

SM Department














English Module

Miss, HIMRLS

L2 chemistry

### Lesson 04: Hazard symbols

- ❖ **Definition:** Hazard symbols or warning symbols are recognizable symbols designed to warn about hazardous or dangerous materials, locations, or objects, including electric currents, poisons, and radioactivity. The use of hazard symbols is often regulated by law and directed by standards organizations. Hazard symbols may appear with different colors, backgrounds, and borders in order to specify the type of hazard and the level of threat (for example, toxicity classes). Warning symbols are used in many places in lieu of or addition to written warnings as they are quickly recognized (faster than reading a written warning) and more commonly understood (the same symbol can be recognized as having the same meaning to speakers of different languages).
- ❖ **List of common symbols:**

Type of hazard	Unicode glyph	Unicode	Image
Generic caution		U+26A0	
Poison		U+2620	
Ionizing radiation		U+2622	
Radiation – high-level source			
Non-ionizing radiation			
Biological hazard		U+2623	
Carcinogen			
High voltage		U+26A1	

❖ **Generic warning symbols:**



On roadside warning signs, an exclamation mark is often used to draw attention to a generic warning of danger, hazards, and the unexpected. In Europe, this type of sign is used if there are no more-specific signs to denote a particular hazard. When used for traffic signs, it is accompanied by a supplementary sign describing the hazard, usually mounted under the exclamation mark.

This symbol has also been more widely adopted for generic use in many other contexts not associated with road traffic. It often appears on hazardous equipment or in instruction manuals to draw attention to a precaution, when a more-specific warning symbol is not available.

❖ **Poison symbol:**



The skull-and-crossbones symbol, consisting of a human skull and two bones crossed together behind the skull, is today generally used as a warning of danger of death, particularly in regard to poisonous substances.

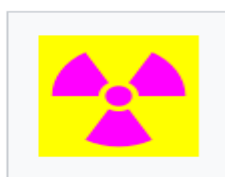
The symbol, or some variation thereof, specifically with the bones (or swords) below the skull, was also featured on the Jolly Roger, the traditional flag of European and American seagoing pirates.

❖ **Ionizing radiation symbol:**

The **international radiation symbol**: first appeared in 1946, at the laboratory. The sign is commonly referred to as a radioactivity warning sign, but it is actually a warning sign of ionizing radiation. Ionizing radiation is a much broader category than radioactivity alone, as many non-radioactive sources also emit potentially dangerous levels of ionizing radiation. This includes x-ray apparatus, radiotherapy linear accelerators, and particle accelerators. Non-ionizing radiation can also reach potentially dangerous levels, but this warning sign is different from the trefoil ionizing radiation warning symbol.



International  
ionizing radiation  
trefoil symbol



Yellow and  
magenta ionizing  
radiation trefoil  
used in the US



Early ionizing  
radiation symbol  
(1946)



ISO 21482 high-  
level sealed-  
source ionizing  
radiation symbol

### ❖ Biohazard symbol:

The **biohazard symbol** is used in the labeling of biological materials that carry a significant health risk (biohazards)



### ❖ Chemical symbols:

A **chemical hazard symbol** is a pictogram applied to containers of dangerous chemical compounds to indicate the specific hazard, and thus the required precautions. There are several systems of labels, depending on the purpose, such as on the container for end use, or on a vehicle during transportation.

