11- Providing adequate ventilation within warehouses ensures the safety of stored materials, taking into account the need to regularly review their industrial methods and operate them within the framework of their technical regulations.

12- If any flammable materials spill on your clothing or any part of your body, you must use a stream of water on the affected area, quickly remove contaminated clothing, and avoid areas with open flames to prevent the injury from worsening and reduce its severity.

13. Hydrochloric, nitric, and sulfuric acids are liquid chemicals with special properties, so these must be taken into consideration when storing and handling them.

14. When diluting the aforementioned acids, be careful to add them to water, not the other way around, to prevent explosions, which is one of the causes of fires in chemical laboratories.

15. It is prohibited to store hydrochloric acid next to nitric acid or any other strongly corrosive substances.

16. It is prohibited to store sulfuric acid with nitric acid or any other liquid chemicals that evaporate or contain oxidizing agents such as peroxide and its derivatives.

17. Using sand and soil to absorb spilled acids is the most appropriate method from a safety standpoint.

18. Treating spilled acids with copious amounts of water-saturated plaster or an alkaline substance is an appropriate method that must be followed.

19- Using a concentrated soda ash solution of 10% to 20% is one of the most suitable methods for cleaning floors from spilled acids.

20- Preventing Non-experts persons from entering the chemical warehouse and enforcing control over the chemical storage areas is extremely important.

21- Following instructions for receiving and delivery chemicals by documenting them in the appropriate records is extremely important. Combating loss and waste is extremely important.

22. Providing primary firefighting equipment and training on how to use it are mandatory safety precautions.

23. Avoiding falling glass containers.

24. Do not use the senses of touch, smell, or taste to identify chemicals.

25. Flammable materials should be stored in cool, dry places away from electrical sources or sparks.

26. The physical and chemical properties of the materials used in laboratory experiments must be known, as well as the properties of the materials resulting from reactions. Personal protective equipment, such as goggles, masks, and gloves, must be tested accordingly.

27. Chemical lab coats must be worn during experiments. Prohibiting loose clothing is important to prevent injuries or accidents in the laboratory.

28. The number of students in the laboratory must be proportional to the laboratory space, taking into account the space allocated to each individual.

29. Students must adhere to the teacher's instructions regarding the steps involved in conducting experiments.

30. The teacher must write safety instructions that students must follow while in the lab and ensure they are implemented.

31. The teacher must know the location of the gas control switch and ensure it is easily accessible, without obstructions preventing quick access to it. This prevents the flow of gas in an emergency.

32. White and yellow phosphorus must be stored below the surface of the water to prevent spontaneous ignition, as they ignite upon exposure to air.

33. Nitrates must be stored in a separate, cool place away from organic or flammable materials.

34. Potassium, sodium, and aluminum powder must be stored in tightly sealed containers that do not allow water to penetrate, as they react with water, which increases the temperature and releases flammable gases.

35. Perorganic oxides must be stored in a dark place at a temperature not exceeding 24°C. Lighting a fire or smoking in the area is prohibited.

36- When storing sodium chlorite, it must be stored in a dry place at room temperature (around 15°C). The substance must not come into contact with any acids or flammable materials such as wood, straw, textiles, fatty materials, or oils, as it is a strong oxidizer.

37- It must not be extinguished with water. Water can only be used to cool the outside of the container and containers near the burning container.

38- If the substance is exposed to strong acids, chlorine dioxide gas is released. This gas is highly toxic and causes corrosion of metals and may lead to explosions due to its flammability if its concentration increases in the atmosphere. Therefore, it should be stored away from acids.

39- If any part of the body is exposed to chemicals, wash thoroughly with water and refer the patient to a physician for immediate first aid.

40- When preparing a sodium peroxide solution, add the peroxide to the water while stirring, not the other way around.

41- Ammonium persulfate should be stored away from reducing agents, mineral acids, or flammable materials. Care should be taken not to expose it to materials that stimulate decomposition such as iron, copper, lead, etc. The substance or its solutions should not come into contact with the skin or eyes, as they cause severe chemical and thermal burns. Protective equipment such as goggles and gloves should be worn. If the body or clothing is exposed to it, wash it well with plenty of water.

42- Sodium chlorate must be stored away from other flammable, reducing, or ammonium salts and must not be exposed to high temperatures.

43- Sodium chlorate must not be exposed to any mineral acids, reducing agents, or flammable materials during handling, use, or transport. When preparing chlorate solutions, use cold water and never hot water to avoid explosions.

44- Chromic acid must be stored away from alkaline, reducing agents, or flammable materials. Due to its acidic and oxidizing properties, personal protective

precautions must be observed. It is also toxic and corrosive to the skin, and contact with the respiratory or gastrointestinal tract can cause severe irritation.

Here are some examples of workplace chemical hazards:

1. **Solvents**: Chemicals used for cleaning or degreasing that can cause respiratory issues or skin irritation.
2. **Pesticides**: Chemicals used in agriculture that can be toxic to humans if inhaled or absorbed through the skin.
3. **Heavy Metals**: Substances like lead, mercury, or cadmium that can cause serious health problems, including neurological damage.
4. **Acids and Bases**: Strong acids (like sulfuric acid) or bases (like sodium hydroxide) that can cause burns or respiratory issues if inhaled.
5. **Fumes and Vapors**: Emissions from processes like welding or painting that can be harmful if inhaled.
6. **Dust**: Fine particles from materials such as silica or asbestos that can lead to respiratory diseases.
7. **Chemical Reactions**: Situations where chemicals interact to produce toxic gases or heat.
8. **Biological Hazards**: Chemicals produced by living organisms, such as mold or bacteria, which can pose health risks.
9. **Formaldehyde**: A chemical used in various industrial processes that can cause irritation and long-term health effects.

Chemical Burns

Chemical substances cause burns to the human body as a result of direct contact, not as a result of heat. These substances may take one of the following forms:

1- Acids: sulfuric acid, chloric acid, nitric acid, glacial acetic acid, etc.

2- Alkalis: caustic soda, potassium hydroxide, ammonia, lime, and ammonia.