

[Examples of accidents]

- During disposal of metallic sodium, the material came into contact with water and ignited. Hazardous materials, etc. caught fire, which spread.

6. Use of toxic substances specified in the Sewerage Act

Wastewater generated by Kumamoto University is disposed of in accordance with the Sewerage Act (the Water Pollution Control Act for part of wastewater) and the Kumamoto Prefectural Ordinance on Conservation of Groundwater. Chemical substances adhering to apparatuses used in experiments cannot be drained directly into a laboratory sink.

A water aspirator must not be used for these substances. When a circulating aspirator is used, make sure to dispose of water in the storage tank as experiment waste liquids. (Refer to Reference Material 4 at the end of this document.) Failure to do so may result in exceedance of the standard of the Sewerage Act.

○ Toxic substances regulated by the Sewerage Act

Cadmium and its compounds, cyanides, organophosphorus compounds, lead and its compounds, hexavalent chromium and its compounds, arsenic and its compounds, mercury and alkyl mercury and other mercury compounds, polychlorinated biphenyls, trichloroethylene, tetrachloroethylene, dichloromethane, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,3-dichloropropene, thiuram, simazine, thiobencarb, benzene, selenium and its compounds, boron and its compounds, fluorine and its compounds, 1,4-dioxane, dioxins, ammonia, ammonium compounds, nitrous acid compounds, and nitric acid compounds

[Examples of accidents]

- A dichloromethane solution was depressurized using a water aspirator. Dichloromethane was discharged into sewerage together with the water.

7. Use of high pressure gases

Understand the types and characteristics of high pressure gases, and handle the gases safely. Notably, avoid impacting containers, and open the valves, etc. slowly. If it is difficult to open or close a container, it may be corroded inside. Do not open or close such a container forcibly. When a container is being used or connected to devices, etc., check for gas leakage as appropriate. After use, close the valve to prevent damage caused by leakage from spreading in the event of an earthquake, fire, etc.

The installation deadline for rental containers (high pressure gas cylinders) is one year from the date of delivery in principle in accordance with the Kumamoto Prefectural Guidelines for Proper Management of High Pressure Gases and Article 8, Item (3) of the Guidelines. Check the return deadline on the empty/full cards hung on cylinders. Return cylinders within one year even if there is remaining gas. However, if a high pressure gas vendor that leases containers confirms safety and gives permission for continued installation, the period can be extended by one year. (For details, refer to "Procedure to extend the installation period of rental containers (high pressure gas cylinders)" in "Manuals/Materials" of YAKUMO.)