

Guide to Basic Laboratory Safety Chemistry Department Saint Louis University



This guide has been prepared by the Department of Chemistry for the convenience of the students and faculty. It is intended to provide a general overview of the safety procedures and to help you understand the responsibilities of each person in the laboratory. It is not intended to be a substitute for the more detailed safety instructions given by your instructor. It is your responsibility to read and understand the safety instructions given to you and to follow them carefully. It is also your responsibility to report any accidents or incidents to your instructor immediately.

Rules to be followed without exception:

Eye protection is required in the laboratory. Safety glasses must be worn at all times. Contact lenses should not be worn in the laboratory. If you wear contact lenses, you must wear eye protection at all times.

Changing clothes requires good hygiene. Shower and change clothes after working in the laboratory.

Unauthorized persons are not allowed in the laboratory. Only authorized personnel are permitted in the laboratory.

CHEMICAL HAZARD INFORMATION

Before performing any experiment, you should know the following. Answers to the questions on the requirements of the hazard symbols associated with the chemicals are provided in the notes on the edge of the safety file. The safety data sheet is a concise and precise source of information concerning the properties of the chemicals you find in the laboratory, so use it for the purposes of information.

The Merck index and the Condensed Chemical Dictionary

provide information on the physical and chemical properties, occurrence and uses of the chemicals in the Periodic Table and in the Department of Chemistry RM.

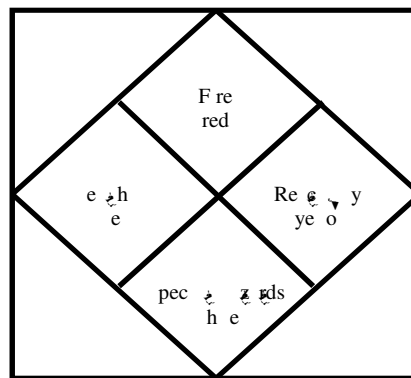
Merck Index and Merck Manuals

provide information on physical properties, occurrence, health effects, first aid, fire and disposal, and the appropriate procedures, precautions, and conditions of use. The MSDS (Material Safety Data Sheet) is a document that provides information on the hazards of a chemical, the physical and chemical properties, and the first aid procedures.

NFPA National Fire Protection Association symbols

The NFPA system defines the hazards of chemicals in terms of four categories: health, fire, reactivity, and specific hazards. The order of severity is indicated by the number of hazard diamonds. The order of severity is indicated by the number of hazard diamonds. The order of severity is indicated by the number of hazard diamonds.

Health
 Severity
 Order
 Specific
 Hazards



A more detailed description of the hazard symbols follows.

Health

Merck symbols for very short-term exposure to a substance or for residues in the environment.

Merck symbols for short-term exposure to a substance or residues in the environment.

Merck symbols for non-acute or chronic exposure to a substance or residues in the environment.

Merck symbols for exposure to a substance or residues in the environment.

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Fire (flammability)

Merck symbols for ready or easily vaporized substances that are highly flammable.

Liquids and solids have a definite shape and volume under most conditions.
 Molecules are held together by attractive forces. The energy per molecule is
 sufficient to overcome the attractive forces. The energy per molecule is
 sufficient to overcome the attractive forces. The energy per molecule is
 sufficient to overcome the attractive forces.

Reactivity (instability)

Molecules are held together by attractive forces. The energy per molecule is
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Earthquake

- Move against an error if necessary and cover the head with the soles of the feet. If possible, get under a sturdy table or desk. If there is no open space, crouch under a sturdy desk or table.

Other emergencies

- For other emergencies, when the danger is over, remain in place until you are told to do so. If you are in a room, stay there until you are told to leave. If you are outdoors, stay where you are until you are told to move.

As dden r se n e per e re of e q d e ng d s ed se v dence of deco pos on h ch y eco e
o en v ed e y re o e he e r persons ne e y nd q c y o e e y Do no re rn n yo
e cer n he e per e re h e e y dropped
Be e re of h e yo r ne gh ors e do ng s yo y e e c of he r e c den s Do no hes e o
e f y co en o ne gh or ho yo o ser e eng g ng n n ns e pr e ce or oper e on v f hey
con n e he ns e pr e ce e he ns r c or

