WELCOME DOSSIER FOR INTERNAL USERS

UNIVERSITAT ROVIRA i VIRGILI
Servei de Recursos Científics i Tècnics

Written by:	Reviewed by:	Approved by:
Quality Officer of the SRCiT 15-04-2020	SRCiT Coordinator 23-04-2020	SRCiT Coordinator 23-04-2020

List of modifications

No	Description	Date of approval
00	Original document	24-02-2006
01	Arrival of new staff	26-10-2007
02	Changes to staff and units	15-10-2008
03	Adaptation of content to ISO 9001:2008	11-08-2009
04	General review to update content and incorporate the new policy to reflect ISO 9001:2015	28-11-2018
05	Modification of the table of services: Group services into sections, elimination of the SEM, addition of the FESEM-FIB. Update of the information concerning the Chemistry Area Modification to the prevention phase Addition of website Includes the z sizer	23-04-2020

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1 PRESENTATION OF THE SCIENTIFIC AND TECHNICAL RESOURCES SERVICE (SRCIT).

The Scientific and Technical Resources Service provides fundamental technical support to research, development and knowledge transfer in all the scientific and technological areas in which the URV is involved. One of its obligations is to place its technical and human resources at the disposal of the URV's different research groups.

It also offers these resources to companies and organizations in order to encourage research and resolve problems.

The aim of this dossier is to give an introductory overview of the SRCiT. If you need more information, consult out our technical staff and our website:

https://www.urv.cat/ca/recerca/suport/recursos-cientifics-tecnics/

2 BASIC OPERATING REGULATIONS OF THE SRCiT

2.1. Location of the SRCiT building, N2

The building can be accessed from the Avinguda dels Països Catalans or by the footpath across the campus. The building is next to an outdoor parking area.

SRCiT Location

2.2. Requisites to be a user of the SRCiT

If you want to be a user of the SRCiT you need:
1) One of the technical staff of the SRCiT to give you access to the SRCiT administrative programme where you can register and your supervisor to authorise you to carry out any necessary analyses.
2) Your URV Card in order to access to the SRCiT building; You need to ask one of those in charge of the Area to enable your card so that you can use it to gain access. If you are from a different institution and do not have a card, you can gain access by ringing the bell.
3) To comply with the safety regulations and general and specific working regulations of each unit.

2.3. User-access hours

Once a user has registered with the SRCiT, they can access the SRCiT's building during the user-access hours. The user-access hours are:

9.00 – 17.00 from Monday to Friday

All users **must use their URV cards** to gain access to the building.

- "Independent user": The user has sufficient knowledge to be able to use the equipment from 8.30 to 21.00, Mondays to Fridays. The technician/specialist of the unit can train and authorize a person to be an independent user.

- "Independent users" can access the SRCiT on bank holidays and weekends provided they can demonstrate the need to do this and they have asked for and been granted authorisation by the coordinator of the SRCiT

- Failure to comply with this rule will mean that the user's authorization to enter the SRCiT's building outside opening hours will be revoked.

2.4. Protocol for entering and leaving the building outside opening hours (working days between 8.30 and 21.00.

- **Entering and exiting the building**

Any users who wants to access the building will identify themselves by inserting their URV card into the card reader situated at the main entrance of the building. If everything is in order, they will allowed access.

Users must enter and leave the building by the main door.

2.5. Protocol for entering and leaving the building on Saturdays, Sundays and bank holidays

- **Entering the building**

Users must first obtain authorization from the coordinator of the Service. Then they must call the CAMPUS security guard and wait at the entrance to the SRCiT until the security guard opens the main entrance and the area which the user has permission to access.

- **Leaving the building**

Users must contact the security guard so that they can close and secure the premises.

3 SRCiT STAFF CONTACT INFORMATION

COORDINATION and ADMINISTRATION

Coordinator

Martí Yebras Cañellas	☎977 559 747	✉ martin.yebras@urv.cat

Administrative staff

Pepi Amador Merino	☎977 558 152	✉ josefa.amador@urv.cat

QUALITY ASSURANCE UNIT

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Microscopy and Nanometric Techniques Area

Head Technical Officer of the Area

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Technical Officers of the Area

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SUSTAINABLE CHEMISTRY AND RENEWABLE ENERGY AREA

Head Technical Officer of the Area

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Chemical Analysis Unit. Chromotography and Mass spectrometry

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Chemical Analysis Unit. Inorganic Analysis and IR Spectrometry (IR and ICP-OES)

Antonio de la Torre López	977 55 8638	antonio.delatorre@urv.cat
Debora Cano Acedo	977 55 8638	debora.cano@fundacio.urv.cat

Materials Characterisation Unit X-ray diffraction

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Molecular Characterisation Unit. MNR

Ramon Guerrero Grueso	977 558 149	ramon.guerrero@urv.cat

Workshop Unit (Mechanisation and Prototype Design)

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RADIOLOGICAL PROTECTION AND ENVIRONMENTAL AREA

Radiological Protection Unit

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Eduard Bardají Bertomeu	977 55 8637	eduardo.bardaji@fundacio.urv.cat
Juan José Morant	977 55 8637	aznar.leon@fundacio.urv.cat

Radioisotopes and Environmental Management Unit

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URV Scientific Equipment Maintenance Unit

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4 TECHNIQUES AND SERVICES

4.1 Microscopy and Nanometric Techniques Area

4.1.1 Microscopy Unit

Techniques	Brief description
Environmental Scanning Electron Microscope (ESEM) with X-ray microanalysis	The environmental scanning electron microscope (ESEM) with X-ray microanalysis, FEI Company Quanta 600 has a resolution of 3 nm. Due to the different types of signals produced from the electron beam-specimen interaction, different results can be obtained: topographic image, material contrast image (by atomic number), energy dispersive X-ray spectroscopy, etc. Thanks to accessories such as the Peltier Stage and an oven (up to 1500°C) it is possible to study materials under cooling or heating. The equipment also has a STEM detector for carrying out humidity measurements and dynamic experiments (wet STEM). Absorbed and induced currents can be measured (EBIC).
Scanning Electron Microscope with Focused Ion Beam (Dual beam) (FESEM-FIB) with X-ray microanalysis	Scios 2 FEI microscope which has an electron column NiCol (Non-Inmersion Column) with electrostatic lenses that enable ultra-high resolution images. It is ideal for magnetic specimens. There are three in-column detectors, all of them with high image contrast: • for material contrast imaging (BSD) • for high-resolution imaging (SE) • for detailed surface imaging Focused Ion Beam (FIB) column not only delivers high-resolution imaging and milling at high voltages but has also good low-voltage performance, enabling the creation of high-quality TEM lamella. The other detectors are: ETD in-chamber detector. Concentric backscattering electron detector (CBSD) for composition and material contrast, and for surface information and topographic contrast. Integrated segmented STEM detector (bright field, dark field and high angle annular dark field (HAAFD)). Energy dispersive X-ray spectroscopy (EDX) detector. Totally automated micromanipulator.
Transmission Electron Microscopy (TEM)	The JEOL 1011 is a high performance high contrast 100 kV TEM that is easy to use and projects excellent images. The 0.2 nm resolution of this instrument allows the morphological study of particles and nanoparticles and their distribution. Due to ultramicrotomy and to the lamellas obtained by FIB (Focus Ion Beam), it is suitable for biological applications and for polymer and materials science. The image obtained is flat, monochromatic (black and white) with magnifications ranging between 200x and 1.000.000x.

Techniques	Brief description
Confocal Laser scanning Microscopy	The Nikon TE 2000E confocal scanning laser microscope is an inverted optical microscope able to provide three-dimensional images of an object by picking up its fluorescent signal. It can eliminate the fluorescent signal coming from a sample that is out of focus and thus obtains optical sections at different planes of the sample in a non-destructive way. These sections can be use to make a three-dimensional analysis or to observe an internal part of the sample. It is equipped with three lasers (488, 543 and 633 nm) and four simultaneous detection channels (three fluorescence channels and one for transmitted light).
Atomic force microscope (AFM) and scanning tunnelling microscope (STM)	Agilent 5500 AFM is characterized by its ability to easily generate three dimensional topographic maps of all types of material with nanometric resolution in the sample plane and atomic resolution in the direction perpendicular to it. Data processing enables measurements of surface roughness, obtains profiles and measures electrical measurements, magnetic domains and surface potential. The microscope can work in an open or controlled atmosphere or in liquids. It can function in acoustic or contact mode. The STM scanner allows atomic resolution surface images.
Raman- FTIR Microscopy	Raman spectroscopy can quickly provide chemical and structural information through the vibrational and rotational analysis of molecules and molecular bounds. It can be applied to a plethora of samples without the need for any previous sample preparation, thus avoiding a step in which the physical properties of the sample can potentially be altered. Raman and infrared spectroscopy are complementary techniques; masked spectral lines in a Raman spectrum can be visible in infrared spectroscopy and vice versa. Raman maps show the spatial distribution of chemical compounds contained in a sample by planes at different heights. The Raman microscope is equipped with three diffraction gratings: 2500 l/mm, 1800 l/mm and 600 l/mm, for three lasers, 514nm, 633nm and 785nm. Filters are also available that can obtain under 100 cm-1 spectra.
Ultramicrotomy	Making slices from 0.7 μm to 60 nm.

4.1.2 Nanometric Techniques Unit

Techniques	Brief description
Laser Marker	The CO_2 laser is a tool that can engrave areas as large as 27 x 27 mm^2 with a high energy laser. It can engrave plastic, metal, glass, wood, etc., at a speed of 225 characters per second.
Tubular furnace (CVD)	Chemical vapour deposition (CVD) is a technique that is normally used to grow layers of materials on a substrate in a process that requires a reactive gas and high temperature.

Techniques	Brief description	
Laser Marker	The CO_2 laser is a tool that can engrave areas as large as 27 x 27 mm^2 with a high energy laser. It can engrave plastic, metal, glass, wood, etc., at a speed of 225 characters per second.	
z-sizer	The Zetasizer instrument can measure the particle size and zeta potential of particles or molecules in a liquid medium. The Zetasizer features unique technology for measurement over a wide concentration range (from 0.3 nm to 10 um), and precise temperature control to give reproducible, repeatable and accurate measurements. Other key parameters like conductivity and particle concentration can also be measured.	
Clean Room	Sputtering (PVD)	Sputtering deposition is a technique that employs plasmas to sputter a material to be later deposited onto the surface of a substrate. It obtains very high quality thin films.
	Laser lithography	Laser lithography is a method that obtains high resolution patterns. It can be used to create structures by direct writing or to produce photomasks in small batches. The capacities and flexibility of this system make them a highly valuable lithographic tool for applications in Life Sciences, Advanced Packaging, MEMS, Micro Optics, Semiconductors and any other applications that require microstructures.
	RIE	This is a technique used to etch a substrate by means of a reactive plasma. It can also be used as a cleaning or surface activation method using an oxygen plasma.
	UV lamp	The purpose of the UV lamp is to illuminate substrates coated with a photoresist through a photomask. The features of the photomask design are then transferred to this layer of resin after photolithography, a process comprising various steps.

4.2 SUSTAINABLE CHEMISTRY AND RENEWABLE ENERGIES AREA

4.2.1 Chromotography and Mass Spectrometry Unit

Techniques	Description
Gas chromatography coupled to mass spectrometry (GC-MS)	Coupling gas chromatography (GC) and the quadrupole mass detector (Q) enables the separation, quantification and characterisation of a large number of volatile and semi-volatile compounds. The equipment works with an electron impact ionization (EI) source that obtains mass spectra characteristic of each compound, with the digital fingerprint of the compound being analysed. The URV has a commercial NIST library containing more than 190,000 spectra that can be compared with the image recorded in order to identify the substance. The Quadrupole Mass Analyser operated in a range of masses (m/z) from 10 to 800 and with a mass resolution of 1000 (low resolution).
High-performance liquid chromatography-time-of-flight mass spectrometry (HPLC-TOF)	Coupling HPLC and the TOF allows the separation, analysis and characterisation of mixtures of semi-volatile or non-volatile products. The team works with a source of electrospray ionisation (ESI). ESI is a soft ionisation technique ideal for thermolabile compounds. It is valid for low or very high polarity compounds that can be ionised in solution. The time-of-flight analyser operates in a mass-range (m/z) of 10 to 10000, a mass resolution of 10,000 (high resolution) and a mass accuracy of with a margin of error <5ppm. This mass precision drastically restricts the number of assignable molecular formulas. In many cases, an elemental and isotopic composition can be assigned to the molecule.

Techniques	Description
Ultra high-performance liquid chromatography (UHPLC) coupled with a quadrupole mass analyser and exactive mass and high resolution spectroscopy (Q/HRMS)	A quadrupole mass analyser for selecting precursor ions with Q/HRMS coupled with UHPLC enables data acquisition in MS and MS/MS mode. This analytical configuration facilitates the molecular identification and quantification of metabolites and peptides in complex matrices. We refer to molecules and metabolites that have low or no volatility. The equipment uses electron ionization (ESI) and atmospheric-pressure chemical ionization (APCI). The mass spectrometer (Q/HMRS) can apply multiple fragmentation techniques - CID, HCD and its combinations, during any stage of MSn, with analysis of the fragments obtained. High resolution MS and MSn can be carried out in parallel to maximise the quantity of high-quality data obtained. The analyser works in a mass range (m/z) of 50 to 2000 with a mass accuracy of <1ppm and a dynamic range of 10^6.
Gas chromatography coupled with a quadrupole mass analyser and high-resolution exactive mass spectroscopy.	A quadrupole mass analyser for ion filtration with exactive mass high resolution mass spectrometry (Q/HRMS) coupled with gas chromatography (GC) enables data acquisition in MS mode. This analytical configuration enables molecular identification and quantification of metabolites in complex matrices. We refer to volatile and semivolatile molecules and metabolites. The equipment works with both electron ionization (EI) and chemical ionization sources. Q/HRMS is high performance spectrometry that combines quadrupole technology with a high resolution analyser and exactive mass with a geometry that enables greater resolution and scanning speed. The quadrupole enables ion selection and increases the options regarding SIM experiments. The analyser operates in a mass range of (m/z) of 30 to 2000, with a mass accuracy of <1ppm.
Liquid chromatography coupled to a diode array detector (HPLC-DAD) and refractive index detector (RID)	Liquid chromatography coupled to a diode array detector (HPLC-DAD) and refractive index detector (RID) separates and quantifies product mixtures that give signals for DAD and RID. The LC-DAD-RID technique consists of different parts: a sample introduction system; a separation system (column); a support and external valve for LC (6 array columns) and two array detectors, a DAD and an RID, that can also work separately. The support and external valve enable work with 6 array columns.
Technical officers: **M. Carme Crespo, Irené Maijó and Sònia Abelló**	

4.2.2 Molecular Characterisation Unit, Nuclear Magnetic Resonance

Techniques	Description
Nuclear magnetic resonance (MNR)	NMR allows researchers to observe any nucleus with magnetic properties. The hydrogen nucleus is present in most organic compounds and is relatively sensitive to this technique, which means that this is a principal technique for determining the structure of organic molecules. The nuclei are arranged under an intense magnetic field generated by a superconductor and are irradiated and selectively observed. Selecting various sequences of specific irradiation obtains diverse quantitative and structural information regarding compounds and soluble mixtures in deuterated solvents. **Technical officer**: **Ramon Guerrero**

4.2.3 Materials and X-Ray Diffraction Unit

Techniques	Description
X-Ray Diffraction	This is a non-destructive technique for the qualitative analysis of samples through the identification of crystalline phases. X-rays diffract crystalline material in certain directions which produces characteristic diffractograms that act as the digital imprints of each crystalline phase. The diffractogram is a reflection of the crystalline structure, that is, it shows how the atoms are distributed in three dimensions. The diffractogram is interpreted using a database. Diffraction detects crystalline phases that are over 1% in weight. The sample can be very small in the order of micrograms, even though it is recommended to work in grams. The technique can be used to obtain information about the structure, composition and state of polycrystalline materials. In addition to the identification and quantification of crystalline phases, it can also be used for studying temperature variables, measuring cell parameters, measuring degrees of crystallinity, calculating residual force, studying textures and adjusting structures. Two diffractometers are available. The SRCiT has two D8-DISCOVER diffractometers equipped with collimators up to 50 microns and a video/laser system for measuring zones of this size in the sample. The equipment uses an area detector which decreases the analysis time and allows researchers to see the Debye rings that provide information regarding the texture of the material. Both diffractometers can work at temperatures ranging from that of liquid nitrogen to 1400ºC in an inert atmosphere or vacuum. **Technical officer**: **Francesc Gispert**

4.2.4 Spectrometry Unit

Techniques	Description
Spectrometry ICP optic ICP-OES	Inductive plasma coupling (ICP) consists of an ionization source for argon plasma joined to an optical spectrometer (OES), thus creating the ICP-OES equipment. In this technique, the continual introduction of liquid sample into a nebulization system forms an aerosol that is transported via an argon flow to the plasma torch, inductively coupled by radiofrequency. Within the plasma, the analytes are atomized and ionized due to the high temperatures generated. The subsequent de-ionizations generate photon emissions in characteristic atomic spectra. The detector sensitive to emission photons and the associated software quantify the intensity of the lines and compare them with the intensities of the reference patterns. **Technical officers**: **Debora Cano Acedo and Antonio de la Torre López**
IR electroscopy and Polarimetry	This is a range of techniques that allow the quality, quantity and optical purity of chemical substances to be analyzed by studying a material's ability to absorb, emit or divert electromagnetic radiation. **Technical officer : Debora Cano Acedo** **Technical officer (Polarimetry): Ramon Guerrero**

4.2.5 Mechanisation and Prototype Design Unit

techniques	Brief description
Mechanics Workshop. Mechanization of prototypes. (situated in the ETSE-ETSEQ building)	The mechanics workshop constructs prototypes, instruments and mechanical accessories; modifies equipment to improve its performance; repairs mechanical breakdowns in scientific equipment; assesses materials to be acquired and ensures that these materials are used effectively. **Technical officer : Ernest Arce Alcarraz**
	Computer numerical control lathe
	Computer numerical control milling machine
	Saw, pillar drill, electric brazier, etc.
	3D printer

4.3 TRANSVERSAL SERVICES OF THE SRCiT

Techniques	Description
Environmental Management and Radioisotopes	The SRCiT establishes environmental measures for the research units, proposes initiatives to the URV's Environmental Policy Commission. It provides assessment and training and handles the waste generated by the URV. It also draws up documentation and declarations, and retrieves and stores the waste generated by the SRCiT and by the URV's laboratories. The SRCiT supervises the URV's radioactive research facilities and ensures that any URV equipment that contains radioactive material or that emits ionizing radiation complies with the relevant legislation. **Technical officer**: **Antonio de la Torre López**
Radiological Protection	This service controls the quality of radiological equipment, assesses the equipment and design of radiological facilities, trains specialists and technicians, and assesses and monitors the quality of radiological facilities in hospitals. **Technical officer**
Cryogenics Liquid nitrogen tank	The SRCiT provides researchers and departments of the URV with liquid nitrogen. Users must sign up for the service in advance. **Technical officer**: **Francesc Gispert**
Certified analytical scales and certified weights	Certified analytical scales for testing volumetric equipment. Loan of certified set of weights for testing scales. **Technical officers**: **Debora Cano Acedo and Antonio de la Torre López**

5 QUALITY POLICY

QUALITY POLICY

UNIVERSITAT ROVIRA i VIRGILI
Servei de Recursos Científics i Tècnics

The Scientific and Technical Resources Service (SRCiT) promotes the adoption of a quality management system as a central pillar of any strategic decision that may affect the groups we serve, these being researchers, research group personnel, the URV's Governing Council, companies, institutions and society in general. Such a system should be based on processes and comply with the international regulation ISO 9001:2015, whilst also keeping in line with the quality policy of the URV.

Part of the SRCiT's commitment is to promote the training and participation of all of its technical staff, given that they are the essence of the organization and that their full involvement will strengthen their personal skills and benefit the organization.

MISSION

The SRCiT's mission is to provide technical support and scientific equipment to the groups it serves through services aimed at improving their competitiveness in their respective fields. Furthermore, the SRCiT improves the URV's social impact by encouraging respect for the environment.

VISION

The SCRiT's vision is to become a support base for the research, development and innovation activities (R+D+I) that provide international projection and visibility for the URV's research groups and for those involved in R+D+I in the socioeconomic environs of the URV.

VALUES

The values aligned with this policy and promoted by the Management are:

- **A user-oriented service**: listening to users at all times and providing high-quality services.
- **Continuall improvement**: establishing a culture of total quality throughout the organization.
- **Efficiency**: providing an efficient service to the groups served by the SRCiT.
- **Commitment**: working responsibly as a team and with the quality policy always in mind.
- **Flexibility**: responding quickly to the opportunities and demands that present themselves.
- **Safety**: ensuring the safety of everyone who uses the SRCiT's facilities.

The SCRiT's management is committed to serving the needs of its users and, on the basis of its analysis of the context, environment, risks and opportunities, has established a quality management system (QMS) through which it will:

- ✓ Provide the services required by its users whilst taking into account the possibility for growth and the changing needs of the fields of science and technology and the URV's research strategy.
- ✓ Guarantee that the SCRiT will seek to prevent or minimize any possible environmental impact resulting from its activities by basing its actions on criteria of sustainability, reliability and efficiency and evaluating and monitoring its compliance with the URV's Environment Plan.
- ✓ Optimize the management of resources by reducing costs and maximizing efficiency. Try to reduce costs resulting from non-quality.
- ✓ Provide a quality management framework that benefits the whole university community.
- ✓ Provide the technical, material and human resources needed so that it can offer each of its services to the user in the most agile, comfortable and sustainable manner possible and improve its competitive position in its ambit of action.
- ✓ Commit to fulfilling the legal and regulatory requirements applicable to the organisation.
- ✓ Establish a process for continually improving the service and thus meet the objectives specified in the QMS.
- ✓ Involve, motivate, train and engage its staff in order to encourage them to participate in the management, development and application of the QMS.
- ✓ Maintain confidentiality of all information exchanged during the provision of services.
- ✓ Work in conjunction with other entities to give a coordinated response to the needs that may present themselves.

In this manner, the actions included in the quality policy of the SRCiT strengthen and facilitate adaptive change, continual improvement and innovation in its processes and services in order to achieve the same level of quality as that specified in the university's quality policy.

For this reason, the SRCiT management ensures that all its staff are aware of its quality policy and commits to facilitating the means needed to complying with the Quality Manual of the SRCiT and with any revisions or additional documents that may derive from it.

Head of Service

Version: 04
Date: 14/06/2017

Scientific and Technical Resources Service (SRCiT)
Sescelades Campus
Av. dels Països Catalans, 26

6 EMERGENCY PLAN

MEETING POINT: pedestrian footpath outside the SRCiT building (unless indicated otherwise by the Head of emergencies).

➢ ***During opening hours (9.00 – 17.00 from Monday to Friday)***

Should you receive a warning or hear an alarm, you should remain calm and wait for instructions from the SRCiT staff.
If the building has to be evacuated, you should make your way without running to the nearest emergency exit or to that which is indicated by the intervention team. You should then make your way to the meeting point.
If you detect an emergency, you must inform the Administration - Secretary's office, which can be contacted on the following number: 977 55 81 52

➢ ***Outside opening hours (holidays and 8.30 to 21.00 on working days)***

Should you detect and emergency outside of opening hours, you must activate the alarm, leave the building, go to the meeting point and wait for the Prevention officer.

7 WASTE MANAGEMENT

Internal users are responsible for managing samples that they bring to the SRCiT. If any waste is generated, it will be collected by following the relevant waste collection protocol.

8 RISK PREVENTION MEASURES AT THE SRCiT (WORKPLACE RISKS)

General regulations for working in a laboratory

➢ ***General regulations for users:***

- Users must have completed all laboratory safety courses specified by the URV's risk prevention service.
- When working in the laboratory, users must always use the safety footwear, lab coat and any other protection indicated by the relevant safety and working procedures.
- Users are prohibited from smoking, eating and drinking in the laboratory.
- Users must follow the safety procedure regarding the use, handling, storage and waste management of chemical products.
- Users are prohibited from leaving containers open after using them and from leaving them outside the cabinets or rooms for storing chemical products.
- Users must use the individual protection equipment (IPE) wherever necessary. Users are responsible for ensuring their own safety.

- Users who want to carry out activities that generate vapours and/or require aerosols must do so in the areas specially prepared with extraction hoods and/or sufficient local ventilation.

➢ ***Specific regulations for certain SRCiT laboratories: (Each unit may have its own specific safety regulations. You must request it)***

Laboratories	Risks - Precautions
Microscopy	With all microscopes and X-rays, the following precautions must be taken: - Do not approach the X-ray tube when it is working. - Do not put you hand in the way of a laser or expose your eyes to it. - Put the sample in place before connecting the lasers. - Do not look directly at the laser that is being used on the sample. - Users of the clean room must follow its specific protocol.
MNR	- Intense magnetic field. Do not enter the processing room with pacemakers, metallic prostheses or ferromagnetic materials. - Analog clocks will break if they are placed near the equipment. - Magnetic cards can be wiped by ionizing radiation. - If when *quenching* there is a danger of asphyxia and burns (helium leak at low temperatures), the zone must be EVACUATED and the staff INFORMED.
X-ray diffraction	- Do not open the window of the diffractometer when X-rays are coming out of the tube (red light). - Do not touch the heater of the high-temperature chamber because of the risk of burns. Risk of burns.
Mass spectrometry	- Do not open the equipment; it contains a source of high voltage and laser.
Laboratory for preparing samples for Inorganic Chemistry	- Danger of burns and inhalation of vapours associated with the use of concentrated inorganic acids (HCl, HNO_3, H_2SO_4, ~~HF~~) at ambient and high temperatures. - Danger of burns and vapour inhalation associated with the use of microwaves with concentrated acids at high pressure. - Danger of burns and inhalation associated with handling acid solutions with toxic content (heavy metals).
Liquid nitrogen tank	- Burns through direct contact. Gloves, protective footwear, safety goggles and lab coat must be worn. - Pulmonary injuries on inhaling cold gas. Users should not work with this substance in confined spaces. - Remove any wet clothing or gloves. Should it become stuck to the skin, the affected area should be rinsed with lukewarm water.

9 BREAKAGES AND INCIDENTS

This document should be filled in to notify the technician of breakages in the equipment, lack of materials, accidents, etc.

In the absence of a technical officer, fill in the form via the SRCiT application or website.

http://www.urv.cat/ca/recerca/suport/recursos-cientifics-tecnics/suggeriments/

10 COMPLAINTS AND SUGGESTIONS

Any user can submit complaints or suggestions by completing the form on the SRCiT application or website.

http://www.urv.cat/ca/recerca/suport/recursos-cientifics-tecnics/suggeriments/

Users can also submit their complaints and suggestions via email:

qualitat.srcit@urv.cat

11 SRCiT WEBSITE

https://www.urv.cat/ca/recerca/suport/recursos-cientifics-tecnics/

This document is intended to provide information about the working regulations of the SRCiT. We thank you for respecting them and for helping us to improve our services through your suggestions, complaints and opinion, all of which are very important to us.