



Guangdong Technion

Israel Institute of Technology

广东以色列理工学院

Lab Safety Guiding for Lab Management

实验室一般安全规定

What is **EHS** ?



EHS: *Environment / Health & Hygiene / Safety*


Know Safety, No Risks!

Lab Course Preparation

Request to Students:

- Lab **Mandatory Safety Training** and pass the test in MOODLE
- **Safety Agreement** to lab
- Evacuation **Drill** before start the lab course of the semester





Guangdong Technion
Institute of Technology
广东技术学院

Your workspace does not have log in rights

Log in using your credentials

Close dialog

Or log in manually:

Username or Email address

Password

Remember my name

Login

To prevent automatic logouts, please log in again

Cookies must be enabled in your browser




Is this your first time here?

Welcome to GTH Moodle Learning Management System!

Please log in to GTH Moodle address and get permission

Could you log in to Moodle system after all is prepared for Guangdong Technion Institute of Technology?

Please contact your class advisor if you still do not have access to Moodle.

Affirmation and Agreement

I, _____, hereby confirm that I have read the Safety Guidelines for Students in Laboratories, which were handed to me at the beginning of the course, and certify that:

I have read and understood the guidelines and I have received instructions on the proper working practice in the laboratories.

I do not suffer from any medical condition, illness or disability that may affect my work with the chemicals or instruments in this laboratory or may be worsened by this work or affect others. In particular, I do not have a poor eye sight or coordination problems. If I have such a condition, I have informed the lab manager before signing this document. The lab manager has confirmed that it is safe for me to work in this lab, and that suitable provisions have been made.

I accept responsibility for acting in accordance with these guidelines and with any additional rules that I will receive from lab personnel in the future, either verbally or in print.

I am aware of the different hazards while working in a laboratory, which may be caused inadvertently by my actions, the actions of one of my peers or any lab employees, by exposure to bacteria or chemicals, or by a failure of a technical piece of equipment in the lab.

I am aware that I might be exposed to dangerous chemicals, i.e., explosives, toxins, flammable materials or carcinogens. (most chemical or bacteria compounds are dangerous to some extent). I affirm that I will obey all instructed guidelines and shall do everything possible to minimize the exposure of myself and others to hazardous substances.

I am aware that chemical substances that are considered safe today, may be found hazardous in the future as a result of ongoing research efforts.

I am aware that by working with different pieces of apparatus and equipment in the lab I am apt to be injured as a result of improper or unsafe operation of myself or of others, or by malfunctioning of the equipment.

(For persons wearing eyeglasses) I am adjusted to my eyeglasses and they fully cope with my eyesight problems.

I do not suffer from a medical condition that may be exacerbated or cause me harm during my work in the lab.

(If you suffer from any medical condition or are allergic to any substance, you must contact an occupational physician and bring a written authorization letter prior to entering the lab. Your signature on this document certifies that you obtained such a permission from an occupational physician)

I affirm that I will notify GTH in writing, of any change in my health condition or ability to adhere to this agreement, as soon as I become aware of it. In addition, I affirm that I will immediately notify GTH in writing, of any malfunction, defect or problem I may encounter, which may affect the well-being, health or safety of the people working in the lab or in the surrounding areas.

Surname: _____ First name: _____

ID #: _____ Program: _____

Date: _____ Student's signature: _____

Lab No.: _____ Lab Manager's signature: _____



❖ *Mandatory training before working in lab*

Lab safety courseware

Dashboard / My courses / Lab safety courseware

Announcements

- Affirmation and Agreement 承诺书.pdf
- Affirmation and Agreement 承诺书.pdf
- GTIIT Lab Safety Guidelines 实验室安全指引.pdf

Download folder

[Moodle.gtiit.edu.cn](https://moodle.gtiit.edu.cn)

Mandatory / Alternative

Chemical-Safety-Courseware

- Chemical-Safety-Courseware
- Chemical Safety Exam

Not available unless: The activity Chemical-Safety-Courseware is marked complete

Biological-Safety-Courseware

- Biological-Safety-Courseware
- Biological Safety Exam

Not available unless: The activity Biological-Safety-Courseware is marked complete

General-Lab-Safety Courseware

- General-Lab-Safety Courseware
- General Lab Safety Guiding

MOODLE

Safety Agreement





❖ *Mandatory training before working in lab*

Safety training & Testing Modules in MOODLE

Training Matrix for Lab Staff										
No.	Name	Title	Lab safety mandatory Training	Hazardous Waste Management	Experimental Hazard Analysis EHA	Strictly Controlled Chemicals Management	Personal Protective Equipment (PPE)	Gas Safety	Emergency Response	Testing System
1		Lab Manager	Y	Y	Y	Y	Y	if lab using gas, Y	Y	Moodle
2		Lab Technician	Y	Y	base on lab manager decision	Y	Y	if lab using gas, Y	Y	Moodle
3		Lab tutor	Y	Y	Y	Y	Y	if lab using gas, Y	Y	Moodle
4		Researcher	Y	Y	Y	Y	Y	if lab using gas, Y	Y	Moodle
5		Students	Y	base on lab manager decision	base on lab manager decision	base on lab manager decision	base on lab manager decision	base on lab manager decision	base on lab manager decision	Moodle

Remark: The matrix is only for your reference. the training topic needs to be selected by lab PI.

General Safety Requirement

Signs & Labels

Behavior in Lab

Risk Control

Storage & handling

Waste Management

Emergency Response

❖ *Safe Working in Labs*



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Signs & Labels



PROHIBIT

ATTENTION, CAUTION



INSTRUCTION

INTRODUCTION



Label of Waste Liquid
危险废物标签

Device Name 设备名称	1. Chemical Name 化学品名称	
Material Category 类别	2. Hazardous Waste Code 危险废物代码	
Volume Component 体积组分	3. Volume 体积	危险废物的数量
Reception Characteristics 接收特性	4. Receiver 接收人	
Quantity (kg) 重量 (kg)	5. Receiver Address 接收人地址	接收人姓名
Quantity (liter) (approximate) 数量 (升) (约)	6. Receiver Contact Information 接收人联系方式	
Submit Date (operator) 提交日期	7. Submit Date 提交日期	提交日期
Lab Name 实验室名称	8. Lab Address 实验室地址	
Lab No. 实验室编号	9. Lab No. 实验室编号	提交人姓名
Submit Date 提交日期	10. Submit Date 提交日期	

CAUTION 当心

**High Temperature
注意高温**

DEVICE NAME 设备名称	
DEVICE ID 设备编号	
LAB NO. 所在实验室	
ADMINISTRATOR 设备负责人	
Allowable maximum temperature 允许最高温度	°C

CAUTION 当心

**UV Radiation Hazard
紫外线危害**

DEVICE NAME 设备名称	
DEVICE ID 设备编号	
LAB NO. 所在实验室	
ADMINISTRATOR 设备负责人	
UV Light Wave 光源波长	nm

Signs & Labels



We could find these signs in our labs:

Caution High Voltage
高压危险



当心中毒

Caution Toxic
当心中毒



Caution Hot Surface
当心表面高温



当心高温表面



当心有害气体
Beware of harmful gases

Be careful when you get close to these areas

Signs & Labels



Some common pictogram labels for chemicals:



Flammable
易燃的



Explosive
易爆炸的



Environmentally
Hazardous
有环境危害的



Corrosive
腐蚀性的



Acute Toxic
剧毒的



Irritant (skin & eye)
有刺激性的
Skin Sensitization 皮肤致敏



Hazardous to Health
有健康危害的

		
GHS01 爆炸	GHS02 燃烧	GHS03 氧化
		
GHS04 高压气体	GHS05 腐蚀	GHS06 有毒
		
GHS07 有害	GHS08 健康危害	GHS09 环境危害

❖ *Safe Working in Labs*



General Safety Requirement

Signs & Labels

Risk Control

Behavior in Lab

Storage & handling

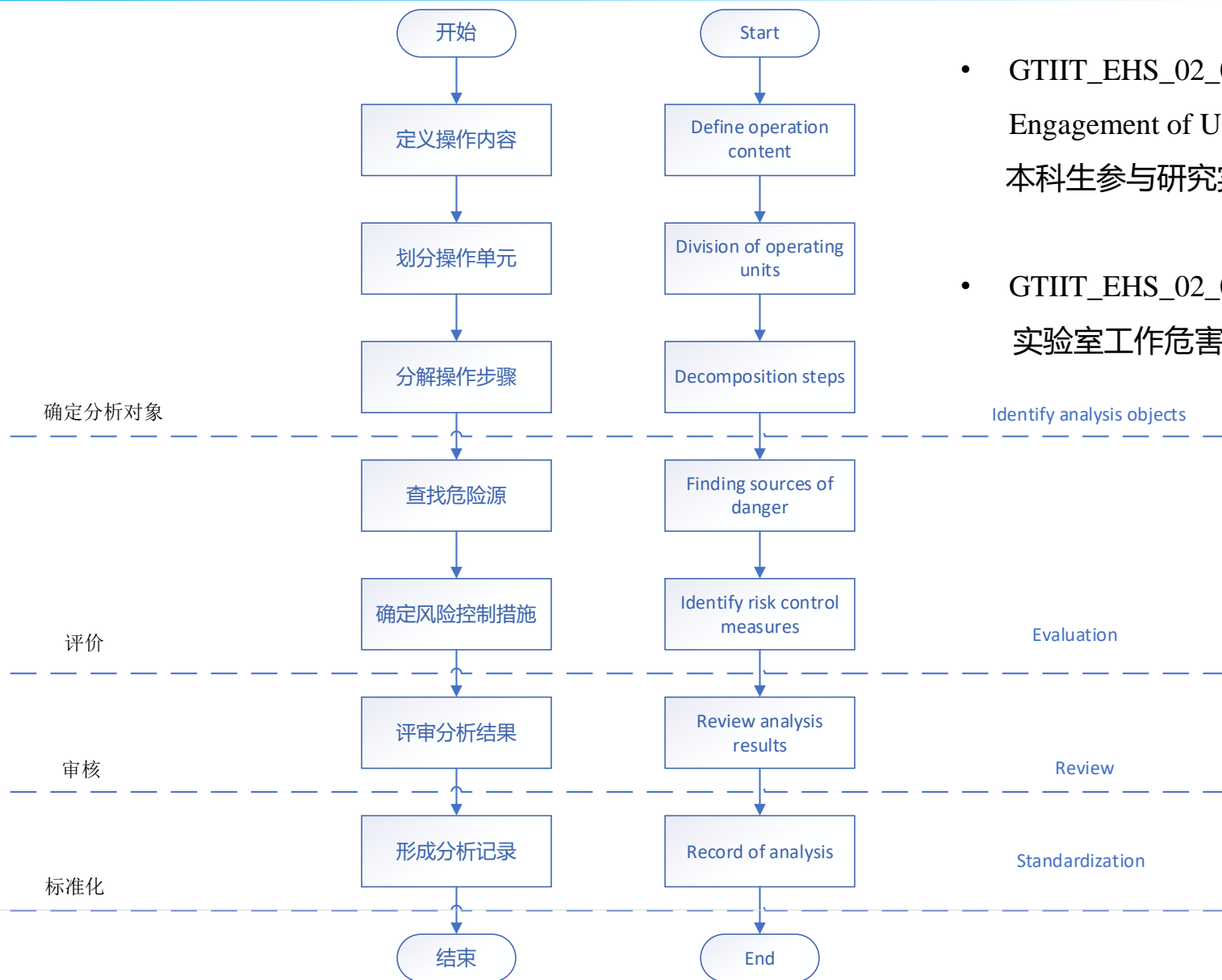
Waste Management

Emergency Response

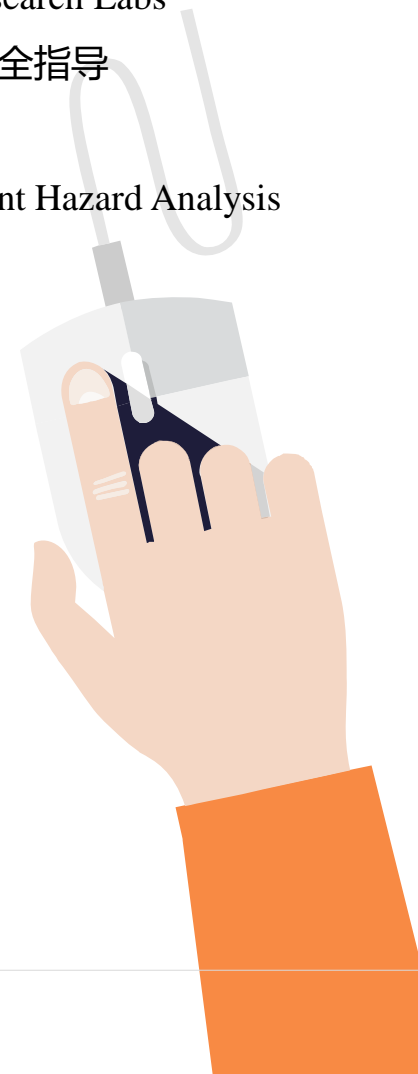
LABORATORY
RISK
ASSESSMENT



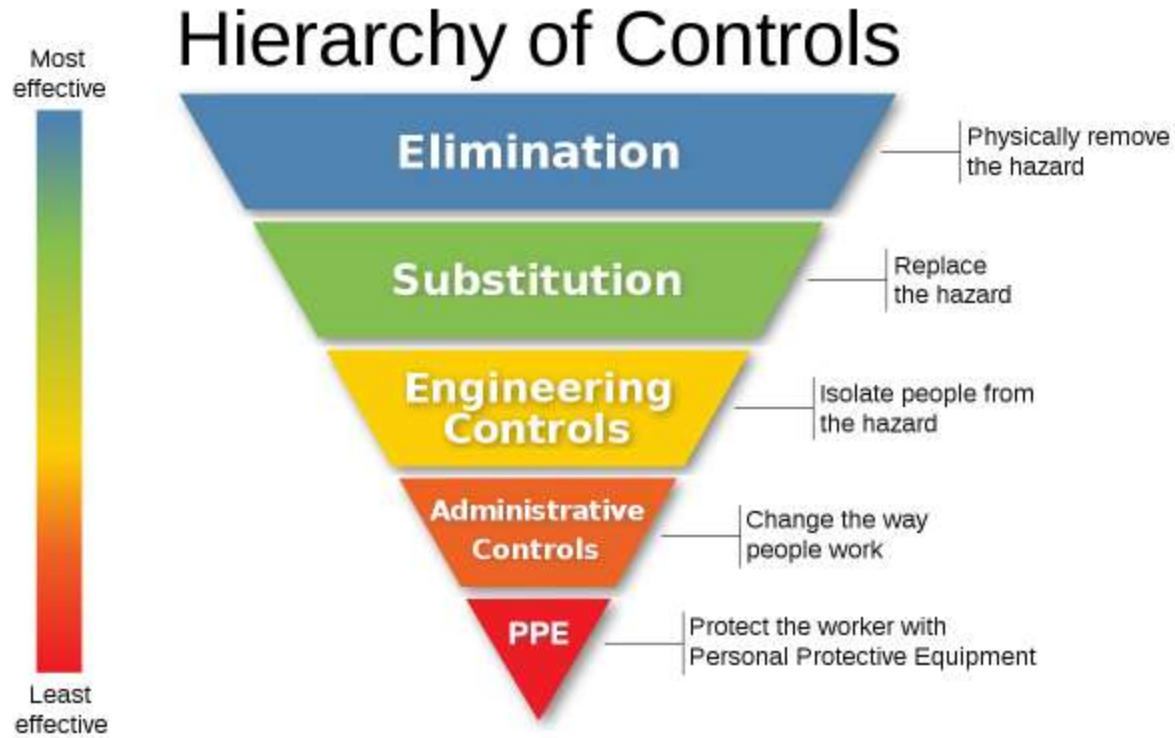
Experiment Hazard Analysis



- GTIIT_EHS_02_06 Safety Instruction for the Engagement of UG students in Research Labs
本科生参与研究实验室实验的安全指导
- GTIIT_EHS_02_01 Lab Experiment Hazard Analysis
实验室工作危害分析



Risk Control



- Personal Protective Equipment (PPE) is a control measure used to reduce exposure to hazards when engineering & administrative controls are not feasible or effective. It is considered as the last defense line against hazards.

当实验室内的防护设备和行政管理手段无法完全减少和控制人员在有害环境下的暴露，个人防护用品（PPE）被视作组织有害因素伤害的最后一道防线



❖ *Safe Working in Labs*



General Safety Requirement

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Behavior in Lab

Before experiment:

Store personal belongings in drawer or locker to avoid contamination and wear your PPE

将与实验无关的物品放置在非实验区域，并穿戴好所需要的PPE。

Lab coats and personal belongings can be temporarily stored in the storage boxes on each floor of teaching lab building.

实验服和个人物品可暂存于教学实验楼各层的储物箱内。

Water cups cannot be brought into lab and only can be placed in tea room.

水杯禁止带入实验室，可以放置在该楼层茶水间。



Behavior in Lab

Food & Drink

- Do not store food and drinks, and eat in lab.
禁止在实验室区域内储存食品或者饮料，以及进食
- Chemical storage only, no food to be stored in refrigerators of lab.
实验室的冰箱只可存放化学品，禁止储存食物



Behavior in Lab



Washing

- Wash your hands frequently; reduce contact time of hazardous chemicals on your hands and skin.

勤洗手，减少有害物质残留在手上或与皮肤接触的时间

- Don't touch eyes and face with contaminated hands.

不使用污染的手接触眼睛或者面部

- Don't use solvents to wash hands.

禁止使用溶剂洗手



Hygiene & Healthy Habits



- PPE
 - Remove PPE before you leave the laboratory to prevent spreading contamination to other areas
离开实验室前要脱下身上的个人防护用品
 - Do not wear gloves outside the laboratory.
不要将手套带出实验室范围

**No PPE
outside
of the lab!**



Be considerate of others.

Never wear personal protective equipment (PPE) in public spaces
(hallways, restrooms, offices, etc.)

Behavior in Lab



Before experiment:

Get all equipment & supplies organized

实验前做好所有相关的准备工作

We need a tidy lab like the left picture

Not like this picture



After experiment:

Keep the laboratory neat & tidy

保持实验室干净整洁



Behavior in Lab

During experiment:

Never use empty food containers to store chemicals

请勿使用空的食物罐储藏化学品



Behavior in Lab



Before experiment, always label your bottles & beakers

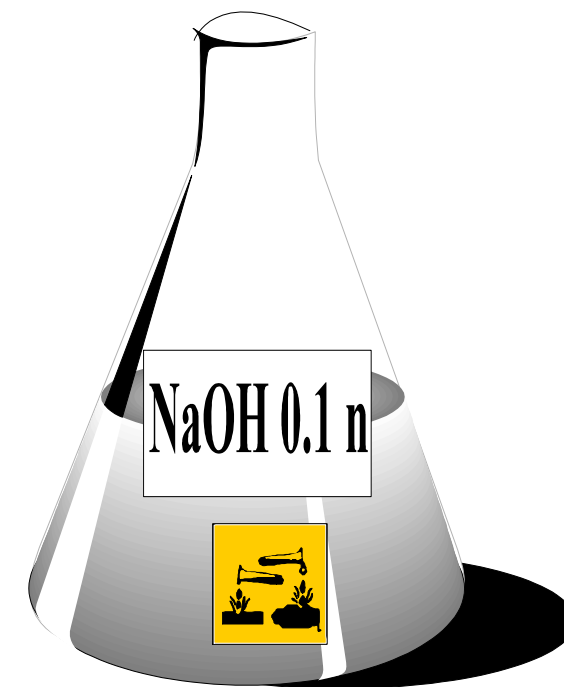
标记自己所使用的所有试剂瓶和烧杯



Because Lots of liquids look just like water!
大多数液体看上去像“水”!

Name 物质名称

Correct hazard label 正确的危害标示



Behavior in Lab

During experiment:

what we need is professional & courteous behaviors and attitudes.

在实验室工作，我们需要的是专业的态度和礼貌的沟通



Playing is not allowed in labs.

禁止在实验室嬉戏，恶作剧和作弄他人

Behavior in Lab

During experiment:

Use specified ladder to reach the higher place.

Never try to keep dangerous solid chemicals and liquid at the higher closet.

使用专门的梯子来拿高处的物品。

切勿将危险固体化学品及液体化学品放在较高的壁橱中。



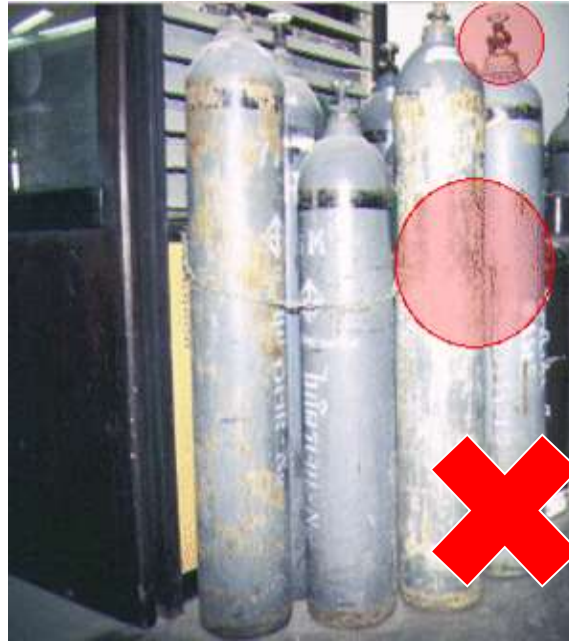
Behavior in Lab

About gas cylinders

Gas cylinders must be secured against toggling, the valves must be covered.

气体钢瓶需用铰链固定，不使用的气瓶阀门需加盖瓶帽

When opening or closing the valves of a gas cylinder, please stand at the opposite end of the tank, and wear appropriate safety gear for your eyes and face. When working with corrosive gases, such as HBr and HCl , you must wear gloves, protect your face with a mask and perform the procedure in a fume hood.



开启或关闭气瓶的阀门时，应避免站在气瓶阀门处。

当使用腐蚀性气体，如溴化氢和氯化氢时，必须戴上防化手套，戴上面屏，并在通风柜中进行操作。

Behavior in Lab



About gas cylinders

Move a Gas Cylinder in a safe way

安全的移动气体钢瓶

Always use a designated trolley

使用钢瓶推车

Secure the cylinder with chain

用铰链固定钢瓶

Never roll the cylinder, it might slip.

禁止滚动钢瓶

Never move the cylinder without your lab tutor's instruction.

禁止任意移动钢瓶



Behavior in Lab

All works that involve a spread of powder particles must be done in a closed environment, such as a non-working (aspirator off) fume hood.

所有涉及粉末颗粒扩散的操作，必须在不排风状态下通风橱内进行。

Keep all materials inside the hood at least 10 cm from the sash opening.

When not working in the hood, close the sash.

所有材料保持在橱窗内至少10厘米距离。

当不需在通风橱内进行操作，请关闭橱窗。

Keep the sash window of fume hood closed (down) as much as possible, especially when working with systems under pressure, vacuum systems, and/or extreme temperatures.

尽可能低的开启通风橱橱窗高度，特别是带压状态、真空状态和/或极端温度下工作时。



Behavior in Lab

During experiment:

Use fume hood properly

正确使用通风橱

Always keep the sash as low as possible

操作通风橱时，应尽量将橱窗往下拉



Ensure the sash is pulled down to the bottom, when the fume hood is not in use.

不操作通风橱时，应将橱窗完全拉下。

Behavior in Lab



- The UG student can do experiments only in presence of the student assigned lab member (or a replacing lab member), during the first 2 months of training, and during training or use of new equipment.

在培训的前两个月以及在培训或使用新设备的过程中，本科学生只有在指派的实验室成员（或替换实验室成员）在场的情况下，才可以进行实验。

Never work alone in lab at night!

避免夜间单独在实验室内进行实验!

- Private research labs are currently open from 08:00 to 22:00 according to the actual arrangement of lab manager. In case of special circumstances, the lab can extend its working hours after communicating with the property service center of the lab building in advance.

独立科研实验室目前根据实验室负责人需求，目前开放时间一般为上午08:00至晚上22:00，如遇特殊情况，实验室提前和实验楼物业中心沟通后可延长工作时间。



GTIIT_EHS_02_06 Safety Instruction for the Engagement of UG students in Research Labs
本科生参与研究实验室实验的安全指导

❖ *Safe Working in Labs*



General Safety Requirement

Signs & Labels

Risk Control

Behavior in Lab

Storage & handling

Waste Management

Emergency Response

Storage & Handling



- **Don't block the exit** 疏散通道被堵塞
Keep exits, hallways, & stairways clear to allow emergency evacuation
保持出口，走廊，楼梯间等位置的畅通，以供紧急疏散使用

Storage & Handling



- **Emergency Equipment Blocked** 应急设备被遮挡

Never block safety showers, fire extinguishers & other emergency equipment

避免遮挡实验室内的 喷淋，灭火器或是其他应急设备

Storage & Handling



- **Spill Or Trips Risk** 倾翻或者绊倒风险

Store excess materials in a neat, secure manner to prevent spills or trips

将多余的原料放置在整洁安全的地方，防止发生倾翻泄露或者绊倒事故

Storage & Handling



- **Store goods too High** 物品堆放太高
Keep enough space for storage from ceiling to avoid a falling risk
物品不要堆放的太高，避免形成有坠落隐患的摆放

Storage & Handling



- **Store appropriately** 按要求存放化学药品
Store flammable chemicals in flammable liquid storage cabinet
在专门的防火柜内存放易燃液体

Storage & Handling



- **Containers Left Open** 实验试剂没有用瓶盖密封
Keep liquid containers closed when not in use.
试剂在不使用时，应该盖紧瓶盖

❖ *Safe Working in Labs*



General Safety Requirement

Signs & Labels

Risk Control

Behavior in Lab

Storage & handling

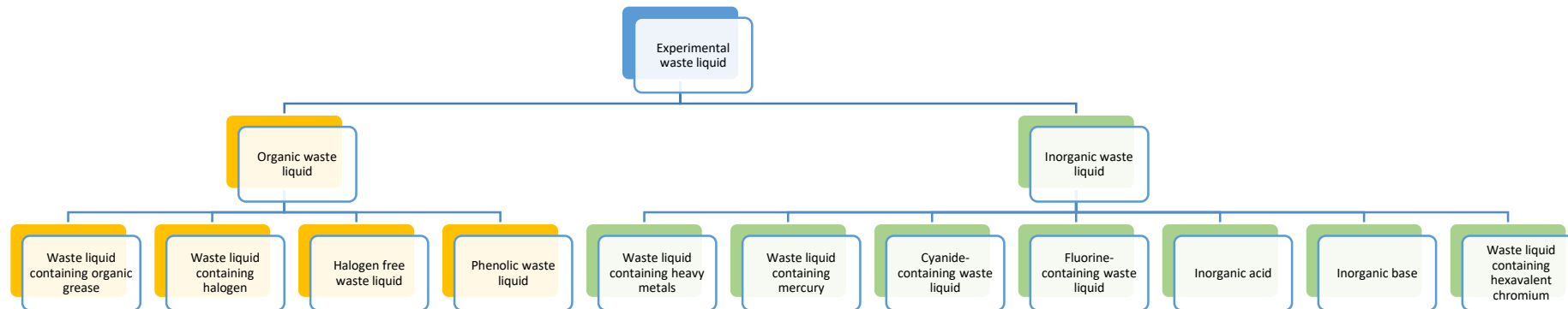
Waste Management

Emergency Response

Experimental Waste Liquid 实验废液

Experimental waste liquid refers to liquid pollutants that are toxic and harmful, and whose concentration or quantity can affect the human body or the environment.

For example: experimental waste liquid, experimental intermediate liquid products, and various high-concentration detergents.



Incompatibility Problem of waste liquid :

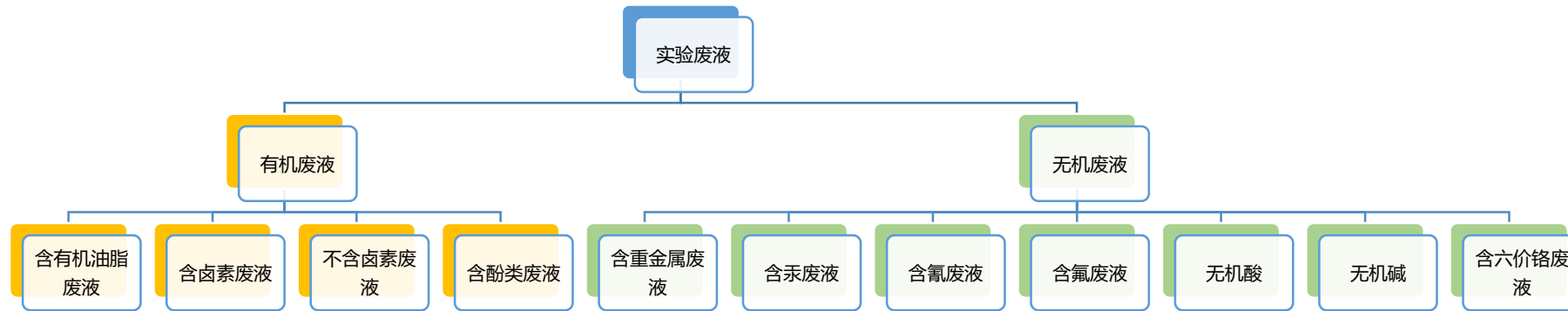
- Peroxides and organics
- Nitrate and sulfuric acid
- Sulfides and acids
- MnO_2 manganese dioxide, $KMnO_4$ potassium permanganate, $KClO_3$ potassium chlorate are prohibited from mixing with concentrated hydrochloric acid
- Volatile acid and non-volatile acid
- Flammable and explosive chemicals and oxides
- Phosphorus and strong base
- Nitrite and acid



Experimental Waste Liquid 实验废液

实验废液是指实验过程中产生的具有有毒有害等危害性，其浓度或数量对人体或环境能够造成影响的液态污染物。

例如：实验废液，实验中间液态产物，以及各类高浓度洗涤剂等等；



废液禁配性问题：

- 过氧化物和有机物
- 硝酸盐和硫酸
- 硫化物和酸
- MnO₂二氧化锰, KMnO₄高锰酸钾, KClO₃氯酸钾禁止与浓盐酸混合
- 挥发性酸和不挥发性酸
- 易燃易爆化学品及氧化物
- 磷和强碱
- 亚硝酸盐和酸



Experimental Waste Liquid 实验废液



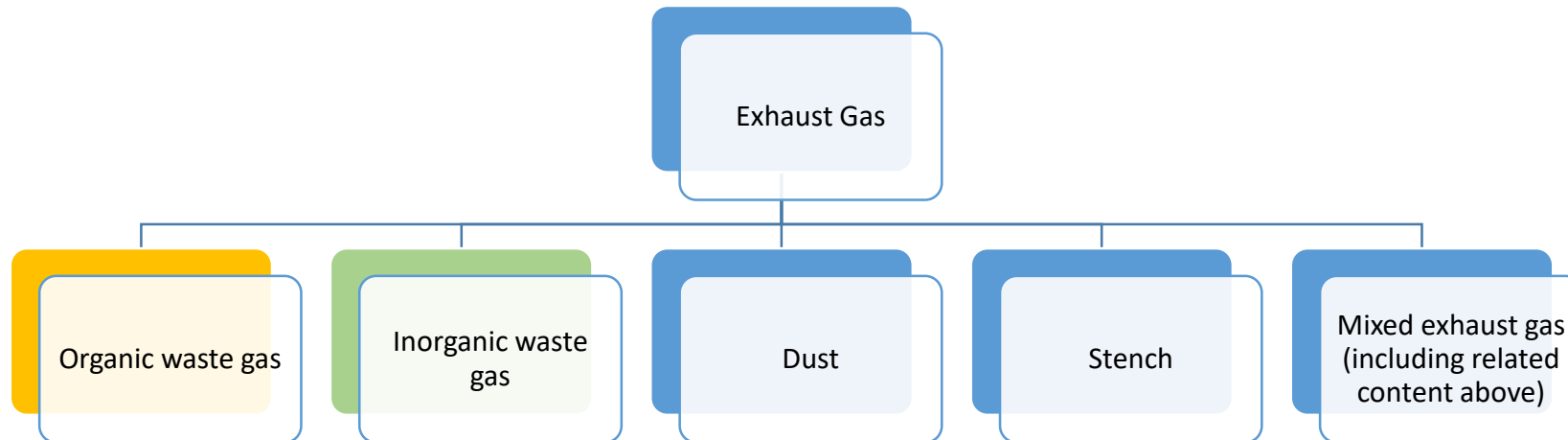
Lab Waste Management Guideline

Exhaust Gas 实验废气

Exhaust Gas refers to the gaseous pollutants that are toxic and harmful and other hazardous gases produced during the experiment, whose concentration or quantity can affect the human body or the environment.

Example:

- Volatile matter produced by experimental reagents and waste liquid, and gaseous products during doing experiments;
- Classify as: solid smoke, liquid mist, gas and so on.

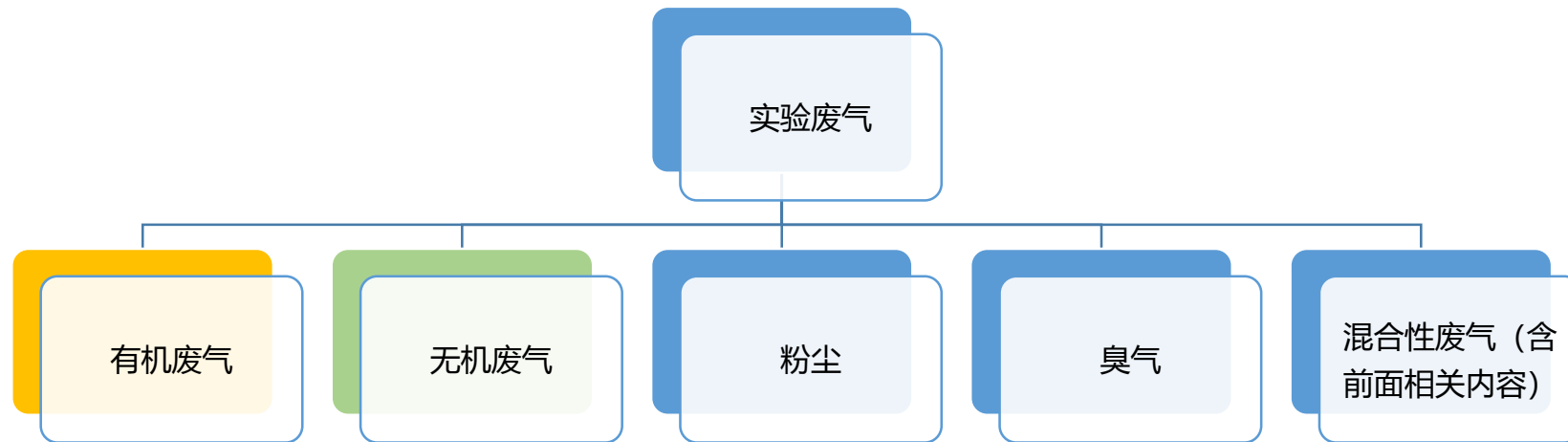


Exhaust Gas 实验废气

实验废液是指实验过程中产生的具有有毒有害等危害性气体，其浓度或数量对人体或环境能够造成影响的气态污染物。

例如：

- 实验试剂和废液产生的挥发物，实验中间气态产物；
- 形态分固态烟状、液态雾状、和气态等等；



Exhaust Gas 实验废气



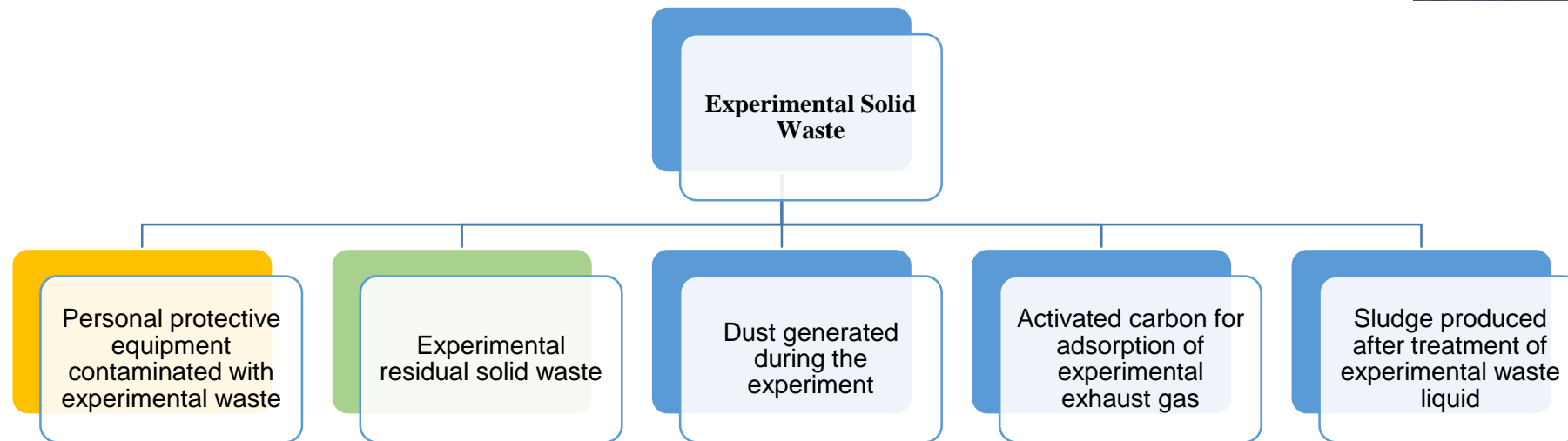
Experimental Solid Waste 实验固废



Experimental Solid Waste refers to the toxic and harmful solids waste generated from experiment, the concentration or quantity of solid pollutants that can affect the human body or the environment.

Example:

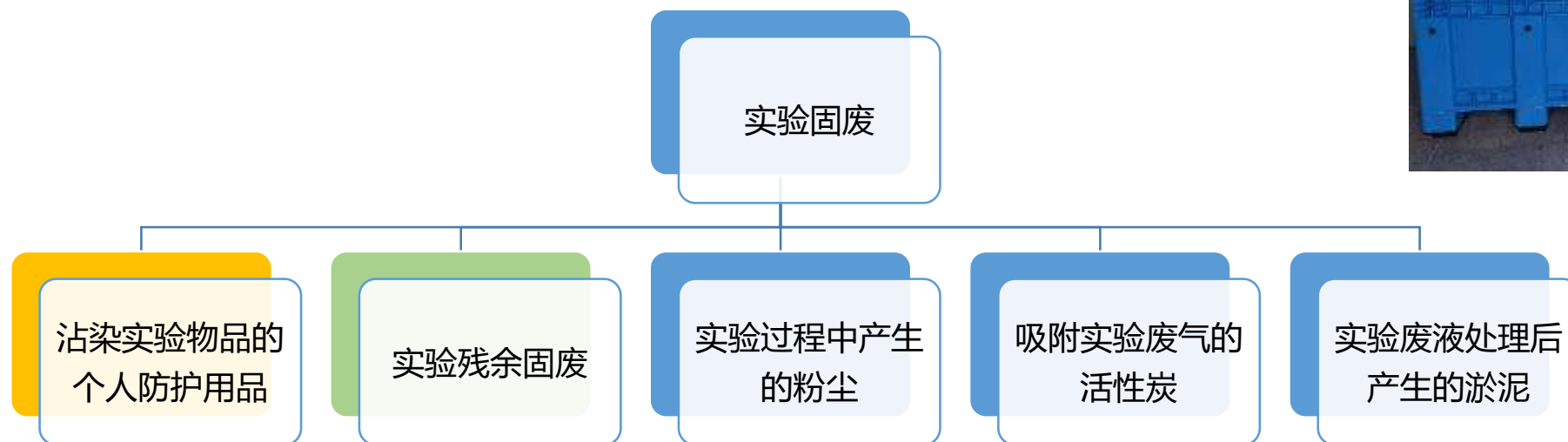
- Solid waste generated from experimental reagents and waste liquid, and intermediate solid waste in the experiment;
- Personal protective equipment contaminated with experimental items, reagents and other corresponding packaging materials, etc.



实验固废是指实验过程中产生的具有有毒有害等危害性固体，其浓度或数量对人体或环境能够造成影响的固态污染物。

例如：

- 实验试剂和废液产生的固体废物，实验中间固态废弃物；
- 沾染实验物品的个人防护用品，试剂等相应的包装材料等等；



Experimental Solid Waste 实验固废



Waste Handling

❖ General Daily Waste should be kept in daily rubbish bin.

一般废物应盛入装有黑色日常垃圾袋的垃圾桶内

❖ Solid Hazardous Waste should be kept in the yellow designated bag.

固体危废应盛放入装有黄色危废专用垃圾袋的垃圾桶内

❖ All sharp object should be kept in designated trash bin.

尖锐物品应盛放入指定专用垃圾桶内



Daily Rubbish Bin

Dangerous Waste Bin

Sharp Object Bin

Incompatibility of lab waste 实验废液相容表

实验废液相容表



反应类编号	反应类编号																					
1	酸、矿物 (非氧化性) Acid, mineral (non-oxidizing)	1																				
2	酸、矿物 (氧化性) Acid, mineral (oxidation)		2																			
3	有机酸 Organic acid			3																		
4	醇类、二机醇及酸类 Alcohols, di-alcohols and acids				4																	
5	农药、石棉等有毒物质 Toxic substances such as pesticides and asbestos					5																
6	酰胺类 Amide						6															
7	胺、脂肪族、芳香族 Amine, aliphatic, aromatic							7														
8	偶氮化合物、重氮化合物和联胺 Azo compounds, diazo compounds & hydrazine								8													
9	水 water									9												
10	碱 Alkali										10											
11	氰化物、硫化物和氟化物 Cyanide, sulfide and fluoride											11										
12	二磺氨基碳酸盐 Disulfonylaminocarbonate												12									
13	酯类、醚类、酮类 Esters, ethers, ketones													13								
14	易爆类 (注一) remark I Chemical for explosion material														14							
15	强氧化剂 (注二) Strong oxidants															15						
16	烃类、芳香族、不饱和烃 Hydrocarbons, aromatics, unsaturated hydrocarbons																16					
17	卤化有机物 Halogenated organic matter																	17				
18	一般金属 General metal																		18			
19	铝、钾、锂、镁、钙、钠等易燃金属 Flammable metals such as Al, K, Li, Mg, Ca, Na																			19		

说明

反应颜色	结果
黄色	产生热 heat
粉色	起火 fire
青色	产生无毒性和不易燃性气体 Generate non-toxic & inflammable gas
绿色	产生有毒气体 Generate Toxic gas
橙色	产生易燃气体 Generate Flammable gas
红色	爆炸 Explosion
蓝色	剧烈聚合作用 Intense polymerization
紫色	或许有危害性但不稳定 Maybe harmful and is unstable

示例

黄色	产生热并起火及产生有毒气体 heat and ignites and toxic gases
粉色	
绿色	

易爆物包括溶剂、废弃爆炸物、石油废弃物等
Remark I 注一: Explosives include solvents, waste explosives, petroleum waste, etc.

强氧化剂包括铬酸、氯酸、双氧水、硝酸、高锰酸等
Remark II 注二: Strong oxidants include chromic acid, chloric acid, hydrogen peroxide, nitric acid, permanganic acid, etc.



Work before Waste Transferring 废弃物转运前工作 For Labs 对实验室:

1. Determine the type and quantity of laboratory transfer waste;
确定实验室转运废物种类、数量;

2. Paste waste labels and records for labs' different wastes;
针对不同实验室废弃物准备废弃物标签和记录;

Filled with right waste information on the label.
容器上是否根据废物信息填写了相应的标签

3. Go to lab to check the waste packaging and loading status;
到实验室检查废弃物包装和承装状态符合要求;

According to the characteristics of the waste, check the packaging requirements, whether the materials of the waste and the package material are suitable;
根据废弃物特性查询包装要求, 废弃物和承装物材质是否相适应;

The liquid volume in container cannot exceed 80% of the volume of the container and should be more than 10cm from the outlet of the container;

25L废液容器不得超过20L, 10L废液容器不得超过8L, 且液体容积不得超过80%的容器容积, 且距离容器出口10cm以上;



Hazardous Wastes 危险废弃物	
Composition 主要化学成分: Fluorescein Sodium Salt 荧光钠盐 Chemical Name: 化学名称 Organic Waste Liquid 实验室有机废液	
Hazardous Condition 危险情况: 在事故状态下您感觉不舒服的时候, 立即就医 (出示安全警示标签及SDS)。 本品的暴露 (皮肤接触、眼睛接触、吸入或食入) 影响可能会产生迟发效应。 急性和迟发效应: 吸入蒸汽会让人感觉不适, 直接接触可能造成轻微皮肤刺激。	
Safety Measures 安全措施: 避免吸入, 避免生成蒸气。 贮存: 常温、干燥、通风良好的储存环境。避免接触易燃物或火源、热源、爆炸品、过氧化物; 皮肤接触: 尽快脱去受污染的衣物和鞋子; 如皮肤沾染, 用大量肥皂和清水清洗受感染部位。如发生皮肤炎或感觉不适, 立即就医。 眼睛接触: 立即用清水小心地清洗15分钟以上, 清洗眼睛时, 用手指撑开眼睑, 小心清洗各个部分及眼睛周围。不要用药品中和, 应当立即就医。 食入: 误食后, 如果患者有意识, 用水漱口; 如患者发生自然呕吐, 将患者身体倾斜以免呕吐物进入气管。保持通风孔畅通。喝大量的水, 并立即联系医生。	
Waste Producer 废物产生单位: 广东以色列理工学院 Address 地址: 广东省汕头市大学路241路 Tel 电话: 0754-8807 Contact 联系人: Batch 批次: Quantity 数量: Delivery Date 转运日期:	

Experimental "Three Wastes" Management Principles

Reduced and harmless design before and during experiments:

在实验室设计和操作阶段，做好废弃物减量化和无害化设计和操作

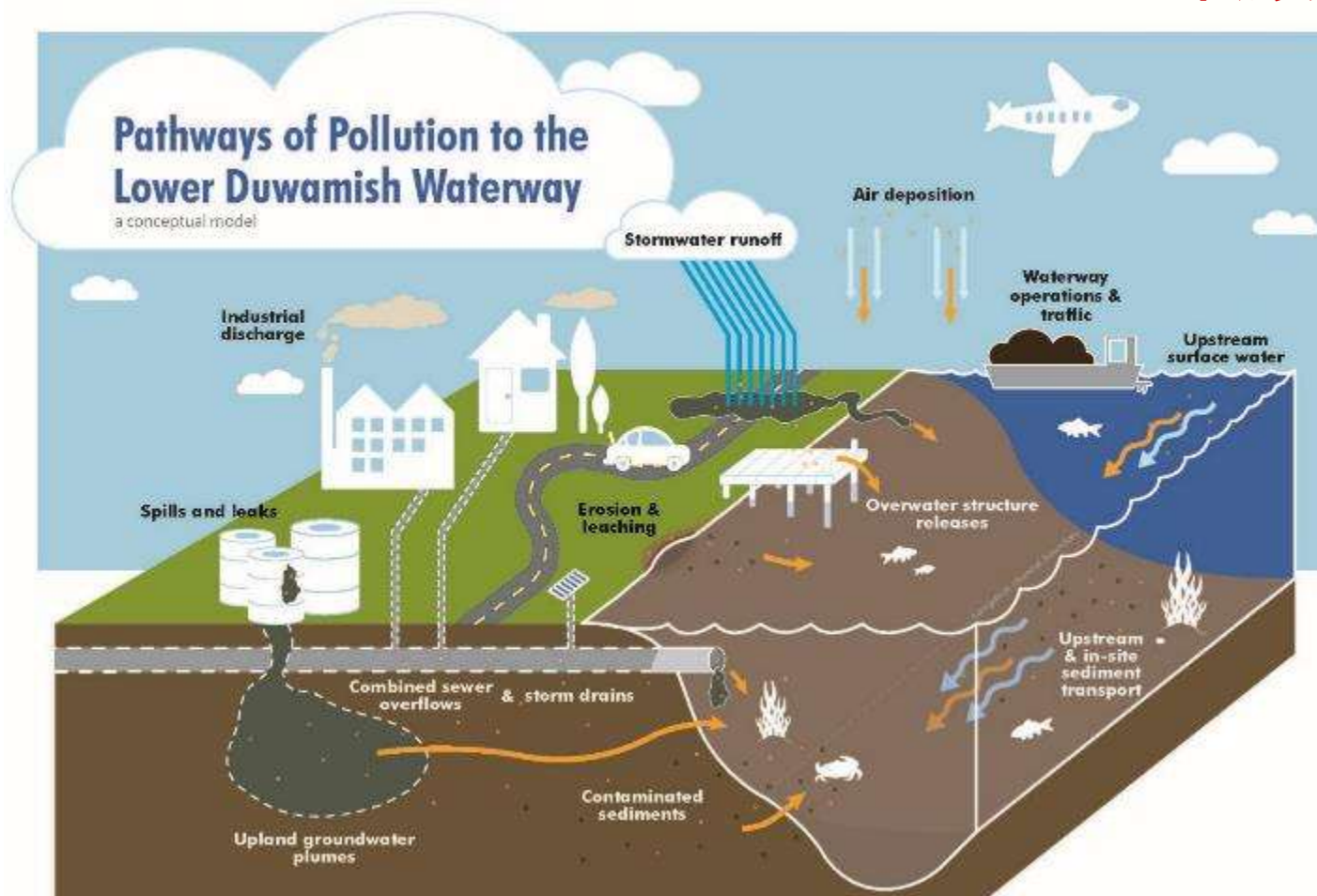
Decrease in quantity and harm of Waste
废弃物数量的减少和危害性的降低



Experimental "Three Wastes" Management Principles



Pollution Resource Control 污染源头控制



❖ *Safe Working in Labs*



General Safety Requirement

Signs & Labels

Behavior in Lab

Risk Control

Storage & handling

Waste Management

Emergency Response

Emergencies



How to use these emergency equipment in Labs:

如何使用这些设置在实验室的应急设备:

Emergency Shower

应急喷淋



Eye Washer

洗眼器



Fire Extinguisher

灭火器



First Aid

急救箱





Emergency Response by Lab staff

Respond to an incident following the sequence of Emergency response :

按照应急响应的顺序应对紧急情况:

Emergency response, 5 steps:

五步

1. Keep a safe distance away from the site.
和事故现场保持一定距离
2. Report the incident to lab staff on-duty immediately.
立即将事故报告实验室教员
3. Inform emergency response team (ERT).
立即通知学校应急小组
4. Isolate the affected area.
立即隔离受影响区域（视情况决定隔离范围）
5. Identify hazardous material(chemicals/bacteria) involved.
确定有害物品的信息

Emergency report flow chart 紧急汇报流程

Report content 报告内容包括:

- Location where and when the event happened
发生地点和时间
- Type of the event and material
事故类型/物料类型
- Situation of personnel injury
人员受伤情况
- The name of reporter and contact way
报告人的姓名和联系方式
- If the leakage is serious, the person may be affected should be informed
如是大面积泄漏，同时通知可能受影响区域的人员；
- If fire or typhoon happen, inform all affected persons to safe place.
如发生火灾、台风等重大灾害时，发出内部报警信号，告知相关区域的人员疏散至安全位置。

Emergencies Response



Emergencies Shower



How to use emergency shower:

- **Pull the handle to turn on**
拉下把手打开喷淋
- **Wash your body for 10-15 minutes at least**
清洗至少10-15分钟
- **Release handle to stop**
放开把手关闭喷淋
- **Remove affected clothing, and dispose it as hazardous waste.**
将被污染的衣物丢弃，作为危废处理



Emergencies Eyes Washer



How to use eye washer :

- Turn the level to “on” position
打开洗眼器
- Keep your eyes open & wash them for 15 min
保持眼睛睁开，清洗15分钟
- Turn the level to “off” position
关闭洗眼器



• *How To Use Extinguisher*

1. Standing on the upwind direction

站在上风向

2. Keep 2m away from the fire, spray dry powder agent on the root of fire

距离火源两米以外，向火源根部喷射灭火剂



Pull the pin.
拔掉插销



Squeeze trigger while holding the extinguisher upright.
手持灭火器竖直的进行喷射



Aim extinguisher nozzle at the base of the flames.
将喷灭火器嘴对准火焰的底部



Sweep the extinguisher from side to side covering the area of the fire with the extinguishing agent.
左右移动灭火器，喷射灭火剂覆盖整个燃烧区，直至火焰全部扑灭

How To Use the fire blanket



Prevent the burning person from running around which will aggravate the fire.

着火人员不可奔跑,以免加剧火势蔓延。

Extinguish the fire by wrapping the person with a fire blanket or lab coat.

If possible, use an emergency shower or strong current of water

用防火毯或实验服将人包裹。如果有可能,使用紧急冲淋。



wiki How to Use a Fire Blanket

Emergencies Response



During experiment:

Always clean up spills immediately, handle spills of dangerous chemicals properly.

Always know the location of the leakage control equipment!

根据溢漏物品的化学性质及时进行适当的处理！

清楚最近的泄漏处理设备位置！



SKM-6-001-01

危险特性	急救措施	消防措施	泄露应急处理	操作处置与储存	接触控制和个体防护
1. 危险特性	2. 急救措施	3. 消防措施	4. 泄露应急处理	5. 操作处置与储存	6. 接触控制和个体防护

2. 危险性概述
4. 急救措施
5. 消防措施
6. 泄露应急处理
7. 操作处置与储存
8. 接触控制和个体防护



Keep It
CLEAN





Guangdong Technion

Israel Institute of Technology

广东以色列理工学院

Suitable for Dormitory and
Canteen area

适合于宿舍楼及饭堂区域



Suitable for Teaching,
Research, Admin.

适合于教学、科研、行政



Emergency Assemble point

紧急集合点



Daxue Road 大学路



AED:
Automated
External
Defibrillator
自动体外除颤器

1. Dorm. A in front of Police office
2. Lobby of Teaching Lab building
3. Administration building
4. Lobby of Education building
5. Lobby of Research building

1



2



3



4



5



Emergencies Contact 紧急联系方式




Campus Fireman

Responsible Department 负责部门	Contact Number 联系电话
Firefighting Department 消防部门 	8807 7119 (24 Hours)

Emergencies Contact 紧急联系方式



Campus Clinic & First Aid

Responsible Department 负责部门	Contact Number 联系电话
First Aid 医疗救助 	Campus Clinic 校医务室 8807 7120

Emergencies Contact 紧急联系方式



EHS Office

Responsible Department 负责部门	Contact Number 联系电话
Environment Health Safety 环境健康安全 	Campus EHS 校园安全办公室 8807 7079

Office:A202

How to find us?

<https://sites.gtiit.edu.cn/ehs/>



Guangdong Technion
EHS Management System

Welcome to EHS

Nothing we do is worth getting hurt for!

Complete EHS Responsibility

- Safety Health & Design
- Construction Safety
- Chemical Operation Safety
- Occupational Hazard & Control

Safe EHS Management System

- EHS Policy & Strategy
- Chemical Management
- Laboratory Management
- Other Special Equipment Management

EHS Training

- Improvement: design safety training material
- Safety Courses and Testing

EHS Sharing

- Information Acquisition & Audit
- Interaction & Dynamic Process Design

安全培训和检测

Safety Training and Testing



EHS Training Material



Safety Courseware and Testing

安全视频

Safety Video Sharing

Guangdong Technion
EHS Management System

Introduction to EHS

Introduction to EHS

Introduction to EHS

Introduction to EHS

Introduction to EHS

Introduction to EHS

安全资料分享(法律法规、案例、视频)

Safety Information Sharing

Guangdong Technion
EHS Management System

Safety Information Sharing

Safety Information Sharing

Safety Information Sharing

Safety Information Sharing

Safety Information Sharing





“Nothing we do is worth getting hurt for !”

Know Risks, No Risks!