

4. Use of specified chemical substances

Specified chemical substances are likely to cause health impairment. Their handling is regulated by the Industrial Safety and Health Act and the Ordinance on Prevention of Dangers Due to Specified Chemical Substances. Specified chemical substances are classified based on their hazards (Type 1 to Type 3).

Type 1 substances: of substances that cause chronic damage, those that are highly toxic in particular and require specially rigorous management in the manufacturing process and permission for manufacture

Type 2 substances: of substances that cause chronic damage, those that do not fall under Type 1 substances

[1] Specified Type 2 substances: of Type 2 substances, those that require caution against leakage in particular

[2] Special organic solvents, etc.: substances that have been found to have potential carcinogenicity, have the same effects as organic solvents, and may cause poisoning due to the abovementioned properties

[3] Auramine, etc.: substances that may develop tumors, such as cancer in urinary tract organs

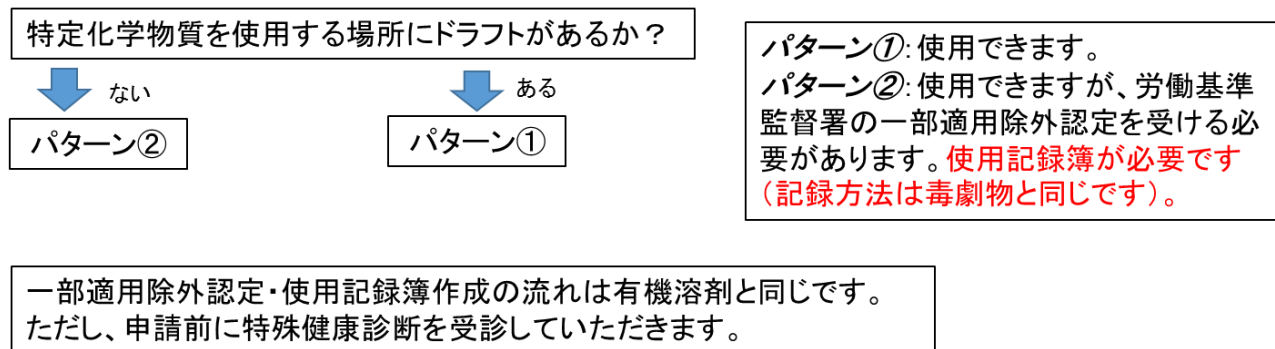
[4] Type 2 substances subject to management: substances other than [1] to [3]

Type 3 substances: substances that cause acute poisoning in the event of leakage in a large quantity

These substances cause or may cause health damage and must be handled carefully in particular. In some cases, health damage was caused by absorption of vapors from the skin. It is necessary to wear protective equipment and avoid skin exposure even in small areas (e.g., ankles).

(1) Restriction on the usage area

As in the case of organic solvents, specified chemical substances must be used in areas where local exhaust ventilation, etc. (e.g., a fume hood) is in place in principle due to their toxicity. To use specified chemical substances in areas without a fume hood, etc. for unavoidable reasons, it is necessary to obtain accreditation for partial exemption. Check the flow below.



(2) Specially controlled substances

Of Type 1 and Type 2 substances of the specified chemical substances, carcinogens or suspected carcinogens are designated as “specially controlled substances.” To check whether chemical substances you use fall under the specially controlled substances, refer to the list of specified chemical substances that is displayed in the usage area. If such list is not displayed, the document is available on the YAKUMO website. Print and display the document for confirmation. Also check for “Special” indicated on barcode labels issued by YAKUMO.

(2)-2 Work record

Specially controlled substances are chemical substances whose toxicity is high (carcinogenic in particular). When they are used regularly, a work record must be kept to monitor health damage that may be caused in the future. This is stipulated in Article 9 of the Guidelines. If the Environmental Safety Center gives a notification that the chemical substance is a specially controlled substance, keep the record in the designated form below and submit it each month by the 10th day of the following month. The record must be kept on file for 30 years. Keep the record properly. If the chemical substance is a specially controlled substance, make sure to report to the Environmental Safety Center, even in a month in which the chemical substance is not used, about the status.

様式と記入例

(平成 27年度 対象物質名)
フクロホルム

記録の方法は電子ファイルでも紙でもかまいません。
記入欄が小さい時は必要に応じて大きさを調整してかまいません。

特別管理物質の使用記録簿 ■居室と実験室が同じ部屋

① 使用期間	② 使用者名	③ 濃度 (%)	④ 平均使用量 (1日あたり)	取扱温度	操作手法	化学物質管理責任者	熊本太郎	
6/1~6/30 土日祝除く	木下 八雲 熊大 太郎	100	1L	<input checked="" type="checkbox"/> 常温 <input type="checkbox"/> 加温 (°C)	濃縮	平均使用時間 (1日あたり) 1分	換気状況 <input type="checkbox"/> ドラフトチャンパー内 <input checked="" type="checkbox"/> 換気扇稼働 <input type="checkbox"/> 窓+ドア開放 <input type="checkbox"/> その他 ()	保護具 <input checked="" type="checkbox"/> 白衣 <input checked="" type="checkbox"/> 手袋 <input checked="" type="checkbox"/> 眼鏡 <input type="checkbox"/> その他 ()
6/20,25	夏目 治五郎	10	500mL	<input checked="" type="checkbox"/> 常温 <input type="checkbox"/> 加温 (°C)	試料調製	20分	<input type="checkbox"/> ドラフトチャンパー内 <input checked="" type="checkbox"/> 換気扇稼働 <input type="checkbox"/> 窓+ドア開放 <input type="checkbox"/> その他 ()	<input checked="" type="checkbox"/> 白衣 <input checked="" type="checkbox"/> 手袋 <input checked="" type="checkbox"/> 眼鏡 <input type="checkbox"/> その他 ()

※操作方法毎に記載すること。

①使用期間
毎日使用した場合は全期間。特定の日の場合のみは全て列挙。

②使用者名
使用者の氏名。基本的には1名。ただし、全く同じ使用状況である場合のみ複数名記入可能。

③濃度 (%)
使用した薬品の濃度 (重量%)。

④平均使用量
使用した日の1日あたりの薬品使用量。(単位自由)

特別管理物質 有 無
※有の場合はその

※この記録は、宛先が不明な場合は、宛先を記入してください。
※この記録は、毎

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Fig. 5-5 Work record form for specially controlled substances (example of how to fill out the form)

(3) Substances that require the use of protective clothes, etc.

Some of the specified chemical substances are designated as “substances that require the use of protective clothes, etc.” that may cause health impairment due to percutaneous absorption. When substances that require the use of protective clothes, etc. are used or an experiment, etc. is conducted in the vicinity and there is a risk of percutaneous absorption, use impermeable protective clothes, protective gloves, and protective boots. Substances that require the use of protective clothes, etc. can be checked on the Safety Data Sheets issued when chemical substances are purchased.

危険性・有害性情報 Danger & Hazard Information

(GHS)

〈法規制情報〉 Regulation Information

消防法： 危4ア-0-II
毒劇物取締法： 劇物III
労働安全衛生法： 特2/労57-2

〈管理者からのコメント〉 Manager comments

法令で保護衣等の着用が義務づけられています。

特定化学物

法規制情報はメーカーからいただいた情報を記載しております。間違いにお気づきの際はお手数ですがご連絡ください(内線3234)。
Regulation information lists information received from the manufacturer, etc. Please contact ext. 3234 if you find any errors, etc.

Fig. 5-6 Example of a Safety Data Sheet

Table 5-1 List of substances that require the use of protective clothes, etc.

Type 1 substances (specified chemical substances)		
Dichlorobenzidine and its salts	Chlorinated biphenyl (also known as PCB)	O-tolidine and its salts
Beryllium and its compounds	Benzotrichloride	
Type 2 substances (specified chemical substance)		
Acrylamide	Acrylonitrile	Alkyl mercury compounds (limited to those whose alkyl group is a methyl group or ethyl group)
Ethyleneimine	Ortho-toluidine	Chloroform
Potassium cyanide	Hydrogen cyanide	Sodium cyanide
Carbon tetrachloride	1,4-dioxane	3,3'-dichloro-4,4'-diaminodiphenylmethane
Dichloromethane	Dimethyl-2,2-dichlorovinyl phosphate	1,1-dimethylhydrazine
Methyl bromide	Mercury and its inorganic compounds (excluding mercury sulfide)	Styrene
1,1,2,2-tetrachloroethane	Tetrachloroethylene	Tolylene diisocyanate
Naphthalene	Nitroglycol	Para-nitrochlorobenzene
Hydrogen fluoride	Benzene	Pentachlorophenol
Cyclopentadienyltricarbonyl manganese	2-methylcyclopentadienyl manganese tricarbonyl	Methyl iodide
Dimethyl sulfate		

As of August 2017

5. Use of hazardous materials

The hazardous materials specified in the Fire Service Act are chemical substances that may cause fire and explosion. The handling is completely different depending on the type of hazardous materials. Fire extinguishing methods are also completely different. When handling hazardous materials, prepare a fire extinguisher, fire extinguishing sand, water, etc. appropriate for these materials.

[Precautions when handling hazardous materials]

1. Understand the properties of the hazardous materials to be handled
2. Do not use fire
3. Check the position of a fire extinguisher and fire extinguishing sand in preparation for ignition or inflammation
4. Do not place combustibles near hazardous materials in preparation for ignition or inflammation

Hazardous materials are chemical substances whose fire hazards are high. Their handling is regulated by the Fire Service Act. The storage quantity is also limited by the Fire Service Act. This requires precautions. Hazardous materials are classified into six types in the Fire Service Act. Their handling is completely different depending on the type. The fire extinguishing method is also completely different, as shown in Table 2 of Reference Material 3 at the end of this document. Prepare a fire extinguisher, fire extinguishing sand, water, etc. appropriate for the hazardous materials to be handled. There are some chemical substances whose hazards increase by mixing with different types of hazardous materials, as shown in Table 4-1. Table 3 of Reference Material 3 at the end of this document shows the combinations chemical substances that pose hazards of explosion when mixed. In addition to these combinations, there are many chemical substances that pose hazards. Check and handle chemical substances carefully when mixing them.