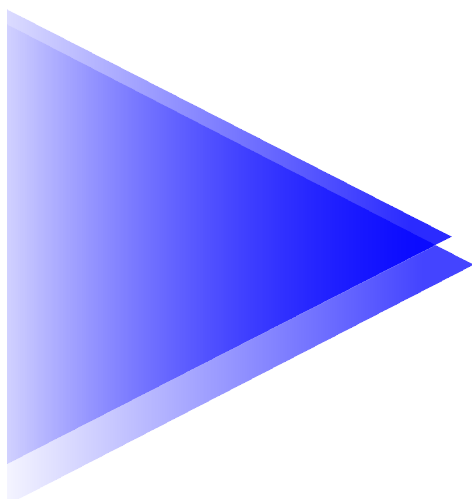


USER SAFETY GUIDE IN AIME CLEANROOM



The purpose of this cleanroom user safety guide is to present the AIME micro-nanotechnology platform, and more specifically the use and safety rules. It is intended for all users, beginners and experienced.

The preservation of the user's health, and the quality of the working environment must be the object of the greatest attention and requires the constant participation of all.

In that context, the purpose of this document is to recall the operating rules that will enable these objectives to be achieved.

It presents the identified risks, the means of preventing them, the conditions of access, the procedures and the precautions to be taken during handling in the cleanroom.

Compliance with all these rules guarantees your safety and the long-term, safe operation of the facility. It is also an important factor in the success of the work and the quality of the results you obtain.

The modifications of this document in connection with the COVID-19 pandemic are materialized by the presence of the  logo in the margin.

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I- Presentation

The Interuniversity Micro-nano Electronics Workshop is a structure accessible to academics and industry. It is equipped with computing resources and heavy technological equipment necessary for the computer-aided design, manufacture and testing of silicon-based integrated devices and circuits :

- 400m² of cleanroom with the main means of fabrication and testing of silicon integrated circuits, designed mainly for teaching purposes
- 200m² of technical premises (air, fluids, etc.)
- a micro-nano-electronics CAD center which provides professional software and calculation resources. It covers all the needs in integrated circuit design (digital, analogue and RF), MEMS, FPGAs and technological simulation.

AIME is mainly used for teaching and training, but also by students, engineers and researchers for their research or development work. AIME cleanroom is a complex environment, with a lot of fragile and expensive equipment. Among the several risks, chemical is the most dangerous.

Dust levels in the cleanroom are monitored annually and the various areas have obtained the following certifications (see Appendix 1) :

- main room : ISO 7 (≈ class 10.000)
- photolithography & nano room : ISO 6 (≈ class 1.000)
- chemistry stations under laminar flow hoods : ISO 5 (≈ class 100).

Parameters such as temperature, humidity and relative pressure are maintained at a precise level (21°C, 55% RH and 2 to 5 mm H₂O depending on the area).

The AIME is equipped with a supply network of service fluids (compressed air, nitrogen, vacuum, deionized water) and more or less dangerous process gases (oxygen, hydrogen, argon, silane, hydrogenated nitrogen, sulfur hexafluoride, boron trifluoride, phosphine, helium, ammonia, ethanol). A specific toxic gas leak detection system complements the fire detection system connected to that of the INSA.

The deionized water used in the cleanroom is produced on site from city water. Its degree of purity is established by measuring its resistivity. The ideal resistivity value for deionized water is 18 MΩ.cm.

The chemistry stations are installed under laminar flow with air extraction.

II- User or visitor : definitions

User status is granted by the AIME cleanroom manager to training supervisors, teacher-researchers and researchers (including doctoral students), after a training. This status may be revoked at any time in case of bad behavior or failure to comply with basic safety rules.

All other persons who come to the cleanroom (students, trainees) are considered as visitors. They must be identified to the person in charge of the cleanroom and accompanied by an authorized user or AIME staff. In this case, students on training courses are considered as visitors for the duration of their training and are placed under the responsibility of their training supervisors.

In the cleanroom, users are generally distinguished by the color of their blouse :

- white: AIME technical staff & training supervisors
- blue: students (visitors) in training
- green: users & other (non-student) visitors.

When you arrive in the cleanroom, you must provide the user charter corresponding to your status (provided in the annexes), filled in and signed.

III- General rules

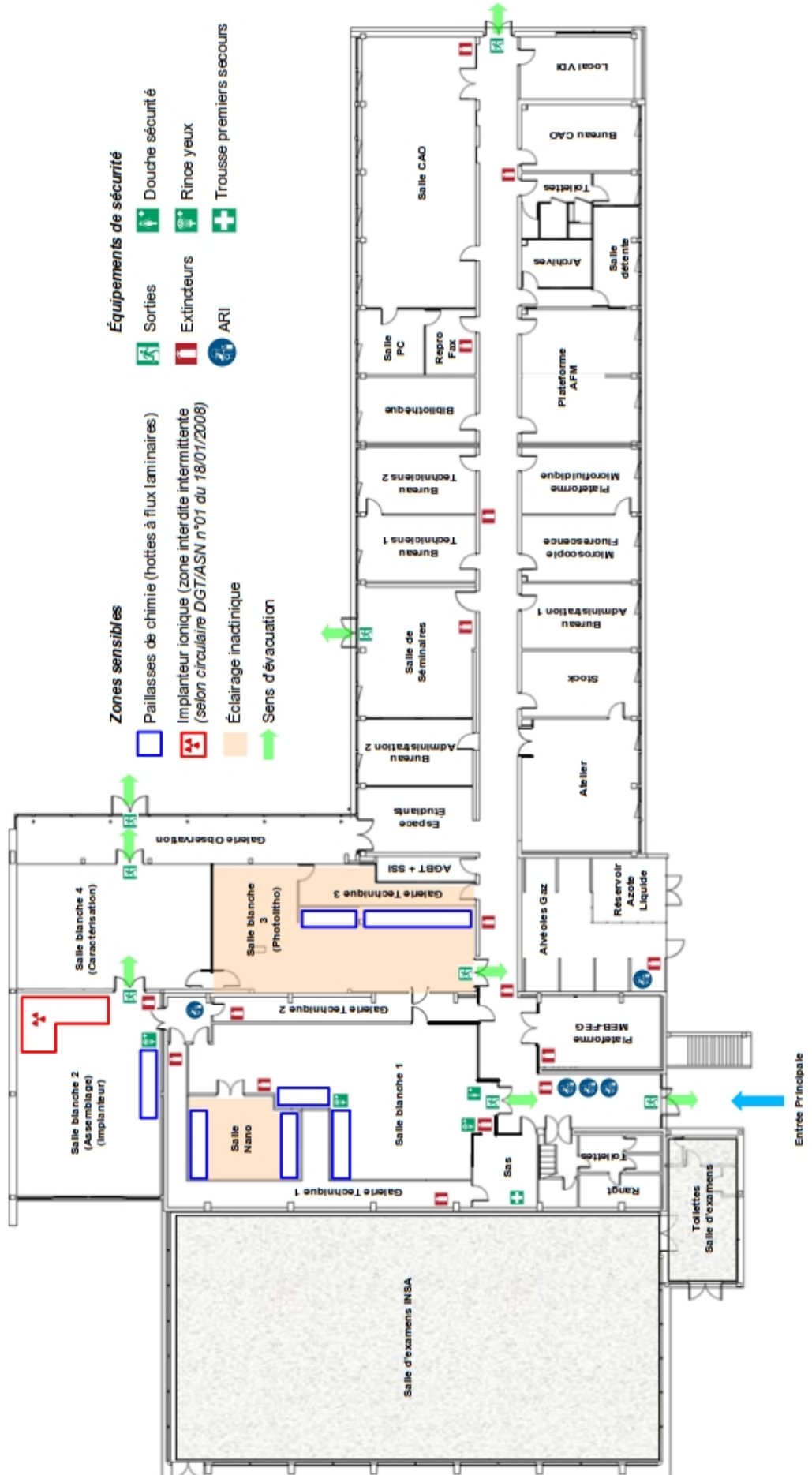
The user must :

- ensure that he/she works in a safe and orderly manner with regard to other people and equipment
- know the location of safety equipment (eyewash stations, safety showers, fire extinguishers, emergency exits, etc.) (see pages 5 and 6)
- know and apply emergency procedures
- respect the dressing procedure
- respect the conditions for bringing objects, materials and products into the cleanroom
- acquire adequate training before using equipment
- be sure of the actions to be performed during a manipulation, otherwise call on AIME staff and teacher
- restore benches (cleaning and waste disposal) and machines (default configuration) to their original state
- inform AIME staff of any defect or abnormal behavior of an apparatus or installation
- notify AIME technical staff of an approaching shortage of supplies
- immediately report any breach of these rules to colleagues.

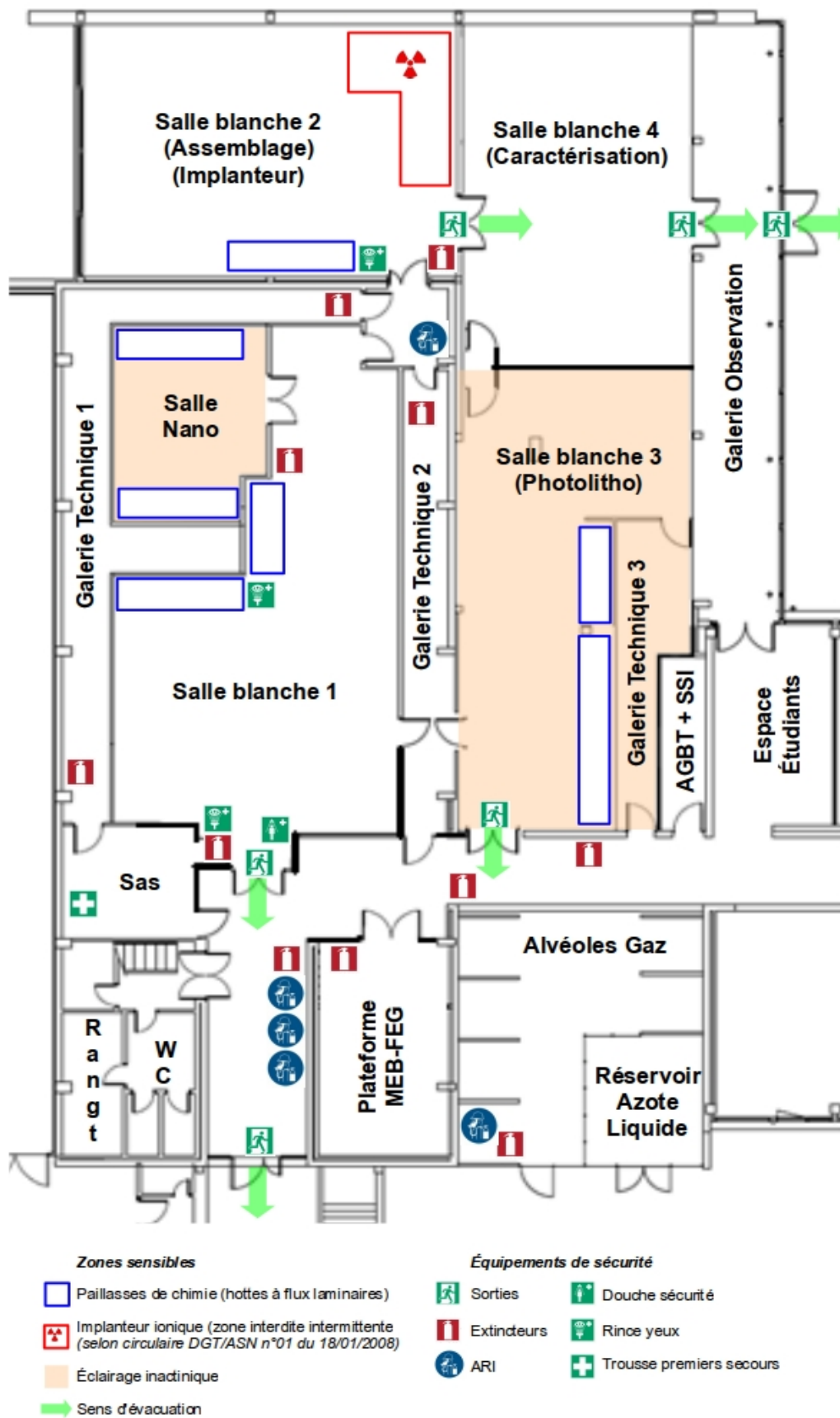
Lone working is not allowed in the cleanroom.

Opening hours : Monday - Friday / 8.30am - 12pm / 1.30pm – 5pm

AIME overview



Cleanroom safety equipment locations



IV- Risk prevention

In the context of risks prevention (physical, mechanical, chemical, biological, etc.), the collective protection of users from sources of danger makes it possible to reduce the risk of exposure and thus limit the consequences. It has priority over individual protection.

IV.1- Collective protection

Air treatment - Ventilation - Air conditioning

Cleanroom installations, necessary to maintain the cleanliness of the component manufacturing environment, contribute to the prevention of risks, in particular by extracting chemical vapors from workstations. In addition, users must respect certain rules in order to maintain a healthy atmosphere (see below).

Alarm systems and evacuation procedures

AIME is equipped with a fire detection system and a detection system for toxic gases used in cleanrooms (silane, phosphine, boron trifluoride).

In the event of an alarm (fire or gas) or malfunction of the extraction systems, it is necessary to leave the cleanroom and the building quickly but calmly using the nearest emergency exit.

The rallying points are located in the car park in front of the AIME. The AIME staff in charge of the evacuation will authorize the subsequent re-entry of the premises.

Location of emergency exits (plans on pages 5 and 6)

They are located :

- in the main cleanroom, exit through the main entrance of the AIME
- in the photolithography room, exit via the main entrance of the AIME
- in the characterization room, exit to the green area at the rear of the AIME
- in the seminar room, exit to the green area at the rear of the AIME.

Showers and eyewash stations (plan pages 5 and 6)

In the cleanroom, there is a "whole body" shower located in front of the emergency exit of the main room. The shower is activated by pulling the triangular handle.



The eyewash stations are used to flush out the eyes and part of the face of users affected by chemical splashes. They are activated by pushing the lever. If necessary, remember to let the water run for a few moments before use.



They are located :

- in the main room, near the emergency exit
- in the main room, near the chemistry and metallization benches
- in the assembly room, at the entrance next to the fume cupboard.

First aid kit (map on pages 5 and 6)

A first aid kit is available in the airlock of the cleanroom, in a locker marked with a white cross on a green background.

It contains first aid material that can be used in the event of minor burns, cuts or blows (antiseptic products, moisturizing protector, compresses and dressings, etc.) but does not exempt you from consulting the INSA prevention doctor. This kit also contains **calcium gluconate**, packaged in plastic ampules and used as local compresses.

This kit also contains calcium gluconate, packaged in plastic ampules, which can be used as local compresses in the event of (or suspected) hydrofluoric acid splashes.



IV.2- Individual protection

In the cleanroom, it is necessary to wear clothing that covers the whole body (bare legs or open shoes are not allowed) and to have the hair tied back. In addition, the following personal protective equipment is mandatory upon entry, as indicated by the pictogram sign on the cleanroom door :

- labcoats
- hairnets and shoe covers
- gloves.

This equipment, which is available in the cleanroom entrance, has a dual purpose: to protect the user during the handling of samples and chemicals (acids, bases, solvents on the chemistry workstations), and to protect the working environment and the manufactured components from the particles generated by this same user.

Labcoats

Nylon labcoats were preferred to cotton for three reasons: :

- cotton lint (dust) can be prohibitive to the quality of the fabric
- the tight weave of the fabric allows the retention of dander and fibers from the user's civilian clothing
- the alteration of the fabric is immediately visible in the event of acid splashes (instead of absorption by the cotton and prolonged contact with the skin).



At the end of a working period, the fabric is covered with several layers of hair, scales, grease and microbes. The labcoat no longer fulfills its function of bilateral protection. It will be cleaned and decontaminated by a specialized company.

Hairnets and shoe covers

This equipment completes the clothing for entering the cleanroom and must be put on correctly (see § V - Entry and exit procedures)



Gloves

The gloves are made of nitrile (with cuff) and are available in several sizes (S, M and L). If necessary, latex gloves can be supplied.

During the thermal stages of the manufacturing processes involving the handling of growth ovens and/or coating ovens, it is imperative to wear high-temperature protective gloves to avoid burns (available near the equipment concerned).



Safety glasses (or goggles)

Safety glasses must be worn when handling any chemical. They are provided in the individual sealed boxes provided at the beginning of the course.



Self-contained breathing apparatus (SCBA)

The AIME is equipped with 5 SCBAs, used by AIME technical staff during emergency interventions or maintenance on installations with a high risk of toxic gas emissions.



IV.3- How to work safely in a cleanroom ?

Acting safely in a multi-user environment means not only making correct use of the personal protective equipment described above, but also :

- **warning you are entering the room, and/or being accompanied (remember: working alone is prohibited)**
- **working calmly and in a friendly manner**
- **be aware of the presence of colleagues working nearby, especially when handling dangerous products or fragile samples**
- **do not work at the edge of the chemical workstations, but prefer to handle products close to the extractions**
- **do not put your face above the chemistry workstations in order to avoid inhaling the harmful vapors of the products used (acids, solvents) and to avoid disturbing the air flow (blowing and extraction)**
- **clean up any dirt from the chemical workstation after handling, and immediately wipe up any liquid, acid, base or water spilled on the work surfaces**
- **do not touch your face or skin with your gloves or the sleeve of your gown: it is your protection AND that of your samples that is at stake**
- **do not play with chemicals, solvent spray bottles or pressurized nitrogen blowers**
- **do not throw any used product down the drain (products are recovered for reprocessing)**
- **do not bring in any equipment, materials or chemicals without permission from the technical staff**
- **if you are ill (any style), DO NOT ENTER in the cleanroom, for your health and that of your colleagues**
- **respect the established practices for working in cleanrooms.**

And above all :

- **if you make any kind of handling error, do not hide it, that would be even worse; tell a competent person.**

IV.4- What to do in the event of an incident in the cleanrooms ?

In the event of an emergency (accident, illness, fire, etc), the priority is to protect the area and then alert (or have alerted) the emergency services in the most precise manner.

PROTECT, ALERT, RESCUE

If, despite the above precautions, an incident occurs, proceed as follows :

- alert or have alerted the training supervisors and the AIME technical staff who will contact the nurse, the INSA prevention doctor and/or the emergency services (fire brigade, ambulance) as well as the INSA lodge.

First aid

- in the event of burns or skin splashes: whatever their severity or origin (flame, acids, bases, solvents, etc.), spray with running water for at least 20 minutes (shower, eyewash, etc.)
- in the event of a HF burn: immediately inform the personnel. After spraying, quickly apply a compress of calcium gluconate (ampules in the first-aid kit - cleanroom airlock), except in the event of projection into the eyes

- in case of splashes in the eyes: rinse the **open** eye(s) thoroughly with running water for at least 20 minutes using eyewash (remember to let the water run for a few moments before spraying)
- in case of ingestion: do not induce vomiting, do not give anything to drink
- in case of inhalation: stop the emission of gas and remove the victim from the polluted area.

In all cases, report the incident or accident in the Occupational Health and Safety Register (located at the entrance to office n°5).

Emergency numbers :

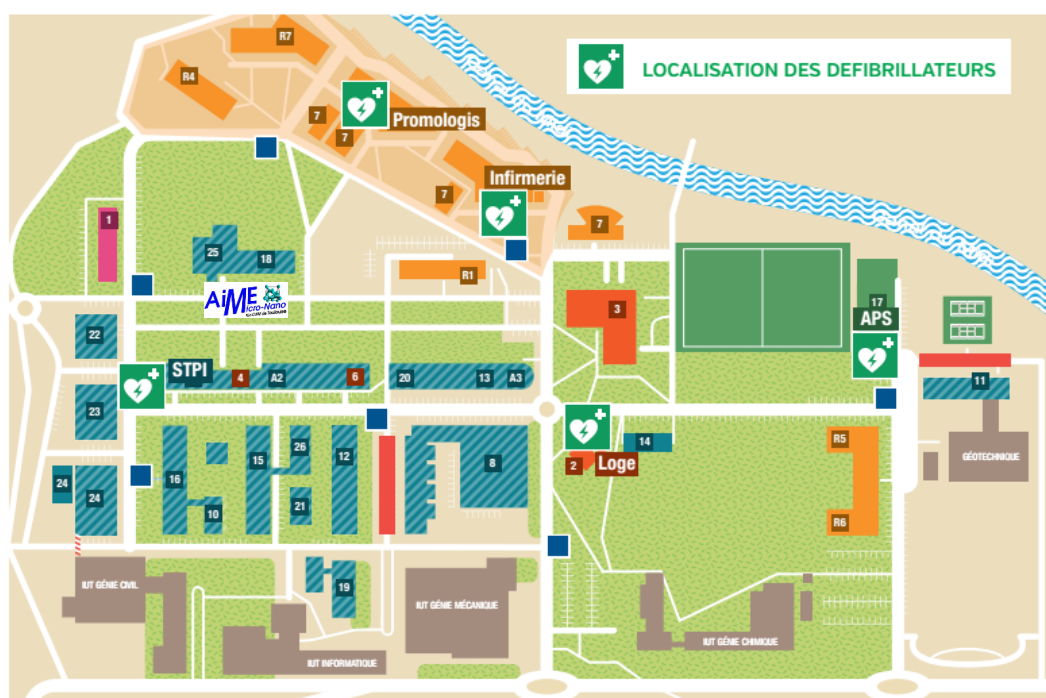
- INSA Infirmary : 98.98 (from an internal telephone) or 05.61.55.98.98
- INSA Lodge : 7 (from an internal phone) or 05.61.55.95.13
- SAMU : 15
- Fire brigade : 18
- European emergency number : 112 (only from a mobile phone)
- First aid in work (SST) :

Christophe CAPELLO : 98.78 or 98.86

Cardiac defibrillators

The INSA is equipped with 5 defibrillators, located :

- at the Lodge (accessible 7 days a week and 24 hours a day)
- in the STPI on the ground floor (accessible on working days from 6am to 9pm)
- in the Infirmary (during opening days and hours)
- at the APS Center (during opening days and hours)
- at Residence 3 Promologis (Agency office)



V- Cleanroom entry and exit procedures

V.1- Entry conditions

Entry into cleanrooms is subject to a series of conditions designed to protect users, to limit as far as possible the contribution of external particles and to reduce process contamination. Thus, it should be noted that :

- **in the current health context, only surgical masks are authorized in cleanrooms (barrier masks for the general public are prohibited). Otherwise, the AIME may provide users with one**
- **the wearing of special cleanroom clothing is compulsory; the clothing sequence is described below**
- **fluffy clothes should be avoided because of the fibers they can release (even with the cleanroom gown)**
- **it is imperative not to enter the cleanroom airlock with wet or muddy shoes: use the mat at the entrance to the AIME**
- **to prevent chemical splashes, sandals, flip-flops and other open shoes are not allowed in the cleanroom. Similarly, shorts and skirts are also forbidden for safety reasons; long trousers and closed flat shoes must be worn**
- **long hair must be tied back for a better fit**
- **make-up is forbidden, due to the risk of contamination of the processes**
- **jewelry (rings, necklaces, chains) must be removed before entering the cleanroom**
- **contact lenses are forbidden, as they can absorb solvent vapors and "weld" to the cornea**
- **no object may enter the cleanroom without prior authorization from AIME technical staff (for further information on objects permitted and prohibited in the cleanroom: see § IV.4).**



V.2- Entry procedure

Entry is in two stages : entry into the airlock, and passage from the airlock to the cleanroom itself.

- Leave your personal belongings in the lockers (lockable with coin) in the student area
- When entering the cleanroom airlock, put on nitrile gloves
- in the cleanroom airlock :
 - retrieve an individual sealed box identified by the binomial code, and containing a pair of safety glasses
 - put on the safety glasses
 - store the box in the lockers
 - collect protective equipment (labcoats, hairnet, shoe covers)
 - put on the labcoat (this will be allocated to you for the duration of the course)
 - put on the hairnet, making sure to put all the hair in
- while sitting on the bench acting as a barrier between the "dirty" and "clean" areas, put on the shoe covers starting with the left foot, which can then be placed in the "clean" part of the airlock, before putting on the right foot

- enter the cleanroom and locate the safety equipment (eyewash, shower, fire extinguishers, etc.).



V.3- Exit Procedure

Proceed in the reverse order to that used for entry.

After crossing the separation bench between the "clean" and "dirty" areas, remove the shoe covers and throw them away :

- remove the shoe covers and throw them in the bin
- keep the hairnet in the sleeve of the labcoat (in case of a planned return to the cleanroom)
- place the labcoat and safety glasses in the assigned airtight box
- remove gloves while turning them inside out and avoiding touching the outside surfaces, then dispose of them in the waste bin **outside the airlock.**



V.4- Objects allowed and prohibited in cleanrooms

In order to limit the release of particles and the risks of contamination of the processes, it is forbidden to bring into cleanrooms :

- any food or drink
- pencils..

Any external object authorized in the cleanroom (tools, equipment, sample boxes, etc.) must first be carefully cleaned using the necessary means (cleaning products or solvents, Hoover, special cloths). Packaging must be removed in the airlock, not in the cleanroom, in order to avoid the emission of particles.

VI- Chemical risk

The technological processes made available to users require the use of chemical products, and therefore reactive products, of varying degrees of danger.

The prevention of chemical risks requires prior information by the supervisors before entering the cleanroom and the application of basic rules to work safely and prevent accidents :

- **information on the product(s) used: identification, risks (pictograms), storage, etc**
- **wearing the appropriate personal protective equipment for handling them**
- **recovery of waste after use (no discharge into sinks).**

These chemicals are prepared by AIME technical staff and offered in small packages in containers suitable for handling. They should only be used in the chemistry workstations. If necessary, the safety data sheets (MSDS) for products used in the cleanroom are available at the entrance of office n°5 (red files).

The introduction and/or use of a new chemical product cannot be done without authorization, with the provision of safety data sheets.

VI.1- Specific instructions for chemicals

The chemicals used in cleanrooms are all known to be dangerous. However, some of them are lethal and it is imperative to respect the following instructions: :

- it is imperative that you wear protective glasses
- if necessary, double the gloves !!!
- **be particularly careful when using hydrofluoric acid (HF, BOE and Polysilicon etch) : even in low concentrations, it is a "sneaky" acid which does not cause any burning or stinging sensation at the time, but whose consequences (blood contamination and bone decalcification) are VERY SERIOUS afterwards!**
- other acids (hydrochloric, nitric, sulfuric, etc.) must also be handled with care
- **if you have the slightest doubt about liquid contact, inform the AIME technical staff (refer to § III.3)**
- ensure that only containers that can withstand high temperatures (glass < 600°C, Teflon < 200°C, polyethylene < 80°C) are placed on the hot plates.

According to Labor Code Article D4154-1 (see Appendix A2) and by extension with regard to the non-permanent status of students, they are not authorized to handle hydrofluoric acid:

Consequently, the supervisors of the training courses will have to carry out all chemical manipulations involving hydrofluoric acid : etching of oxides, etching of polysilicon, etc

-O-O-O-O-O-

A1- Cleanroom classification

In a so-called "cleanroom", the concentration of particles is controlled in order to minimize the introduction, generation and retention of particles inside : the ambient air is renewed and filtered in a very rigorous manner in order to eliminate the dust that causes defects in micro and nano devices.

Cleanrooms are classified according to the number of particles per unit volume. The international standard ISO 14644-1 (formerly US FED STD 209) is used to determine the dust level and therefore the cleanliness class of the cleanroom.

Numéro de classification	Concentrations maximales admissibles par m ³ d'air en particules de taille égale ou supérieure à celles données ci-dessous					
	0,1 µm	0,2 µm	0,3 µm	0,5 µm	1 µm	5 µm
ISO 1	10	2	–	–	–	–
ISO 2	100	24	10	4	–	–
ISO 3	1 000	237	102	35	8	–
ISO 4	10 000	2 370	1 020	352	83	–
ISO 5	100 000	23 700	10 200	3 520	832	29
ISO 6	1 000 000	237 000	102 000	35 200	8 320	293
ISO 7	–	–	–	352 000	83 200	2 930
ISO 8	–	–	–	3 520 000	832 000	29 300
ISO 9	–	–	–	35 200 000	8 320 000	293 000

A2- Labor Code – Article D4154-1










Dangerous chemical agents prohibited for holders of a fixed-term contract and temporary workers

It is prohibited to employ employees with a fixed-term employment contract and temporary employees for the performance of work exposing them to the following dangerous chemical agents :

- 1) Asbestos: servicing or maintenance operations on flocking or heat insulation; containment, removal or demolition work
- 2) The following aromatic amines: benzidine, its homologues, its salts and its chlorinated derivatives, 3, 3'dimethoxybenzidine (or dianisidine), 4-aminobiphenyl (or 4-aminobiphenyl)
- 3) Sodium arsenite
- 4) Hydrogen arsenide (or arsenic hydrogen)
- 5) Auramine and magenta (manufacturing)
- 6) Beryllium and its salts
- 7) Beta-naphthylamine, N, N-bis (2-chloroethyl) -2-naphthylamine (or chlornaphazine), o-toluidine (or orthotoluidine)
- 8) Liquid or gaseous bromine, excluding compounds
- 9) Cadmium: metallurgy and smelting work
- 10) Soluble mineral compounds of cadmium
- 11) Chlorine gas, excluding compounds
- 12) Chloromethane (or methyl chloride)
- 13) Vinyl chloride during polymerization
- 14) Mercury dichloride (or mercury bichloride), mercury oxycyanide and alkyl derivatives of mercury
- 15) Manganese dioxide (or manganese dioxide)
- 16) Gaseous fluorine and hydrofluoric acid**
- 17) Solid or vapor iodine, excluding compounds
- 18) Carbon oxychloride
- 19) Paraquat
- 20) Phosphorus, phosphorus pentafluoride, hydrogen phosphide (or hydrogen phosphorus)
- 21) Linseed dust: work involving exposure to inhalation
- 22) Hard metal dust
- 23) Ionizing radiation: work performed in areas where the hourly dose rate is likely to be greater than 2 millisieverts
- 24) Carbon disulphide
- 25) Tetrachloroethane
- 26) Tetrachloromethane (or carbon tetrachloride)
- 27) Wood disinsection work (spraying the product, soaking the wood, stacking or sawing impregnated wood, treatment of existing frames), and grain during storage.



























A3- Globally Harmonized System of Classification and Labelling of Chemicals

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) divides products into hazard classes represented by pictograms :

GHS01		Explosive
GHS02		Flammable
GHS03		Oxidizing
GHS04		Compressed gas
GHS05		Corrosive
GHS06		Toxic
GHS07		Harmful
GHS08		Health hazard
GHS09		Environmental hazard

These pictograms are generally accompanied by hazard statements (noted Hxxx, formerly risk phrases) and precautionary statements (noted Pxxx).

A4- Common chemicals in AIME and associated hazards

ACIDS	Hydrochloric acid	HCl	 
	Hydrofluoric acid	HF	 
	BOE 7-1 (Buffer Oxide Etch)	NH ₄ F-HF	 
	Nitric acid	HNO ₃	  
	Phosphoric acid	H ₃ PO ₄	
	Sulfuric acid	H ₂ SO ₄	
	Hydrogen peroxide	H ₂ O ₂	 
BASES	Ammonia	NH ₄ OH	  
	Developer		
	Developer MF-CD-26		 
	Developer MIBK/IPA		  
	HMDS (Hexamethyldisilazane)		   

MIXTURES	« Piranha » solution	H_2SO_4/H_2O_2	
	RCA Standard Clean 1	$NH_4OH/H_2O_2/H_2O$	
	RCA Standard Clean 2	$HCl/H_2O_2/H_2O$	
	Aluminium etching	$H_3PO_4/HNO_3/H_2O$	
	Polysilicon etching	$HF/HNO_3/H_2O$	
RESINS	S1813	-	
	AZ 5214E AZ nLOF 2035	-	
	PMMA 495 PMMA 950	-	
SOLVENTS	Acetone	C_3H_6O	
	Ethanol	C_2H_6O	
	Isopropanol	C_3H_8O	
	Hexane	C_6H_{14}	

CONSIGNES DE SÉCURITÉ

**NE PAS TRAVAILLER SEUL OU EN DEHORS DES HORAIRES D'OUVERTURE
(lundi – vendredi / 8h30-12h00 / 13h30-17h00)**



RESPECTER LES PROCÉDURES D'ENTRÉE EN SALLE BLANCHE



NE PAS SE POSITIONNER AU-DESSUS DES POSTES DE CHIMIE

NE PAS TRAVAILLER AU BORD DES POSTES DE CHIMIE

**MANIPULER LES PRODUITS CHIMIQUES AVEC PRÉCAUTION
ET À PROXIMITÉ DES EXTRACTIONS**

LES ÉTUDIANTS NE DOIVENT PAS MANIPULER L'ACIDE FLUORHYDRIQUE HF

NE PAS REJETER DE PRODUITS CHIMIQUES DANS LES ÉVIERS

NETTOYER SON POSTE DE TRAVAIL APRÈS MANIPULATION

**PRÉVENIR LE PERSONNEL TECHNIQUE EN CAS DE DÉVERSEMENT DE
PRODUIT OU D'ERREUR DE MANIPULATION**



**INFORMER LE PERSONNEL TECHNIQUE DE TOUT INCIDENT OU
DÉFECTUOSITÉ OU COMPORTEMENT ANORMAL D'UN ÉQUIPEMENT**



**NE PAS INTRODUIRE DE MATÉRIEL, MATÉRIAUX OU PRODUITS CHIMIQUES
SANS AUTORISATION DU PERSONNEL TECHNIQUE**

Référence : Guide Sécurité Salle Blanche AIME

A6- AIME Cleanroom User's Charter

RESEARCHER - TEACHER - TECHNICAL STAFF

I, the undersigned,

Nam :

Surname :

Organization :

Department/Team :

declare to have read the information contained in the document "User safety guide in AIME cleanroom".

I am committed to :

- 1- respect the clothing conditions to access to the cleanroom
- 2- adhere to the procedures for dressing in and out of the cleanroom
- 3- identify safety equipment
- 4- adopt a behavior in adequacy with proper cleanroom work
- 5- do not introduce any equipment, materials or chemicals in the cleanroom without prior authorization of AIME technical staff
- 6- unpack and clean all authorized exterior equipment before entering the room
- 7- use the appropriate glassware (solvents, acids, DI water) for my handling and clean it after use
- 8- handle chemicals in compliance with safety rules and as close as possible to extractions
- 9- do not pour chemicals into the sink but use the recovery tanks
- 10- clean my worktop (chemistry bench, table) after use, store the dispensing bottles and glassware at the back of the bench, close the recovery tanks
- 11- return the used material to its original place (boxes or drawers): tweezers, chronometers, masks, spinning chucks, etc
- 12- reset the equipment settings (spinner, diamond saw, etc.) to their original values
- 13- report any equipment malfunction to AIME technical staff.

Toulouse, on	Signature
--------------------	-----------

A7- AIME Cleanroom User's Charter

TRAINING SUPERVISOR

I, the undersigned,

Nam :

Surname :

Organization :

Course :

declare to have read the information contained in the document "User safety guide in AIME cleanroom".

I am committed to :

1- inform the students I supervise about the cleanroom safety instructions before their arrival at AIME

2- monitor the manipulations of the students I supervise in the cleanroom

3- respect (and enforce) the clothing conditions to access to the cleanroom

4- adhere to (and enforce) the procedures for dressing in and out of the cleanroom

5- identify safety equipment

6- adopt a behavior in adequacy with proper cleanroom work

7- do not introduce any equipment, materials or chemicals in the cleanroom without prior authorization of AIME technical staff

8- unpack and clean all authorized exterior equipment before entering the room

9- use the appropriate glassware (solvents, acids, DI water) for my handling and clean it after use

10- handle chemicals in compliance with safety rules and as close as possible to extractions

11- carry out all the manipulations of chemicals based on hydrofluoric acid (HF) for the students

12- do not pour chemicals into the sink but use the recovery tanks

13- clean my worktop (chemistry bench, table) after use, store the dispensing bottles and glassware at the back of the bench, close the recovery tanks

14- return the used material to its original place (boxes or drawers): tweezers, chronometers, masks, spinning chucks, ...

15- reset the equipment settings (spinner, diamond saw, etc.) to their original values

16- report any equipment malfunction to AIME technical staff.

Toulouse, on	Signature
--------------------	-----------

A8- AIME Cleanroom Visitor's Charter

STUDENT - INTERN

I, the undersigned,

Nam :

Surname :

Organization :

Course :

declare to have read the information contained in the document "User safety guide in AIME cleanroom".

I am committed to :

- 1- respect the clothing conditions to access to the cleanroom
- 2- adhere to the procedures for dressing in and out of the cleanroom
- 3- identify safety equipment
- 4- adopt a behavior in adequacy with proper cleanroom work
- 5- do not introduce any equipment, materials or chemicals in the cleanroom without prior authorization of AIME technical staff
- 6- use the appropriate glassware (solvents, acids, DI water) for my handling and clean it after use
- 7- handle chemicals in compliance with safety rules and as close as possible to extractions
- 8- do not pour chemicals into the sink but use the recovery tanks
- 9- clean my worktop (chemistry bench, table) after use, store the dispensing bottles and glassware at the back of the bench, close the recovery tanks
- 9- do not pour chemicals into the sink but use the recovery tanks
- 10- return the used material to its original place (boxes or drawers): tweezers, chronometers, masks, spinning chucks, etc
- 11- reset the equipment settings (spinner, diamond saw, etc.) to their original values
- 12- report any equipment malfunction to AIME technical staff.

Toulouse, on	Signature
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A9- AIME Cleanroom Visitor's Charter

STUDENTS - INTERNS (GROUPS)

Organization:

Course :

We, the undersigned, students of the training program above mentioned, declare that we have taken notice of the information contained in the "AIME – Cleanroom User Safety Guide".

We are committed to :

- 1- respect the clothing conditions to access to the cleanroom
- 2- adhere to the procedures for dressing in and out of the cleanroom
- 3- identify safety equipment
- 4- adopt a behavior in adequacy with proper cleanroom work
- 5- do not introduce any equipment, materials or chemicals in the cleanroom without prior authorization of AIME technical staff
- 6- use the appropriate glassware (solvents, acids, DI water) for my handling and clean it after use
- 7- handle chemicals in compliance with safety rules and as close as possible to extractions
- 8- do not pour chemicals into the sink but use the recovery tanks
- 9- clean my worktop (chemistry bench, table) after use, store the dispensing bottles and glassware at the back of the bench, close the recovery tanks
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- 11- reset the equipment settings (spinner, diamond saw, etc.) to their original values
- 12- report any equipment malfunction to AIME technical staff.

Name - Surname	Group	Signature

Toulouse, on