

USERS RULES GTC PLATFORMS

The platform GeoThermoChronology (GTC) provides technical and human resources for the acquisition of analytical data.

It is composed of 4 laboratories under the responsibility of dedicated personal. Each laboratory has its own organization. A simplified form chart for each laboratory is given at the end of this document.

GTC platform directors:

Julien Carcaillet julien.carcaillet@univ-grenoble-alpes.fr 0476635930 (technical director)

Matthias Bernet matthias.bernet@univ-grenoble-alpes.fr 04763514075 (scientific director)

Sample mechanical processing:

Francis Coeur francis.coeur@univ-grenoble-alpes.fr 0613479222

Mineral separation:

Nouméa Boutin-Paradis noumea.boutinparadis@univ-grenoble-alpes.fr 0476635964

Fission track laboratory:

Mélanie Balvay melanie.balvay@univ-grenoble-alpes.fr 0476635964

Matthias Bernet matthias.bernet@univ-grenoble-alpes.fr 04763514075

Cosmogenic nuclides laboratory:

Julien Carcaillet julien.carcaillet@univ-grenoble-alpes.fr 0476635930

Before your arrival

Before working in one of the laboratories of the GTC platform, you have to:

- Plan in advance the time you want use the laboratory with the laboratory responsible
- Complete the ISTERre administrative requirements (registration, proof of liability insurance etc.) if you are a visiting scientist or otherwise affiliated with ISTERre, or if you are linked to partner laboratories,
- Have an internship agreement for students or a valid contract with ISTERre (e.g. CDD),
- Read and understand the present rules,
- Read the intern rules of ISTERre, know the emergency numbers and the Assistants de Prévention (risk prevention advisors), isterre-ap@univ-grenoble-alpes.fr
 - o – Julien Carcaillet 04 76 63 59 30
 - o – Rachel Martin 04 76 51 40 78
 - o – Isabelle Douste-Bacqué 04 76 63 51 80
 - o – Sandrine Roussel 04 76 63 51 80

General information

- The usual opening hours of the building are Monday to Friday 7:00 to 20:00. Outside the opening hours and during weekends the building is under alarm and the access to the building and the laboratories is strictly prohibited for internship students and researchers with contracts or visiting scientists.
- The presence of the responsible (of the laboratory or the project) is compulsory (except with his or her explicit agreement).
- The working hours in the different laboratories are summarized in the laboratory chart. The access to technical rooms are prohibited during the weekends (Permanent and non-permanent staff).
- The work schedule is assured by the responsible of the concerned laboratory. He/She is the only person who organizes it to satisfy the request. Occasionally, a modification may occur at his/her initiative to insure the timely finishing of Ph.D. theses or master student research internships.

Communications

- All communications (congress, symposium and journal/book or webpage publications) must mention the collaboration with GTC. In the “method section”: *samples preparation was carried out at the ISTerre GeoThermoChronology platform (Grenoble, France).*

The technical partner will 1/ be co-authors if its participation concerns data production and their discussion in the scientific context or 2/ thank in the "Acknowledgments section": *We warmly thank [name] (GeoThermoChronology Platform, ISTerre) for technical support.*

Publication address: *Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, IRD, IFSTTAR, ISTerre, 38000 Grenoble, France*

CHARTER OF FISSION-TRACK LABORATORIES

Name of the trainer	Mélanie Balvay ou Matthias Bernet
Name of the trained person	
Date of the training	

GENERAL RULES	OK
Opening hours (7h30 – 20h00 except Week End and holidays) Handling hours (8h30 – 17h00 with mandatory presence of permanent staff for chemicals)	
No eating, drinking and smoking in the lab	
HANDLING	
Knowing experimental protocols and labeling all samples	
Knowing devices operating before using : <ul style="list-style-type: none"> Binocular, microscope, polishing machine, micro-lathe, mini saw (room 361) Microscope with automated stage and camera (room 366) 	
Orders : Report breakage, stocks last or approach stocks last of products or consumables	
HEALTH AND SAFETY	
<u>Chemicals</u> : Take note of Material Safety Data Sheet (MSDS) <ul style="list-style-type: none"> HNO₃ 5,5mol.L⁻¹ (apatite etching) NaOH-KOH eutectic mix at 228°C (zircon etching) HF at 48% (mica etching) : acid only handled by Mélanie 	
<u>Personal and collective protective equipment (PPE / CPE)</u> : Labcoat, gloves, safety glasses, face shield, earplugs, fume hood	
<u>Chemical wastes</u> : waste management and precautions (handling under fume hood with PPE)	
<u>Accidents</u> : Eye wash (room 361), safety shower (room 365), Absorbent cloths for chemicals (room 361), pharmacy (room 361 and 365), extinguisher (corridor), emergency phone numbers (door 361), incident card to complete (secretariat)	
<u>Radioactivity</u> : Use of weakly radioactive materials (radioprotection instructions on the door 366)	
<u>Device dangers</u> : <ul style="list-style-type: none"> High temperature (oven and hotplate) Risk of cutting (micro-lathe and mini saw) Eye strain (binocular and microscope) 	
<u>Clean and tidy up</u> : benches, common areas, equipment and devices used	

The trained person agrees not to participate/take part on the items where the competence is not acquired.

Place :

Signatures : The trainer

Date :

The trained person and his supervisor :

CHART OF THE ROCK CHRUSHING LABORATORY

Name of the trainer	Francis Coeur
Name of the trained person	
Date of the training	

GENERAL INSTRUCTIONS	OK
Opening hours at ISterre (7:30 – 20:00 except week-end and bank holiday) Handling hours (07:30 – 16:00 with obligatory presence of a permanent)	
Do not eat, drink and smoke in the laboratory	
MANIPULATIONS	
Know the experimental protocol and identify all the samples	
Know the operating of the equipment before use: - Rock jaw crusher, disc pulverizer, agate pulverizer, sieving, oven, shaking table	
Order : Signal any damage of equipment or accidents and the end of consumables or products out of stock	
HEALTH AND SAFETY	
<u>Personal protective equipment (PPE) :</u> Ear plug, anti-dust mask	
<u>Accidents:</u> INFORM THE LABORATORY MANAGER! Emergency telephone number (switchboard), incident file to be completed (secretariat)	
<u>Equipment risk:</u> High temperature (oven) Risk of crushing (crusher) Risk of inhalation of dust	
<u>Cleanliness and storage :</u> bench, common spaces, used equipment and facility	

The trained person agrees not to intervene on the points where the competence is not acquired.

Location:

date:

Signatures: the trainer

the Trained person and his supervisor

CHART OF THE COSMOGENIC NUCLIDE LABORATORY

Name of the trainer	Julien Carcaillet
Name of the trained person	
Date of the training	

GENERAL INSTRUCTIONS	OK
Opening hours at ISterre (7:30 – 20:00 except week-end and bank holiday) Handling hours (8:15 – 19:00 with obligatory presence of a permanent for chemistry)	
Do not eat, drink and smoke in the laboratory	
MANIPULATIONS	
Know the experimental protocol and identify all the samples	
Knowledge of operating the equipment before use: - Magnetic separator, shacking table, oven, ultra-pure water system	
Order : Signal any damage of equipment or accidents and the end of consumables or products out of stock	
HEALTH AND SAFETY	
<u>Chemical products</u> : read the risk sheets HCL, H ₂ SiF ₆ , HNO ₃ , NH ₄ OH HF 48%: manipulation only with Julien	
<u>Chemical wastes</u> : Waste management and precautions (manipulation under hood with PPE)	
<u>Accidents</u> : INFORM THE LABORATORY MANAGER! Portable shower (room 361), eye rinse (365), safety shower (365), eyewash station (365), absorbent cloths for chemicals (361), pharmacy (361/365), fire extinguisher (corridor), Emergency telephone number (361), incident file to be completed (secretariat)	
<u>Equipment risk</u> : High temperature (oven and hot plates) Chemical product contacts Inhalation Risk (BeO)	
<u>Cleanliness and storage</u> : bench, common spaces, used equipment and facility	

The trained person agrees not to intervene on the points where the competence is not acquired.

Location:

Signatures: the trainer

date:

the Trained person and his supervisor

CHART OF THE MINERAL SEPARATION LABORATORY

Name of the trainer	Nouméa Boutin-Paradis
Name of the trained person	
Date of the training	

GENERAL INSTRUCTIONS	OK
Opening hours at ISterre (7:30 – 20:00 except week-end and bank holiday) Handling hours (07:00 – 16:00 with obligatory presence of a permanent)	
Do not eat, drink and smoke in the laboratory	
MANIPULATIONS	
Know the experimental protocol and identify all the samples	
Knowledge of operating the equipment before use: - Frantz and Carpco magnetic separators, binocular microscope, vacuum pumps, fume hood	
Order : Signal any damage of equipment or accidents and the end of consumables or products out of stock	
HYGIENE ET SECURITE	
<u>Chemical products</u> : read the risk sheets LST, C ₃ H ₆ O, CH ₂ I ₂	
<u>Personal protective equipment (PPE)</u> : Coat, gloves, chemical box	
<u>Accidents:</u> INFORM THE LABORATORY MANAGER! Emergency telephone number (switchboard), incident file to be completed (secretariat)	
<u>Equipment risk:</u> High temperature (oven) Magnetic risk	
<u>Cleanliness and storage</u> : bench, common spaces, used equipment and facility	

The trained person agrees not to intervene on the points where the competence is not acquired.

Location:

Signatures: the trainer

date:

the Trained person and his supervisor