

[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.)

Article 8 of the Guidelines (Use of High Pressure Gases)

When using or handling a high pressure gas, the Chemical Substance Handlers shall fulfill the following requirements.

- (1) Handle high pressure gases while giving sufficient consideration to the hazards, including toxicity, combustion-supporting properties, and explosivity.
- (2) Return used-up high pressure gas containers (excluding self-owned containers) to the vendor immediately.
- (3) Do not keep containers with remaining gas (excluding bulk containers) for more than one year after their installation in principle; provided, however, that such containers may be kept for another year from the date of inspection if safety is confirmed based on an inspection by the high pressure gas vendor and the inspection sheet is reported to the President.

8. Action to take when chemical substance is used up

When a chemical substance is used up, request the Environmental Safety Center to register used-up. Used-up registration can be requested by the three methods below.

- (1) When a poisonous or deleterious substance or explosives' raw material is used, or an organic solvent or specified chemical substance is used in an area without local exhaust ventilation (e.g., a fume hood)

Check that the use record is indicated on the Safety Data Sheet distributed when the chemical substance was delivered. Attach a YAKUMO label sticker to the sheet, and send the sheet to the Environmental Safety Center by campus mail.

Chemical Substance Safety Data Sheet

発行日: Date of Issue 2015-00-00

グループ名: Group Name
環境安全センター Chief of the Environmental Safety Center

保管番号: y47001 ABC

CAS No.: 67-56-1

化学物質名: メタノール Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol

製品名: メチルアルコール Methanol

メーカー名: 和光純薬 容量: 500 容量単位: mL

危険性・安全性情報

(GHS)

〈法規制情報〉

危険性: 消防法危険物第4類アルコール類
健康有害性: 劇物有毒物
環境有害性: なし

〈管理者からのコメント〉

使用済みを必ずつけて下さい。管理者からのコメントの記入欄です。管理者からのコメントの記入欄です。管理者からのコメントの記入欄です。

使用済	使用日	使用量	残量	備考

※毒物及び劇物は必ず付けて下さい。

〈バーコードとデータシートの管理〉

化学物質を使い切った後は、バーコードとデータシートを環境安全センターに返却して下さい。

使用済みを登録した場合は、チェックを入れて下さい。

- (2) Chemical substances other than (1) above

Download a “used-up registration request sheet” from YAKUMO,* attach a YAKUMO label sticker to the sheet, and send the sheet to the Environmental Safety Center by campus mail. If a barcode (e.g., a former YAKUMO barcode) cannot be pasted, indicate the YAKUMO storage number and the name of the chemical, etc. (to prevent mistakes in copying the YAKUMO ID). Up to 10 labels can be attached or indicated on a single used-up registration request sheet. It is recommended not to accumulate used-up items for a long period. Send a sheet to the Environmental Safety Center at an interval of one week or so by campus mail.