

Kansas State University Laboratory/Research Hazard Assessment Worksheet

The Kansas State University Department of Environmental Health and Safety (EH&S) Research and Laboratory Safety Program commissions each campus laboratory or research location through the completion of a laboratory hazard assessment. All laboratories on campus must have a completed and updated hazard assessment on file with EH&S at all times.

Hazard assessments and laboratory signs provide information that aids workers, informs hazardous materials and emergency response, and facilitates emergency communication. Updated hazard information and signage are two of our most important research safety tools on campus.

For any questions, comments, or for assistance with completing this form, please contact EH&S at safety@ksu.edu or 785-532-5856. Thank you for your partnership and collaboration in campus-wide safety.

* Required

* This form will record your name, please fill your name.

Laboratory Information

1

Today's Date *

2

Building/ Location of Laboratories and Research *

3

Room(s) for Hazard Assessment

NOTE: Please only include rooms with the same hazards and operations. A separate worksheet should be completed for rooms with different hazards and operations. *

4

Department *

5

Department Head *

6

Principal Investigator Name *

7

Principal Investigator eID *

8

Laboratory Manager

9

Laboratory Manager eID

10

Laboratory Group Members

Department Safety Coordinator *

Laboratory Hazard Assessment

12

Please describe the laboratory goals and operations in lay terms. *

13

My laboratory is best described as: *

- Teaching Laboratory
- Research Laboratory
- Clinical/ Diagnostic Laboratory
- Other

14

Chemicals:

I conduct work with the following classes of hazardous chemicals: *

- Compressed gasses
- Flammables
- Pyrophorics
- Explosives
- Volatile anesthetic materials
- Reactive materials (i.e. flammable solids, spontaneously combustible, dangerous when wet)
- Oxidizers
- Organic peroxide-forming materials
- Highly toxic materials, select carcinogens, or reproductive toxins
- Corrosives
- Cryogenics
- Pesticides
- Strong acids and bases
- None of the above
- Other

15

Please list the location of your safety data sheets. *

16

Do you conduct work with DEA-controlled substances, prescriptions, or drug precursors? *

- Yes
- No

17

If yes, please list DEA-controlled substances, prescriptions, or drug precursors.

18

I use the following equipment in my laboratory operations: *

- Chemical fume hood(s)
- Perchloric acid fume hood(s)
- Hydrofluoric acid fume hood(s)
- Biosafety cabinet(s)
- 3D printer(s)
- Resin printer(s)
- Ultra low freezer(s)
- Autoclave(s)
- Glove box(es)
- Anaerobic chamber(s)
- Clean bench(es)
- Laminar flow hood(s)
- Other high-value equipment, engineering controls, or operations
- None of the above

19

Please indicate building and room locations for equipment used in Question 18.

If "Other high-value equipment, engineering controls, or operations" was indicated, please describe these items here.

20

The following safety equipment is available for my laboratory: *

- Fire Extinguisher
- Fire Blanket
- Eyewash Station
- Emergency Shower
- First Aid Kit
- Automatic External Defibrillator (AEDs)
- Chemical Spill Kit
- Biological Spill Kit
- None of the above
- Other

21

If "Other" safety equipment was indicated in question 20, please describe.

22

Please list any animals used in your research.

23

I ship, receive, or transport Dangerous Goods. *

- Chemicals
- Biologicals
- Radiologicals
- None of the above
- Other

24

I conduct work with nanoparticles. *

- Yes
- No

25

I conduct work with radiological materials, including: *

- Ionizing radiation producing equipment
- Non-ionizing radiation producing equipment
- Radioactive materials
- Sealed sources
- X-rays
- Irradiators
- Class 1 Lasers
- Class 2 Lasers
- Class 3 Lasers
- Class 4 Lasers
- Lasers of unknown class
- None of the above
- Other

26

If working with lasers, they are registered with Kansas State University.

- Yes
- No

27

If working with ionizing or non-ionizing radiation producing equipment, machines are registered with the Bureau of Radiation Control.

- Yes
- No

28

I conduct work with biological materials, including *

- Work with biological agents or materials, including recombinant or synthetic DNAmolecules/organisms
- Human pathogens
- Animal pathogens
- Plant pathogens
- Zoonotic pathogens
- Biological toxins or toxin-producing organisms
- Exotic or transgenic organisms
- Human or non-human primate cell lines or tissues
- Human blood or other potentially infectious materials (OPIM)
- None of the above

29

My laboratory is designated as the following biosafety level: *

- BSL-1
- BSL-2
- ABSL-1
- ABSL-2
- BSL-1P
- BSL-2P
- BSL-3P
- BSL-1Ag
- BSL-2Ag
- ACL-1
- ACL-2
- None of the above

30

Please list all biological hazards and pathogens used and/or stored in the space.

31

Please list any other materials you may work with (i.e. additive manufacturing materials, filaments, etc.).

32

I have the following active research protocols: *

- Institutional Biosafety Committee (IBC)
- Institutional Review Board (IRB)
- Laser Safety Committee (LSC)
- Radiation Safety Committee
- Institutional Animal Care and Use Committee (IACUC)
- Reactor Safeguards Committee
- None of the above
- Other

33

I have the following specific to my laboratory or department: *

- Laboratory specific procedures (SOPs) or work instructions
- Laboratory specific training
- Laboratory safety manual (separate from university EHS manual)
- Chemical Hygiene Plan (separate from university EHS plan)
- Incident and/or Near-Miss Reporting Form (separate from EHS website form)
- Bloodborne Pathogens Program and Exposure Control Plan
- Security Plan
- Emergency Response Plan / Emergency Action Plan (separate from university plan)
- None of the above
- Other

34

Please describe any other department-specific or laboratory-specific plans or procedures indicated in question 33.

35

Is respiratory protection used in any aspect of your operations or research? *

Yes

No

36

If yes, are you enrolled in the KSU EHS Respiratory Protection Program? *

Yes

No

37

Are you exposed to loud noises in any aspect of your operations or research? *

Yes

No

38

Please describe any work activities with noise exposure.

39

Is hearing protection used in any aspect of your operations or research? *

Yes

No

40

Do you have ergonomic concerns associated with your operations or research? *

Yes

No

41

Please describe any ergonomic concerns you have.

42

Please select any of the following work environment features that apply to your operations and research:

- Welding, brazing, soldering, or other types of "Hot Work"
- Confined Spaces
- Open trenches or excavations
- Off-campus work locations, including field work
- Inhalation hazards from chemicals, pathogens, particulates, or contaminants
- Compressed air use
- Agricultural equipment or machinery
- Scaffolding or elevated platforms
- Portable ladders
- Working at heights greater than 4 feet
- Forklift, walker-stacker, or other powered industrial truck
- Cranes, hoists, or slings
- Aerial lifts
- Work with equipment, including laboratory instruments with energized, unguarded electrical components operating at 50-600 V
- Work with high-energy equipment, including laboratory instruments, 600 V or greater
- Work requires the use of mechanical equipment, including instruments that have unguarded electrical motors, shafts, pulleys, and other rotating parts
- None of the above

43

Please list any other material, operation, or equipment hazards or considerations for your laboratory.

44

In addition to completing this form, please also ensure the following for the laboratory group: *

	Already Completed	Will Complete within 30 days	I would like assistance completing or more information	Not applicable
EHS Assistant Chemical Inventory is accurate and up-to-date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fume Hood EHS annual inspection is up-to-date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biosafety Cabinet annual certification is up-to-date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research compliance protocols are accurate and up-to-date (IACUC, IBC, IRB, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All required EHS training is completed and up-to-date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All EHS program requirements are met (annual fit testing for respirators, medical evaluations, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Laboratory PPE Assessment

A PPE Assessment is conducted to evaluate and control hazards by choosing appropriate Personal Protective Equipment (PPE). These PPE requirements will be communicated on the laboratory signage and all faculty, staff, students, and visitors to the laboratory must utilize indicated PPE at all times.

45

Please describe personal protective equipment (PPE) requirements for your laboratory and the hazards PPE is used to protect against. Please include all PPE types, including but not limited to eye protection, hand protection, foot protection, protective clothing, respiratory protection, hearing protection, and specialty PPE *

Laboratory Signage Information

Please complete the following questions. This information will be displayed on your laboratory sign. Once the completed form is returned to EHS, the information will be reviewed by EHS and you will be issued a laboratory sign. The laboratory sign must be printed in COLOR and posted on each entrance to your laboratory.

46

PI Name *

47

PI Office Location *

48

PI Work Phone *

49

PI 24 Hour Phone

Stored in emergency response file with KSU Police and EHS - not posted on sign unless requested *

50

Laboratory Manager or Alternate Contact Name *

51

Laboratory Manager/ Alt Contact Office Location *

52

Laboratory Manager/ Alt Contact Work Phone *

53

Laboratory Manager/ Alt Contact 24 Hour Phone
Stored in emergency response file with KSU Police and EHS - not posted on sign unless requested *

54

Department Safety Coordinator Name *

55

Department Safety Coordinator Office Location *

56

Department Safety Coordinator Work Phone *

57

Department Safety Coordinator 24 Hour Phone
Stored in emergency response file with KSU Police and EHS - not posted on sign unless requested *

58

Please provide name, campus office location, phone number, and 24 hour phone number for any other laboratory emergency contacts you may wish to include.

24 hour phone numbers are stored in emergency response file with KSU Police and EHS.

59

Please choose which access description best fits your laboratory. *

- Teaching Laboratory: Access only with Professor or TA approval
- Research Laboratory: Access only with prior PI or Laboratory Manager approval
- Research Laboratory; Access only with prior PI or Laboratory Manager approval **and escorted access**
- Research Laboratory: Access **does not require prior approval**
- Clinical/ Diagnostic: Access only with prior PI Laboratory Manager approval
- Other

60

Can emergency responders safely enter your laboratory in the event of an emergency? *

- Yes
- No

61

Describe any information first responders should know about your laboratory and hazards: *

62

Can KSU facilities enter your laboratory for building and systems maintenance and repairs? *

- Yes
- No

Describe any information KSU facilities should know about your laboratory and hazards. *

We have moved to the Globally Harmonized System (GHS) as recognized by OSHA and KDOL for Hazard Communication (OSHA 29 CFR 1910.1200). Please indicate which of the following pictograms represent hazards used or stored in your laboratory. (Note: These are noted on manufacturer shipped chemical containers and in Safety Data Sheets (SDSs)). *



Flame Over Circle (Oxidizer)



Gas Cylinder (Compressed Gas)



Corrosion (Corrosive)



Environment (Environmental Hazard)



Exclamation Mark



Exploding Bomb (Explosive)



Skull and Crossbones (Toxic)



Health Hazard



Flame (Flammable)

None of the above

65

Please indicate if either or both of the following warning pictograms apply to your laboratory: *



Cryogen Use



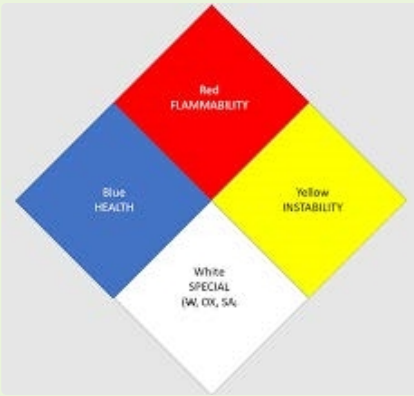
Loud Noise, hearing protection required

None of the above

66

The NFPA 704 Diamond is used to identify hazard types and severities during emergency response. The diamond addresses health, flammability, instability and special hazards for your laboratory storage and operations as a whole.

Please indicate the NFPA diamond information for each section of the diamond in the following questions.



67

Red (flammability hazard) *

- 0 - will not burn
- 1 - must be preheated to burn
- 2 - ignites when moderately heated
- 3 - ignites at ambient temperature
- 4 - flammable liquids, volatile liquids, pyrophoric materials

68

Yellow (instability hazard) *

- 0 - normally stable
- 1 - normally stable but becomes unstable if heated
- 2 - violent chemical change possible at elevated temperature and pressures
- 3 - capable of detonation or explosion
- 4 - readily capable of detonation or explosion

69

White (special hazard) *

- W - avoid use of water
- OX - oxidizer
- SA - simple asphyxiant
- None

70

Blue (health hazard) *

- 0 - minimal hazard
- 1 - slight hazard
- 2 - moderate hazard
- 3 - serious hazard
- 4 - severe hazard

71

Please note which biosafety level(s) should be reflected on your sign: *

- None
- BSL-1
- BSL-2
- ABSL-1
- ABSL-2
- ACL-1
- ACL-2
- BSL-1P
- BSL-2P
- ABSL-1Ag
- ABSL-2Ag
- Other

72

Please note which radiation safety and laser safety information should be reflected on your sign: *

- None - no active license or materials
- Active license with material storage or use
- Active license with no material storage or use
- No lasers present in laboratory
- Class 1 laser
- Class 2 laser
- Class 2M laser
- Class 3B laser
- Class 3R laser
- Class 4 laser

Any other special hazards or information you feel should be included on your laboratory sign:

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