

Laboratory safety symbols and hazard signs

Signs and symbols are figures representing specific instructions about what to do and what not to do or representing some specific material or situation ahead. They alert us about some potential hazards, instruct us to follow specific measures, or notify us of some specific object/situation/location.

A laboratory is an uncompromising place where rigorous rules and practice must be followed; otherwise, there is a chance of a deadly accident – with a potential threat not only to an individual but also to the whole surrounding environment. In a lab, there are several hazardous materials, equipment with a potential threat, several restricted areas with limited access, areas where strict measures must be followed, and specified areas for a specific task. These places must be indicated to ensure that every person understands the situation and/or permitted actions and work accordingly to maintain laboratory safety.

You will find several signs and symbols painted or attached in different areas of a lab. They may be different in labs with different facilities and activities performed; however, a sign/symbol always represents a specific instruction nevertheless the type/location of a lab.

Biological hazard symbols in the lab

These symbols represent biological substances that have the potential to negatively affect human health or the health of any living beings. The presence of pathogenic microorganisms, toxins, viruses, virulent proteins, body fluids, and body fluid-contaminated materials is indicated by the biohazard symbol.

Name of Symbol	Symbol	Indication
Biological Hazard	 <p style="text-align: center;">Biological Hazard</p>	Presence of Biohazardous materials
Biosafety Level 1	 <p style="text-align: center;">BSL-1</p>	Presence of biosafety level 1 (Risk Group 1) organisms. (Presence of organisms that usually don't cause disease in healthy adults but are capable of causing infections, have a minimum potential hazard to environment and laboratory personnel, and have effective treatment measures.)

<p>Biosafety Level 2</p>	 <p>BSL-2</p>	<p>Presence of biosafety level 2 (Risk Group 2) organisms. (Presence of organisms capable of causing mild infections, having moderate potential hazard to the environment and laboratory personnel, difficult to spread forming aerosol, and having effective treatment/preventive measures.)</p>
<p>Biosafety Level 3</p>	 <p>BSL-3</p>	<p>Presence of biosafety level 3 (Risk Group 3) organisms. (Presence of organisms capable of causing severe infections and spreading via aerosol. They have high individual risk and moderate community risk with some treatment and prevention measures available.)</p>
<p>Biosafety Level 4</p>	 <p>BSL-4</p>	<p>Presence of biosafety level 4 (Risk Group 4) organisms. (Presence of organisms having a high potential of causing serious infection to individuals and communities. They have a very high transmission rate and have no available treatment and preventive measures.)</p>
<p>Poison/Poisonous Materials</p>	 <p>Poison</p>	<p>Presence of toxic materials</p>
<p>Flammable Material</p>	 <p>Flammable Material</p>	<p>Presence of combustible materials (a substance that can easily burn)</p>
<p>Gloves Required</p>	 <p>Gloves Required</p>	<p>Must use protective gloves in this area/while working in this area</p>

Safety Glasses Required	 Safety Glasses Required	Must use protective/safety goggles in this area/while working in this area
Lab Coat Required	 Lab Coat Required	Must wear lab coat (apron) while in this area
Face/Safety Mask Required	 Face Mask Required	Must wear face/dust/safety masks
Fire Extinguisher	 Fire Extinguisher	The location where the fire extinguisher is placed
First Aid	 First Aid	The place with the first aid box and materials
Food and Drink Prohibited	 Food and Drink Prohibited	Not allowed to eat or drink anything in this area
No Open Shoes No Open Shoes	 No Open Shoes	Not allowed to wear open-toe shoes

Hot Surface		Risk of burning if you touch with naked hands
General Warning		Presence of possibly hazardous materials/environment
Health Hazard		Presence of chemical, physical, or biological factors with the potential to have a negative effect on our health

Advantages of Laboratory Safety Symbols

- Prevent accident.
- Notify personnel about potential hazards so that they can be prepared before becoming a victim of a preventable accident.
- Remind personnel about their duty and task.
- Indicate the location of specific materials and allow for their quick access.
- Notify the intended purpose of objects/areas.

General Laboratory Practices

- No Food or Drink.
- Wear Your PPE and Proper Lab Attire.
- Good Hygiene.
- Use Proper Storage Containers.
- Label Your Work Space.
- Don't Work Alone.
- Stay Focused and Aware of Your Surroundings.
- Participate in Safety Exercises.