

# 温州肯恩大学实验室安全分级分类管理办法

## 第一章 总 则

**第一条** 为进一步加强实验室安全管理，提高实验室安全风险防范的针对性和有效性，根据教育部《高等学校实验室安全分级分类管理办法（试行）》和浙江省教育厅关于印发《浙江省高等学校实验室安全分级分类管理工作指引》的通知等文件要求，以“分级管理、分类施策、动态调整、精准防控”为原则，结合学校实际，制定本办法。

**第二条** 本办法中的“实验室”是指学校开展教学、科研、技术服务等活动的所有实验、实训场所，包括实验准备室、试剂室、药品库、材料仓库和其他附属用房等，以房间为管理单元。

## 第二章 组织与领导

**第三条** 学校实验室安全工作领导小组全面负责指导全校实验室开展安全分级分类管理工作。

**第四条** 教学部（实验室管理中心）是实验室安全分级分类的归口管理部门，负责完善实验室安全分级分类管理办法，组织开展全校实验室安全分级分类认定和督查工作，对各级各类实验室的管理实施分类指导，建立全校实验室分级分类管理台账。

**第五条** 各学院、部门是实验室安全管理的责任主体，负责落实本单位实验室危险源类别和风险等级的认定工作，并对认定结果进行审核确认；针对不同危险等级实验室制定相应的管理措

施，实施差异化管理。

**第六条** 各实验室责任人是本实验室安全分级分类管理的直接责任人，负责对所属实验室进行实验室安全风险评估、危险源识别和风险等级认定，并将认定结果提交所在单位审核确认。

### **第三章 危险源识别与评估**

**第七条** 危险源是导致实验室安全风险的重要因素，实验室危险源按照其特征可分为化学类、生物（医学）类、辐射类、机械类、电子（电气）类和其他类。

**第八条** 危险源安全风险评估是实验室安全分级的基础。根据危险源可能导致的安全风险程度，实验室危险源的安全风险等级从高到低可分为 I 级、II 级、III 级、IV 级 4 个等级。各类别危险源的安全风险等级划分参考《浙江省高校实验室危险源分类分级划分参照表》（附表 1）。

**第九条** 同一间实验室涉及多个危险源的，应当分别进行识别和安全风险评估。同类别危险源，依据等级最高的危险源判定实验室该类别危险源的安全风险等级。

**第十条** 新建或改扩建的实验室启用前，应进行危险源识别和安全风险评估。

### **第四章 实验室安全分级管理**

**第十一条** 实验室安全分级，是指根据实验室内存在的主要危险源及其安全风险等级判定实验室的安全风险等级。实验室安全风险等级可分为一级（重大风险）、二级（高风险）、三级（中

风险)、四级(低风险)4个等级。同一间实验室涉及多个类别危险源的,依据等级最高的危险源类别判定该实验室的安全风险等级。

**第十二条** 根据实验室安全分级分类认定结果,实行实验室安全风险分级管理机制,管理要求参照《浙江省高校实验室安全分级管理要求参照表》(附表2)。

**第十三条** 实验室门外应当张贴学校统一格式的安全信息牌,信息包括安全风险等级、危险源、实验室安全责任人、防护措施、消防要点、应急联系电话等,并及时更新。

**第十四条** 学校、各单位、实验室等各级责任机构应根据实验室安全风险等级,开展相应的安全检查和隐患整改。重大隐患未完成整改前,不得在实验室中进行实验活动。

**第十五条** 实验室负责人、安全管理员和实验人员等应根据所在实验室的危险源类别及安全风险等级,接受相应的安全培训和应急演练。国家要求持证上岗的,应参加相应的专业培训并通过考核,取得相应资格证书方可开展实验。

**第十六条** 在实验室开展的科研项目、课题或其他实验、实训活动应提前进行安全风险评估,针对重要危险源,制定相应的操作规程和应急管控措施,置于醒目位置,责任到人。涉及I级、II级危险源的实验活动,由各单位进行审查、备案,学校不定期抽查。

**第十七条** 实验室应配备适合其安全风险等级的安全管理员人

员和安全设施设备。高风险点位应安装监控和必要的监测报警装置。实验室应配备必要的个体防护装备。

## 第五章 监督实施

**第十八条** 各单位应严格按本办法做好实验室安全分级分类工作。学校对实验室安全分级分类落实情况进行监督检查。

**第十九条** 实验室危险源类别和风险等级认定工作由实验室责任人或实验室管理员在“浙江省高校实验室安全数治平台”(<https://safesy.zjedu.gov.cn/>)进行申报,各单位对其进行鉴定与审核,教学部(实验室管理中心)进行二次核验和抽查。

**第二十条** 实验室的研究内容、危险源类型与数量等因素发生改变时,实验室负责人应当重新进行危险源识别和风险评估,并在“浙江省高校实验室安全数治平台”重新申报。各单位应及时对变更情况进行审定。学校定期对实验室分级分类情况进行复核。

## 第六章 附 则

**第二十一条** 本办法由教学部(实验室管理中心)负责解释。

附表: 1.浙江省高校实验室危险源分类分级划分参照表  
2.浙江省高校实验室安全分级管理要求参照表

附表 1

## 浙江省高校实验室危险源分类分级划分参照表

序号	危险源类别	主要内容	I 级	II 级	III 级	IV 级
1	化学类	实验场所涉及实验原料或产物中的化学试剂、实验气体等危险源。	1.剧毒品、剧毒气体； 2.爆炸品； 3.第一类易制毒品； 4.有毒有害、易燃易爆、强氧化性、强腐蚀性等试剂总量 $\geq 50\text{kg(L)}$ ； 5.有毒有害、易燃易爆、腐蚀性气体的钢瓶总量 $\geq 6$ 瓶或管道供气 $\geq 3$ 种。	1.易制爆品； 2.第二类、第三类易制毒品； 3.有毒有害、易燃易爆、强氧化性、强腐蚀性等试剂总量 $20\text{-}50\text{kg(L)}$ ； 4.有毒有害、易燃易爆、腐蚀性气体的钢瓶总量 $3\text{-}5$ 瓶或管道供气 $2$ 种； 5.单间实验室存放气体钢瓶总量 $\geq 8$ 瓶。	1.有毒有害、易燃易爆、强氧化性、强腐蚀性等试剂总量 $2\text{-}20\text{kg(L)}$ ； 2.有毒有害、易燃易爆、腐蚀性气体的钢瓶总量 $1\text{-}2$ 瓶或管道供气 $1$ 种； 3.单间实验室存放气体钢瓶总量 $5\text{-}7$ 瓶。	未列入 III 级及以上的化学类危险源。

序号	危险源类别	主要内容	I 级	II 级	III 级	IV 级
2	生物 (医学)类	实验场所涉及病原微生物、精麻类药品、生物制剂、实验动物及尸体、转基因动植物等危险源。	1. 生物安全 BSL-4/ABSL-4 、 BSL-3/ABSL-3 实验室(第一类、第二类病原微生物)； 2. 第一类精神药品。	1. 生物安全 BSL-2/ABSL-2 实验室(第三类病原微生物)； 2. 第二类精神药品； 3. 麻醉药品。	1. 生物安全 BSL-1/ABSL-1 实验室(第四类病原微生物)； 2. 其他有毒有害病毒、病菌和生物制剂； 3. 实验动物及尸体(不涉及病原微生物)； 4. 转基因动植物。	未列入III级及以上的生物(医学)类危险源。
3	辐射类	实验场所涉及放射源、射线装置等危险源。	1. I、II、III类放射源； 2. I、II类射线装置； 3. 甲级非密封放射性物质工作场所； 4. 管制的核材料。	1. IV、V类放射源； 2. III类射线装置； 3. 乙级非密封放射性物质工作场所。	1. 豁免的放射源、射线装置； 2. 丙级非密封放射性物质工作场所。	——

序号	危险源类别	主要内容	I 级	II 级	III 级	IV 级
4	机械类	实验场所涉及压力容器和设备、高转速设备、特殊设备等危险源。	1.超高压容器、第三类压力容器； 2.转速 $\geq 30000\text{r/min}$ 的高转速设备（离心机和具有互锁功能的高转速机床除外）。	1.第二类、第一类压力容器； 2.冲压机、金属挤压液压机、四柱液压机等机械压力设备； 3.转速 10000-30000r/min 的高转速设备（离心机和具有互锁功能的高转速机床除外）； 4.等离子设备、电弧放电设备、热淬火设备、锻压设备、行车、叉车、额定起重量 $\geq 3\text{t}$ 且提升高度 $\geq 2\text{m}$ 的起重机械等特殊设备。	1.其他压力容器； 2.车床、钻床、铣床、刨床、高速或回转机械等设备； 3.各类离心机和具有互锁功能的高转速机床； 4.线切割机、电火花机、注塑机、电焊设备等特殊加工设备。	未列入III级及以上的机械类危险源。

序号	危险源类别	主要内容	I 级	II 级	III 级	IV 级
5	电子 (电气)类	实验场所涉及高电压大电流设备、激光设备、强磁设备等危险源。	1.电压 $\geq 1000\text{V}$ 的高电压设备、电流 $\geq 500\text{A}$ 的大电流设备； 2.单间实验室的设备总功率 $\geq 80\text{kW}$ ； 3.使用 4 类和 3 类（3R、3B）激光设备； 4.磁感应强度 $\geq 2\text{T}$ 的强磁设备和环境。	1.电压 380-1000V 的较高电压设备、电流 100-500A 的较大电流设备； 2.单间实验室的设备总功率 20-80kW； 3.使用 2 类（2、2M）激光设备； 4.磁感应强度 0.5-2T 的强磁设备和环境。	1.电压 220（不含）-380V 的较高压设备； 2.单间实验室的设备总功率 5-20kW； 3.使用 1 类（1、1M）激光设备； 4.磁感应强度 0.2-0.5T 的中磁设备和环境； 5.24 小时不断电设备； 6.微波暗室。	未列入 III 级及以上的电子(电气)类危险源。

序号	危险源类别	主要内容	I 级	II 级	III 级	IV 级
6	其他类	实验场所涉及加热设备、粉尘、绘画材料等危险源。	1.富氧涉爆设备装置; 2.单间实验室中烘箱、马弗炉、管式炉等加热设备总量≥8 台。	1.舞台升降机械; 2.涉及粉尘爆炸危险的场所; 3.单间实验室中烘箱、马弗炉、管式炉等加热设备总量3-7 台; 4.煤气瓶（管道燃气）及燃具、酒精喷灯; 5.酒精灯≥10 个。	1.单间实验室中烘箱、马弗炉、管式炉等加热设备总量1-2 台; 2.油浴锅、水浴锅、加热套、电炉、电烙铁、电吹风、热风枪、电磁炉等小型加热设备总量≥5 件; 3.酒精灯 3-9 个; 4.有毒、易燃的绘画材料、颜料、釉料、染料、清洗剂等; 5.木工加工场所; 6.易发生绞、碾、碰、戳、切、割等伤害的体艺器材。	未列入III级及以上的其他危险源。

说明：1.表中未作特别说明的，均指储存或使用该危险源。表中未能穷尽的危险源，可视实际情况予以定级。

2.“单间实验室”指面积≤50平方米的实验场所，其他面积可按比例调整评价标准。

3.涉及多个危险源的，应当分别进行识别和安全风险评估。

4.同类别危险源，依据等级最高的危险源判定实验室该类别危险源的安全风险等级。

附表 2

## 浙江省高校实验室安全分级管理要求参照表

管理要求	一级（重大风险） 实验室	二级（高风险） 实验室	三级（中风险） 实验室	四级（低风险） 实验室
安全检查	学校党政主要负责人每年牵头开展不少于 1 次安全检查；学校主管职能部门每月开展不少于 1 次安全检查；二级单位每周开展不少于 1 次安全检查；实验室做到“实验结束必巡”。	分管校领导每年牵头开展不少于 1 次安全检查；学校主管职能部门每季度开展不少于 1 次安全检查；二级单位每月开展不少于 1 次安全检查；实验室做到“实验结束必巡”。	学校主管职能部门每半年开展不少于 1 次安全检查；二级单位每季度开展不少于 1 次安全检查；实验室做到经常性检查。	学校主管职能部门每年开展不少于 1 次安全检查；二级单位每半年开展不少于 1 次安全检查；实验室做到经常性检查。
安全培训	实验室安全管理人员、实验人员完成不少于 24 学时的准入安全培训，之后每年完成不少于 8 学时的安全培训（以上均含应急演练）；每年开展不少于 2 次应急演练（含针对主要危险源的应急演练）。	实验室安全管理人员、实验人员完成不少于 16 学时的准入安全培训，之后每年完成不少于 4 学时的安全培训（以上均含应急演练）；每年开展不少于 1 次应急演练（含针对主要危险源的应急演练）。	实验室安全管理人员、实验人员完成不少于 8 学时的准入安全培训，之后每年完成不少于 2 学时的安全培训（以上均含应急演练）；每年开展不少于 1 次应急演练。	实验室安全管理人员、实验人员完成不少于 4 学时的准入安全培训，之后每年根据学校实际需要安排适量的安全培训；每年开展不少于 1 次应急演练。

管理要求	一级（重大风险） 实验室	二级（高风险） 实验室	三级（中风险） 实验室	四级（低风险） 实验室
安全评估	科研项目、学生课题等实验活动应进行安全风险评估（涉及主要危险源的实验活动应在二级单位备案），学校不定期抽查；针对主要危险源制定相应的管理办法和应急措施，责任到人。	科研项目、学生课题等实验活动应进行安全风险评估（涉及主要危险源的实验活动应在二级单位备案），学校不定期抽查；针对主要危险源制定相应的管理办法和应急措施，责任到人。	科研项目、学生课题等实验活动应进行安全风险评估，二级单位不定期抽查；二级单位判断如有必要，可按更高等级实验室安全要求进行管理。	科研项目、学生课题等实验活动应进行安全风险评估，二级单位不定期抽查；二级单位判断如有必要，可按更高等级实验室安全要求进行管理。
条件保障	配备充足的实验室安全管理人员；高风险点位安装监控和必要的监测报警装置；危化品等主要危险源存储严格执行治安管控或其他部门监管要求；配备必要的个体防护装备。	配备充足的实验室安全管理人员；高风险点位安装监控和必要的监测报警装置；危化品等主要危险源存储严格执行治安管控或其他部门监管要求；配备必要的个体防护装备。	配备实验室安全管理人员；在重要风险点位安装监控和必要的监测报警装置；配备必要的个体防护装备。	配备实验室安全管理人员；配备必要的个体防护装备。

# Wenzhou-Kean University Laboratory Risk-Grading and Classification Management Regulations

## Chapter I General Provisions

**Article 1** To further strengthen laboratory safety management and enhance the targeted approach and effectiveness of risk prevention, these Regulations are formulated in accordance with the *Pilot Measures for Laboratory Risk-Grading and Classification Management in Higher Education Institutions* issued by the Ministry of Education and the *Guidelines for Laboratory Risk-Grading and Classification Management in Higher Education Institutions of Zhejiang Province* issued by the Zhejiang Provincial Department of Education. These Regulations follow the principles of graded management, classified measures, dynamic adjustment, and precise prevention and control, and are adapted to the actual conditions of Wenzhou-Kean University.

**Article 2** The term “laboratory” in these Regulations refers to all experimental or training sites used for teaching, research, technical services, and related activities, including preparation rooms, reagent storage rooms, chemical storage warehouses, materials warehouses, and other auxiliary rooms. Each room shall be treated as a basic management unit.

## Chapter II Organization and Leadership

**Article 3** The University Laboratory Safety Leadership Group is fully responsible for guiding the university-wide implementation of laboratory risk-grading and classification management.

**Article 4** The Office of Academic Affairs (Laboratory Management Center) is the designated functional department responsible for laboratory risk-grading and classification. Its duties include refining and updating the Regulations; organizing the risk-grading and classification assessment and inspection of all University laboratories; providing differentiated guidance for laboratories at various levels and types; and establishing and maintaining a university-wide ledger of laboratory risk-grading and classification.

**Article 5** Each college or department-level unit is the principal entity responsible for laboratory safety management. It shall identify hazard-source categories and risk levels for its laboratories, and review and confirm the results; and formulate differentiated management measures for laboratories according to their risk levels.

**Article 6** The laboratory supervisor is directly responsible for the risk-grading and classification management of the laboratory. The supervisor shall conduct laboratory safety risk assessment, identify hazard sources, and determine risk levels; and submit the assessment results to the affiliated unit for review and confirmation.

### **Chapter III Hazard-Source Identification and Assessment**

**Article 7** Hazard sources are important factors leading to laboratory safety risks. Based on their characteristics, laboratory hazard sources are classified into chemical, biological (medical), radiation, mechanical, electronic (electrical), or other categories.

**Article 8** Safety-risk assessment of hazard sources forms the basis of laboratory risk-grading. Depending on the potential severity of the associated safety risks, hazard sources are classified into four levels, from high to low: Grade I, Grade II, Grade III, and Grade IV. The classification of each hazard category shall refer to Attachment 1: *Reference Table for the Classification and Grading of Laboratory Hazard Sources in Zhejiang Province Higher Education Institutions*.

**Article 9** Where a single laboratory contains multiple hazard sources, each hazard source shall be identified and assessed separately. For hazard sources within the same category, the highest level among them determines the safety risk level of that category for the laboratory.

**Article 10** Hazard-source identification and safety-risk assessment shall be conducted before any newly built, expanded, or renovated laboratory is put into use.

### **Chapter IV Laboratory Risk-Grading Management**

**Article 11** Laboratory risk-grading refers to determining the safety risk level of a

laboratory based on the main hazard sources present and their safety risk levels. Laboratory safety risk levels are classified into four grades: Grade I (major risk), Grade II (high risk), Grade III (medium risk), and Grade IV (low risk). If a single laboratory contains hazard sources of multiple categories, the highest risk level among them determines the safety risk level of the laboratory.

**Article 12** A graded management mechanism shall be implemented based on the results of laboratory risk-grading and classification. Management requirements are set out in Attachment 2: *Reference Table for the Risk-Based Classification Management Requirements of Laboratory Safety in Zhejiang Province Higher Education Institutions*.

**Article 13** Each laboratory shall post a uniform-format safety information board on its door, indicating safety risk level, hazard sources, laboratory safety supervisor, protective measures, fire-safety points, emergency contact telephone, and other relevant information. The board shall be updated in a timely manner.

**Article 14** Responsible bodies at all levels—University, units, and laboratories—shall carry out safety inspections and hazard rectification in accordance with the laboratory’s safety risk level. Experimental activities are strictly prohibited in laboratories where major hazards have not been rectified.

**Article 15** Laboratory supervisors, safety administrators, and experiment personnel shall receive safety training and participate in emergency drills appropriate to the hazard-source categories and safety risk levels of their laboratories. Where national rules require a certificate for on-post operation, personnel must complete the relevant professional training, pass the required examinations, and obtain the corresponding qualification certificate before conducting experiments.

**Article 16** Safety-risk assessment shall be carried out in advance for scientific research projects, student research topics, or other experimental and training activities. For significant

hazard sources, corresponding operating procedures and emergency control measures shall be formulated, posted in prominent locations, and clearly assigned to responsible individuals. Experimental activities involving Grade I or Grade II hazard sources shall be reviewed and filed by the respective unit, and the University will conduct random spot checks.

**Article 17** Laboratories shall be equipped with safety management personnel and safety facilities and equipment appropriate to their safety risk levels. High-risk areas shall have surveillance and necessary monitoring and alarm systems installed. Laboratories shall also be provided with all necessary personal protective equipment.

### **Chapter V Supervision and Implementation**

**Article 18** Each unit shall strictly implement laboratory risk-grading and classification in accordance with these Regulations. The University shall supervise and inspect the implementation of these requirements.

**Article 19** Hazard-source categories and risk-levels shall be declared by the laboratory safety supervisor or laboratory safety administrator on the *Zhejiang Province Higher Institution Laboratory Safety Digital Governance Platform* (<https://safesy.zjedu.gov.cn/>). Each unit shall appraise and review the declarations, and the Office of Academic Affairs (Laboratory Management Center) shall conduct secondary verification and random spot checks.

**Article 20** When a laboratory's research content, hazard source types, or quantities change, the laboratory supervisor shall re-identify hazard sources, re-assess safety risks, and update the declaration on the Platform. Each unit shall review such changes in a timely manner. The University shall periodically review the grading and classification status of all laboratories.

### **Chapter VI Supplementary Provisions**

**Article 21** These Regulations shall be interpreted by the Office of Academic Affairs (Laboratory Management Center).

- Attachments: 1. Reference Table for the Classification and Grading of Laboratory Hazard  
Sources in Zhejiang Province Higher Education Institutions
2. Reference Table for the Risk-Based Classification Management  
Requirements of Laboratory Safety in Zhejiang Province Higher  
Education Institutions

## Attachment 1

**Reference Table for the Classification and Grading of Laboratory Hazard Sources in Zhejiang Province Higher Education Institutions**

No.	Hazard Category	Main Content	Grade I	Grade II	Grade III	Grade IV
1	Chemical	Reagents, gases, etc.	<ol style="list-style-type: none"> <li>1. Highly Toxic Chems / highly-toxic gases;</li> <li>2. Explosives;</li> <li>3. Class-I Precursor Chemicals for Drug Production;</li> <li>4. <math>\geq 50</math> kg(L) of toxic, flammable, strong-oxidizer, strong-corrosive reagents;</li> <li>5. <math>\geq 6</math> gas cylinders or <math>\geq 3</math> kinds of piped toxic/flammable/corrosive gases.</li> </ol>	<ol style="list-style-type: none"> <li>1. Explosive-precursor chemicals;</li> <li>2. Class-II and III Precursor Chemicals;</li> <li>3. 20-50 kg(L) of toxic, flammable, strong-oxidizer, strong-corrosive reagents;</li> <li>4. 3-5 cylinders or 2 kinds of piped toxic/flammable/corrosive gases;</li> <li>5. <math>\geq 8</math> cylinders in a single room.</li> </ol>	<ol style="list-style-type: none"> <li>1. 2-20 kg(L) of toxic, flammable, strong-oxidizer, strong-corrosive reagents;</li> <li>2. 1-2 cylinders or 1 kind of piped toxic/flammable/corrosive gases;</li> <li>3. 5-7 cylinders in a single room.</li> </ol>	Not listed above.
2	Biological (medical)	Pathogenic microbes, psychotropic and narcotic drugs, lab animals, GMOs, etc.	<ol style="list-style-type: none"> <li>1. BSL-4 / ABSL-4, BSL-3 / ABSL-3 labs (Cat. 1 and 2 pathogens);</li> <li>2. Class-I psychotropic drugs.</li> </ol>	<ol style="list-style-type: none"> <li>1. BSL-2 / ABSL-2 labs (Cat. 3 pathogens);</li> <li>2. Class-II psychotropic drugs;</li> <li>3. Class-II narcotic drugs.</li> </ol>	<ol style="list-style-type: none"> <li>1. BSL-1 / ABSL-1 labs (Cat. 4 pathogens);</li> <li>2. Other toxic viruses / bacteria / biological agents;</li> <li>3. Lab animals and carcasses (no pathogens);</li> <li>4. GMO plants / animals.</li> </ol>	Not listed above.
3	Radiation	Radioactive sources, ray devices, etc.	<ol style="list-style-type: none"> <li>1. Category-I, II, III sealed sources;</li> <li>2. Category-I, II ray devices;</li> <li>3. Type-A unsealed rad-workplace;</li> <li>4. Controlled nuclear material.</li> </ol>	<ol style="list-style-type: none"> <li>1. Category-IV, V sealed sources;</li> <li>2. Category-III ray devices;</li> <li>3. Type-B unsealed rad-workplace.</li> </ol>	<ol style="list-style-type: none"> <li>1. Exempt sources / devices;</li> <li>2. Type-C unsealed rad-workplace.</li> </ol>	—

No.	Hazard Category	Main Content	Grade I	Grade II	Grade III	Grade IV
4	Mechanical	Pressure vessels, high-speed equipment, special equipment, etc.	<ol style="list-style-type: none"> <li>1. Ultra-high-pressure / Category-III pressure vessels;</li> <li>2. <math>\geq 30,000</math> r/min high-speed equipment (except inter-locked machine tools).</li> </ol>	<ol style="list-style-type: none"> <li>1. Cat-II and I pressure vessels;</li> <li>2. Presses, metal-extrusion hydraulic presses, etc.;</li> <li>3. 10,000-30,000 r/min high-speed equipment (except inter-locked machine tools);</li> <li>4. Plasma / arc-discharge / forging / overhead-crane / forklift / lifting appliances <math>\geq 3</math> t and lift <math>\geq 2</math> m.</li> </ol>	<ol style="list-style-type: none"> <li>1. Other pressure vessels;</li> <li>2. Lathes, drills, mills, planers, high-speed or rotating machinery;</li> <li>3. Various centrifuges and inter-locked high-speed machine tools;</li> <li>4. Wire-cut, EDM, injection-molding, welding equipment.</li> </ol>	Not listed above.
5	Electrical	High-voltage / large-current equipment, lasers, strong-mag equipment, etc.	<ol style="list-style-type: none"> <li>1. <math>\geq 1,000</math> V or <math>\geq 500</math> A;</li> <li>2. Single-room total power <math>\geq 80</math> kW;</li> <li>3. Class-4 and 3 (3R, 3B) lasers;</li> <li>4. Magnetic induction <math>\geq 2</math> T.</li> </ol>	<ol style="list-style-type: none"> <li>1. 380-1,000 V high-voltage equipment or 100-500 A large-current equipment;</li> <li>2. Single-room total power 20-80 kW;</li> <li>3. Class-2 (2, 2M) lasers;</li> <li>4. Magnetic induction 0.5-2 T.</li> </ol>	<ol style="list-style-type: none"> <li>1. 220-380 V high-voltage equipment;</li> <li>2. Single-room total power 5-20 kW;</li> <li>3. Class-1 (1, 1M) lasers;</li> <li>4. Magnetic induction 0.2-0.5 T;</li> <li>5. 24 h non-stop equipment;</li> <li>6. Microwave anechoic chamber.</li> </ol>	Not listed above.

No.	Hazard Category	Main Content	Grade I	Grade II	Grade III	Grade IV
6	Other	Heating equipment, dust, painting materials, etc.	1. Oxygen-enrichment explosive devices; 2. $\geq 8$ heating devices (ovens, muffle furnaces, tube furnaces) in a single room.	1. Stage lifts; 2. Dust-explosion-risk sites; 3. 3–7 heating devices (ovens, muffle furnaces, tube furnaces) in a single room 4. Gas bottles (piped gas) and burners, alcohol blow-lamps; 5. $\geq 10$ alcohol lamps.	1. 1-2 heating devices (ovens, muffle furnaces, tube furnaces) in a single room; 2. Oil baths, water baths, heating mantles, electric stoves, soldering irons, hot-air guns, induction cookers ( $\geq 5$ items); 3. 3-9 alcohol lamps; 4. Toxic / flammable painting materials, pigments, glazes, dyes, cleaning agents; 5. Wood-working shops; 6. Sports equipment prone to entanglement, crushing, collision, puncture, cutting, etc.	Not listed above.

### Notes

1. Unless otherwise stated, all criteria refer to the storage or use of the hazard source.
2. “Single-room laboratory” refers to a laboratory space with an area of no more than 50 m<sup>2</sup>; for laboratories of other sizes, the evaluation criteria may be adjusted proportionally.
3. Where multiple hazard sources are involved, each shall be identified and subject to separate safety risk assessment.
4. For hazard sources within the same category, the highest risk level among them shall determine the safety risk level of that category for the laboratory.

## Attachment 2

**Reference Table for the Risk-Based Classification Management Requirements of Laboratory Safety in Zhejiang Province Higher Education Institutions**

<b>Management Requirement</b>	<b>Grade-I (Major-risk) Lab</b>	<b>Grade-II (High-risk) Lab</b>	<b>Grade-III (Medium-risk) Lab</b>	<b>Grade-IV (Low-risk) Lab</b>
Safety Inspection	The University's Party and administrative leaders shall conduct no less than one inspection per year. The competent functional department shall conduct no less than one inspection per month. The college or department-level unit shall conduct no less than one inspection per week. The laboratory shall perform a safety patrol after the conclusion of every experiment.	University leader in charge shall lead no less than one inspection per year. The competent functional department shall conduct no less than one inspection per quarter. The college or department-level unit shall conduct no less than one inspection per month. The laboratory shall perform a safety patrol after the conclusion of every experiment.	The competent functional department shall conduct no less than one inspection every six months. The college or department-level unit shall conduct no less than one inspection per quarter. The laboratory shall perform frequent self-inspections.	The competent functional department shall conduct no less than one inspection per year. The college or department-level unit shall conduct no less than one inspection every six months. The laboratory shall perform frequent self-inspections.
Safety Training	Laboratory safety supervisors and personnel shall complete no less than 24 hours of entry safety training (including emergency drills), followed by no less than 8 hours of annual refresher training (including drills). No fewer than two emergency drills (covering major hazard sources) shall be conducted per year.	Laboratory safety supervisors and personnel shall complete no less than 16 hours of entry safety training (including emergency drills), followed by no less than 4 hours of annual refresher training (including drills). No fewer than one emergency drill (covering major hazard sources) shall be conducted per year.	Laboratory safety supervisors and personnel shall complete no less than 8 hours of entry safety training (including emergency drills), followed by no less than 2 hours of annual refresher training (including drills). No fewer than one emergency drill shall be conducted per year.	Laboratory safety supervisors and personnel shall complete no less than 4 hours of entry safety training. Subsequent annual training shall be arranged as needed by the University. No fewer than one emergency drill shall be conducted per year.

<b>Management Requirement</b>	<b>Grade-I (Major-risk) Lab</b>	<b>Grade-II (High-risk) Lab</b>	<b>Grade-III (Medium-risk) Lab</b>	<b>Grade-IV (Low-risk) Lab</b>
Safety Assessment	Research projects and student experiments must undergo a safety risk assessment. Activities involving major hazard sources shall be filed with the college or department-level unit, and are subject to random University spot-checks. Specific management regulations and emergency plans for major hazard sources shall be established, with clear assignment of responsibility.	Research projects and student experiments must undergo a safety risk assessment. Activities involving major hazard sources shall be filed with the college or department-level unit, and are subject to random University spot-checks. Specific management regulations and emergency plans for major hazard sources shall be established, with clear assignment of responsibility.	Research projects and student experiments shall undergo a safety risk assessment, subject to random spot-checks by the college or department-level unit. The unit may impose the management requirements of a higher risk grade if deemed necessary.	Research projects and student experiments shall undergo a safety risk assessment, subject to random spot-checks by the college or department-level unit. The unit may impose the management requirements of a higher risk grade if deemed necessary.
Resource Guarantee	Adequate laboratory safety supervisors shall be appointed. Surveillance and necessary monitoring and alarm devices shall be installed at high-risk locations. Storage of controlled chemicals and other major hazard sources shall strictly comply with public security and other regulatory requirements. Necessary personal protective equipment shall be provided.	Adequate laboratory safety supervisors shall be appointed. Surveillance and necessary monitoring and alarm devices shall be installed at high-risk locations. Storage of controlled chemicals and other major hazard sources shall strictly comply with public security and other regulatory requirements. Necessary personal protective equipment shall be provided.	Laboratory safety supervisors shall be appointed. Surveillance and necessary monitoring and alarm devices shall be installed at key risk points. Necessary personal protective equipment shall be provided.	Laboratory safety supervisors shall be appointed. Necessary personal protective equipment shall be provided.