Safety Manual

東京大学大学院新領域創成科学研究科

Graduate School of Frontier Sciences,

The University of Tokyo

事故・火災・事件が起きたら

落ち着いて
３つの手順を
クリアせよ！

IN CASE OF ACCIDENT, FIRE or INCIDENT

①助けを呼ぶ 周囲に 知らせる

Alert Others

大声で知らせる

火災の場合火災報知機を鳴らす

Shout out loud to others, press the fire alarm button in case of fire

CLEAR!

②緊急車両を手配する

Call Emergency

消防・救急
Fire/Medical
０－１１９

警 察
Police
０－１１０

CLEAR!

③キャンパス内に連絡する

Call Security Office

守衛所
Security Office
内線１１９

内線63010

CLEAR!

柏地区環境安全管理室 内線 ６３５８６・６３５８５

※ Please report your supervisor or boss.

About This Manual

Content

This manual summarizes the minimum safety protocol that must be followed by members of the Kashiwa Campus community. Detailed safety procedures and requirements are set by each division, so be sure to participate in the safety seminars hosted by your division.

Purpose

This manual was created to outline the safety practices and responsibilities that need to be discharged by all Kashiwa Campus members—faculty, administrative staff, and students—in order to ensure that all educational and research activities are carried out safely and properly through compliance with the Industrial Safety and Health Act, the Fire Services Act, the Poisonous and Deleterious Substances Control Act, ionizing radiation-related laws, and other pertinent regulations. The aim of this endeavor is to maintain the health and welfare of everyone at the Kashiwa Campus by preventing accidents, fires, and other hazardous situations. Those in supervisory positions are especially urged to familiarize themselves with the information contained herein.

Contents

This manual is based on a guide compiled by Kashiwa Campus Environment, Health and Safety Office, and was modified for use at the Graduate School of Frontier Sciences. Further helpful information on safety management is posted on the office's website, so please periodically check the following page for details:
http://www.kashiwa.u-tokyo.ac.jp/kyoutsujimu/bunyabetsu/anzen/anzeneisei/anzen_anzeneisei.html

The following issues are available on on-line manual at the website of above.

- Laboratory Safety: Regulations on Carrying Hazardous Materials on Public Transportation
- Health and Safety When Abroad
- Laboratory Safety: Management of Hazardous Materials
- Confirming Qualifications for Hazardous Operations
- Guideline of Support for Qualification and Training Session
- Confirmation letter for succeeding / Confirmation letter for carry-on

Environment, Health, & Safety Office, GSFS

Environment and Safety Education

·The purpose of safety education is to enlighten campus members on the hazards inherent in their research work and other activities so that they can take steps to protect themselves and prevent accidents.

·Safety education shall be provided to all campus members (including students) when they join the campus community and when they begin new activities or assignments. The Environment, Health, & Safety Office shall regularly conduct seminars and other forms of training to serve that need.

·Fire drills shall be held at every building, in accordance with the fire response plan. All building residents and members of the building's firefighting team must actively participate in the drills and acquire a full understanding of the actions to be taken during a fire.

·Employees and students who use ionizing radiation (X-rays) or radioactive materials (radioisotopes: RI) must comply with the radiation safety rules of their department and participate in the specified training seminars.

<Schedule of Safety Education>

Title of Seminars	Time of year
All the students must receive one of these safety educations. ※1	
Safety occupational education organized by Kashiwa campus EHS office	April
Safety education provided during new student orientation	April, October
Safety education(English ver.) provided during foreign student orientation	April, October
Non-laboratory Safety Seminar	May (Hongo)
Laboratory/non-laboratory Safety Seminar	May (Kashiwa)
Seminars mandatory for those engaging in certain tasks	
Environmental Safety Seminar	Several times during year (Hongo)
	November (Hongo, in English)
	May, November (Kashiwa)
Cryogen Safety Seminar	Twice in April, once each in June and October
High-pressure Gas Safety Seminar	Once each in May, July, and November
Training Course for Radiation Handlers (first-time and refresher)	Several times during both semesters (Hongo)
Crane Operation Seminar	Approx. once every three years (Kashiwa)
Special Crane Operation Seminar	
Seminars taken as needed	
Seminars on operation of lasers, centrifuges, autoclaves, and fume hoods	July (Kashiwa, Hongo, etc.)
Chemical & UTCRIS Seminar	June, November (Kashiwa, Hongo, etc.)
Seminars on GMOs, etc.	May, June, November (Hongo), April (Kashiwa)

※1 Safety Education

All faculty members, such as fixed-term part-time staff, temporary staff, shared-use researchers, coordinated research program researchers and students of GSFS and those who participate in the education and research activities of GSFS will be subject to any of the environment and safety education.

Safety occupational education organized by Kashiwa campus EHS Office

It is organized by the Kashiwa campus EHS office every April (in Japanese). The target audience of this education is not only the GSFS members but also all members working at the Kashiwa campus.

It will be announced by a mass e-mail for Kashiwa campus members.

Safety education organized by GSFS

If you cannot attend the safety occupational education organized by Kashiwa campus EHS Office, you need to attend one of the followings.

○Safety education by each department

This education is held at the time of the new student orientation in April and October (in Japanese) organized by each department When faculty and staff attend it, please consult an EHS committee member of your department.

○Safety education for international students

This education is held in English at the time of the guidance for new international students in April and October. It is organized by Student Affairs Section GSFS and International Liaison Office GSFS.

○Safety education organized by each laboratory/section

It is organized by your laboratory/section, which based on the contents of this safety manual and also added local rules regarding your laboratory/section. It needs to be given by professor, associate professor, lecturer, or assistant professor.

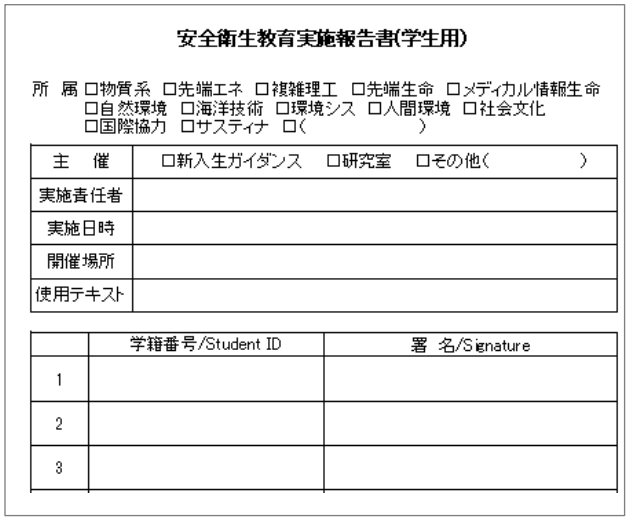
◆Report form of safety education

Submission of the Report form of safety education to EHS Office GSFS is required at any education mentioned above. The report form needs to be prepared by its organizer and submitted to EHS Office GSFS (Mail box: 002 Bioscience bldg..) in two weeks with signs of all attendances.

Tentative step for not-attended person for safety education

If the one cannot attend any safety education above, it is approved for the academic year by submission of the Commitment form after reading this safety manual (latest ver.) as a tentative step. However, attendance of any safety education in the next year is required.

∇ Report form of safety education



安全衛生教育実施報告書(学生用)

所 属 □物質系 □先端エネ □複雑理工 □先端生命 □メディカル情報生命
□自然環境 □海洋技術 □環境シス □人間環境 □社会文化
□国際協力 □サスティナ □(　　)

主　催	□新入生ガイダンス　□研究室　□その他(　　)
実施責任者	
実施日時	
開催場所	
使用テキスト	

	学籍番号/Student ID	署 名/Signature
1		
2		
3		

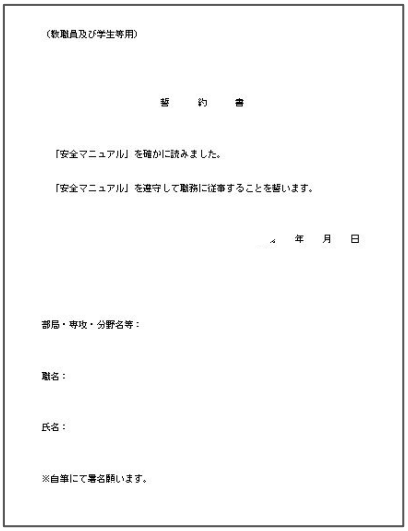
安全衛生教育実施報告書(教職員用)

所 属 □物質系 □先端エネ □複雑理工 □先端生命 □メディカル情報生命
□自然環境 □海洋技術 □環境シス □人間環境 □社会文化
□国際協力 □サスティナ □(　　)

主　催	□新入生ガイダンス　□研究室　□その他(　　)
実施責任者	
実施日時	
開催場所	
使用テキスト	

	身分/Job title	署 名/Signature
1		
2		
3		

∇ Commitment form



(教職員及び学生等用)

誓　約　書

「安全マニュアル」を確かに読みました。

「安全マニュアル」を遵守して職務に従事することを誓います。

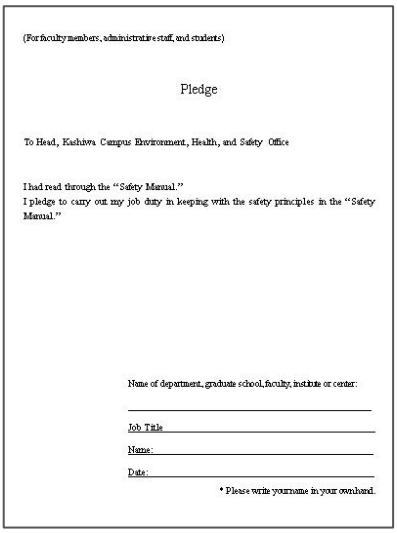
年　月　日

部局・専攻・分野名等：

職名：

氏名：

※自筆にて署名願います。



(For faculty members, administrative staff, and students)

Pledge

To Head, Kashiwa Campus Environment, Health, and Safety Office

I had read through the "Safety Manual."
I pledge to carry out my job duty in keeping with the safety principles in the "Safety Manual."

Name of department, graduate school, faculty, institute or center:

Job Title

Name:

Date:

* Please write your name in your own hand.

Safety Card

We distribute Safety cards to all members of GSFS that summarize emergency contacts in case of a disaster. On the Kashiwa campus, the safety card also helps confirm the holder's safety at the time of a disaster such as a large earthquake. For this reason, please be sure to fill in the necessary information on the safety card and carry it with you at all times. If you do not have a safety card, please ask your department's office or EHS office (Extension 63722).

Those who are assigned GSFS

EHS Office individually visits the office of newly assigned professors, associate professors, lecturers, and assistant professors (not researchers) to GSFS to explain environment and safety matters. When you are assigned to GSFS, please immediately contact us.

Responding to Emergencies

Basic Response Flow

Responding to Earthquakes

Initial Response

- ○ Ensure personal safety.
- ○ Extinguish flame sources.
- ○ Make sure evacuation route is accessible.

If necessary, cancel classes, experiments, meetings, etc.

↓

Emergency Response

- ○ Assist injured people.
- ○ Extinguish fires and leaks of hazardous materials.
- ○ Report situation to administrative staff of your department. If necessary, request assistance.

↓

Evacuation/Confirming Safety

- ○ Move to the local evacuation area.
- ○ Confirm safety of all members of your laboratory.
- ○ Report situation to administrative staff of your department.

Emergency safety check after earthquake with seismic intensity of 6 or more

The purpose of this check is to prevent injury or loss of life from a secondary collapse caused by the collapse of buildings and falling objects such as outer walls and glass in the event of an aftershock. An emergency risk judge quickly evaluates the safety of damaged buildings and determines whether a building can or should be entered using three color judgment stickers.

Danger(Red) Caution（Yellow） OK（Green）

Responding to Fires

Initial Response

- ○ Ensure personal safety.
- ○ When discovering a fire, first loudly alert others nearby.

Emergency Response

- ○ Press fire alarm button (this will sound the bell and activate the hydrant pump).
- ○ If from 9 a.m. to 5 p.m., call the administrative office of your department.
  After 5 p.m., call Security Office (ext. 63010). If no one answers,
  directly contact the fire department by dialing 0-119.

Evacuation/Confirming Safety

- ○ Try to put out fire with a fire extinguisher or hydrant, without exposing yourself to danger.
- ○ Evacuate via safest route.

Responding to Injuries

Initial Response

- ○ Summon help from others nearby.
- ○ Give injured people first aid if possible.

Emergency Response

- ○ Call emergency services and go to hospital.

【On Campus】

・Kashiwa Health Service Center: ext. 63040
Weekdays 9:00am～5:00pm

【Off Campus】

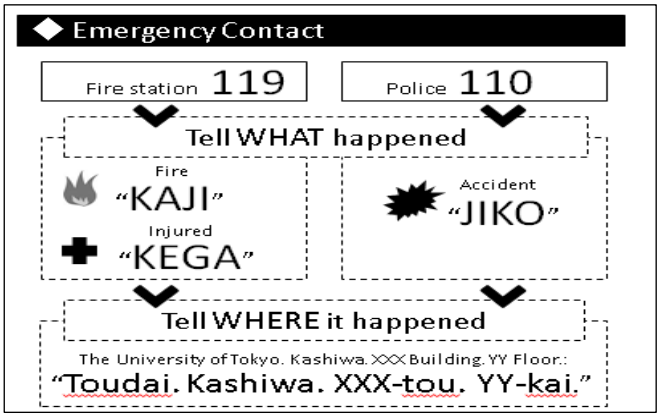
・Kashiwa Kousei General Hospital: 04-7145-1111
* Someone needs to go with the injured person to hospital

If needed, Telephone for a Taxi. Tel. No. - -

Transdisciplinary Sciences Bldg.

http://www.hc.u-tokyo.ac.jp/quide/kashiwa/

○ If needed, call an ambulance (0-119)
↳ Call Security Office (ext. 63010) to provide location instructions ambulance.



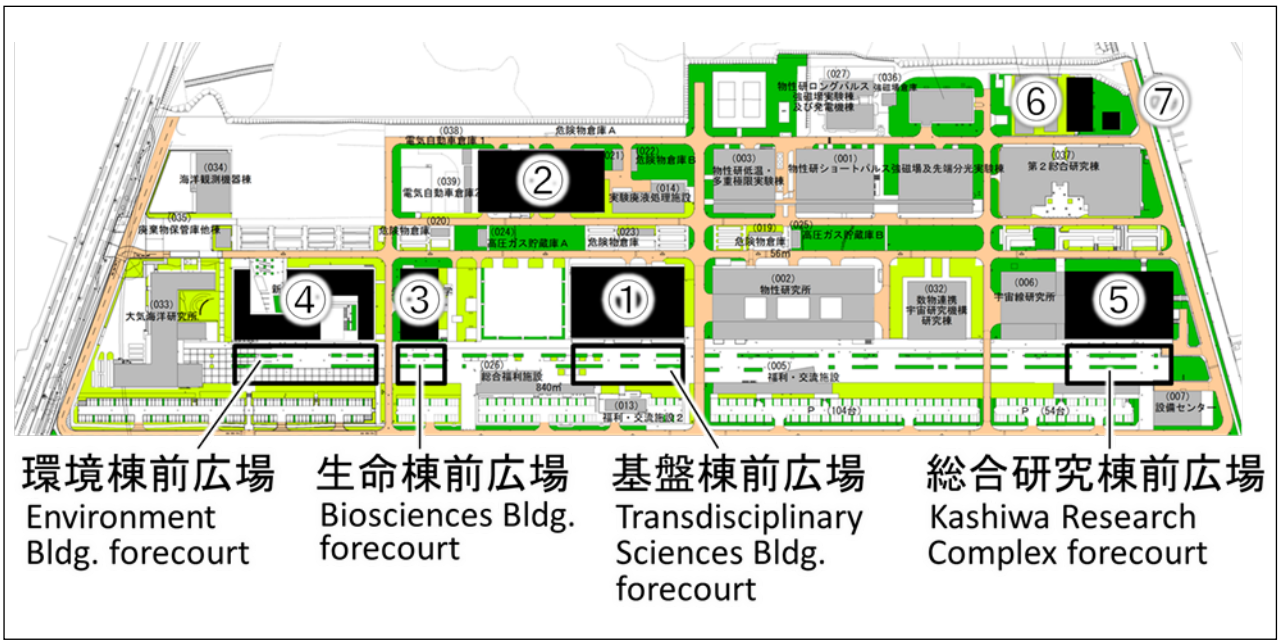
Evacuation Area

【Temporary Evacuation Assembly Area of each building】

①Transidisciplinary Sciences Bldg.
②Transidisciplinary Sciences Laboratory
: Transidisciplinary Sciences Bldg. Forecourt

③ Bioscience Sciences Bldg. : Bioscience Sciences Bldg. Forecourt
④ Environment Bldg. : Environment Bldg. Forecourt

⑤ Kashiwa Research Complex
⑥ Computational Biology Laboratory
⑦ Calorimeter Laboratory
: Kashiwa Research Complex Forecourt



【A final evacuation place securely】 KASHIWA NOHA Park

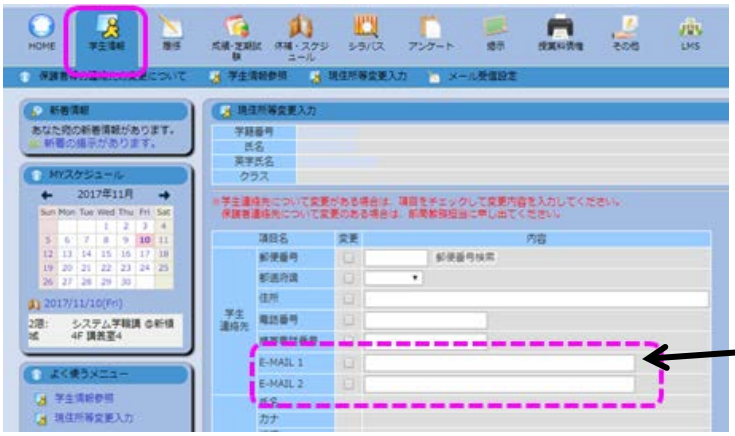
Safety Confirmation e-mail

GSFS has introduced the Safety Confirmation Services to confirm safety of all students and staff when a large-scale earthquake occurs. This system will send a safety confirmation e-mail to the addresses registered in advance.
Recipients should reply to the e-mail to report on their own safety status.

■How to register your e-mail address(es).

① 学生 / For Students

UTAS ： https://utas.adm.u-tokyo.ac.jp/campusweb/campusportal.do



ログイン後、「 学生情報 」の画面からメールアドレスを登録。

普段使用しているメールアドレスを登録してください。

● For Research Students and Auditing Students

For Research Students and Auditing Students those who cannot log in to UTAS.
Please let us know your following Information.

① 学籍番号（8 桁）/ Student ID number (8 degits)
② 共通 ID （10 桁）/ Common ID number (10 degits)
③ 専攻名 / Department
④ 学生身分（研究生、聴講生等）/ Affliation (research student or auditing student)
⑤ 氏名 / Your Name
⑥ 氏名カナ/Name pronunciation (Kana)
⑦ メールアドレス 1 / E-mail address 1
⑧ メールアドレス 2 / E-mail address 2

E-mail (Environment, Health, and Safety Office)：fs-anzen@edu.k.u-tokyo.ac.jp

Safety Confirmation e-mail

② For Staff

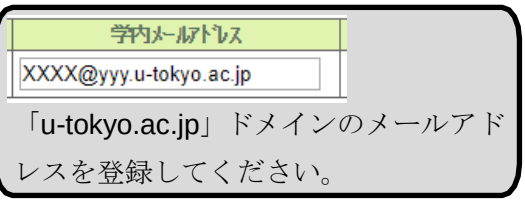
人事情報システム /Personnel information system

1. 人事情報システムにログインする / Log in to the Personnel information system

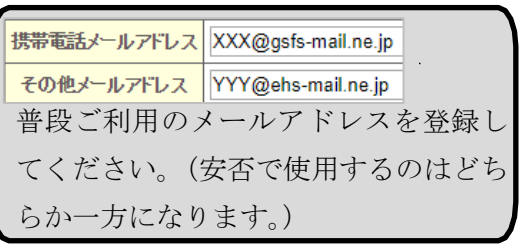
［東大ポータル / UTokyo Portal］ http://www.ut-portal.u-tokyo.ac.jp/gakunai/

＜東大ポータル / UTokyo Portal 画面＞

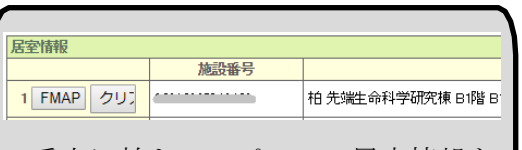
2. ログイン後、「メニュー選択 → パーソナルメニュー」を表示し、**メールアドレス**、**居室情報**を登録してください。 / Access to“パーソナルメニュー” and register your e-mail addresses



「u-tokyo.ac.jp」ドメインのメールアドレスを登録してください。



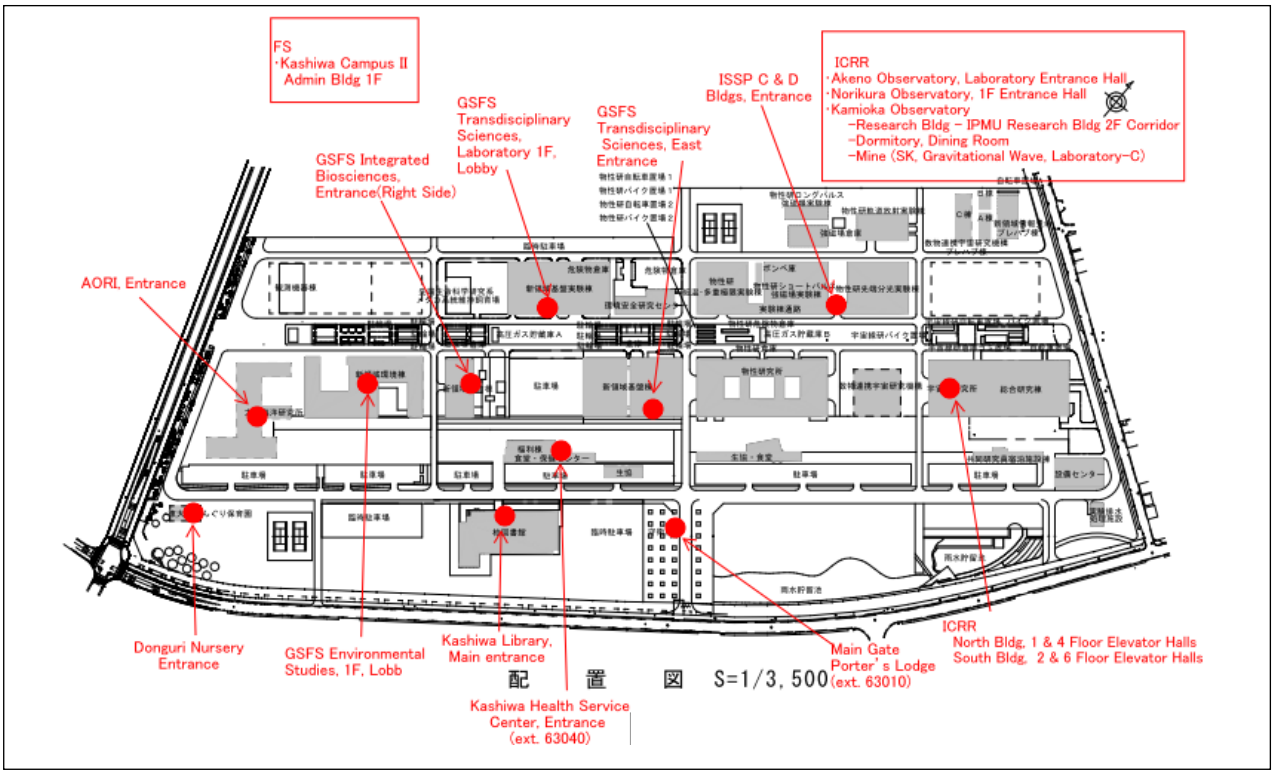
普段ご利用のメールアドレスを登録してください。（安否で使用するのはどちらか一方になります。）



一番上に柏キャンパスでの居室情報を登録して下さい。（未登録の場合、東京都の震度で安否メールが送信されます）

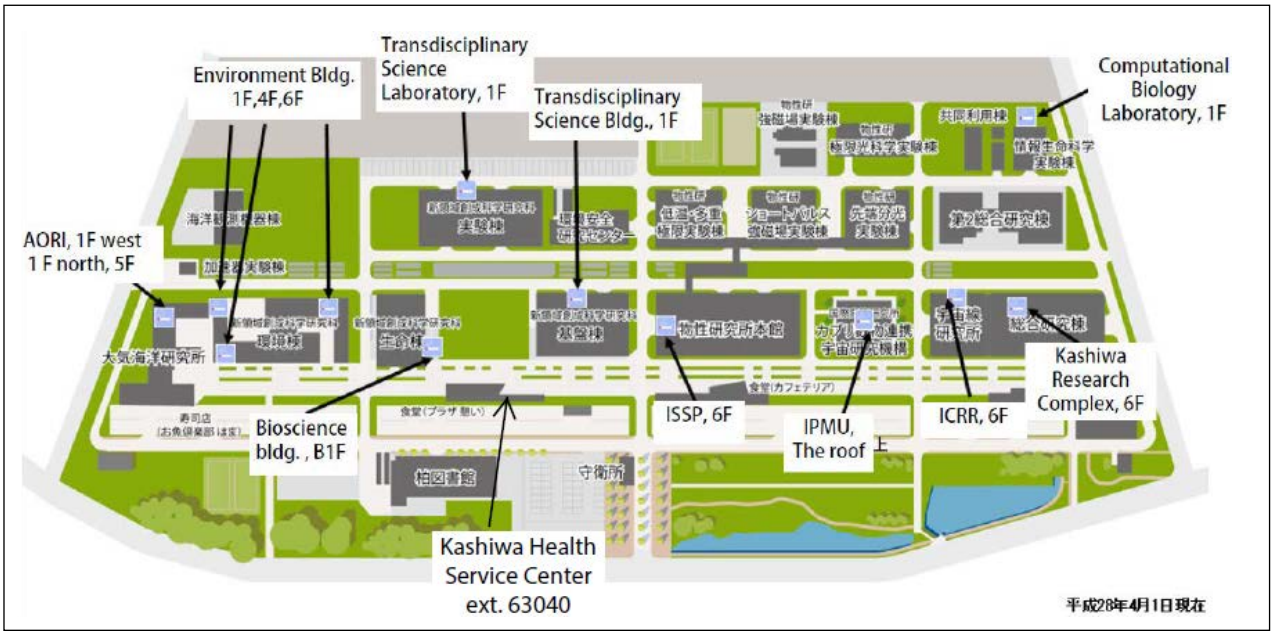
The location of AED's

AEDs: The location of AEDs (automated external defibrillators) at the security office (ext. 63010), the east entrance of the Frontier Sciences, Transdisciplinary Sciences Building, each department and the Kashiwa Campus Health Service Center.



Smoking area

Smoke only in designated areas.



CPR (Cardio Pulmonary Resuscitation)

You Could Save a Life!

Learn cardiopulmonary resuscitation (CPR)

1. Check for consciousness.
Ask the victim "Are you okay?" three times while patting his/her shoulder (in the collar bone area) to try to stimulate a response

2. Request an ambulance and AED.
Loudly call for assistance from people in the vicinity. Ask someone to call 119 and to bring an AED (automated external defibrillator).

3. Clear the airway and check for breathing.
Tilt the victim's head back and lift the chin to open up the airway. Place your ear near the victim's mouth and nose to check for signs of breathing.
Checking for signs of breathing
(1) Look for chest movement (rising/falling).
(2) Listen for the sound of breathing.
(3) Feel for exhalation with your cheek.

4. Give two breaths (possible to omit).
Keeping the victim's head tilted back, pinch his/her nose and give two breaths slowly (1 seconds each).

5. Perform chest compressions and artificial respiration.
(1) Loosen the victim's upper clothing and place your hands stacked on the victim's chest, between both nipples.
(2) Perform 30 chest compressions at a rhythm of 100 per minute. The chest should compress between 4 to 5 centimeters.
(3) Keeping the victim's head tilted back, pinch his/her nose and give two breaths slowly (1 second each).
(4) Do 5 sets of this cycle of chest compressions and artificial respiration. (About 2 minutes)

6. Start using the AED once it arrives.
(1) Open the case and turn on the power.
(2) Attach the electrodes to the victim (below right collar bone and on left side of chest).
(3) Push the shock button if indicated to do so by the device.

General Safety Practices

Important Knowledge

Be prepared for emergencies by familiarizing yourself with the following:

- Contact information: Home phone numbers and other contact information for dealing with sudden illnesses, accidents, and other emergencies.
- Evacuation routes: The location of evacuation routes, emergency exits, and refuge areas.
- Emergency equipment: The location of fire extinguishers, fire alarms, fire hydrants, emergency showers, etc.

Know at least two evacuation routes

AED (automated external defibrillator)

Fire extinguishers are located in hallways and some rooms

Fire alarm (top) and hydrant (bottom)

Emergency showers are located in restrooms marked with this sign

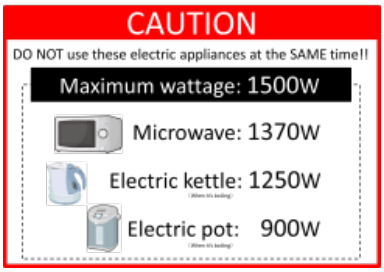
Emergency shower (wall-hanging type) : Pull the chain for a rinse. The shower will stop automatically.

General Safety Rules

・When leaving laboratories and other rooms unoccupied, conduct a safety check before locking the doors.

・Do not lend your keycard to others. When using your keycard to enter/exit a room or building, do not allow others to pass through the door with you.

・When using several electric devises at the same time, thoroughly consider the amount of power to be used and the capacity of the electrical wires and outlets to prevent overheating and short-circuiting. Refrain from the dangerous habit of plugging too many devices into the same outlet.



・Use only electric heaters which heat source is NOT exposed to air, and do not place them near flammable objects.

• When working on computers or other visual display terminals, do not continuously work for more than one hour. Take a 10- to 15-minute break before resuming work.

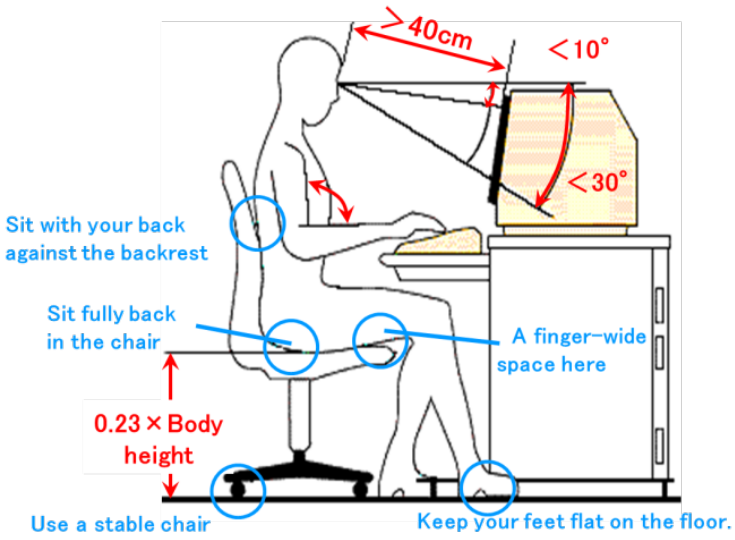
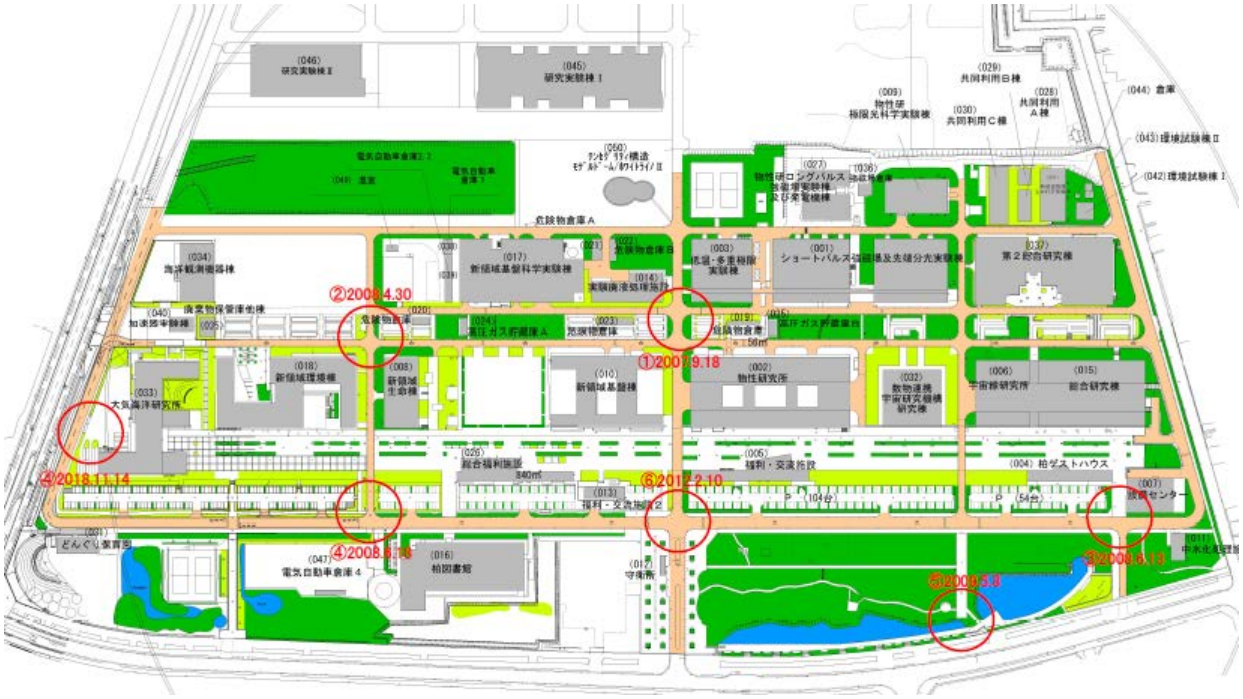


Fig. Correct position for using computer

・Generally, the maximum weight that can be handled by an adult male working alone is 55 kg (for female: 33 kg), or 40% of body weight. When working with a heavy object, stand as close to it as possible and keep your center of weight low. When lifting, first position one foot slightly forward, and bend your knees to lower your hips sufficiently. Next, hold the object tightly and lift by extending your legs

Fig. Correct position for lifting baggage

・The locations high frequency of traffic accident on Kashiwa campus is as below. Crossing the street diagonally and sudden running into streets have occured throughout the campus. Always be conscious that cars and motorcycles may be unable to make a sudden stop. Especially, driving in a dark requires extra caution.



Promenade: In the black high-lighted areas “Promenade” as below, riding is prohibited.

Bicyclists must walk their bicycles in the Promenade.

※It’s dangerous to ride a bicycle with no hands and you must not operate a cell-phone while driving.

守ろうね！自転車に乗るときのルール

自転車安全利用五則

Keep the bicyclist's rules!

THE MAIN RULES FOR SAFE BICYCLE RIDING

1 自転車は、車道が原則、歩道は例外※

●自転車は『(軽)車両』です。車道を通行しましょう。

※ 自転車及び歩行者専用」の標識がある歩道は、自転車で通行することができます。

Keep traffic rules & etiquette on roads as a "vehicle user"

『Bicycles and Pedestrians Only』 Bicyclists are permitted to travel on the sidewalk.

2 車道は左側を通行

●車道の左端を通行し、右後ろからくる車にも注意しましょう。

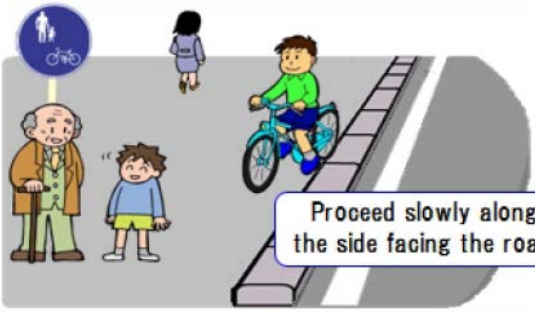
Keep left on the road

Take special care to look out for vehicles making a left turn.

3 歩道は歩行者優先で、車道寄りを徐行

●歩道を通行するときは、歩行者の通行を妨げないようにしましょう。

Carry the principle of people first



Proceed slowly along the side facing the road.

4 安全ルールを守る

○飲酒運転・二人乗り・並進の禁止

○夜間はライトを点灯

●ライトのほか、自転車の側面に反射材をつけましょう。

○ 交差点での信号遵守と一時停止・安全確認

●交差点では必ず一時停止をし、車両の有無や動きをしっかり確認しましょう。

Follow the traffic rules

NEVER ALLOWED

Drunk riding　Double ride　Riding abreast

TURN ON YOUR LIGHT

At night, inside tunnel, or on foggy days. And use some reflective materials.

FOLLOW A TRAFFIC RIGHT & "STOP" SIGN

Stop and check in all directions before crossing.

5 子どもはヘルメットを着用

●子どもが自転車に乗るときや、子どもを補助いす等に同乗させるときは、安全確保のために保護者が積極的にヘルメットを着用させましょう。

Use a bicycle helmet

Especially for a children or infants

神奈川県警察 HP より抜粋 / KANAGAWA PREFECTURAL POLICE

Compensation for Occupational Accidents

Definitions

(1) Occupational accidents
Occupational accidents are work-related accidents that resulted in an employee's injury, illness, disability, or death. To qualify for occupational accident compensation, the accident must have occurred in the course of duties as an employee of the University of Tokyo.

(2) Compensation
Various forms of compensation are paid for occupational accidents, such as payment in kind for medical expenses, compensation for lost income, disability compensation, and survivor's compensation.

Special-circumstance Occupational Accidents

(1) Accidents occurring during breaks
These accidents are eligible for compensation if they resulted from a fault in the facility or managerial practices.

(2) Accidents occurring during business trips
Since business trips are considered part of an employee's duties, these accidents are generally eligible for compensation, provided that they did not result from the employee's private activities.

Commuting Accidents

(1) Commuting accidents are accidents that occurred during commuting to or from work and resulted in the employee's injury, illness, disability, or death. Although technically not considered occupational accidents, they are treated as the same for purposes of accident compensation.

(2) Accidents that occurred while deviating from the commuting path are not eligible for compensation. However, the following activities are considered exceptions.
① Purchasing of daily necessities, and similar activities
② Attending job training, school courses (such as evening high schools), and other such educational programs
③ Voting in elections, and similar activities
④ Receiving a medical examination or treatment at a hospital or clinic, and similar activities

Filing for Compensation

Occupational accident insurance claims need to be filed with the local labor standards office by the employee or a family member, along with a certificate of occupational accident issued by the administrative office of the employee's division. In principle, claims must be filed within two years of the accident, or within five years if applying for disability or survivor's compensation.

Where to call: General Affairs Team, GSFS, (1st floor, Transdisciplinary bldg.)

Insurance for Students Pursuing Education and Research

All UT students are automatically provided with Personal Accident Insulance for Students Pursuing Education and Research. Other optional insurance is available for students as well.

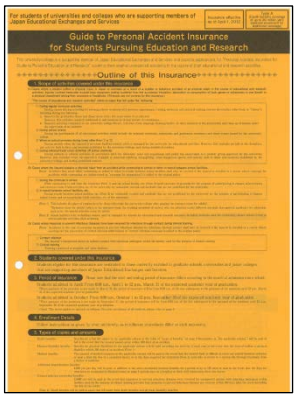
Automatically Provided Insurance

● Personal Accident Insurance for Students Pursuing Education and Research (PAS; “Gakukensai”)

Cases where the insured suffers a physical injury as a result of sudden accident of an external origin in the course of educational and research shall be covered.

UT bears all the expenses for this insurance to improve the students’ welfare (Type A: Death benefits coverage of up to 20 million yen, with additional coverage for accidents that occur during community).

This insurance does NOT cover all of damage to third parties, bodity harm or otherwise.

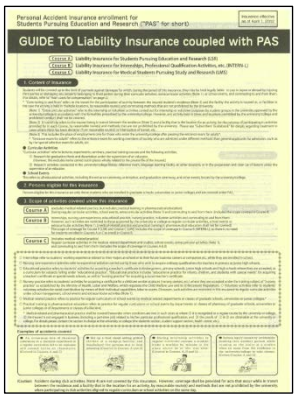

Guide to Personal Accident Insurance
for Students Pursuing Education and Research
Outline of this Insurance

Contact: Student Affairs Section (1st floor, Transdisciplinary bldg.)

Other Optional Insurances

● Liability Insurance coupled with PAS; “Gakukensai”

Students will be covered up to the limit of payment against damages for which, during the period of this insurance, they may be held legally liable to pay in Japan or abroad when injuring third parties or damaging any property belonging to third parties during their curricular activities, or school events, and commuting to and from them.


GUIDE TO Liability Insurance coupled with PAS

Course A: Liability Insurance for Students Pursuing Education and Research (LSR)

Course B: Liability Insurance for Internships, Proferssional Qualification Activities, etc. (INTERN-L)

Course C: Liability Insurance for Medical Students Pursuing Study and Research (LMS)

Contact: Student Affairs Section (1st floor, Transdisciplinary bldg.)

東大ポータル(UTokyo Portal)>便利帳(Manuals)>環境安全本部>環境安全本部一覧>1.3 安全衛生管理部>事故災害>自転車事故撲滅 WGーZero Bicycle Accident Working Groupー

● Accident insurance of ”Futai Gakuso”

”Futai Gakuso” covers 4 categories during daily life, in addition to the ”Gakukensai.” If you want to insure all 4 of the following categories, you must fill-out the application form and pay the insurance fees because the university does not cover them since ”futai gakuso” is a voluntary insurance. Coverage includes:

(1) Personal injury

Cases in which you suffer from after-effects or die because of a sudden, externally caused accident.

(2) Personal illness

Cases in which you are hospitalized or go to the hospital for more than 1 day because you had become ill in Japan, the self-payment (30%) of national health insurance will be covered by ”futai gakuso”.

”Futai gakuso” is not applicable to the treatment of a dentist.

(3) Compensation responsibility

Cases in which you injure other people through an unexpected accident, or damaged things belonging to other people, the legal compensation is applicable to “futai gakuso.” ”Futai gakuso” is not applicable to auto or bike accidents.

(4) Relief expense

Cases in which you are hospitalized for 3 or more days and if family or relatives come to help or support you, that expenses of up to 2 people for 14 days will be covered.

Contact: Consulting Desk for Student Life and Insurance (Tel: 0120-811-806)

(Only Japenese spoken)

http://www.jees.or.jp/gakkensai/opt-gakuso.htm

Accident Report

When an accident occurs, be calm down firstly.

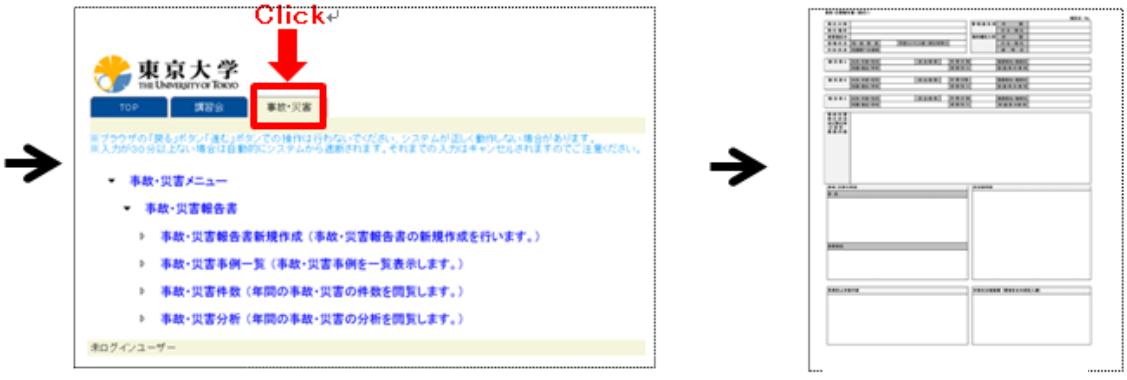
(1) Ensure personal safety

(2) Call your supervisor

When it settles, fill out the format of Accident Report of UTSMIS and turn it in.

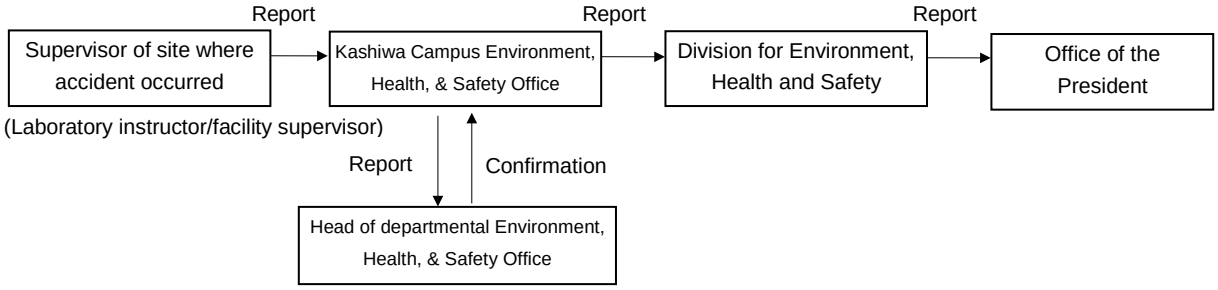
＜How to reach UTSMIS＞

URL : http://utsmis.adm.u-tokyo.ac.jp/UT_Anei_User/Report/Accident/



Accident Report

Flow of Reporting Procedure



Maintaining Physical and Mental Health

Health Exams

(1) As a general rule, employees are expected to look after their health.
(2) Personnel targeted by university-administered health exams are required to receive those exams. However, they may choose to receive equivalent exams at off-campus medical facilities instead, provided that they report the results to the university.
(3) In addition to general health exams, the university requires specialized health exams for those involved in hazardous operations.
(4) Employees are required to attend post-exam health guidance meetings, etc. when requested to do so.

Mental Health

(1) Depression is the most common mental health problem associated with work. If you experience any of the following symptoms, promptly seek consultation.
   ① Insomnia, including frequent waking in the middle of the night or in the early morning
   ② Not feeling fully rested after waking in the morning
   ③ General loss of energy or interest
   ④ Strong aversion to attending work
(2) Consultation on mental health is offered at the university by the following providers.
   ① Occupational physician, room #559b, 5th floor, ISSP Main Building, Ext. 63508
   ② Department of Psychiatry, Kashiwa Campus Health Service Center, Ext. 63040

Sexual Harassment

The University of Tokyo has established the following guidelines concerning sexual harassment.
(1) Policy for Sexual Harassment
(2) Declaration of Sexual Harassment Prevention

Consultation

Consultation on sexual harassment is offered at the university by the following providers. The privacy of users is strictly protected, and no one is treated disadvantageously for seeking consultation.
(1) Departmental counselors
(2) Kashiwa Campus Harassment Counseling Center (room #162, 1st floor, General Research Building, Ext. 64495)
(3) Kashiwa Campus Health Service Center (next to Plaza Ikoi, Ext. 63040)
(4) Kashiwa Campus Student Counseling Center (room #117, 1st floor, Frontier Sciences, Environmental Studies Building, Ext. 63714)
(5) Nandemo-Sodan (One-Stop Resources) Office Kashiwa Branch (room #2B5, 2nd floor, Frontier Sciences, Transdisciplinary Sciences Building, Ext. 64129)
(6) Occupational physician (room #559b, 5th floor, ISSP Main Building, Ext. 63508)

Safety Inspection by Occupational Physician and Periodic Safety Inspection

To improve the environment of laboratories and workplaces, every laboratory and workplace, occupational physicians will conduct safety inspection once a year. Periodic inspection at each laboratory and workplace should be conducted to complement the safety inspection by occupational physicians.

【Safety Inspection by Occupational Physician】


Safety Inspection by a Occupational Physician

● Safety Inspection by Occupational Physician
This inspection includes all rooms (except staff rooms) in our department.

● Ex-post Safety Inspection by health officer
This inspection is aimed to the rooms where unsafe conditions were identified for correction. Health officers check improved situation.

【Periodic Safety Inspection】

● Periodic Safety Inspection by each laboratory
It is responsible for all users of any rooms to conduct this periodic safety inspection for their own rooms once a month.

About【Safety Inspection by Occupational Physician】

<Inspection Flow>

(1) Settlement schedule
The witness of the safety inspection should be assigned by inspection.

(2) Inspection day
Occupational physicians, health officers, and members of EHS committee attend the inspection.

(3) Announcement inspection results
The points identified to be corrected should be fixed will be announced by EHS Office, GSFS by e-mail.

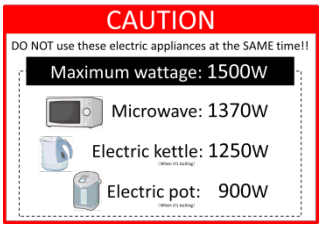
(4) Responding to points identified to be corrected
Each laboratory must respond to a report and to e-mail back the situation to the Office.

(5) After checking by health officer
Health officer will visit the laboratory which was pointed out during the inspection and check the situation.

＜Frequently cautionary issues＞

● Over wattage

If the usage wattage exceeds electric capacity (wattage), breaker tripped.
When you use several electric equipment at the same time, be careful of the exceedance and post a notice.



● Rearrangement of wiring

To avoid tripping over by wiring and shorting out of power connector by water stained, fix a wire cover and power connection on the wall.

● Fix shelf and locker to the wall

Shelf and locker must be fixed to the wall by L-shaped hooks. Silicone mat under the locker is effective as well.

● Fix cylinders

Cylinder holders must be fixed to floor and wall, and cylinders must be fixed against its holder with two points. Fix cylinder holders by gel mat, and of cylinders by belts is recommended.

About【Periodic Safety Inspection】

● Periodic Safety Inspection by each laboratory

<How to do Voluntary Safety Inspection by each laboratory >

(1) Posting the record of Voluntary Safety Inspection by each laboratory

Choose appropriate format of record from two formats of Voluntary Safety Inspection by each laboratory, and post it on the wall inside each room.

You can summarise safety conditions of several laboratories and non-laboratory rooms into one report respectively.

・Non-experimental laboratory/desk work room (「非実験系研究室・事務部門」)

・・・Non-Experimental Laboratory, Office workplace

・Experimental laboratory (「実験系研究室」)・・・・・・・・・Experimental laboratory

(2) Conducting Periodic Safety Inspection

You conduct periodic safety inspection by yourself following items to be checked in the list every month (anytime in a month) and record the results.

(3) Report Submission

Each laboratory must submit filled-out reports to the EHS Office GSFS at the end of the academic year. Internal mail to: 002 EHS Office, Bioscience Bldg.

＜Checklist for Non-experimental laboratory/desk work room＞

新領域　　年度　職場自主点検記録（居室等）　　部屋入口の内側に掲示して下さい。

専攻:　　研究室:　　責任者:　　点検者:　　部屋名称:　　A:対応済　B:要対応　C:該当しない

項目		4/	5/	6/	7/	8/	9/	10/	11/	12/	1/	2/	3/
電源の管理	・コンセントの水濡れの危険がない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・電子レンジ、湯沸かしポット、コーヒーメーカー等電気容量の大きい物が同一のコンセントにつながれていない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・床上のコードに耐荷重性のモール（カバー）がかけてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・床上のコードが整理されている	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
入口内側の掲示	・緊急連絡先を電話口等わかりやすい場所に掲示してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・職場自主巡視記録を掲示し、毎月点検を実施している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
地震火災対策	・棚やキャビネット等が固定されている	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・高所におかれた重量物に転落防止措置をしている	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・廊下に傘立て、靴箱等避難の妨げや、延焼するものを置いていない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・消火栓や消火器の位置を把握している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
その他	・緊急シャワーの位置を把握している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・救急箱を備え付けてある（※）	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・安全マニュアルを備え付けてある（※）	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	（※） 研究室に1つあればよい。												

＜Checklist for Experimental laboratory＞

新領域　　年度　職場自主点検記録（実験系研究室）　　実験室入口の内側に掲示して下さい。

専攻:　　研究室:　　責任者:　　点検者:　　部屋名称:　　A:対応済　B:要対応　C:該当しない

項目		4/	5/	6/	7/	8/	9/	10/	11/	12/	1/	2/	3/
電源の管理	・コンセントの水濡れの危険がない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・床上のコードに耐荷重性のモール（カバー）がかけてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・床上のコードが整理されている	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
入口外側の掲示	・最新の緊急時用室内配置図が掲示してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・該当する薬品関連の掲示（第一種/第二種/第三種有機溶剤）がしてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・その他該当する掲示が（組換遺伝子実験、レーザー等）してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・一般的な掲示（飲食禁止、関係者以外立入禁止）がしてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
入口内側の掲示	・緊急連絡先が掲示してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・職場自主巡視記録を掲示し、毎月点検を実施している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
提示対象場所への掲示	・必要な保護具を備え付け、保護具着用の掲示がしてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・実験機器緊急時停止方法が掲示してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・ドラフト本体に「ドラフト管理責任者」が掲示してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・ドラフト本体に「直近のドラフト定期点検結果」が掲示してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
薬品管理	・薬品保管庫が固定してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・薬品瓶の転倒転落防止措置がしてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・薬品は分別保管している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
毒物劇物管理	・毒物/劇物保管庫に「医薬用外毒物」「医薬用外劇物」の掲示がしてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・教員が鍵を管理している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・使用後は試薬瓶を速やかに保管庫へもどしている	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・使用記録はその都度UTCRISまたは専用ノートに記録している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
定期点検	・業者または研究室でドラフトチャンバー定期点検を行っている	A B C（1年を超えない範囲で1回実施する）											
	・業者または研究室でオートクレーブ定期点検を行っている	A B C（1年を超えない範囲で1回実施する）											
	・業者または研究室で遠心機定期点検を行っている	A B C（1年を超えない範囲で1回実施する）											
ガスボンベ等の管理	・ボンベラックを固定してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・ボンベをボンベラック等に2点固定してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・使用中のボンベは管理システムへ登録している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・使用していないボンベは返却されている	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
水質汚濁防止	・実験用流し台に穴や割れ、排水管接続部からの水漏れはない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・ドラフトチャンバー用流しに穴や割れ、排水管接続部からの水漏れはない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
地震火災対策	・高所におかれた重量物を固定してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・工作機械を作業台に固定してある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・暗室に蓄電型の保安灯がついている、または懐中電灯を備え付けてある	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・廊下に傘立て、靴箱等避難の妨げや、延焼するものは置いていない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・消火栓や消火器の位置を把握している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
その他	・緊急シャワーの位置を把握している	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・実験室に飲食物を持ち込んでいない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
	・実験室で寝泊まりしていない	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C

Lab-member Survey

GSFS conducts a survey of all registered laboratory members twice a year (at the beginning of summer and winter semesters). The EHS Office GSFS will announce it to all laboratories, so prepare the list by your laboratory/office and send it back to the office by e-mail.
So we have your lab/office prepare who stay in Kashiwa campus even one day of a week also should be filled in.

20〇〇年 新領域 構成員調査表 (Name List)

専攻名	環境安全専攻
研究室名	環境安全研究室

作成日:

No.	氏 名 (Name)	よみがな	共通ID(10桁) Common ID (10 digit) ※身分証の右下に記載の下10桁の数字です。	身分 (Affiliation)	普段ご利用のEmail (Daily Use Email)	安全教育受講有無 (Health and Safety Education Attendance)	建物名 (Bldg.)	部屋名 (Room No.)	内 線 (Ext.)	その他 (Other)
1	〇〇 〇〇	XX XX	1111111111	教授	001@k.u-tokyo.ac.jp	有	A棟	BBB	99999	
2	〇〇 〇〇	XX XX	2222222222	准教授	002@edu.k.u-tokyo.ac.jp	有	A棟	CCC	99998	
3	〇〇 〇〇	XX XX	3333333333	講師	003@edu.k.u-tokyo.ac.jp	有	A棟	DDD	99997	
4	〇〇 〇〇	XX XX	4444444444	助教	004@mail.u-tokyo.ac.jp	有	A棟	DDD	99996	
5	〇〇 〇〇	XX XX	5555555555	特任助教	005@edu.k.u-tokyo.ac.jp	有	A棟	DDD	99999	水曜日は白金台2号館
6	〇〇 〇〇	XX XX	6666666666	秘書	006@edu.k.u-tokyo.ac.jp	有	A棟	BBB	99999	月・火・金
7	〇〇 〇〇	XX XX	7777777777	技術職員	007@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
8	〇〇 〇〇	XX XX	8888888888	研究員	008@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99997	XX会社から出向(4-7月末まで)
9	〇〇 〇〇	XX XX	9999999999	研究員	009@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99996	
10	〇〇 〇〇	XX XX	11111111110	D3	010@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
12	〇〇 〇〇	XX XX	12222222221	D2	012@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
13	〇〇 〇〇	XX XX	13333333332	M2	013@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
14	〇〇 〇〇	XX XX	14444444443	M1	014@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
15	〇〇 〇〇	XX XX	15555555554	M1	015@edu.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
16	〇〇 〇〇	XX XX	16666666665	研究生	016@XXX.k.u-tokyo.ac.jp	有	A棟	EEE	99999	
17	〇〇 〇〇	XX XX	17777777776	B4	017@g.ecc.u-tokyo.ac.jp	有	A棟	EEE	99999	工学部YYY工学科所属

General Rules for Laboratory Safety

Basic Safety Management

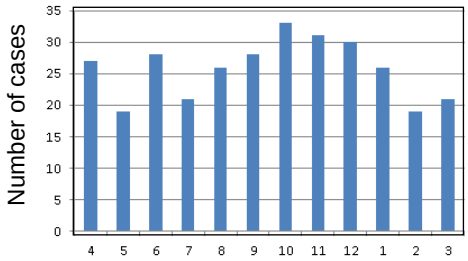
Any equipment and substance can cause accidents in any experiment of you do not handle them safety. Laboratory safety does not mean “Doing experiments whihout hazards”, but “Doing experiments which avoid accidents”. To realize this situation, you need to know the hazards of substances and equipment, and to check relevant laws.

Safety Rules for Experiments

(1) Substance and equipment you plan to use may be subject of laws and certifications.

(2) DO NOT plan too hard a schedule for your experiments. Overloaded schedules and sickness can tripper accidents. Until you are familiar with using your laboratory equipment, avoid night time experiment.

Numbers of accidents (2009-2017)



(3) In principle, night-time experiments should be avoided. Decreased awareness could impede your response to emergency situations.

(4) When you conduct experiments, consult your supervisor and labmates, and anticipate the accident cases related to your experiment.

(5) Extremely hazardous tasks should be performed in a group, never alone. In principle, such experiments should not be performed on weekends or holidays.

(6) Select protective gear suited for the experiment when you conduct experiments. It is reported that 70% of droplet accidents were caused by other experimentors. Stickers about the need protective gear should be put on the wall in your room.

(7) Whenever equipment must be left operating in an unattended laboratory, post emergency contact information on the room door or in another highly visible location.

(8) Prepare for accidents by familiarizing yourself with the locations of emergency exits; and the locations, types, and operation of fire extinguishers.

Eating and drinking are not allowed in laboratories, and other secsual activities.

Laser Safety

Those using laser devices must familiarize themselves with the following information on physical hazards and precautions.

(1) Physical Hazards

The main physical hazards posed by laser beams are eye and skin injuries. In some cases, laser radiation can cause major permanent damage, such as blindness from injury of the corneas. Also, laser damage to the front of the eye (cornea and crystalline lens) can result in cataracts and other adverse conditions, and high-power lasers can also burn the skin. In particular, short-wavelength radiation can cause photochemical reactions, so lengthy exposure should be avoided, even when the beam is of low intensity. Below are important precautions for preventing physical harm.

Eye Hazard Precautions

(a) When using a laser, always wear protective eyewear suited to the laser's wavelength.
(b) Never directly look at a laser beam, even if it is of low intensity and you are wearing protective eyewear.
(c) Before using mirrors or other optical instruments with a laser, make sure that they are firmly secured.
(d) Do not place highly reflective objects in the vicinity of the laser. Do not wear a watch while using a laser, as the glass face can reflect the laser beam (there have been accidents where blindness resulted from reflected laser radiation).
(e) Avoid setting the laser beam path at eye level, including the level when walking or working.
(f) Whenever possible, use the laser in a well-lit place.
(g) Whenever possible, shield the laser beam path, including the area beyond its terminus, in order to prevent unplanned reflection.
(h) Post appropriate warning signs on the doorway or safety partition of areas where lasers are used. Never place the laser device so that it is pointed at the doorway.

Skin Hazard Precautions

(a) Never expose your body to laser radiation, including parts covered by clothing.
(b) Minimize the potential for exposure, such as by wearing long-sleeved, fire-resistant clothing.
(c) Never stand in or beyond the path of a laser beam.
(d) Never place flammable materials (solvents, oil, paper, etc.) in a laser beam path.
(e) Always use a purpose-built laser beam stopper or nonflammable shield (bricks, etc.) to provide a safe terminus for the beam.

(2) Other Precautions

(a) Lasers operate on high voltage, so never remove a laser device's housing at any time, unless absolutely necessary (such as when repairs are needed). Before removing the housing, take precautions to prevent electrical shock.
(b) Always wear protective eyewear when a laser device's housing is removed, even if a laser beam is not being generated.

(c) Use additional caution when working with excimer lasers, as they use halogen gas. Be sure to check the gas piping for leaks, etc. and take other appropriate safety measures.

(d) The dyes used in some dye lasers are carcinogenic, so exercise additional caution when using these lasers. Always wear protective gloves and eyewear when preparing dye solutions. When possible, dye solutions should be prepared in a local exhaust ventilation system.

(e) When using a laser, take steps to ensure that unaware personnel can readily take notice that laser work is being performed.

Laser Classes

The level of hazard posed by lasers rises with the power output of their beams. Under the March 25, 2005 revision of *JIS C 6802: Radiation Safety Standards for Laser Products*, lasers were classified by hazard level as follows.

Class	Description	Output (continuous emission)	Warning Label	Explanatory Label Text
1	Lasers that can be safely viewed by the naked eye, even when the radiation is focused by a lens or other optical instrument.	Up to 0.39 μW	Not required	Class 1 laser product
2	Lasers emitting visible wavelengths (400–700 nm); the body's aversion responses (blink reflex, etc.) provide adequate defense against hazardous exposure.	Up to 1 mW	Required	Laser radiation / Do not stare into beam / Class 2 laser product
1M	Lasers emitting wavelengths in the range of 302.5–4,000 nm; beam can be safely viewed with the naked eye at a distance of at least 100 mm from the radiation source, but viewing through a lens may result in injury.	Up to 5 mW	Required	Laser radiation / Do not view directly with optical instruments / Class 1M laser product
2M	Lasers emitting visible wavelengths; the body's aversion responses provide adequate defense against hazardous exposure when viewing with the naked eye at a distance of at least 100 mm from the radiation source, but viewing through a lens may result in injury.	Up to 5 mW	Required	Laser radiation / Do not stare into beam or view directly with optical instruments / Class 2M laser product
3R	Lasers emitting wavelengths in the range of 302.5–4,000 nm; generally safe if not viewed with an optical instrument. Direct viewing of the beam with an optical instrument is hazardous.	Up to 5 mW	Required	Laser radiation / Avoid direct eye exposure / Class 3R laser product
3B	Lasers that pose a hazard of eye injury from exposure to direct or reflected beams, regardless of wavelength and method of viewing (naked eye or through optical instrument).	Up to 0.5 W	Required	Laser radiation / Avoid direct exposure to beam / Class 3B laser product
4	Lasers emitting beams that are hazardous to view, even when looking at scattered/reflected radiation, and that may burn the skin or set objects on fire.	Over 0.5 W	Required	Laser radiation / Avoid eye or skin exposure to direct or scattered radiation / Class 4 laser product

The warning/explanatory labels must be placed at a highly visible position on the laser device or its mounting.

Required Display for handling

The alart sticker as below need to be displayed on the laser equipments, which is easily visible location.

An warning sign

Reference: University of Tokyo Faculty and Graduate School of Engineering's safety manual

Personal Protective Gear

Protective eyewear

(1) Safety glasses/goggles

Use for grinding, cutting, and other work with exposure to sparks, flying particles/chemicals, etc.

<Glasses type>

Shape of them is the same with the daily use glasses, but droplet from its side could be avoided.


Side coverage


Angle adjustable shank


Length adjustable shank


For small size users


Mirroring fablicated


Easy to pain behind one's ear

<Over glasses Type>

This type of glasses is affordable to do double glasses.


Angle adjustable shank


Length adjustable shank


Soft rubber adopted at ear

<Googles Type>

This type of glasses is able to cover eyes fully and may shut out vapor and gases.


Rubber band


Antifog function


Rubber could adhere to face

(2) Light-filtering eyeshields/faceshields

Use for work with exposure to harmful light rays (ultraviolet/infrared rays, intense visible light, laser beams, etc.) You need to check the treatable types of laser, emission wavelength, and filter characteristics.


For unspecified angle of laser


For double glasses


Light and small

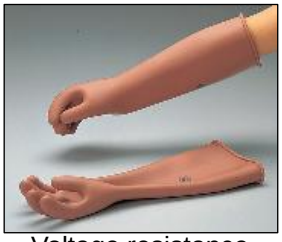
- Protective wear

- Protective gloves

  Use for work with sharp materials (glass, sheet metal, etc.), cold/hot objects, and other materials that pose a risk of hand injury.


Heat-resistant


For cryogen


Voltage resistance


For operations

- Respiratory devices

  (1) Dust masks

  Use for work in which dust, fumes, mist, etc. are produced.

  (2) Respirators

  Use for work in areas where harmful substances (organic solvents, other hazardous chemicals, etc.) are used and the local exhaust ventilation system does not provide sufficient ventilation.

  (3) Self-contained breathing apparatuses

  Use for work in places with a risk of atmospheric oxygen deficiency (such as rooms where a large amount of liquid nitrogen is used).

- Helmets, hard hats

  Use for work involving a risk of falling or being hit by flying/falling objects.

- Ear protectors (earplugs, earmuffs)

  Use for work in areas where the sound level exceeds 85 dB(A).

- Safety harnesses

  Use for work performed in high places (more than 2 meters above the ground).

- Safety shoes

  Use for transport of heavy objects and other work that poses a risk of foot injury (including injury from falling objects).

- Other protective gear

  Wear shoes with good traction when working on wet or slippery floors.

  Avoid wearing footwear that can easily come off your feet.

  Avoid wearing loose clothing that might snag on chemical bottles and laboratory equipment.

Management of Chemicals

Chemical Management System (UTCRIS)

The University of Tokyo has a university-wide management system for chemicals ; the University of Tokyo, Chemical Registration Information System (UTCRIS). When you buy chemicals, register them immediately.

This system can also be used for management of compressed gas cylinders at the Hongo Campus. At the Kashiwa Campus, however, compressed gas cylinders are comprehensively managed at two local storage facilities, so use the high-pressure gas management system of the Cryogenic Service Laboratory at the Institute for Solid State Physics (see “Cryogens and High-pressure Gas” below).

UTCRIS （https://utcris.adm.u-tokyo.ac.jp/CRIS_v1_0/index.aspx）

The University of Tokyo conducts tasks to track the usage amount of specific chemicals by the the Industrial Safety and Health Act and Pollutant Release and Transfer Register with using UTCRIS.

Risk assessment

Risk Assessment sheets (hereinafter referred to as “RA” sheets) are obligated for certain hazardous chemicals (about 700 substances). This aim of the RA is to fully recognize the hazards of the substance and to reduce the risk associated with its use.

For the first time, after purchasing the corresponding reagent, create an RA sheet and implement risk reduction measures. Also, please review and update the RA sheet when you change the handling status of the substances (i.e. improve equipment, change of substance handlers, change of experimental conditions, etc.).

How to make RA sheets

① Check the stock of chemicals in your lab. to identify chemicals requiring RA

② Find the Safety Data Sheet (SDS) for each chemical requiring an RA and understand the hazardous nature of the chemical

③ Make a list of procedures regarding the use of each chemical

④ Consider necessary measures for risk reduction

⑤ Implement risk reduction measures

⑥ Fill out a RA sheet for each chemical

⑦ Inform all laboratory members about the contents of the RA sheets and send a copy to EHS Office, GSFS

記入例/Example 成科学研究科/Grad. School of Frontier Sciences, The University of Tokyo

化学物質リスクアセスメント(RA)記録シート/Risk Assessment (RA) Sheet for Chemicals

☑ 新規作成/ New
☐ 更新/ Renewal

実施日/ Date	H31年/ 1月/ 17日		
専攻/ Dept.	環境工学専攻	研究室/ Lab.	環境研究室
研究室 責任者/PI	[氏名/ Name] 衛生 太郎	[職名/ Title] 准教授	
RA実施者/ RA conductor	環境 花子	←使用者は別途記載/Useres need to be written in the next page	

化学物質名/Name of Chemicals	酢酸エチル		
CAS No.	141-78-6	研究室内通し番号/ SN in your lab.	1
使用する作業の概要/Overview of working operations （薬品毒きなどで、具体的に記入してください/ Use bullets to describe operation concretely）	1) 触媒反応試験の反応原料として用いる（数日に1回、3時間程度、30mL程度）。 Catalytic reaction test as chemical precursor (once a few days, 3 hours, 30mL) 2) 触媒上への吸着状態を確認するためのプローブとして用いる（数日に1回、5時間程度、5mL程度）。 Chemical precursor for catalytic reaction test (once a few days, 5 hours, 5mL) 3) 水中に溶けた有機物を液液抽出するための溶媒として用いる(数日に1回、10分程度、50mL程度)。 Use as solvent for organics from dissolved in water by liq.-liq. extraction (once a few days, 3 hours, 30mL)		

● リスクアセスメントの結果(作業毎に発現する化学物質の危険性)
/Results of RA(Hazard of chemicals at an operation)

1) 反応原料としてシリンジポンプに充填し、SUS管を通して反応器に供給する。シリンジポンプ充填時にシリンジ先端から液体が勢い良く押し出される可能性があり、眼に入ると赤身や痛みが出る可能性が高いので対策が必要である。
It is filled in syringe pumps as a reaction raw material and supplied to reactors through SUS pipes. Since liquid is possibly spurted out from the syringe and redness and pain will appear because of the spurting, countermeasures for it are necessary.
2) 試験管に入れた試薬をSUS管を通して触媒層に接続し、流路全体を減圧することで、飽和蒸気圧に対応する濃度の酢酸エチルを触媒層に供給する。圧力変更を急激に行うと試験管内部で液体が飛散する可能性があるので換気の良い場所で行う必要がある。
By connecting the contained this reagent in a test tube to the catalyst layer via SUS pipes and depressurizing the entire flow path, this reagent which is corresponding to the saturated vapor pressure is supplied to the catalyst layer. Spurting of liquid in the testing tube is possibly occured at adruptly pressure change, so this operation is necessary to be performed in a well-ventilated area.
3) 有機物が溶けた水と酢酸エチルを分液ロートに入れ、液液抽出をする。抽出の前後でロートを開放する際に酢酸エチルが外部に飛散する可能性がある。溶媒蒸気は空気より重く床面に蓄積しやすいため、他の実験者の使用化学物質と反応して引火の恐れがある。
For liquid-liquid extraction, organic materials dissolved water and this reagent put in separating funnels. Vaporizing is possibly occured from the funnel at the time of openning the funnel. Vaporized solvent is heavier than air and tends to accumulate on the floor, so there is possibility of ignition by reacting with the substances used by other users.
4) 劇物であり、地震の際の漏洩のリスクが高い。It is deleterious substance, so there ishigh possibility of leakage at earthquakes.
5) 引火性が高いため、火災の際に危険性が高い。It is highly flammable, so it is high risk at fire.

● 実施したリスク低減措置(措置してない場合はその理由)
/Reducing means of the risks(If you do not reduce it, write down its reason)

・薬品を様々な容器(上の例だと、シリンジポンプ、試験管、分液ロート)に移す作業はドラフト内で行う。Conduct its pouring operations with syringe pumps, test tubes, and separating funnel in fume hoods.
・実験後、シリンジやロートなどのガラス器具にひびなどがないか確認する。Check cracks of glassware such as syringes and funnels after finishing experiments.
・使用時に作業着と保護メガネの着用を徹底する。Wear personal protective equipment when it uses.
・他の実験者が実験室に居る際に、反応性や有害性の高い化学物質を使用する際には、声掛けするようにする。Keep in mind to make communication when high reactive and hazardous chemical substances are used at the room of some other people conduct experiments in laboratory.
・万が一、火災が発生した際のために、小型二酸化炭素消火器を常備しておく。Always keep small CO2 extinguishers in case of fire.
・試薬庫内での転倒防止措置を施す。Take measures to prevent falling of chemical substances.

作成したシートは、新領域 環境安全管理室にご提出ください/ Submit this sheet to EHS Office, GSFS
Mail:fs-anzen@k.u-tokyo.ac.jp、☎:63722、学内便/Box: 生命棟002/ Box 002, Bioscience bldg

Handling Chemicals

About Organic Solvents and Specific Chemicals

When using organic solvents, appropriate stickers (there are three types of solvents as below, 10 × 30 cm) should be displayed external door of laboratory. The stickers; “火気厳禁 (Flammable - Keep Fire Away” and “飲食･喫煙禁止 (No food/drink, No smoking)” also should be displayed. If you need theses stickers, contact EHS Office GSFS.

Solvent Category 1, 2, and 3 | Flammable - Keep Fire Away | No food/drink, No smoking

About Toxins and Irritants

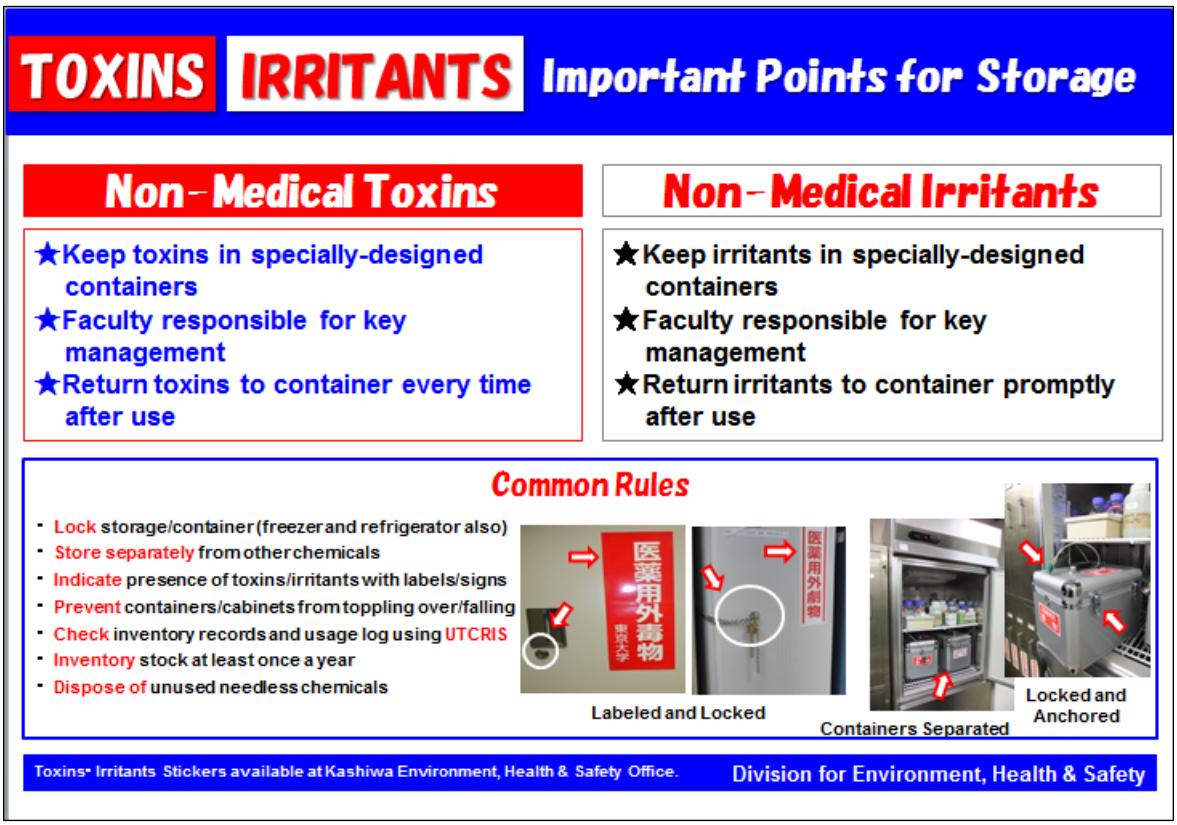
Toxins and Irritants must be stored separately,

Locked at all times, and manage the key by staff.

Stickers see below should be displayed on reagent boxes

(Big：10×30 ㎝, Small：4×11 ㎝).

Toxins and Irritants



GHS (Globally Harmonized System of Classification and Labelling of Chemicals)

① Flammable gases/aerosols/liquids/solids, Self-reactive/ Self-heating substances, Pyrophoric liquids/solids, Substances which on contact with water, emit flammable gases

② Explosives, Self-reactive substances, Organic peroxides

③ Gases under pressure

④ Acute toxicity

⑤ Respiratory sensitizer, Mutagenicity, Toxic to reproduction, Target organ systemic toxicity following single/repeat exposure

⑥ Acute toxicity, Skin corrosion /irritation /sensitizer, Serious eye damage / eye irritation

⑦ Acute hazards to the aquatic environment, Chronic hazards to he aquatic environment

⑧ Corrosive to metals, Skin corrosion/irritation, Serious eye damage /eye irritation

⑨ Oxidizing liquids/solids, Organic peroxides

Types of mercury requiring special handling

According to Mercury Pollution Prevention Act, it is mandatory to thoroughly store and manage spec types of mercury and to report the amount of stored and transferred to the Ministry of Education, Culture, Sports, Science and Technology.

Types of mercury requiring special handling: mercury, mercuric chloride, mercuric oxide, mercuric sulfate, mercuric nitrate, mercuric nitrate hydrate, or a mixture containing 95% or more of either of these.

Recording management information of assign/receive

Whenever you buy/receive or assign such mercury, you need to record the date of purchase or transfer, the purpose, the amount, and the name and address of the purchaser/receiver and assignee.

Report to EHS Office GSFS

By the end of May next year, it is necessary to report to EHS Office, GSFS regarding the management of mercury including assignment, stored amount at the beginning of the fiscal year, the amount used during the year and the amount disposed at the end of the fiscal year.

Display the sign for mercury including equipment

Mercury needs to be stored in a locked storage cabinet, and the cabinet must be labeled with an official seal properly identifying the exact type of mercury containing equipment sign specifying the name of the specified mercury. Equipment containing mercury also needs to have an official seal attached which identifies the exact type of mercury.

Measurement of Working Environment

Laboratories that use organic solvents are required to conduct measurement of working environment twice a year. Working environment measurement experts conduct this measurement and the report of this must be maintained for three years (designated substances: 30 years).

This measurement are performed on site and on the substances selected by the Office of Environment, Health, and Safety four times a year based on the usage survey of substances under the Industrial Safety and Health Act.

Fig. Measurement of Working Environment

Gas detectors are available for all in GSFS.

Detecting tube depends on the type of gas you would like to detect. If you would like to borrow our detecting set, inform the EHS Office of the gas type. Feel free to contact EHS staff at any time.

Fig. An detecting tube

Handling Cryogens and High-pressure Gas

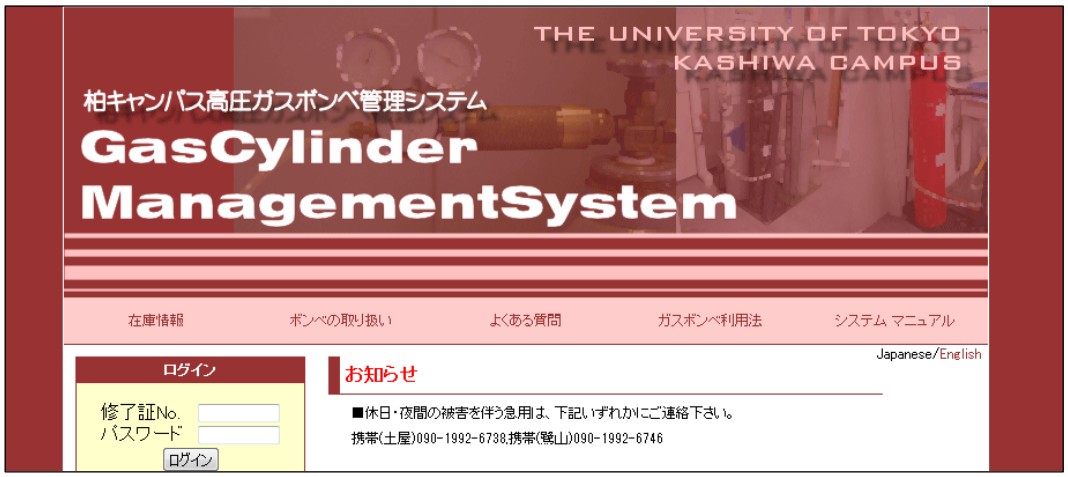
(1) Cryogens (liquid nitrogen, liquid helium, etc.) and high-pressure gas is smanaged by the Cryogenic Service Laboratory (Institute for Solid State Physics).

The Cryogenic Service Laboratory (Institute for Solid State Physics) (http://www.issp.u-tokyo.ac.jp/labs/cryogenic/)

(2) Those who wish to use cryogens or high-pressure gas must first undergo the training seminar held by the Cryogenic Service Laboratory (Institute for Solid State Physics).

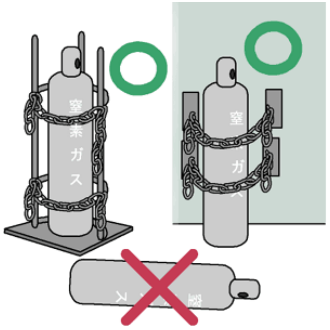
(3) When you produce high-pressure gas or settle equipment for a certain amount of storage, permission or notification of administrative organs are required. When you install them for experiments, contact the Cryogenic Service Laboratory without fail.

(4) Any gas cylinder should be registered in Gas Cylinder Management System, Kasahiwa Campus.



Gas Cylinder Management System, Kasahiwa Campus (http://www.issp.u-tokyo.ac.jp/cryogenic/cylinder/)

(5) Gas cylinders should be tied up with bands and chains at two points.



Caution on carrying cryogens

Wearing appropriate protective equipment

To avoid danger such as frostbite, bruises and fractures, wearing gloves or sandals while handling cryogen is strictly prohibited.

How to carry

- Containers filled with liquid nitrogen are heavy and, so two or more people are needed to pull and move the container.

At the elevator

How to carry

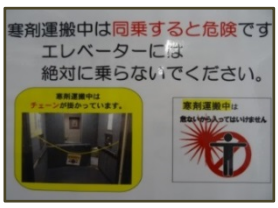
- Do NOT ride on an elevator with cryogens

  One person carries the cryogen into an elevator on the departure floor, and sends it to the destination floor unmanned. A second person waits at the destination floor.

- Pay a special attention when taking a cryogen container on or off an elevator as the gap may be an even.

Sign in an elevator

- Post a "KEEP OUT" sign on the elevator whenever transporting cryogen, and notify other elevator users not to get in.



- Fixation of container of cryogens

Treating Radiation and Radioactive Materials

(1) Radiation and radioactive materials must be handled properly in accordance with the division's radiation safety rules.

(2) Radiation and radioactive materials must be handled only in authorized radiation-control areas.

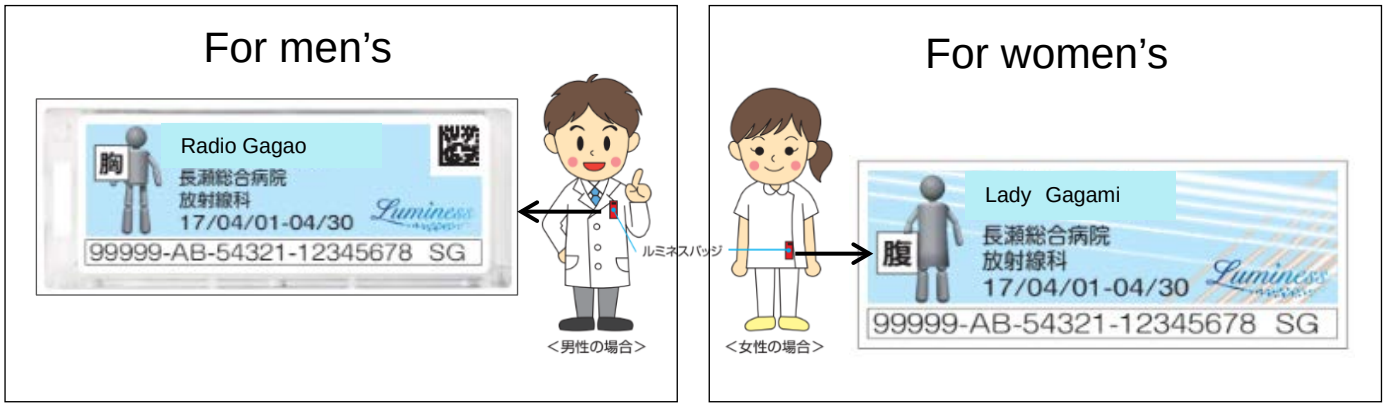
(3) The fundamental principle for using radiation and radioactive materials is that the resulting benefits must outweigh the risks involved.

(4) Those who wish to handle radiation (X-rays) or radioactive materials must first register in accordance with their division's radiation safety rules, undergo the training seminars held by the university and their division, and receive a specialized medical exam.

(5) Those planning to use X-ray diffraction equipment or other such devices must complete the necessary X-ray operator procedures and comply with the instructions of the X-ray operation supervisor or the person in charge of the equipment in question (safety management is conducted in accordance with the Ordinance on Prevention of Ionizing Radiation Hazards). Management of synchrotron radiation facilities is regulated under the Radiation Hazard Prevention Act, so those planning to use such facilities need to register as radiation handlers under the same procedures for radioactive material handlers.

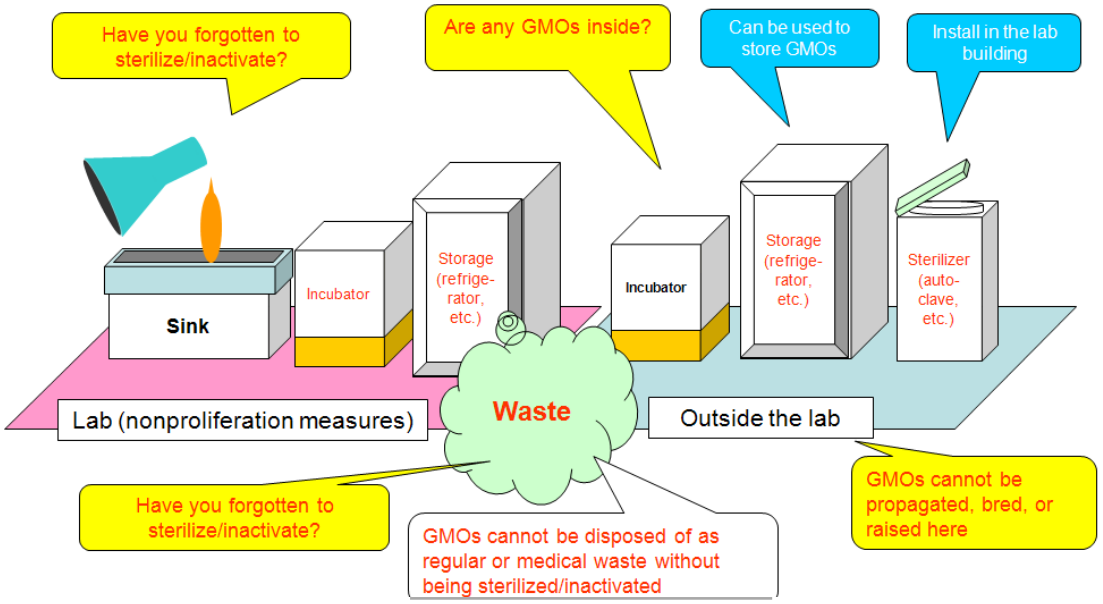
(6) In the event of an emergency, notify the laboratory supervisor and the on-site person in charge, and contact the division's radiation safety manager.

(7) Those who wish to use radiation facilities in other university divisions will need to present certification of their registration as radiation handlers. To obtain a certificate, contact your division's radiation management office.



Important Reminders on Genetic Modification Experiments

Important reminders on genetic modification experiments



For more info. contact : bioscience.adm@gs.mail.u-tokyo.ac.jp

For University Members Engaged in Research Using Narcotics, Psychotropics, Stimulant Raw Materials

Important reminder for university members engaged in research using narcotics, psychotropics, stimulants, stimulant raw materials, Cannabis or Opium

Licensing and registration are required for possession and use

Unauthorized possession/use is illegal!

Please consult the environment, health, & safety at your department before use!

○ Narcotics researcher's license
- Required for possession/use of narcotics for scientific research
- Expiration: Dec. 31 of the following year
- Must be obtained by one member of each project (not required for other researchers involved in the same project)

○ Registration of labs that use psychotropics
- Required of all facilities that use psychotropics for scientific research or testing
- The application must be made under the name of the department head

○ Stimulants researcher's license
- Required for possession/use of stimulants for scientific research
- Expiration: Dec. 31 of the following year

○ Stimulant raw materials researcher's license
- Required for possession/use of stimulant raw materials for scientific research
- Expiration: The first Dec. 31 following the elapse of 4 years from the designated starting date

○ Cannabis researcher's license
- Required for growing/possession/use of cannabis for academic research.
- Expiration: Dec. 31 of the year

○ Groups I/II grower's licenses (Opium)
Group I - Required for growing opium poppy flowers for academic research when opium use is necessary
Group II - Required for growing opium poppy flowers for academic research when opium use is not necessary
- Expiration: The first Sep. 30 from date of issue.

Division for environment, Health & Safety Ext. 21051
E-mail : kankyoanzensuishin.adm@gs.mail.u-tokyo.ac.jp

Unmanned aerial vehicle

It is necessary to obtain permission in advance to use an unmanned aerial vehicle on Kashiwa campus.

① Applicants need to prepare and submit the required documents to the EHS Office, GSFS at least one month before the expected flight date.
② When your application is approved, please ask the administration office for each department to notify all department members regarding the flight date, time, and route.

If you would like to use an unmanned aerial vehicle in Kashiwa Ⅱ campus, please call the administration bldg. directly by phone to obtain permission without following the procedure described above.

See here:
http://www.kashiwa.u-tokyo.ac.jp/kyoutsujimu/bunyabetsu/anzen/anzen.html

Electrical Facility Safety

A wide variety of electrical equipment is used on campus to enable the smooth, efficient performance of experiments and other research activities. It must be remembered that even little mistakes in the use of that equipment can result in electrical shock, short-circuiting, power outages, and fires. Laboratory work in particular poses a high electrical hazard, as personnel must sometimes repair electrical wiring/devices and perform tasks that place electrical systems under extreme operating conditions. As such, all laboratory personnel are expected to acquire a basic knowledge of electricity and a correct understanding of the rules for safe use of electrical facilities.

Regulations

Electrical facilities are subject to the Electricity Business Act, technical standards, and various other regulatory controls. Under the Electricity Business Act, the electrical facilities at University of Tokyo campuses are deemed Electric Facilities for Private Use, and each campus is required to have a set of electrical safety rules and voluntarily carry out electrical facility construction work, inspections, operation, safety measures, and other responsibilities for compliance with technical standards. In particular, the act requires the installation of electrical wiring and other such work to be done by a qualified electrician wearing protective gear, using the appropriate materials and methods. In the event that a university member causes an accident through action in violation of such requirements, the relevant supervisor and chief electrical engineer would be held responsible under both the Industrial Safety and Health Act and the Electricity Business Act.

Electrical Shock

Physical Effects

Electrical shock occurs when an electrical current from a conductor flows through a person to the ground or another conductor. It results from touching live, uninsulated parts of electrical wiring/devices or moving too close to an electrically charged component. The effects on the human body vary depending on such factors as the type of power source, the current path, and the duration of exposure, but in every case the amount of current is a big part of the equation. The direct effect of amperage varies, but in general, currents at least around 100 mA are considered lethal. However, even currents as low as 20 mA can be fatal—for example, grabbing a live conductor at this amperage would cause muscle spasms and nerve paralysis that could prevent the person from releasing the conductor, and hence lead to death.

Prevention

(1) Never touch electrical equipment with wet hands.
(2) Promptly replace damaged power outlets, plugs, etc.
(3) Be sure to ground all electrical equipment. This is especially important for equipment that is located near water, uses water, or has metal housing.
(4) Never place power strips or other such devices on the floor in laboratories where there is potential exposure to water, metal shards, etc.
(5) Keep power outlets and electrical devices free of dust and grime.
(6) Capacitors can remain charged even after the power supply is switched off, so never touch a circuit

before completely discharging all capacitors in it.

(7) The live parts of high-voltage and/or high-amperage laboratory equipment must be insulated to prevent electrical shock, and the area surrounding the equipment must be designated as a danger zone off limits to unauthorized personnel.

(8) Never work alone when performing an experiment involving high voltages and/or strong currents. Also, post appropriate warning signs around the work area, such as “Danger! High Voltage.”

Short-circuiting Accidents

Over time, electrical insulation can degrade from exposure to heat and other stress, resulting in the risk of short-circuiting. The accumulation of dust or moisture inside electrical equipment often results in short-circuiting, and can thus lead to a fire.

Prevention

(1) Install a ground fault circuit interrupter at power sources with potential exposure to moisture.

(2) Promptly try to determine the cause of any abnormalities detected in electrical equipment, such as strange sounds or odors.

(3) Regularly inspect and clean electrical devices to keep them free of dust and grime.

Fires from Overheating

Fires can result from overheating of electrical systems. Sources of overheating include heat-emitting devices, overloaded electrical wiring, and bad electrical contacts.

Prevention

(1) Fires from electrical overheating are often caused by electrical heaters/burners and other heating devices, so exercise caution when using them. In particular, do not allow devices with exposed heating elements to operate unattended.

(2) In general, heating devices draw a large current and are prone to overheating from bad contacts between their plug and the power outlet. Consequently, it is important to regularly check the electrical cords and outlets for damage or other problems.

(3) Whenever a high-temperature electric furnace is to be operated unattended for a long time, measures need to be taken to prevent fire hazards, such as by removing flammable objects from the vicinity.

(4) Power strips overheat when overloaded, so avoid using them to power heating devices, since such devices generally draw large currents.

Electric Sparks

Fires and explosions can result from the release of electric sparks in places where combustible gases or vapors accumulate.

Prevention

(1) Never place flammable/combustible materials near electrical switches, outlets, and other spark sources.

(2) When planning to use electrical switches and other spark sources in places where combustible gases or vapors accumulate, select only devices with anti-explosion designs.

Precautions on Electric Cabling

Normally, the walls of laboratories and other work rooms have power outlets and, in some cases, a power distribution board. In general, outlets are rated at 15 A, so power will have to be drawn directly from the distribution board in cases where the outlet capacity is insufficient, such as when using equipment that requires a heavy current.

Precautions

(1) Consult with the facility supervisor and other relevant managers before carrying out electrical installation work in the laboratory/work room.
(2) When temporarily running electrical cabling across the floor, use cab-tire cables resistant to compression, and secure them to the floor with duct tape or other appropriate means.
(3) Whenever possible, avoid cabling layouts that rely on plug strips to power multiple devices. If this is not possible, use plug strips that have a thick cable and can be secured to the wall (not the floor) with magnets, etc.

Responding to Electrical Accidents

Electrical Shock

First, immediately switch off the power supply. When this is not possible, use an electrically insulated pole, a dry wooden pole, etc. to separate the victim from the electrical shock source. Next, apply first aid to the victim and take other emergency procedures.

Electrical Fires

First, switch off the power supply and then begin firefighting efforts. When the power cannot be turned off, avoid using water to fight the fire, as it may result in electrical shock and cause the fire to spread. Instead, use a dry chemical extinguisher, a carbon dioxide extinguisher, or other extinguisher designed for electrical fires.

Reminder Based on Currently Happened Accidents

Watch out for leakage from gas cylinders!

In case of a gas leak,
close the cylinder valve, notify authorities, ventilate the room, and evacuate!
**** Some gases pose a risk of explosion, poisoning, anoxia, or other serious hazards***

Cylinders are pressurized at nearly 150 atm = High risk for massive gas leakage!

- ***Always cap the valve outlet of cylinders not in use***
- ***When transporting cylinders, be sure to cap the valve outlet and put the protective cover over the valve***
- ***When spindle-key-operated cylinders are not in use, do not leave the spindle key on the valve***

Never leave the outlet cap on the handle (may result in failure to cap outlet or other problems)

Wheel-handle valves

Outlet left uncapped

Outlet properly capped

Valve cover in place

Spindle-key valves

Do not leave spindle key on valve when not in use

Division for Environment, Health & Safety

Ever had a liquid nitrogen/helium cylinder nearly tip over when its casters snagged on a bump on the floor?

Beware of toppling of liquefied gas cylinders during transport!

In a recent accident at Kashiwa Campus, a cylinder filled with liquid nitrogen toppled on a person transporting it, resulting in injury. In order to prevent similar accidents from occurring, please comply with the following precautions for safe transport of liquid nitrogen/helium containers.

- Have someone assist you with transport.
- When full, a 100 L liquid nitrogen cylinder is extremely heavy, weighing as much as 150 to 200 kg
  - Serious injury may result if your feet are run over by the casters!
  - Never wear sandals or other loose footwear when transporting cylinders!
- Be very careful when crossing bumps!
  - Whenever possible, move cylinders by pulling them, not pushing them
  - Pass over bumps slowly, crossing with one caster at a time
  - Cylinders are prone to tipping when only the handle on top is pushed or pulled
  - If you have to push a cylinder, place one hand on the middle of the cylinder
- If a cylinder is about to tip over or has already tipped over, do not try to force it back up! Release your grip if necessary to protect yourself
- Do not let yourself get caught under a toppling cylinder. If you do, the cylinder won't be the only thing damaged—you yourself could be severely injured!
- You can repair a broken cylinder , but you can't "repair" bodily injuries so easily.

Movable cryogenic tanks

Use caution with microwave heating!

Bumping, shattering, and spattering can result in burns or eye injuries!

Many accidents have occurred from the use of microwave ovens to heat lab materials

Past Accidents

- A flask containing agarose gel solution was stirred after microwave heating. As a result of bumping, the solution spewed over and burned the person's hand
- A flask was heated while stoppered. Upon removal from the oven, it shattered, causing cuts and burns to the person
- When a paraformaldehyde solution was heated and stirred, bumping caused the solution to spatter into the person's eyes

Safety Tips for Microwave Heating

- Stay near the microwave oven and avoid overheating the material
- When heating solutions, do not fill the flask, beaker, test tube, bottle, etc. to more than 1/3 of its capacity
- Never heat containers sealed with a stopper, lid, etc.
- Wear impermeable heat-resistant gloves and protective eyewear

Read the microwave oven user manual to familiarize yourself with proper operation.

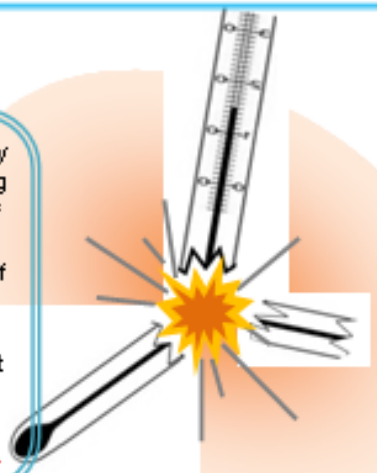
Beware of bursting mercury thermometers during heating

Accidents involving bursting of mercury thermometers occur every year at the University of Tokyo, often resulting in the spattering of mercury. In addition to the risk of cuts from broken glass, these accidents can also lead to health impairment from mercury absorption and to environmental contamination.

Case 1

In May 2007, a mercury thermometer broke during the mixing and heating of chemicals.

Due to the possibility of mercury absorption, the student performing the experiment and a student working nearby were required to undergo examination at a hospital.



Case 2

In Nov. 2009, an unattended mercury thermometer cracked after it was heated above 300°C.

As a result, the column snapped and the bulb shattered, allowing mercury to leak out.

Precautions

(1) Check the thermometer's maximum measurable temperature and do not use the thermometer in cases where you cannot keep the temperature from exceeding the maximum.
(2) Do not use the thermometer for stirring. Minimize the risk of breaking by taking care to keep the thermometer from hitting people or things.
(3) If the thermometer breaks, the proper emergency response must be made immediately, so promptly contact your department's Health and Safety Management Office (ext.) so that the necessary response can be made promptly.

Division for Environment, Health & Safety
Jan. 2010

Please use non-mercury thermometers whenever possible.
Before disposing of mercury thermometers, please consult with your department's health & safety officer.

Beware of Anaphylaxis!

Anaphylaxis: Acute allergic reaction that can result from animal bites.
Symptoms may also appear in people normally not predisposed to allergies.

Preventing bites by lab mice, etc....

- When performing experiments, secure the animal's hind legs
- Shrieking is a sign that the animal is agitated. Return the animal to the cage and allow it to calm down before using it
- Whenever possible, put on protective wear (thick gloves, etc.), use forceps or other utensils, and take other steps to prevent bites

If bitten...

- Thoroughly rinse or wipe the wound
- Immediately notify nearby colleagues and concerned personnel

Contact: _____.

- Monitor yourself for unusual physical conditions (rashes, flushing, difficulty breathing, dizziness, elevated heartbeat, nausea, etc.)
  Symptoms of anaphylaxis generally start to appear within 30 minutes
  - Symptoms appear quickly in severe cases
  - Symptoms are more severe in people who have experienced similar reactions before

If you experience unusual physical conditions (especially difficulty breathing), immediately seek medical attention!

- Call an ambulance or rush to a hospital
- Tell the doctor that you may be suffering from anaphylaxis

The University of Tokyo

Experimental Waste

All campus members involved in educational and research activities need to implement safety measures to prevent those activities from having negative effects on the environment within and outside the university.

(1) Kashiwa Center, Environmental Science Center collects the experimental waste in Kashiwa campus.

Types of waste
- Experimental waste
- Radiational waste
- Medical waste
- General waste

(2) Kashiwa Center regularly collects experimental waste. Check its classification rule of waste and procedure for emission. Receiving area of waste is infront of the storage of dangerous substances, and receiving date is 4th Thursday. Solid waste (Type L) must be put in a small bag with a bar-coded sticker. Contact Kashiwa Center for the details.

環境安全研究センター 柏支所

Kashiwa Branch, Environmental Science Center, The Univ. of Tokyo

電話:04-7136-4200 or 4201 内線:64200 or 64201 Fax:04-7136-4204 Fax(内線):64204

環境安全研究センター ホーム

[1] 実験廃棄物の受け入れ
[2] 実験廃棄物の処理
[3] ご案内
(支所見学会、講習会)
[4] 柏支所のあゆみ
[5] 建物・設備

[1] 実験廃棄物の受け入れ

柏キャンパスで発生した有害な実験廃棄物は，センター柏支所で，定期的に受け入れています。この際，実験廃棄物の分別収集区分や処理依頼伝票などの基本的なルールは，センター本館による回収の場合と全く同じです。ただし，廃棄物の受け入れ場所は柏支所の危険物倉庫前であり，受け入れ時期は原則として第4木曜日となっています。また固形廃棄物(L分類)については，廃棄物の適正管理の立場から，小袋にバーコード・シールの貼付を義務付けています。

受入場所	柏支所危険物倉庫前
受入日	第4木曜日(原則)

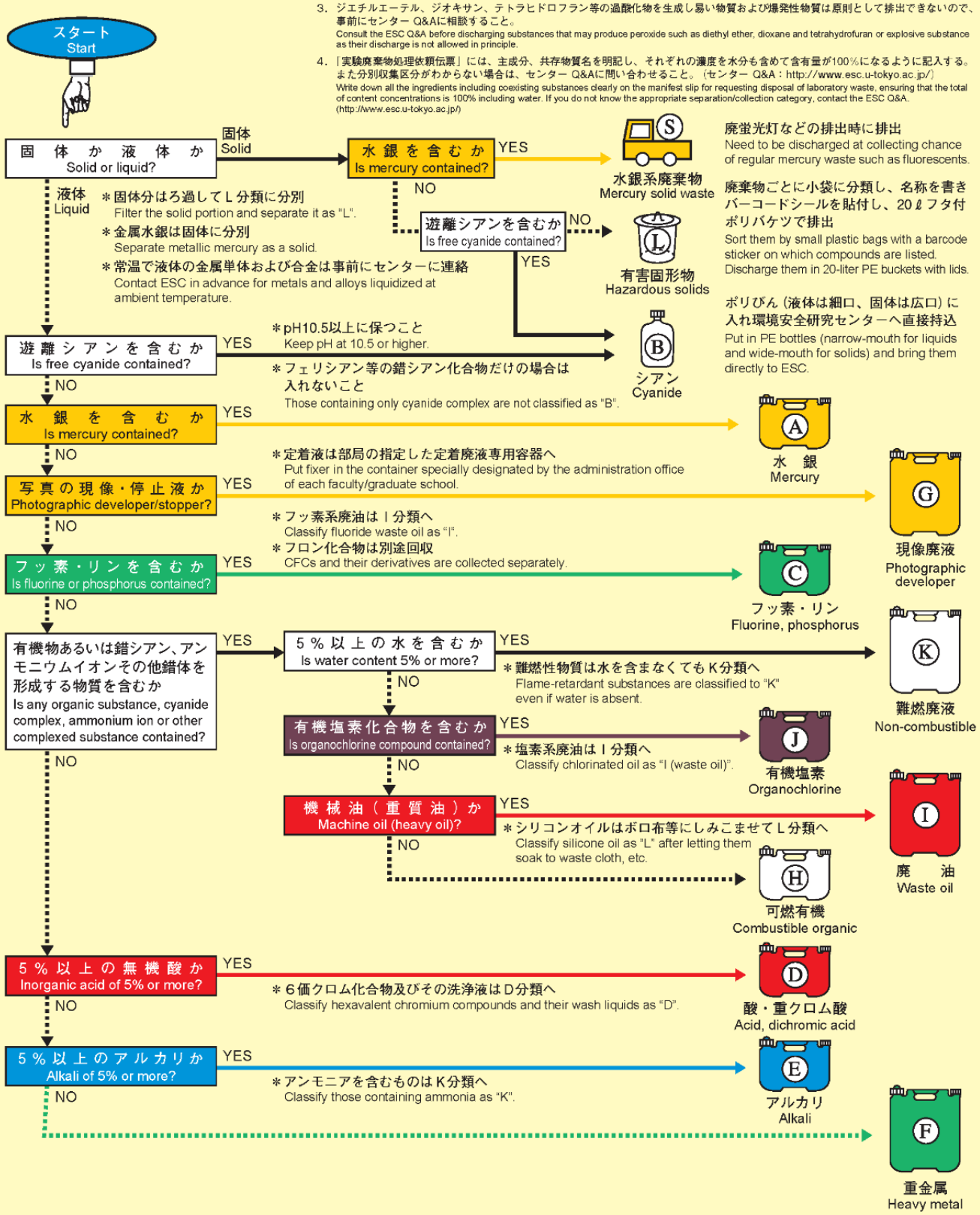
受入時刻	10:30～10:45 (物性研究所、宇宙線研究所) 11:00～11:45 (大学院新領域創成科学研究科) 13:30～14:15 (大気海洋研究所)

Kashiwa Center, Environmental Science Center HP:http://www.esc.u-tokyo.ac.jp/kashiwa/index.html
E-mail : kashiwajimu@esc.u-tokyo.ac.jp

(3) Chemicals that have lost their labels or otherwise become unidentified pose a threat to safety and entail enormous effort and costs for disposal, so make sure that all chemicals remain readily identifiable. This can be done by properly managing chemical supplies and waste with an inventory control system, promptly disposing of unneeded chemicals, and keeping chemical purchases to the minimum amount necessary. Also, chemicals often become unidentified when kept in sample containers, so be sure to promptly label such containers and dispose of their contents once they become unneeded.

化学的有害廃棄物分別収集早見表
Classification chart of chemically hazardous waste

注 Notes
1. オスミウム、タリウム、ベリリウムおよびそれらの化合物は、今のところ処理方法が開発されていないので研究室等で保管すること（但し、タリウム、ベリリウム含有廃棄試薬は別途回収する）。
Osmium, thallium, beryllium, and their compounds should be stored at each laboratory, etc. because methods for treating them have not been developed. (Reagents containing thallium or beryllium are collected in exceptional circumstances.)
2. PCBおよびPCB含有物は処理が禁止されているので、部局ごとに厳重に保管すること。
PCB and PCB-containing substances should be stored strictly by each faculty/graduate school as their treatment is prohibited.
3. ジエチルエーテル、ジオキサン、テトラヒドロフラン等の過酸化物を生成し易い物質および爆発性物質は原則として排出できないので、事前にセンター Q&Aに相談すること。
Consult the ESC Q&A before discharging substances that may produce peroxide such as diethyl ether, dioxane and tetrahydrofuran or explosive substance as their discharge is not allowed in principle.
4. 「実験廃棄物処理依頼伝票」には、主成分、共存物質名を明記し、それぞれの濃度を水分も含めて含有量が100％になるように記入する。また分別収集区分がわからない場合は、センター Q&Aに問い合わせること。（センター Q&A：http://www.esc.u-tokyo.ac.jp/）
Write down all the ingredients including coexisting substances clearly on the manifest slip for requesting disposal of laboratory waste, ensuring that the total of content concentrations is 100% including water. If you do not know the appropriate separation/collection category, contact the ESC Q&A. (http://www.esc.u-tokyo.ac.jp/)



東京大学 THE UNIVERSITY OF TOKYO
発行　2015年6月　東京大学環境安全研究センター　E-mail：shishin@esc.u-tokyo.ac.jp
Published in June 2015, by Environmental Science Center, The University of Tokyo

東京大学環境安全研究センター資料より抜粋

Reagent Disposal

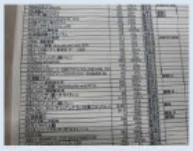
Since 2012, GSFS has contracted out reagents disposal to a disposal service (each laboratory shall be responsible for their own costs of reagent disposal). When the schedule of disposal reagent of this year is decided, EHS Office GSFS will announce it.

How to Dispose Reagents

For those who have unneeded chemical reagents in your laboratory....
Here is the flow of reagent disposal.

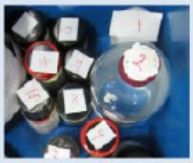
① Collect reagents for disposal in your lab.

② Make list of reagents to be disposed @UTCRIS



③ Number the reagents

Put a number on each bottle



Person in Charge of lab.

④ Contact EHS Office

Ask for a quotation

Determine a date of Content confirmation (⑤)

Person in Charge of lab. → EHS Office

⑤ Content confirmation by EHS Office

Check the bottles against the list

Determine a date of Pick up by disposal service (⑥)

Person in Charge of lab.

EHS Office

⑥ Pick up by disposal service

Check the bottles against the list

Person in Charge of lab.

EHS Office

Disposal service

⑦ Register the dispose reagents @UTCRIS

Register them after receiving the e-mail about disposal process completing

10 Jan. 2019, EHS Office, GSFS (Ex 63722)

Tips for Reagent Disposal

The name and number of each reagent will be used in checking up them all the reagents one by one, when "⑤Contents confirmation by EHS Office" and "⑥ Pick up by disposal services" .

The name should be written in full.

The number should be the same with the list, writing down on the bottle, lid, or package of reagent.

MSDS (Material Safety Data Sheet) needs to be turned in with the reagent and list.

No.	試薬名	残量	容量	単位	開封
1	ナトリウム	24	25	g	開封
2	ヒ素	80	100	g	開封
3	硝酸マンガン	500	500	g	未
4	ヒドラジン水和物	320	500	mL	開封

Don't forget to fill out the cells of remaining amount, capacity, unit, and unopened/opened.
These information would help the process of "⑤Contents confirmation by EHS Office" and "⑥ Pick up by disposal services" faster.

Periodical check

Fume hoods, autoclaves, centrifuges must be checked once a year, except for devices that are out of use.

Periodical check conducted by vendors

EHS Office will combine the applications for GSFS every October. A notification e-mail will be sent to all GSFS members, so please make the application through your laboratory unit.

Voluntary check

Check and record your devices in each laboratory according to the "Annual Voluntary Check List" specified by The University of Tokyo. An anemometer is available at the EHS Office

Annual Voluntary Check List Form

● Fume hoods

○○ 年度 ドラフトチャンバー、排じん・排ガス処理装置
年次自主検査表　　年　月　分

機番　　3年間保管

事業場・部局	東京大学　柏キャンパス	検査日	年　月　日
研究室名		検査者	
設置場所		判定	良好、　要改善

○　異常なし、×　要修理

区分	検査項目	判定	整備修理等記録、修理日
	ドラフトチャンバーの管理に必要な講習や製造業者への確認等を行いましたか	○ ×	
	ドラフトチャンバーの管理に必要な仕様書やタグなどの図面が保管されていますか	○ ×	
	ドラフトチャンバーの管理に必要な測定器具・工具・保護具を準備、点検、着用していますか	○ ×	
	ドラフトチャンバー内に試薬や器具が置いてありませんか	○ ×	
フード	腐蝕、変形が無いか	○ ×	
	開口面付近に障害物が無いか	○ ×	
	開口面は吸気方向に正しく向いているか	○ ×	
	発煙管の煙が逃げずに吸い込まれるか	○ ×	
ダクト	腐蝕、変形が無いか	○ ×	
	埃などの堆積物がないか	○ ×	
	接続部にゆるみがないか	○ ×	
	ダンパーが軽い力で作動するか	○ ×	
ファン	ファンベルトの張りが適切でガタがないか	○ ×	
	ファンのインペラーに粉塵の付着が無いか	○ ×	
	ファンのケーシングに粉塵の付着が無いか	○ ×	
	駆動部に適切に注油されているか	○ ×	
	駆動時に異常な振動や音がしないか	○ ×	
	駆動時に過熱にならないか	○ ×	

制御風速の測定の測定

基準測定値＿＿＿＿＿＿
測定時の開口面の高さ＿＿＿cm　（通常使用する開口範囲内で測定してください

開口部を以下のように16等分し、それぞれの基準を記入してください

m/s	m/s	m/s	m/s	m/s	m/s	m/s	m/s
m/s	m/s	m/s	m/s	m/s	m/s	m/s	m/s

制御風速が通常使用する開口面の高さにおいて、排気に対して使用する場合で0.4m/s未満、粉末状の物質に対して使用する場合で1.0m/s未満だった場合には、すぐに専門業者に点検・修理を依頼してください。点検修理後は以下の記載欄にその内容を記載してください。

点検・修理記録（　年　月　日）

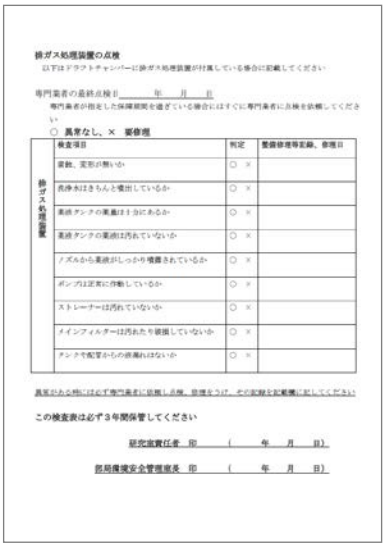
排じん装置の点検

以下はドラフトチャンバーに排じん装置が付属している場合に記載してください

専門業者の最終点検日　平成　年　月　日
専門業者が指定した保障期間を過ぎている場合にはすぐに専門業者に点検を依頼してください

○　異常なし、×　要修理

	検査項目	判定	整備修理等記録、修理日
排じん装置	腐蝕、変形が無いか	○ ×	
	埃などの堆積物がないか	○ ×	
	内部充てん物の量は適切か、破損はないか。	○ ×	
	内部充てん物の導入孔部に隙間や漏れはないか	○ ×	
	プレフィルターの汚れや破損はないか	○ ×	



排ガス処理装置の点検

以下はドラフトチャンバーに排ガス処理装置が付属している場合に記載してください

専門業者の最終点検日　　年　月　日
専門業者が指定した保障期間を過ぎている場合にはすぐに専門業者に点検を依頼してください

○　異常なし、×　要修理

	検査項目	判定	整備修理等記録、修理日
排ガス処理装置	腐蝕、変形が無いか	○ ×	
	洗浄水はきちんと循環しているか	○ ×	
	廃液タンクの量は十分にあるか	○ ×	
	廃液タンクの廃液は汚れていないか	○ ×	
	ノズルから廃液がしっかり噴霧されているか	○ ×	
	ポンプは正常に作動しているか	○ ×	
	ストレーナーは汚れていないか	○ ×	
	メインフィルターは汚れたり破損していないか	○ ×	
	タンクや配管からの漏れはないか	○ ×	

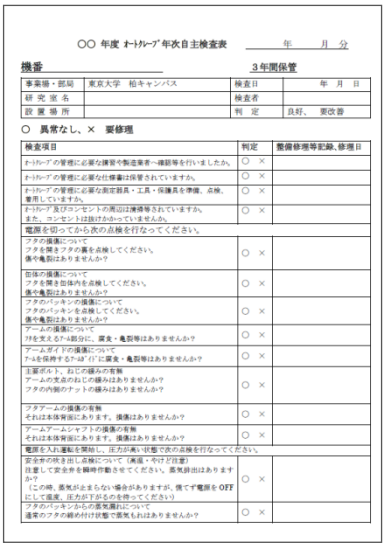
異常がある時には必ず専門業者に依頼し点検、修理をうけ、その記録を記載欄に記してください

この検査表は必ず3年間保管してください

研究室責任者　印　　（　　年　月　日）

部局環境安全管理室長　印　　（　　年　月　日）

● Autoclaves



○○ 年度 オートクレーブ 年次自主検査表　　年　月　分

機番　　3年間保管

事業場・部局	東京大学　柏キャンパス	検査日	年　月　日
研究室名		検査者	
設置場所		判定	良好、　要改善

○　異常なし、×　要修理

検査項目	判定	整備修理等記録、修理日
オートクレーブの管理に必要な講習や製造業者への確認等を行いましたか。	○ ×	
オートクレーブの管理に必要な仕様書は保管されていますか。	○ ×	
オートクレーブの管理に必要な測定器具・工具・保護具を準備、点検、着用していますか。	○ ×	
オートクレーブ及びコンセントの周辺は清掃等されていますか。 また、コンセントは抜け落ちていませんか。	○ ×	
電源を切ってから次の点検を行なってください。		
フタの損傷について フタを開きフタの裏を点検してください。 傷や亀裂はありませんか？	○ ×	
缶体の損傷について フタを開き缶体内を点検してください。 傷や亀裂はありませんか？	○ ×	
フタのパッキンの損傷について フタのパッキンを点検してください。 傷や亀裂はありませんか？	○ ×	
アームの損傷について ｱﾙﾐを支える3箇所に、腐食・亀裂等はありませんか？	○ ×	
アームガイドの損傷について ｱｰﾑを保持するﾌﾟﾗｽﾁｯｸﾞｲﾄﾞに腐食・亀裂等はありませんか？	○ ×	
主要ボルト、おじの緩みの有無 アームの支点のおじの緩みはありませんか？ フタの内側のナットの緩みはありませんか？	○ ×	
フタアームの損傷の有無 それは本体背面にあります。損傷はありませんか？	○ ×	
アームアームシャフトの損傷の有無 それは本体背面にあります。損傷はありませんか？	○ ×	
電源を入れ運転を開始し、圧力が高い状態で次の点検を行なってください。		
安全弁の吹き出し点検について（高温・やけど注意） 注意して安全弁を瞬時作動させてください。蒸気排出はありますか？ （この時、蒸気が止まらない場合がありますが、慎てて電源をOFFにして温度、圧力が下がるのを待ってください）	○ ×	
フタのパッキンからの蒸気漏れについて 通常のフタの締め付け状態で蒸気もれはありませんか？	○ ×	

● Centrifuges

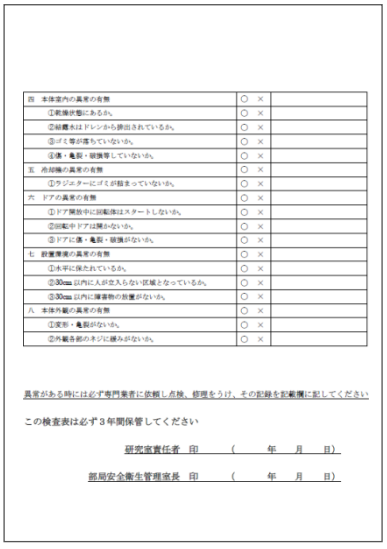
○○ 年度 動力遠心機械年次自主検査表　　年　月　分

機番　　3年間保管

事業場・部局	東京大学　柏キャンパス	検査日	年　月　日
研究室名		検査者	
設置場所		判定	良好、　要改善

○　異常なし、×　要修理

検査項目	判定	整備修理等記録、修理日
遠心器の管理に必要な講習や製造業者への確認等を行いましたか。	○ ×	
遠心器の管理に必要な仕様書は保管されていますか。	○ ×	
遠心器の管理に必要な測定器具・工具・保護具を準備、点検、着用していますか。	○ ×	
遠心器及びコンセントの周辺は清掃等されていますか。 また、コンセントは抜け落ちていませんか。	○ ×	
一　回転体の異常の有無（回転体とはローターを意味する）	○ ×	
①最高回転速度・許容回転速度以上で使用していないか。	○ ×	
②回転体の外観・内側に腐食傷がないか。	○ ×	
③回転体の固定ナットの緩みはないか。	○ ×	
④回転体のスイングバケットは滑らかにスイングするか。	○ ×	
⑤回転体のネジ部分にグリースが塗られているか。	○ ×	
⑥回転体の寿命管理がされているか、使用記録はあるか、保証期間内か。	○ ×	
⑦回転体のチューブ挿入穴に付着物はないか。	○ ×	
⑧回転体に入るチューブに変形・変色・劣化している物はないか。	○ ×	
⑨回転体の回転軸が入る穴に付着物等がないか。	○ ×	
二　主軸の軸受部の異常の有無	○ ×	
①回転体が乗る回転軸にサビや傷が発生していないか。	○ ×	
②回転体が乗る回転軸に曲がりが発生していないか。	○ ×	
三　回転制御の異常の有無	○ ×	
①加速動作に異常がないか。（加動・異常音）	○ ×	
②惰動動作に異常がないか。（回転のふらつき）	○ ×	
③減速動作に異常がないか。（加動・異常音）	○ ×	
④減速時のブレーキ動作に異常がないか。	○ ×	



四　本体室内の異常の有無	○ ×	
①乾燥状態にあるか。	○ ×	
②結露またはドレンから排出されているか。	○ ×	
③ゴミ等が落ちていないか。	○ ×	
④傷・亀裂・破損等していないか。	○ ×	
五　冷却機の異常の有無	○ ×	
①ラジエーターにゴミが詰まっていないか。	○ ×	
六　ドアの異常の有無	○ ×	
①ドア開放中は回転体はスタートしないか。	○ ×	
②回転中ドアは開かないか。	○ ×	
③ドアに傷・亀裂・破損がないか。	○ ×	
七　設置環境の異常の有無	○ ×	
①水平に保たれているか。	○ ×	
②30cm以内に人が立入らない区域となっているか。	○ ×	
③30cm以内に障害物の放置がないか。	○ ×	
八　本体外観の異常の有無	○ ×	
①変形・亀裂がないか。	○ ×	
②外観各部のネジに緩みがないか。	○ ×	

異常がある時には必ず専門業者に依頼し点検、修理をうけ、その記録を記載欄に記してください

この検査表は必ず3年間保管してください

研究室責任者　印　　（　　年　月　日）

部局安全衛生管理室長　印　　（　　年　月　日）

Required signs

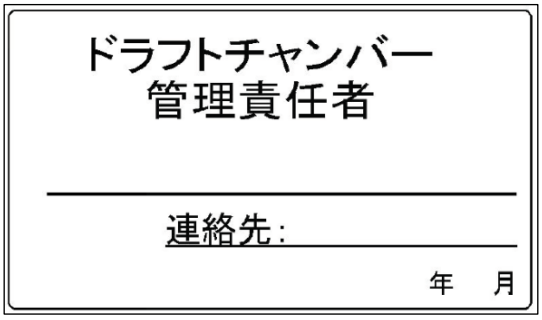
Fume hood: Post the last periodical check report and the name of the person in charge of the equipment

● Regular inspection record

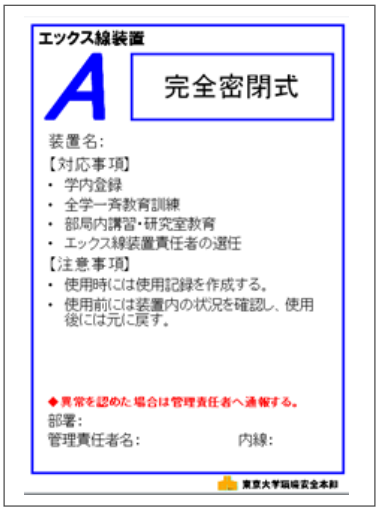
定期点検の記録 / Regular Inspection 20th anniversary since 2002

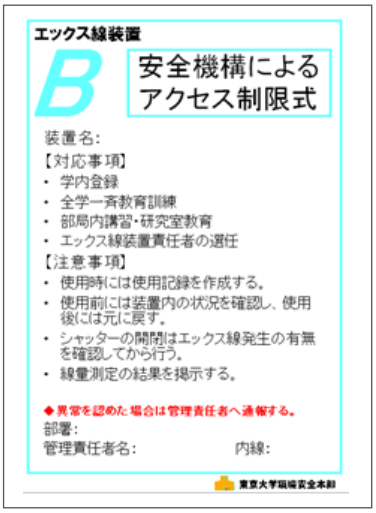
年 度	点検✔	メンテナンス	✔	メンテナンスの内容
2018	✔	✔		11月活性炭交換済
2019				
2020				
2021				
2022				

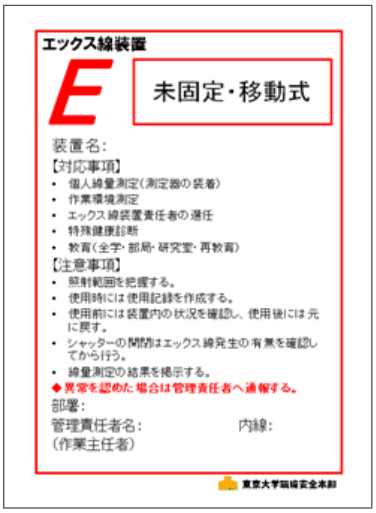
● Management representative



■ Classification of x-ray equipment







Equipment required voluntary check

・X-ray equipment for research

All equipment: Periodical leakage check once a year

Equipment fixed in an out of controlled area: Work environment inspection once every 6 months

Un-fixed equipment located in an out of controlled area: Work environment inspection every month

・Electronic microscope (Rated acceleration voltage 100 kV or more): Periodical leakage check once a year

Contact: RI Office, GSFS (fs-rad@edu.k.u-tokyo.ac.jp)

● Oximeter

The oximeters manufactured by RIKEN will be calibrated by the supplier every 2 years. Calibration for the oximeters manufactured by other companies and voluntary calibration for the RIKEN need to be requested directly from the supplier by yourself.

On every last Saturday in September, a simultaneous blackout is conducted and oximeters will need to be re-calibrated properly after blackout.

Recalibrating Method

酸素濃度計（理研計器製 OX-500）のエア校正について

停電復旧後、濃度表示が点滅します。この状態では正しく測定できていませんので、必ず「**エア校正**」を行ってください。

【注意】　新鮮な空気中で行ってください

① 「MODE」スイッチを押し「Air」を表示します。

② 「MAINTE」スイッチを 3 秒間押すと現在の酸素ガス濃度が表示され「エア校正」が始まります。

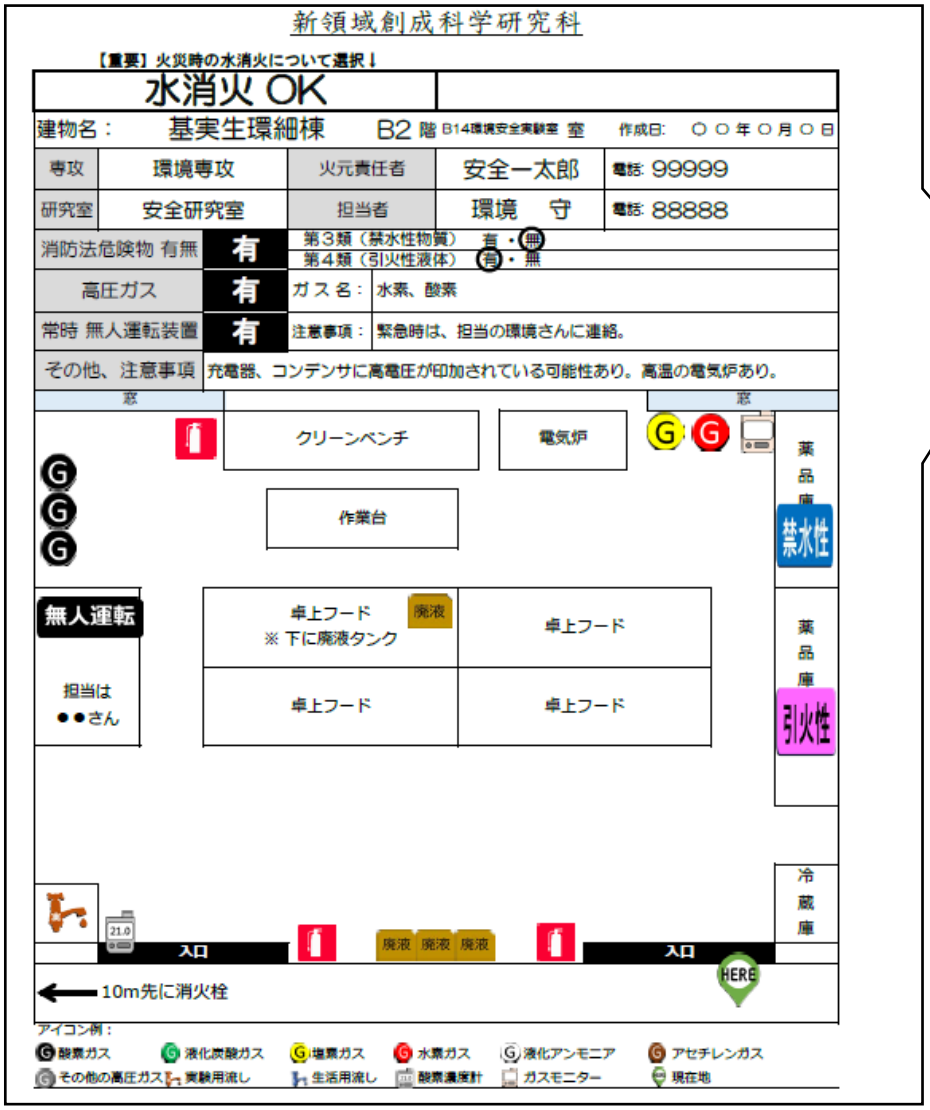
③「エア校正」が終了すると終了音が鳴り「測定モード」に戻ります。点滅から点灯になっていることを確認してください。

※ 正しくエア校正ができない場合はメーカーに修理を依頼してください。

Equipment Arrangement

① Equipment arrangement

Laboratory equipment arrangement is required to be indicated the door outside for emergencies. Use the following arrangement as a reference. If the equipment arrangement changes, please update in each instance.



Door

Equipment Arrangement

Tips for arranging equipment

◎ Layout : Handwriting is acceptable

◎ Location of cylinders and reagent storage

◎ Fire distinguisher / Fire hydrant: Mark a sign of “☆”

◎ Hazardous materials, and over-night working equipment:Mark a sign of “□”、use “Red”

◎ Cylinders: Mark a sign of “○”、use “Red”

② Emergency contact information

1）Please fill in the contact person's name and phone number at the emergency of nights and weekends,

2）The contact person is available to faculties, staff, and students.

3）Write the phone number who can contact anytime (Fixed-line phone and cell phone is available)

4）Prit it as A4 size and put it on the wall with a magnet

○○棟 ○○室　夜間･休日緊急時連絡表（記入方法）

２０○○年　月　日作成

室名　○○研究室

順位	氏 名	電話番号
1	○○　○○	０８０－１２３４－５６７８
2	○○　○○	０９０－８７６５－４３２１（携帯） ０４－１２３４－５６７８（自宅）

(1) 夜間、休日の緊急時に、確実に連絡が取れる担当者 2 名の名前、電話番号を優先順に記入。

(2) 担当者は教職員、学生のいずれでも可。

(3) 電話番号は携帯電話、固定電話のうち確実に連絡の取れる方を記入（併記可）。

(4) 掲示方法：印刷したものを封筒等に入れ、部屋入口の内側に貼付（すぐ取り出せるようにしておく）。

③ Emergency stop procedure

Put the emergency stop procedure on the equipment which operated unmanned in your laboratory There is no official form, so please cover the following contents.

1）Name of the laboratory

2）Users' name and emergency contact of the equipment

3）Emergency stop procedure of the equipment

4）Cautions if any

5）Make it as an A5 size

Management Plan for Safety and Health during Educational Research Activities in the Field

Activity in Japan

① Management plat 野外活動計画書
② Name list 参加者名簿
③ Schedule 行程予定表

Activity outside Japan

① Management plan 野外活動計画書
② Name List 参加者名簿
③ Schedule 行程予定表
④ Pre-departure Check list 安全衛生事前ﾁｪｯｸﾘｽﾄ


【①Management plan】


【②Name list】


【③Schedule】


【④Safety Check list】

Document Submission

1. First, submit documents to Head of EHS Office, Head of your Department, and environment and Safety committee member of your department by E-mail.

2. Next, submit original documents to EHS Office by mail through the intra-university mail system after being approved by EHS Office Head.

3. Submit documents by one week before your scheduled departure date.
   If there are any changes in your plan(including suspension or cancellation), please contact the EHS Office by E-mail at [fs-anzen@edu.k.u-tokyo.ac.jp]

4. GHS Office will return a copy of the field research activities documents to the Activity Leader after approval by the GSFS Dean. Please maintain those copies for at least one year.

Guideline of Support for Qualification and Training Session

GSFS has a support system to cover costs for qualifications commonly needed in graduate school laboratory research (such as health officers, dangerous object handlers, and radiation officers).

This system supports those who have need legally required training/qualification for their job.

Guidelines for this support system

(1) This system supports costs for required training/qualification only once for each qualification. This system does not support qualifications which needed specific to only one research group. Also, this system does not support the qualification and trainings held by The University of Tokyo.
(2) This system supports training sessions required by law for necessary re-qualifications/training.
(3) Applicants should submit an application to the EHS Office, GSFS. After approval by the EHS Committee, the application will be processed.
(4) When you get approval, please request payment at the Contract Office. (Copies of acceptance notice/credentials and a receipt is needed.)

年　月　日

労働安全衛生法等にかかる資格取得・講習会受講申請書

環境安全委員会委員長　殿

各直属の上司　　印

下記事項について、安全衛生管理の業務上必要と認め申請しますので、承認願います。

記

所属		職名		氏名	
資格・講習会等名					
主催者					
開催期日	年　月　日～　年　月　日（　日間）				
開催場所					
受講理由					
費用	受講料		テキスト代		旅費
その他					

※資格・講習会等の関係資料を添付してください。なお、予算の都合上、支出できない場合もありますので、ご了承ください。
受講料等は立替払いとし、所定の用紙に領収書等を添付し、契約係へ提出してください。
資格取得・講習会受講後は、人事記録に記載しますので、人事労務グループ・人事チームへ修了証等の写しを届けてください。

承認	環境安全委員会 委員長	環境安全管理室 室長				
します。	（共閲）　新領域担当課副課長　　契約係長					

Guideline for chemicals and lab equipment succession

Whenever chemicals are handed-over or brought-in upon retirement or employment of a faculty member, please fill in the following note and return it to EHS Office GSFS.

*Those who retire or move out: Takeover confirmation form

*Those who move in: Carry-in confirmation form

(Attention) Even if you do NOT hand over or bring in any chemicals, please submit this document it to EHS Office.

化学物質等引き継ぎ確認書

引き渡し教職員
所属：
職名：
氏名：
内線：

化学物質等の引き渡しの有無　□ 有　□ 無

※引き渡す化学物質等がある場合は以下について記載してください

引き渡す化学物質等は，以下のとおりです。(引き渡し事由: □退職 □学内異動 □その他(　　))

事項		項目		設備・資格等	備考
化学物質（放射性物質等を除く）	□ 有	特定毒物	□ 有	要	
		毒物・劇物	□ 有		
		毒薬・劇薬・指定薬物	□ 有		
		麻薬	□ 有	要	
		向精神薬	□ 有	要	
		覚せい剤・覚せい剤原料	□ 有	要	
		製造禁止物質	□ 有	要	
	□ 無	特定物質	□ 有	要	
		農薬（使用禁止農薬・販売禁止農薬・その他）	□ 有		
		上記以外の化学物質	□ 有		
高圧ガス等	□ 有	毒性ガス	□ 有	要	
		特殊高圧ガス	□ 有	要	
	□ 無	上記以外の高圧ガス	□ 有		
放射性物質等	□ 有	表示付認証機器	□ 有	要	
		放射線発生装置	□ 有	要	
		放射性同位元素（密封・非密封）	□ 有	要	
		放射化物	□ 有	要	
	□ 無	核燃料物質・核原料物質	□ 有	要	
		エックス線装置	□ 有	要	
		上記以外の放射性物質等	□ 有	要	
（微）生物・動物等	□ 有	遺伝子組換え生物等	□ 有	要	
		病原体等・特定病原体等	□ 有	要	
	□ 無	実験動物	□ 有	要	
特殊機器等	□ 有	レーザー（4,3B,3R,2M,1M）	□ 有		
	□ 無	労働安全衛生法届出設備等	□ 有	要	
その他	□ 有	実験系廃棄物、不明試薬	□ 無		
	□ 無	法定資格等	□ 有		

申し送り事項

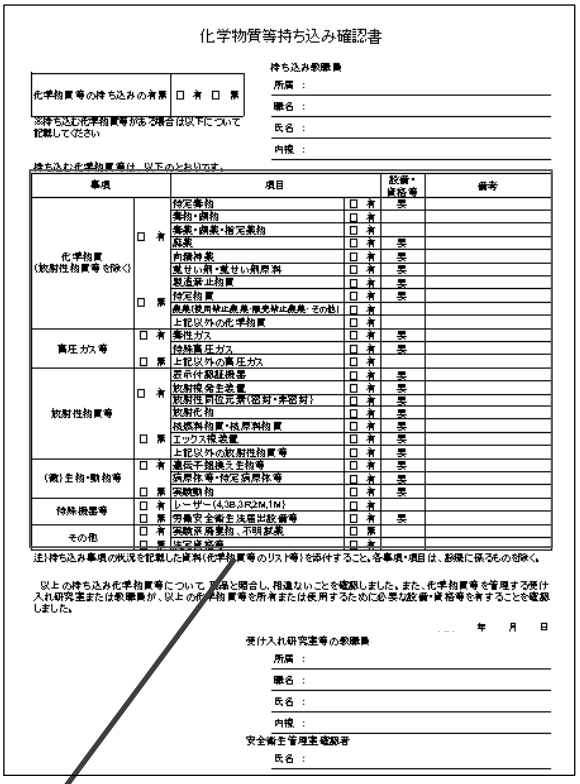
以上の引き渡し化学物質等及び申し送り事項について，現品と照合し，相違ないことを確認しました。また，引き受け教職員が以上の化学物質等を所有または使用するために必要な設備・資格等を有することを確認しました。

年　月　日

引き受け教職員
所属：
職名：
氏名：
内線：

環境安全管理室確認者
氏名：

（平成28年3月改訂）



化学物質等持ち込み確認書

持ち込み教職員
所属：
職名：
氏名：
内線：

化学物質等の持ち込みの有無　□ 有　□ 無

※持ち込む化学物質等がある場合は以下について記載してください

持ち込む化学物質等は，以下のとおりです。

事項		項目		設備・資格等	備考
化学物質（放射性物質等を除く）	□ 有	特定毒物	□ 有	要	
		毒物・劇物	□ 有		
		毒薬・劇薬・指定薬物	□ 有		
		麻薬	□ 有	要	
		向精神薬	□ 有	要	
		覚せい剤・覚せい剤原料	□ 有	要	
		製造禁止物質	□ 有	要	
	□ 無	特定物質	□ 有	要	
		農薬（使用禁止農薬・販売禁止農薬・その他）	□ 有		
		上記以外の化学物質	□ 有		
高圧ガス等	□ 有	毒性ガス	□ 有	要	
		特殊高圧ガス	□ 有	要	
	□ 無	上記以外の高圧ガス	□ 有		
放射性物質等	□ 有	表示付認証機器	□ 有	要	
		放射線発生装置	□ 有	要	
		放射性同位元素（密封・非密封）	□ 有	要	
		放射化物	□ 有	要	
	□ 無	核燃料物質・核原料物質	□ 有	要	
		エックス線装置	□ 有	要	
		上記以外の放射性物質等	□ 有	要	
（微）生物・動物等	□ 有	遺伝子組換え生物等	□ 有	要	
		病原体等・特定病原体等	□ 有	要	
	□ 無	実験動物	□ 有	要	
特殊機器等	□ 有	レーザー（4,3B,3R,2M,1M）	□ 有		
	□ 無	労働安全衛生法届出設備等	□ 有	要	
その他	□ 有	実験系廃棄物、不明試薬	□ 無		
	□ 無	法定資格等	□ 有		

注）持ち込み事項の状況を記載した資料（化学物質等のリスト等）を添付すること。各事項・項目は，該当に係るものを除く。

以上の持ち込み化学物質等について，現品と照合し，相違ないことを確認しました。また，化学物質等を管理する受け入れ研究室または教職員が，以上の化学物質等を所有または使用するために必要な設備・資格等を有することを確認しました。

年　月　日

受け入れ研究室等の教職員
所属：
職名：
氏名：
内線：

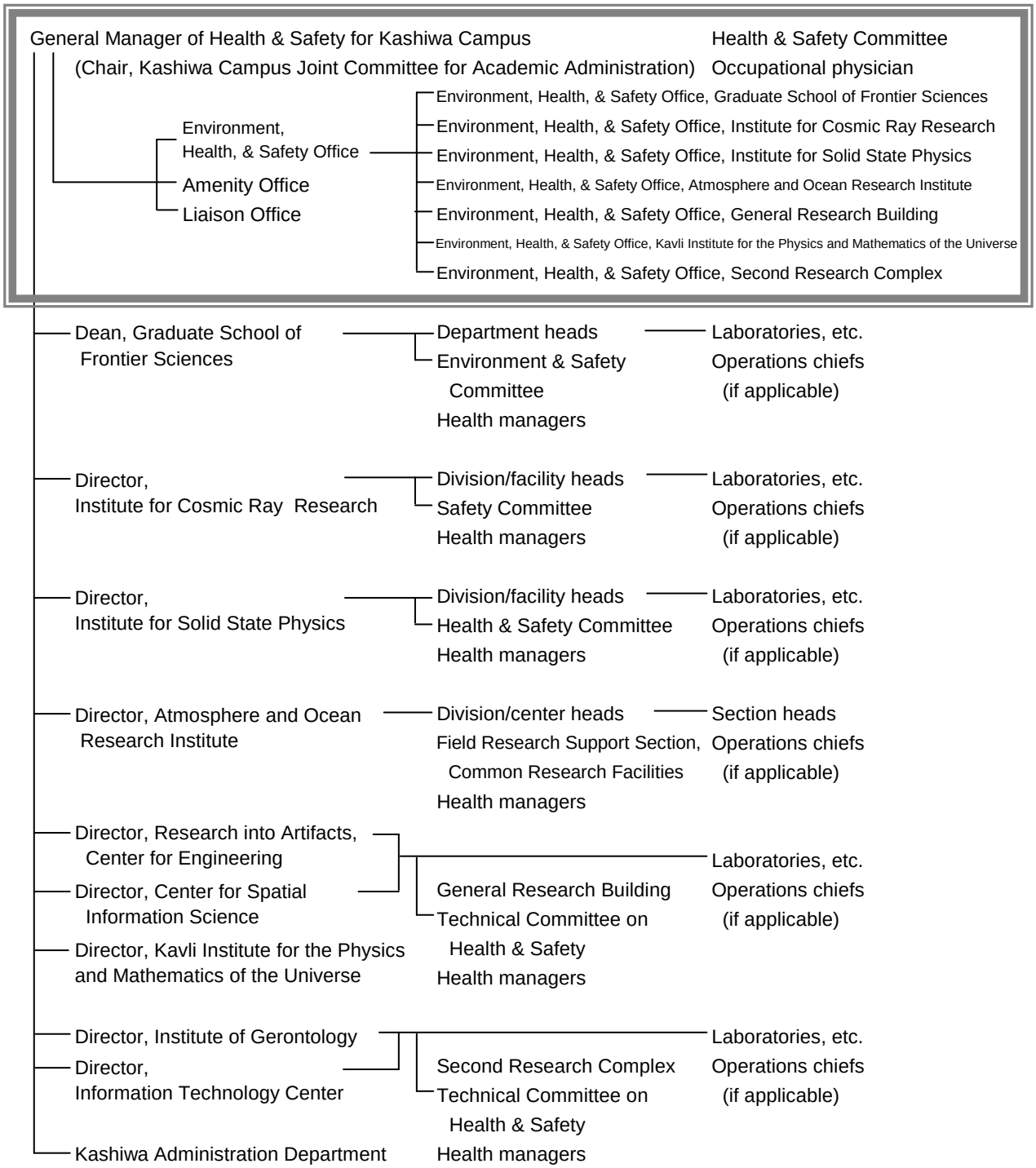
安全衛生管理室確認者
氏名：

Safety Management System

System Overview

The Kashiwa Campus has established a system for ensuring proper safety management through the following chain of responsibility: school/institute head – department/division/facility heads – laboratory heads. All safety officers must be fully aware of their duties for maintaining safety and health.

Safety Management Organization



About Environment, Health, and Safety Office; EHS Office

The Kashiwa Campus Environment, Health, & Safety Office oversees environment, health and safety management on campus and provides information to support such management.

●Contact of Kashiwa Campus Environment, Health, & Safety Office

Extension: 63586 or 63585
(Health & Safety Team, Kashiwa General Administration Office)
E-mail: anzen.kj@gs.mail.u-tokyo.ac.jp

Environment, Health, and Safety Office, GSFS

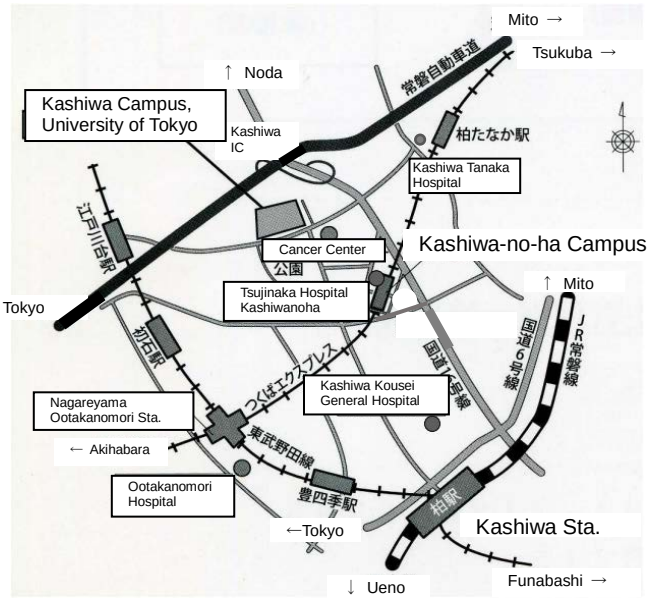
In **GSFS**, EHS Office GSFS provides information and support on Environment, Health, and Safety matters, in collaboration with The Kashiwa Campus Environment, Health, & Safety Office

●Contact of Environment, Health, and Safety Office; EHS Office

- Location: Environment, Health, and Safety Office,
  #B14, Bioscience Bldg., 5-1-5 Kashiwanoha, Kashiwa,
  Chiba 277-8562 JAPAN
- E-mail: fs-anzen@edu.k.u-tokyo.ac.jp
- Phone: 04-7136-3722 (Ext. 63722)
  PHS Ext. 65418, 65419
- Fax: 04-7136-3713
- Internal postal address: P.O.Box 002
  Environment, Health, and Safety Office
  Bioscience Bldg.,
  Open: 9:00～17:00 (weekdays)
- URL: http://ehs.k.u-tokyo.ac.jp/index.html

When an Emergency Occurs...

	What to Do	Contacts	Phone Numbers (calling from campus phone)	What to Say
Injury	1. Summon help from others nearby. 2. Perform first aid. Bleeding: Stop with handkerchief. Unconsciousness: Perform CPR. 3. Contact places listed on the right. 4. If injury is minor, take victim to Health Service Center. *In case of illness* Kashiwa Telephone Service **0-7163-0119** (10 pm to 8 am & Holidays)	(1) Hospital Kashiwa Health Service Center Tsujinaka Hospital Kashiwanoha, Otakanomori Hospital or Kashiwa Kousei General Hospital	Ext. 63040 0-7137-3737 0-7141-1117 0-7145-1111	A _____ at the University of Tokyo Kashiwa Campus has suffered a _____ (injury), so we are taking him/her to your hospital.
		(2) Fire Dept. (to call for ambulance)	0-119	A person has been injured at the _____ (school/institute) at the University of Tokyo Kashiwa Campus, so please send an ambulance. The location is Room No. ____ on the ____ floor of the (building name). The address is 5-1-5 Kashiwa-no-ha. My name is _____.
		(3) Admin. offices 9 am-5 pm, weekdays GSFS After 5 p.m. Security Office	Ext. 64003 Ext. 63010	A person has been injured in Room No. ____on the ____floor of the ____ Building. I have called an ambulance, so please guide it to the building.
Fire	1. Summon help from others nearby. 2. Contact places listed on right. (Relax and take a deep breath) 3. When safely possible, try to extinguish fire. If large fire, evacuate.	(1) Fire Dept.	0-119	A fire has broken out at the _____ (school/institute) at the University of Tokyo Kashiwa Campus, so please send a fire truck. The location is Room No. __ on the __ floor of the (building name). The address is 5-1-5 Kashiwa-no-ha. My name is ____.
		(2) Administrative offices 9 am-5 pm, weekdays GSFS After 5 pm Security Office	Ext. 64003 Ext. 63010	A fire has broken out in Room No.____ on the ____ floor of the ____ Building. I have called a fire truck, so please guide it to the building.



Make a copy of this page, fill in the blanks with the appropriate information, and keep the copy near the phone.

Also, make a memo of the necessary information for fighting fires involving hazardous materials, and keep a copy near the phone and posted on the laboratory doorway.

<Address>

Kashiwa Campus:
5-1-5 Kashiwa-no-ha, Kashiwa-shi

Tsujinaka Hospital Kashiwanoha:
148-6 Kashiwanoha Campus, 178-2 Wakashiba
Kashiwa-shi

Kashiwa Tanaka Hospital:
Higashi65-1, 70-1, Koaota, Kashiwa-shi

Ootakanomori Hospital:
113 Toyoshiki, Kashiwa-shi

Kashiwa Kousei General Hospital:
617 Shikoda, Kashiwa-shi