, Cr 100 ppm, Hg 20 ppm, Pb 100 ppm, Se 50 ppm

2. Identify and assess the risks involved in this project.
   - An X-Ray beam is emitted from the Bruker XRF while in use
   -Both solutions used with the Bruker are toxic, requiring proper personal protection equipment and safety training

3. Describe the safety precautions and procedures that will be used to reduce the risks.
   The XRF machine has a locked top cover which prevents the beam from leaving the device. Safety equipment such as gloves, aprons and protective eyewear are used during testing. (Proper procedures) are followed to minimize personal risk while testing.

4. Describe the disposal procedures that will be used (when applicable).
   - Pipette tips are ejected from the micropipette into the trash disposal, without contact
   - Following the experiment, contaminated soil/plant matter are disposed of in a sealed hazardous waste container. The container is properly disposed of by the facility.

5. List the source(s) of safety information.
   Manual for XRF available online at http://research.uga.edu/docs/units/safety/manuals/Chemical-Laboratory-Safety-Manual.pdf
   Laboratory created safety video available for viewing at https://www.youtube.com /user/safetytraining7/ featured

To be completed and signed by the Designated Supervisor (or Qualified Scientist, when applicable):
I agree with the risk assessment and safety precautions and procedures described above. I certify that I have reviewed the Research Plan/Project Summary and will provide direct supervision.

David Nadler	David Nadler	07/01/19
Designated Supervisor's Printed Name	Signature	Date of Review (mm/dd/yy)

Chair, NYIT	dnadler@nyit.edu
Position & Institution	Phone or email contact information

20 years of environmental health, research, and safety management experience

Experience/Training as relates to the student's area of research