

### **RATES**

This document presents the services offered by the CENIEH as an ICTS to researchers and companies. The list only includes the defined services, while the Center may also commission other methodologies and provide **scientific and technical advice**. The availability of the services described depends on the involvement of scientific-technical staff from the ICTS, as well as the capacity and operability of the equipment.

#### General conditions:

- The procedure for requesting the services shall be in accordance with the Access Protocol available on the website and through the User Office.
- The commissioning of procedures, processes or methodologies shall be invoiced for on the basis of the cost of each technique.
- The minimum charge for the different techniques which are charged per hour shall be equivalent to one hour, or the fraction indicated in the rate.
- In each case, a surcharge of 10% will be applied to the total invoice for management costs.
- Should the complete provision of the service requested require the CENIEH to subcontract part of the work, the cost of this subcontracting, with a surcharge of 10%, will be charged to the total amount of the subcontracted service.
- The rates shown do not include VAT. The current rate of VAT will be applied to them
- These rates are an eligible cost and, therefore, can be financed under some of the Programs of the National Scientific Research and Technical Innovation Plan.
- The fees will be invoiced once the service is completed; however, an advance payment may be requested as a guarantee of payment
- Any tests which fail as a consequence of malfunctioning of the analytical instrumentation of the ICTS shall not be chargeable.
- When standards not available in the laboratories are needed, the cost of those standards will be added to the price of the service, subject to the prior agreement of the requester.
- Laboratories or services not envisaged in the following schedule can be engaged and charged for on the basis of a prior agreement on price.
- The equipment denoted (LUC) may be used in the "qualified user" mode subject to inclusion of the user in the LUC (List of Qualified Users), and reception of the appropriate instructions or training.
- All the rates are for guidance only, and the prices may undergo modification, depending on the number of samples and their specific characteristics.
- The work and publications resulting from access to the ICTS must acknowledge CENIEH, mentioning the laboratories and/or services used and the application number. A copy of these publications shall be sent to <a href="mailto:gestiondocumental@ex.cenieh.es">gestiondocumental@ex.cenieh.es</a>, preferably indicating the application number(s) related to the publication.

Please request an estimate for each analysis and test and for any services not included in the tables below.



Access Mode established for Laboratories					
Laboratories with	Laboratories with				
Competitive Access Mode	On-Demand Access Mode				
Micro-Computed Tomography Area of the	Geology Laboratories				
Microscopy and Micro-Computed	<ul> <li>Sample preparation</li> </ul>				
Tomography Laboratory.	- Thin Sections				
Geochronology laboratories:	Archaeometry Laboratory				
- Archaeomagnetism.	Digital Mapping and Multimedia				
- Luminescence	Laboratory				
- Electron Spin Resonance	Experimental Archaeology Laboratory				
- Uranium Series					
- Cosmogenic Nuclides					
Conservation and Restoration Laboratory					

# **Application of Rates for the Competitive and On-Demand Access Modes**

## **Competitive Access Mode**

The applications made to laboratories with Competitive Access Mode by means of Competitive Calls, following resolution, will be assigned as priority 1 or priority 2, and will be executed during the period established in the call, with **Rate A** being applied in all cases, whether they are for members of the CENIEH, or public or private bodies.

The applications made to laboratories with Competitive Access Mode but by means of On-Demand Access shall be charged at:

- Rate B for members of the CENIEH and for work arising from their research activity, whether as
  researchers on an internal project or as co-researchers on a project based at another research center
  or university.
- Rate C will be applicable to public and private institutions such as universities and public research bodies (OPIs) and other non-profit bodies.
- **Rate D** shall be applied to any type of work that is destined for and/or serves the ends of companies, private or for-profit entities.

### **On-Demand Access Mode**

The applications made to laboratories with exclusive On-Demand Access mode shall be charged at Rate A, B or C, depending on the kind of requesting institution, determined in general as follows:

- Rate A: applicable to members of the CENIEH and for work arising from their research activity,
  whether as researchers on an internal project or as co-researchers on a project based at
  another research center or university.
- Rate B: applicable to public and private institutions such as universities and public research bodies (OPIs) and other non-profit bodies.



•	Rate C: applicable to any class of work destined for and/or aimed at private or for-profit
	companies or bodies.



# **ARCHAEOMETRY LABORATORY**

X-RAY DIFFRACTIONRate ARate BRSample preparation DRX-grinding (€/unit)2.23.3Sample preparation DRX-milling (€/unit)2.23.3Sample preparation DRX-mortar (€/unit)3.34.95Sample preparation for Oriented Aggregates (€/unit)4466Preparation tablet 13mm (€/unit)3.34.95X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	500 Rate C 4.4 4.4 6.6 88 6.6 11 11 33 Rate C 4.4 4.4 6.6
Sample preparation DRX-grinding (€/unit)2.23.3Sample preparation DRX-milling (€/unit)2.23.3Sample preparation DRX-mortar (€/unit)3.34.95Sample preparation for Oriented Aggregates (€/unit)4466Preparation tablet 13mm (€/unit)3.34.95X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	4.4 4.4 6.6 88 6.6 11 11 33 Rate C 4.4
Sample preparation DRX-milling (€/unit)2.23.3Sample preparation DRX-mortar (€/unit)3.34.95Sample preparation for Oriented Aggregates (€/unit)4466Preparation tablet 13mm (€/unit)3.34.95X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	4.4 6.6 88 6.6 11 11 33 Rate C 4.4
Sample preparation DRX-mortar (€/unit)3.34.95Sample preparation for Oriented Aggregates (€/unit)4466Preparation tablet 13mm (€/unit)3.34.95X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	6.6 88 6.6 11 11 33 Rate C 4.4
Sample preparation for Oriented Aggregates (€/unit)4466Preparation tablet 13mm (€/unit)3.34.95X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	88 6.6 11 11 33 Rate C 4.4 4.4
Preparation tablet 13mm (€/unit)3.34.95X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	6.6 11 11 33 Rate C 4.4 4.4
X-ray diffraction (€/hour)5.58.25Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	11 11 33 Rate C 4.4 4.4
Multipurpose platform diffraction (€/hour)5.58.25Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	11 33 Rate C 4.4 4.4
Identification of phases (€/unit)16.524.75X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	33 Rate C 4.4 4.4
X-RAY FLUORESCENCERate ARate BRSample preparation FRX-grinding (€/unit)2.23.3	Rate C 4.4 4.4
Sample preparation FRX-grinding (€/unit) 2.2 3.3	4.4 4.4
	4.4
Comple proporation EDV milling (f / unit)	
Sample preparation FRX-milling (€/unit) 2.2 3.3	6.6
Preparation tablet 13 mm (€/unit) 3.3 4.95	
Preparation tablet 40 mm (€/unit) 4.4 6.6	8.8
Preparation glass bead (€/unit) 7.7 11.55	15.4
Semi-quantitative analysis (€/unit)   10   15	20
Quantitative analysis (€/unit)   13.2   19.8	26.4
Calculation of LOI (€/unit) 5.5 8.25	11
INFRARED SPECTROSCOPY (FTIR)  Rate A Rate B R	Rate C
Sample preparation FTIR-grinding (€/unit) 2.2 3.3	4.4
Sample preparation FTIR-milling (€/unit) 2.2 3.3	4.4
Preparation tablet 13 mm (€/unit) 3.3 4.95	6.6
ATR/transmission (€/unit) 2.2 3.3	4.4
Use of instrument (€/hour)5.58.25	11
RAMAN MICROSCOPY Rate A Rate B R	Rate C
Use of instrument (€/hour) 5.5 8.25	11
THERMOGRAVIMETRY (TG/DSC)  Rate A Rate B R	Rate C
Sample preparation TG/DSC-grinding (€/unit) 2.2 3.3	4.4
Sample preparation TG/DSC-milling (€/unit) 2.2 3.3	4.4
Use of instrument (€/hour) 11 16.5	22
THERMOGRAVIMETRY (TG/DSC)+FTIR Rate A Rate B R	Rate C
Sample preparation TG/DSC-grinding (€/unit) 2.2 3.3	4.4
Sample preparation TG/DSC-milling (€/unit) 2.2 3.3	4.4
Preparation tablet 13 mm (€/unit) 3.2 4.8	6.4
Use of instrument TG+DSC+FTIR (€/hour) 16.5 24.75	33
SCIENTIFIC-TECHNICAL REPORT Rate A Rate B R	Rate C
Scientific-Technical Report (€/day) 100 150	200
Scientific-Technical Report (€/hour)5075	100



## MICROSCOPY AND MICRO-COMPUTED TOMOGRAPHY LABORATORY

MICRO-COMPUTED TOMOGRAPHY	Rate A	Rate B	Rate C	Rate D
Sample preparation (€/hour)	13.2	15	20	21.60
V Tome XS Use of scanner 240 kV (€/hour)- qualified user*	38.5	60	100	108.00
Tome XS Use of scanner 180 kV (€/hour)-qualified user*	49.5	75	120	129.60
V Tome XS Establishment of parameters 240 kV (€/hour)	49.5	70	110	118.80
V Tome XS Use of scanner 240 kV (€/hour)	49.5	70	110	118.80
V Tome XS Establishment of parameters 180 kV (€/hour)	60.5	85	130	140.40
V Tome XS Use of scanner 180 kV (€/hour)	60.5	85	130	140.40
CoreTOM Establishment of parameters (€/hour)	49.5	70	110	118.80
CoreTOM Use of scanner (standard) (€/hour)	49.5	70	110	118.80
CoreTOM Use of scanner in-situ test (€/hour)	49.5	70	130	140.40
Radiographies:				
- Between 1 and 5 (€/unit)	9.9	14	22	23.76
- Between 6 and 15 (€/unit)	8.8	13	21	22.68
- More than 15 (€/unit)	7.7	12	20	21.60
Image analysis (€/hour) Qualified user*	33	45	60	
Image analysis (€/hour)	38.5	50	65	
Image analysis training (€/hour)	33	45	60	
AUTOMATED MICROSCOPY MORPHOLOGI G3	Rate A	Rate B	Rate C	
Sample preparation (€/hour)	13.2	15	20	
Use of Morphologi G3 (€/hour) Qualified user*	11	15	20	
Use of Morphologi G3 (€/hour)	22	25	30	
Use of software (€/hour) Qualified user*	11	15	20	
Morphologi qualification training(€/hour)	22	25	30	
Use of software (€/hour)	22	25	30	
ELECTRON MICROSCOPY	Rate A	Rate B	Rate C	
Sample preparation (€/hour)	13.2	15	20	
Use of SEM (€/hour) Qualified user*	15	22.5	30	
Use of EDS/WDS (€/hour) Qualified user*	18	25.5	34	
Use of SEM (€/hour)	21	26.5	34	
Use of EDS/WDS (€/hour)	24	30	38.5	
Coating with Au (€/coating)	17.5	25	32.5	
Coating with C (€/coating)	12	17	22	
Qualification training SEM/EDS (€/hour)	21/23.7	26.5/30	34/38.5	
3D DIGITAL MICROSCOPY	Rate A	Rate B	Rate C	
Sample preparation (€/hour)	13.2	15	20	
Use of 3D microscope (€/hour) Qualified user*	11	15	20	
3D qualification training(€/hour)	13.2	17	22	



Use of 3D microscope (€/hour)	13.2	17	22	
CONFOCAL LASER MICROSCOPY	Rate A	Rate B	Rate C	
Sample preparation (€/hour)	13.2	15	20	
Use of confocal laser (€/hour) Qualified user*	11	15	20	
Use of Confocal Laser (€/hour)	13.2	17	22	
OPTICAL MICROSCOPY	Rate A	Rate B	Rate C	
Sample preparation (€/hour)	13.2	15	20	
Petrographic analysis (€/hour) *	3.3	4.5	6	
Metallographic analysis (€/hour)*	3.3	4.5	6	
Fluorescence analysis (€/hour)*	8.8	12	16	
Petrographic analysis (€/hour)	6.6	9	12	
Metallographic analysis (€/hour)	6.6	9	12	
Fluorescence analysis (€/hour)	13.2	16	20	
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C	Rate D
Scientific-Technical Report (€/day)	100	150	200	240
Scientific-Technical Report (€/hour)	50	75	100	120
Data and results analysis	22	30	40	48

<sup>\*</sup>Qualified users must undergo prior training whose duration depends on the equipment. This will be charged for at the rates shown for each case.



## **GEOLOGY LABORATORY**

SAMPLE PREPARATION	Rate A	Rate B	Rate C
Rock cutting wet/dry (€/hour)	5	7.5	10
Jaw crushing (€/hour)	5	7.5	10
Vibratory disc/ball mill (€/hour)	10	15	20
Screening wet/dry (€/hour)	8	12	16
Magnetic separator (€/hour)	30	45	60
Microwave oven digestion (€/unit)	9	13.5	18
GRANULOMETRY	Rate A	Rate B	Rate C
Mineral separation and screening by grain size (PE-05GE) (€/unit)	10	15	20
Beckman Coulter laser granulometric analysis (€/hour)	50	75	100
Robinson pipette	20	30	40
CHEMICAL ASSAYS	Rate A	Rate B	Rate C
Petron Calcimetry (€/unit)	12	18	24
Determination of humidity by desiccation and gravimetry (€/unit)	5	7.5	10
Determination of organic matter by ignition (€/unit)	8	12	16
Electrical conductivity and pH (€/unit)	5	7.5	10
THIN SECTIONS AND PROBES	Rate A	Rate B	Rate C
Consolidation (€/unit)	7	10.5	14
Standard thin section (LDS)			
Polished (€/unit)	16	24	32
without cover (€/unit)	12	18	24
with cover (€/unit)	13	19.5	26
Medium thin section (LDM)			
Polished (€/unit)	25	37.5	50
without cover (€/unit)	20	30	40
with cover (€/unit)	21	31.5	42
Large thin section (LDG)			
Polished (€/unit)	40	60	80
without cover (€/unit)	34	51	68
with cover (€/unit)	35	52.5	70
Preparation of polished probes	25	37.5	50
SOIL MICROMORPHOLOGY THIN SECTIONS	Rate A	Rate B	Rate C
Standard impregnation (€/unit)	75	112.5	150
Soil micromorphology thin sections (€/unit) (already impregnated)	25	37.5	50
Soil micromorphology thin sections with impregnation (€/unit)	100	150	200
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C
Scientific-Technical Report (€/day)	100	150	200
Scientific-Technical Report (€/hour)	50	75	100



### **GEOCHRONOLOGY: LABORATORY OF ARCHAEOMAGNETISM**

FIELDWORK	Rate A	Rate B	Rate C	Rate D
Taking samples (€/person-day)	250	375	500	600
SAMPLE PREPARATION	Rate A	Rate B	Rate C	Rate D
Sample cutting (hours)+marking - (€/hour)	5	7.5	10	12
VSM-ambient temperature (Qualified user)	Rate A	Rate B	Rate C	Rate D
VSM (€/hour)	1.5	2.25	3	3.60
VSM (€/day)	15	22.5	30	36
HYSTERESIS LOOPS	Rate A	Rate B	Rate C	Rate D
Hysteresis loops (ambient temperature) - (€/hour)	2	3	4	4.80
Hysteresis loops (high temperature) - (€/hour)		On re	quest	
Hysteresis loops (low temperature*) - (€/hour)		On re	quest	
ISOTHERMAL REMANENT MAGNETIZATION (IRM)	Rate A	Rate B	Rate C	Rate D
IRM and AIRM by VSM - (€/hour)	2	3	4	4.80
IRM by magnetic pulses - (€/unit)	2	3	4	4.80
AIRM-IRM anisotropy - (€/unit)	2	3	4	4.80
FORC	Rate A	Rate B	Rate C	Rate D
Use of equipment (ambient temperature) - (€/hour)	2	3	4	4.80
Use of equipment (low temperature)* - (€/hour)	2	3	4	4.80
ANHYSTERETIC REMANENT MAGNETIZATION (ARM)	Rate A	Rate B	Rate C	Rate D
ARM (€/unit)	2	3	4	4.80
AARM (€/unit)	2	3	4	4.80
AF/TH DEMAGNETIZATION	Rate A	Rate B	Rate C	Rate D
AF/TH (€/unit)	4	6	8	9.60
ANISOTROPY OF MAGNETIC SUSCEPTIBILITY (ASM)	Rate A	Rate B	Rate C	Rate D
ASM (€/unit)	7	10.5	14	16.80
USE OF LABORATORY (day)	Rate A	Rate B	Rate C	Rate D
Use of laboratory (€/day)	150	225	300	360
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C	Rate D
Scientific-Technical Report (€/day)	100	150	200	240
Scientific-Technical Report (€/hour)	50	75	100	120

<sup>\*</sup>In the case of measurements at low temperature, the price/hour may be affected by the cost and availability of liquid He at the moment in question, so that this should be confirmed before undertaking the tests.

GEOPHYSICS	Rate A	Rate B	Rate C
Electrical tomography (€/day)	150	300	600
Ground penetrating radar (€/day)	100	150	300

Use of this equipment by hiring shall only be permitted for persons with experience and this shall be assessed in each case.



### **GEOCHRONOLOGY: ELECTRON SPIN RESONANCE LABORATORY**

Taking samples (€/person-day)         250         375         500         600           PORTABLE GAMMA SPECTROMETRY EQUIPMENT*         Rate A         Rate B         Rate C           Use of equipment (€/day)         50         75         100           GAMMA DOSIMETRY (HpGe)         Rate A         Rate B         Rate C           Sample preparation gamma dosimetry (€/sample)         18         27         36           Gamma dosimetry measurement (€/sample)         18         27         36           USE of ESR equipment         Rate A         Rate B         Rate C         Rate D           Use of ESR equipment (€/hour) ambient temperature         5         20         40         48           Use of ESR equipment (€/hour) ambient temperature (N2)         18         72         144         172.80           Use of ESR equipment (€/hour) ambient temperature (N2)         18         72         144         172.80           Use of ESR equipment (€/hour) ambient temperature (N2)         18         72         144         172.80           Use of ESR equipment (€/hour) ambient temperature (N2)         18         72         144         172.80           Use of ESR equipment (€/hour) ambient temperature (N2)         18         72         144         172.80           <				1	
Rate A   Rate B   Rate C	FIELDWORK	Rate A	Rate B	Rate C	Rate D
Use of equipment (€/day)	Taking samples (€/person-day)	250	375	500	600
GAMMA DOSIMETRY (HpGe)Rate ARate BRate CSample preparation gamma dosimetry (€/sample)182736Gamma dosimetry measurement (€/sample)182736USE of ESR equipmentRate ARate BRate CRate DUse of ESR equipment (€/hour) ambient temperature5204048Use of ESR equipment (€/hour) low temperature (N2)1872144172.80BLEACHING10306072DATING OF QUARTZRate ARate BRate CRate DComplete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.450600800960(Partial) Separation of quartzes (€/sample)**135202.5270324(Partial) For irradiation and bleaching, the stated rates shall be applied.See the irradiation and bleaching ratesDATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840Gamma irradiation: Brand I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Band II - More than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Preparation of vials by the user0.65 <td>PORTABLE GAMMA SPECTROMETRY EQUIPMENT*</td> <td>Rate A</td> <td>Rate B</td> <td>Rate C</td> <td></td>	PORTABLE GAMMA SPECTROMETRY EQUIPMENT*	Rate A	Rate B	Rate C	
Sample preparation gamma dosimetry (€/sample)  Gamma dosimetry measurement (€/sample)  USE of ESR equipment Use of ESR equipment (€/hour) ambient temperature Use of ESR equipment (€/hour) low temperature (N2)  BELEACHING  DATING OF QUARTZ  Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH***  No. of samples with separation of tissues (€/sample)  ESR chemical preparation and measurement, analysis of results and calculation (€/sample)  Sample Sam	Use of equipment (€/day)	50	75	100	
Gamma dosimetry measurement (€/sample)  USE of ESR equipment Use of ESR equipment (€/hour) ambient temperature Use of ESR equipment (€/hour) low temperature (N2)  BLEACHING  DATING OF QUARTZ  Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.  (Partial) Separation of quartzes (€/sample)**  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH***  No. of samples with separation of tissues (€/sample)  Sample swith separation of quartzes (€/sample)  ESR chemical preparation and measurement, analysis of results and calculation (€/sample)  Somma spectrometry, irradiation (€/sample)  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  Somma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Band II - More than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user  O.2  O.3  O.4  O.48  Gamma irradiation: Preparation of vials by the user  O.2  O.3  O.4  O.48  Gamma irradiation: Preparation of vials by the user  O.2  O.3  O.4  O.48  Gamma irradiation: Preparation of vials by the user  O.2  SCIENTIFIC-TECHNICAL REPORT  Rate A Rate B Rate C  Rate D  Scientific-Technical Report (€/day)  100  150  200  240	GAMMA DOSIMETRY (HpGe)	Rate A	Rate B	Rate C	
USE of ESR equipment (€/hour) ambient temperature 5 20 40 48  Use of ESR equipment (€/hour) low temperature 5 20 40 48  Use of ESR equipment (€/hour) low temperature (N2) 18 72 144 172.80  BLEACHING 10 30 60 72  DATING OF QUARTZ Rate A Rate B Rate C Rate D  Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.  (Partial) Separation of quartzes (€/sample)** 135 202.5 270 324  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH*** Rate A Rate B Rate C Rate D  No. of samples with separation of tissues (€/sample) 200 300 400 480  Gamma spectrometry, irradiation (€/sample) 50 75 100 120  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample) 50 75 100 120  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample) 50 75 100 120  ESR chemical preparation and measurement, analysis of results and radiation: Irradiation vials 0.2 0.3 0.4 0.48  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Band II - More than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user 0.2 0.3 0.4 0.48  Sample bleaching (€/sample) 10 30 60 72  SCIENTIFIC-TECHNICAL REPORT Rate A Rate B Rate C Rate D  Scientific-Technical Report (€/day) 100 150 200 240	Sample preparation gamma dosimetry (€/sample)	18	27	36	
Use of ESR equipment (€/hour) ambient temperature  Use of ESR equipment (€/hour) low temperature (N2)  BLEACHING  DATING OF QUARTZ  Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.  (Partial) Separation of quartzes (€/sample)**  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH***  Rate A Rate B Rate C Rate D  See the irradiation and bleaching rates be applied.  DATING OF TEETH***  Rate A Rate B Rate C Rate D  No. of samples with separation of tissues (€/sample)  So 75 100 120  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING Gamma irradiation: Irradiation vials  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by laboratory  Scientific-Technical Report (€/day)  So 200 100 150 200 240	Gamma dosimetry measurement (€/sample)	18	27	36	
Use of ESR equipment (€/hour) low temperature (N2)         18         72         144         172.80           BLEACHING         10         30         60         72           DATING OF QUARTZ         Rate A         Rate B         Rate C         Rate D           Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.         450         600         800         960           (Partial) Separation of quartzes (€/sample)**         135         202.5         270         324           (Partial) ESR measurement and analysis of results (€/sample)         315         472.5         630         756           (€/sample)         135         202.5         270         324           (Partial) For irradiation and bleaching, the stated rates shall be applied.         See the irradiation and bleaching rates           DATING OF TEETH***         Rate A         Rate B         Rate C         Rate D           No. of samples with separation of tissues (€/sample)         200         300         400         480           Gamma spectrometry, irradiation (€/sample)         50         75         100         120           ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)         525         700         840 <td>USE of ESR equipment</td> <td>Rate A</td> <td>Rate B</td> <td>Rate C</td> <td>Rate D</td>	USE of ESR equipment	Rate A	Rate B	Rate C	Rate D
BLEACHING  DATING OF QUARTZ  Rate A  Rate B  Rate C  Rate D  Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.  (Partial) Separation of quartzes (€/sample)**  (Partial) ESR measurement and analysis of results (€/sample)  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH***  Rate A  Rate B  Rate C  Rate D  No. of samples with separation of tissues (€/sample)  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING  Gamma irradiation: Irradiation vials  Gamma irradiation: Band II - More than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by laboratory  Scientific-Technical Report (€/day)  100  100  100  Rate A  Rate B  Rate C  Rate D	Use of ESR equipment (€/hour) ambient temperature	5	20	40	48
DATING OF QUARTZRate ARate BRate CRate DComplete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.450600800960(Partial) Separation of quartzes (€/sample)**135202.5270324(Partial) ESR measurement and analysis of results (€/sample)315472.5630756(€/sample)See the irradiation and bleaching rates be applied.DATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	Use of ESR equipment (€/hour) low temperature (N2)	18	72	144	172.80
Complete dating. Separation of quartzes, gamma spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.450600800960(Partial) Separation of quartzes (€/sample)**135202.5270324(Partial) ESR measurement and analysis of results (€/sample)315472.5630756(€/sample)See the irradiation and bleaching, the stated rates shall be applied.See the irradiation and bleaching ratesDATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	BLEACHING	10	30	60	72
spectrometry, bleaching, irradiation, ESR measurement, analysis of results and calculation of age.  (Partial) Separation of quartzes (€/sample)**  (Partial) ESR measurement and analysis of results (€/sample)  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH***  Rate A Rate B Rate C Rate D  No. of samples with separation of tissues (€/sample)  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by laboratory  Scientific-Technical Report (€/day)  Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D  A Rate A Rate B Rate C Rate D	DATING OF QUARTZ	Rate A	Rate B	Rate C	Rate D
analysis of results and calculation of age.  (Partial) Separation of quartzes (€/sample)**  (Partial) ESR measurement and analysis of results (€/sample)  (Partial) For irradiation and bleaching, the stated rates shall be applied.  DATING OF TEETH***  Rate A Rate B Rate C Rate D  No. of samples with separation of tissues (€/sample)  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by the user  Gamma irradiation (€/sample)  Scientific-Technical Report (€/day)  100  150  202  203  204  205  207  324  207  324  207  324  207  324  207  324  207  324  208  208  208  209  200  200  200  200	Complete dating. Separation of quartzes, gamma	450	600	800	960
(Partial) Separation of quartzes (€/sample)**135202.5270324(Partial) ESR measurement and analysis of results (€/sample)315472.5630756(€/sample)See the irradiation and bleaching, the stated rates shall be applied.See the irradiation and bleaching ratesDATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Preparation of vials by the user0.6511.31.56Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	spectrometry, bleaching, irradiation, ESR measurement,				
(Partial) ESR measurement and analysis of results (€/sample)315472.5630756(€/sample)(Partial) For irradiation and bleaching, the stated rates shall be applied.See the irradiation and bleaching ratesDATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGyGamma irradiation: Band II - More than 30 sample-doses0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)Scientific-Technical Report (€/day)100150200240					
(€/sample)See the irradiation and bleaching rates(Partial) For irradiation and bleaching, the stated rates shall be applied.See the irradiation and bleaching ratesDATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Band II - More than 30 sample-doses0.6511.31.56gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240		135	202.5	270	324
(Partial) For irradiation and bleaching, the stated rates shall be applied.See the irradiation and bleaching ratesDATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Preparation of vials by the user0.6511.31.56gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	· · · · · · · · · · · · · · · · · · ·	315	472.5	630	756
be applied.  DATING OF TEETH***  Rate A Rate B Rate C Rate D  No. of samples with separation of tissues (€/sample) 200 300 400 480  Gamma spectrometry, irradiation (€/sample) 50 75 100 120  ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING Rate A Rate B Rate C Rate D  Gamma irradiation: Irradiation vials 0.2 0.3 0.4 0.48  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user 0.2 0.3 0.4 0.48  Gamma irradiation: Preparation of vials by laboratory 1.2 1.8 2.4 2.88  Sample bleaching (€/sample) 10 30 60 72  SCIENTIFIC-TECHNICAL REPORT Rate A Rate B Rate C Rate D  Scientific-Technical Report (€/day) 100 150 200 240	· · · · · ·				
DATING OF TEETH***Rate ARate BRate CRate DNo. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Preparation of vials by the user0.6511.31.56gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240		See the	e irradiation a	nd bleachi	ng rates
No. of samples with separation of tissues (€/sample)200300400480Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Preparation of vials by the user0.6511.31.56Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	• • • • • • • • • • • • • • • • • • • •	Data A	Data D	Data C	Data D
Gamma spectrometry, irradiation (€/sample)5075100120ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)350525700840GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240					
ESR chemical preparation and measurement, analysis of results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING  Gamma Irradiation: Irradiation vials  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Band II - More than 30 sample-doses  per kGy  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by laboratory  Sample bleaching (€/sample)  SCIENTIFIC-TECHNICAL REPORT  Rate A  Rate B  Rate C  Rate D  840  840  840  840  840  840  840  84					
results and calculation of age (€/sample)  GAMMA IRRADIATION and BLEACHING  Rate A  Rate B  Rate C  Rate D  Gamma Irradiation: Irradiation vials  Gamma irradiation: Band I - Less than 30 sample-doses per kGy  Gamma irradiation: Band II - More than 30 sample-doses per kGy  Gamma irradiation: Preparation of vials by the user  Gamma irradiation: Preparation of vials by laboratory  Sample bleaching (€/sample)  Scientific-Technical Report (€/day)  Rate A  Rate B  Rate C  Rate D  Rate B  Rate C  Rate D  Rate B  Rate C  Rate D					
GAMMA IRRADIATION and BLEACHINGRate ARate BRate CRate DGamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	·	350	525	700	840
Gamma Irradiation: Irradiation vials0.20.30.40.48Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240		Rate A	Rate B	Rate C	Rate D
Gamma irradiation: Band I - Less than 30 sample-doses per kGy1.52.2533.60Gamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240					
kGyCamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240					
Gamma irradiation: Band II - More than 30 sample-doses per kGy0.6511.31.56Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	·	1.5	2.23		3.00
per kGy0.20.30.40.48Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	·	0.65	1	1.3	1.56
Gamma irradiation: Preparation of vials by the user0.20.30.40.48Gamma irradiation: Preparation of vials by laboratory1.21.82.42.88Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	·	0.00	_		
Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	·	0.2	0.3	0.4	0.48
Sample bleaching (€/sample)10306072SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	Gamma irradiation: Preparation of vials by laboratory	1.2	1.8	2.4	2.88
SCIENTIFIC-TECHNICAL REPORTRate ARate BRate CRate DScientific-Technical Report (€/day)100150200240	• • • • • • • • • • • • • • • • • • • •				
Scientific-Technical Report (€/day)100150200240					
	Scientific-Technical Report (€/hour)	50	75	100	120

<sup>\*</sup>When portable field gamma spectrometry can only be used by CENIEH personnel or when it is considered in the evaluation of the access request, by *affiliated* personnel. The fee will only be applied when full dating services are not contracted, but rather partial work, and this is assessed by the User Office.

<sup>\*\*</sup>The separation of quartzes/feldspars will be subject to this fee when carried out in any of the laboratories of the CENIEH.

<sup>\*\*\*</sup> This type of dating must be specifically requested, evaluated and budgeted if the entire process is required.



### **GEOCHRONOLOGY: LUMINESCENCE LABORATORY**

LUMINESCENCE DATING (OSL/IRSL) (€/sample)	Rate A	Rate B	Rate C	Rate D
This includes sample preparation (separation of quartz or	400	560	750	787.5
feldspar as appropriate), luminescence measurement,				
calculation of dose rate, estimation of age and submission				
of a brief report describing the methodology and results.				
LUMINESCENCE LABORATORY*	Rate A	Rate B	Rate C	Rate D
Sample preparation by qualified user (except HF)	102	150	201	
(€/sample)				
Qualified Use of Luminescence Reader (€/sample)	102	150	201	
PORTABLE GAMMA SPECTROMETRY EQUIPMENT**	Rate A	Rate B	Rate C	
Use of equipment (€/day)	50	75	100	
FIELDWORK	Rate A	Rate B	Rate C	Rate D
Taking samples (€/person-day)	250	375	500	600
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C	Rate D
Scientific-Technical Report (€/day)	100	150	200	247.2
Scientific-Technical Report (€/hour)	50	75	100	123.6

<sup>\*</sup>The user must have previous knowledge and pass a training session (approx. 1-2h) before starting the work, and shall be offered the opportunity to act as a qualified user. Machine time shall be assigned on the basis of the characteristics of the samples and users shall act at all times per the instructions of the IRA 3015 beta area supervisor.

Upon prior consultation, partial work within the luminescence dating process may be requested with a specific fee (sample extraction, field gamma spectrometry, quartz/feldspar grain extraction, luminescence measurement, high-resolution gamma spectrometry).

<sup>\*\*</sup>When portable field gamma spectrometry can only be used by CENIEH personnel or when it is considered in the evaluation of the access request, by *affiliated* personnel. The fee will only be applied when full dating services are not contracted, but rather partial work.



### **GEOCHRONOLOGY: COSMOGENIC NUCLIDES LABORATORY**

SAMPLE PREPARATION (€/sample)	Rate A	Rate B	Rate C	Rate D
Complete preparation of samples for 10Be analysis (and	400	600	800	960
26Al if necessary) (€/sample)				
<ol> <li>Crushing and sieving (€/sample)</li> </ol>	40	60	80	96
2. Extraction and purification of quartzes (including	200	300	400	480
magnetic separation, separation by density and				
acid attack) (€/sample)				
3. Beryllium (and aluminum if necessary), extraction	120	180	240	288
(including quartz digestion, evaporation with HF,				
ion exchange, chromatography, hydroxide				
precipitation) (€/sample)				
4. Calcination and pressing	40	60	80	96
PREPARATION OF samples - Meteoric Be (€/sample)	Rate A	Rate B	Rate C	Rate D
Complete preparation of samples for 10Be meteoric	200	300	400	480
analysis				
MEASUREMENT BY AMS (€/sample)	Rate A	Rate B	Rate C	Rate C
Please inquire with the laboratory*				
FIELDWORK	Rate A	Rate B	Rate C	Rate D
Taking samples (€/person-day)	250	375	500	600
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C	Rate D
Scientific-Technical Report (€/day)	100	150	200	240
Scientific-Technical Report (€/hour)	50	75	100	120

Blanks and standards for AMS are included in the rates

The actual sample preparation procedure will vary with the types of material, the availability of samples, and the measurements required (exposure ages, erosion rates, burial ages, etc.).

The analysis and measurements of AMS for 10Be (and 26Al when necessary) will be carried out in the facilities collaborating with the CENIEH. Consulting the laboratory researcher before submitting the proposal is recommended.



### **GEOCHRONOLOGY: URANIUM SERIES LABORATORY**

FIELDWORK	Rate A	Rate B	Rate C	Rate D
Taking samples (€/person-day)	250	375	500	600
URANIUM SERIES DATING	Rate A	Rate B	Rate C	Rate D
Physical evaluation of the sample/subsampling (€/hour)	36	48	72	86.4
Micromilling (€/hour)	45	67.5	90	108
Micromilling qualified user (€/hour)	2	3	4	4.8
Chemical separation (€/sample)	120	180	240	288
Measurement of MC-HR-ICP-MS (€/sample)	224	336	448	537.6
Sample preparation and measurement by MC ICP-MS	320	480	640	768
(€/sample)				
MULTIELEMENTAL ANALYSIS(*)	Rate A	Rate B	Rate C	
Physical evaluation of the sample/subsampling (€/hour)	5	7.5	10	
Microwave-assisted chemical treatment of sample	20	30	40	
(€/sample)				
Chemical treatment without microwaves (€/sample)	12	18	24	
ICP-OES calibration	30	45	60	
Quantitative analysis ICP-OES (€/sample)	10	15	20	
ICP-MS calibration	60	90	120	
Quantitative analysis ICP-HRMS (€/sample)	40	60	80	
Exploratory analysis U-Th ICP-HRMS (€/sample)	30	45	60	
LASER ABLATION(**)	Rate A	Rate B	Rate C	
Adjustment of equipment (€/day)	200	300	400	
LA-MC-ICPMS (€/hour)	180	270	360	
LA-ICP-HRMS (€/hour)	120	180	240	
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C	Rate D
Scientific-Technical Report (€/day)	100	150	200	240
Scientific-Technical Report (€/hour)	50	75	100	120

<sup>\*</sup> In the multi-element analysis, in the case of a **solid matrix**, it is recommended that the samples be sent ground. In any case, and if the preparation is required at CENIEH, the sample preparation must be added, and its acceptance will depend on the laboratory's capacity to carry out the preparation.

<sup>\*\*</sup> If preparation of a thin section for laser ablation is required, the charge for preparation of the section necessary from the sample must be added (Geology).



#### **DIGITAL MAPPING AND MULTIMEDIA LABORATORY**

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FIELDWORK	Rate A	Rate B	Rate C
Fieldwork (€/person-day)	250	375	500
AERIAL CARTOGRAPHY (DRONES)	Rate A	Rate B	Rate C
Please inquire			
2D PRINTING	Rate A	Rate B	Rate C
Satin photo paper (200 g/m2)	25	40	50
Matte paper (180 g/m2)	23	25	46
CAD paper (90 g/m2)	10	15	20
TOPOGRAPHY	Rate A	Rate B	Rate C
Total Robotic Station (€/day)	65	85	100
Total Robotic Station (€/week)	200	250	300
Total Robotic Station (€/month)	450	550	650
Total Non-Robot Station (€/day)	30	40	50
Total Non-Robotic Station (€/week)	100	120	150
Total Non-Robotic Station (€/month)	250	320	370
GPS/GNSS (centimetric) (€/day)	60	90	100
GPS/GNSS (centimetric) (€/week)	250	300	350
GPS/GNSS (centimetric) (€/month)	400	600	800
PHOTOGRAMMETRY	Rate A	Rate B	Rate C
Please inquire			
SCANNERS	Rate A	Rate B	Rate C
Tripod 3D laser scanner (€/day)	150	500	550
Tripod 3D laser scanner (€/week)	600	1500	2000
Tripod 3D laser scanner (€/ month)	2000	3000	5000
Handheld 3D laser scanner (€/day)	30	120	170
Handheld 3D laser scanner (€/week)	200	500	700
Handheld 3D laser scanner (€/month)	350	1000	2000
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C
Scientific-Technical Report (€/day)	100	150	200
Scientific-Technical Report (€/hour)	50	75	100

#### Specific conditions:

- 1) The rates do not include loan for service outside the laboratory of the applications for subsequent data processing: only the programs necessary for downloading and basic evaluation of the data are included.
- 2) The rates include the loan of field laptops for the desktop scanners only

The requester shall be responsible for returning the equipment in the condition in which it was loaned. The equipment is partly insured, although in the event of any claim, the requester shall be liable for the policy excess. In cases of breakdown, breakage or theft of the equipment, the requester shall bear liability in accordance with the general conditions of the Center.



# **CONSERVATION AND RESTORATION**

FIELDWORK*	Rate A	Rate B	Rate C	Rate D	
Consultancy, Conservation and Intervention in situ	275	412.5	550	660	
(€/person-day)					
TECHNICAL CONSULTANCY	Rate A	Rate B	Rate C	Rate D	
Analysis of state of conservation of cultural,	18.5	27.23	36.3	43.56	
archaeological and paleontological assets (€/hour)	10.5	27.23	30.5	13.33	
Preventive conservation in museum halls and					
deposits (physical and environmental compliance,	18.5	27.23	36.3	43.56	
exhibition systems, transport, etc.) (€/hour)					
Curative conservation and restoration (€/hour)	18.5	27.23	36.3	43.56	
Application of analytical techniques to cultural	40.5	27.22	26.2	12.56	
assets	18.5	27.23	36.3	43.56	
(€/ hour)					
INTERVENTION ON CULTURAL,					
ARCHAEOLOGICAL AND/OR	Rate A	Rate B	Rate C	Rate D	
PALEONTOLOGICAL ASSETS-PREVENTIVE					
CONSERVATION					
Environmental tracking and active control (RH, T,	10 5	27.22	26.2	42.56	
lighting systems, atmospheric contaminants) (€/hour)	18.5	27.23	36.3	43.56	
Active pest control (€/hour)	18.5	27.23	36.3	43.56	
Physical conditioning (deposit/transport) (€/hour)	18.5	27.23	36.3	43.56	
Design of preventive conservation plan/collections	16.5	27.23	30.3	45.50	
emergency plan (€/week)	726	1089	1452	1,742.40	
Temporary physical conditioning (€/hour)	18.5	27.23	36.3	43.56	
INTERVENTION ON CULTURAL,	10.5	27.23	30.3	45.50	
ARCHAEOLOGICAL AND/OR					
PALEONTOLOGICAL ASSETS-CURATIVE	Rate A	Rate B	Rate C	Rate D	
CONSERVATION & RESTORATION					
Desiccation (active control) (€/hour)	18.5	27.23	36.3	43.56	
Stabilization: desalting (€/hour)				<del>                                     </del>	
	18.5	27.23	36.3	43.56	
Inhibition of metal corrosion (€/hour)	18.5	27.23	36.3	43.56	
Protection (€/hour)	18.5	27.23	36.3	43.56	
Biocide treatments (€/hour)	18.5	27.23	36.3	43.56	
Cleaning of surfaces/elimination of crusts	18.5	27.23	36.3	43.56	
(mechanical-chemical) (€/hour)  Surface stabilization, spot internal consolidation,					
by suction or immersion (€/hour)	18.5	27.23	36.3	43.56	
Volumetric reconstruction (€/hour)	18.5	27.23	36.3	43.56	
Volumetric reconstruction (€/hour)	18.5	27.23	36.3	43.56	
Chromatic reintegration (€/hour)	18.5	27.23	36.3	<u> </u>	
MOLDS AND REPLICAS				43.56	
	Rate A	Rate B	Rate C	Rate D	
Master and first replica-Up to 5 cm (€/unit)	33	50	66	79.20	



Master and first replica-5 cm to 10 cm (€/unit)	72.6	108.9	145.2	174.24
Master and first replica-10 cm to 20 cm (€/unit)	105.27	157.3	210.57	252.68
Master and first replica-20 cm to 30 cm (€/unit)	139.15	208.12	278.3	333.96
Master and first replica-30 cm to 80 cm (€/unit)	217.8	326.7	435.6	522.72
Master and first replica-More than 80 cm-price on				
application	-	-	-	-
Delivery of master-Up to 5 cm (€/unit)	100	148	200	240
Delivery of master-5 cm to 10 cm (€/unit)	217.8	326.7	435.6	522.72
Delivery of master-10 cm to 20 cm (€/unit)	315.81	473.72	631.62	757.94
Delivery of master-20 cm to 30 cm (€/unit)	417.45	626.18	834.9	1001.88
Delivery of master-30 cm to 80 cm (€/unit)	653.4	980.1	1306.8	1568.16
Delivery of master-More than 80 cm-price on				
application	-	-	-	
Second and subsequent replicas-Up to 5 cm	16.5	24	33	39.60
(€/unit)	10.5	24	33	33.00
Second and subsequent replicas-5 cm to 10 cm	36.3	54.45	72.6	87.12
(€/unit)	33.3	J	7 = 10	07.22
Second and subsequent replicas-10 cm to 20 cm	52.03	78.05	104.06	124.87
(€/unit)				
Second and subsequent replicas-20 cm to 30 cm	68.97	103.46	137.94	165.53
(unit) Second and subsequent replicas-30 cm to 80 cm				
(€/unit)	108.9	163.35	217.8	261.36
Second and subsequent replicas-More than 80 cm-				
price on application	-	-	-	
Chromatic reintegration-Up to 5 cm (€/unit)	22	33	44	52.8
Chromatic reintegration-5 cm to 10 cm (€/unit)	42.35	63.53	84.7	101.64
Chromatic reintegration-10 cm to 20 cm (€/unit)	84.7	127.05	169.4	203.28
Chromatic reintegration-20 cm to 30 cm (€/unit)	127.05	190.575	254.1	304.92
Chromatic reintegration-30 cm to 80 cm (€/unit)	211.75	317.63	423.5	508.20
Chromatic reintegration-More than 80 cm-price on				
application	-	-	-	-
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C	Rate D
Scientific-Technical Report (€/day)	110	165	220	264
Scientific-Technical Report (€/hour)	55	82.5	110	132
<u> </u>				

Scientific-Technical Report (€/hour) 55 82.5 110 132

\*For long-duration fieldwork, a specific estimate will be given in advance, as determined by the specific conditions of the work to be undertaken.



## **EXPERIMENTAL ARCHAEOLOGY**

This laboratory <u>operates on a prior quotation basis due to the specific characteristics of the tests it performs</u> Price of materials for the experiments and tests:

FIELDWORK	Rate A	Rate B	Rate C
Fieldwork (€/person-day)	250	375	500
ROCK ANALYSIS AND KNAPPING EXPERIMENTS	Rate A	Rate B	Rate C
Evaluation of properties (measurement with equipment)	8	12	16
(€/hour)			
Evaluation of properties (measurement with equipment) (€/day)	40	60	80
Stigma benchmark by knapping techniques (€/hour)	10	15	20
Stigma benchmark by knapping techniques (€/day)	45	67.5	90
Consumables and raw materials (cost of consumables)		See the schedule for consumables	
TRACEOLOGICAL EXAMINATION	Rate A	Rate B	Rate C
Sample preparation for experimental benchmark use (€/day)	40	60	80
Sample preparation for experimental benchmark use (€/hour)	8	12	16
Experimentation to create experimental benchmark of traces of use (€/hour)	10	15	20
Experimentation to create experimental benchmark of traces of use (€/day)	45	67.5	90
Examination of traces of use (microscope) (€/hour)	10	15	20
Examination of traces of use (microscope) (€/day)	50	75	100
Consumables and raw materials (cost of consumables)		l	L
PROCESSING OF ARCHAEOLOGICAL MATERIAL	Rate A	Rate B	Rate C
Washing, marking and simple inventorying (€/hour)	8	12	16
Washing, marking and simple inventorying (€/day)	40	60	80
Photography, drawing and infographics (€/hour)	8	12	16
Photography, drawing and infographics (€/day)	40	60	80
Technological analysis, critical reading (€/hour)	45	67.5	90
Technological analysis, critical reading (€/day)	95	142.5	190
ARCHAEOLOGICAL REPLICAS AND LEASING REPLICAS	Rate A	Rate B	Rate C
Consumables and raw materials (cost of consumables)	Please inquire		
USE OF LABORATORY AND EQUIPMENT BY QUALIFIED USERS	Rate A	Rate B	Rate C
Consumables and raw materials (cost of consumables)	7	10.5	14
Accelerated climatic test chamber (basic) (€/day)	35	52.5	70
Consumables gases for climatic chamber-Total amount	Please inquire		
Shimadzu Universal Testing Machine (€/hour)	6	9	12
Shimadzu Universal Testing Machine (€/day)	30	45	60
Skeletization space (necropsies-cooking) (€/hour)	5	7.5	10
Skeletization space (necropsies-cooking) (€/day)	25	37.5	50



Knapping area (€/hour)	3	4.5	6
Knapping area (€/day)	15	22.5	30
High-speed camera Photron (€/hour)	17	25.5	34
High-speed camera Photron (€/day)	85	127.5	170
General qualification training (€/hour)	15	22.5	30
Use of 3D digital microscope (€/hour) Qualified user*	10	15	20
3D qualification training(€/hour)	12	17	22
Use of 3D microscope (€/hour)	12	17	22
SCIENTIFIC-TECHNICAL REPORT	Rate A	Rate B	Rate C
Scientific-Technical Report (€/day)	100	150	200
Scientific-Technical Report (€/hour)	50	75	100

CONSUMABLES	Rate A – kg/100 g	Rate B – kg/100 g	Rate C – kg/100 g
Quartzite, sandstone or limestone	10.7/1.07	16.05/1.60	21.4/2.14
Flint 2nd class	10.7/1.07	16.05/1.60	21.4/2.14
Flint 1st class	37.45/5.35	56.18/8.02	74.9/10.7
Obsidian	53.5/8.02	80.25/12.04	107/16.05
Antler	48.15/5.35	72.23/8.02	96.3/10.7
Bone	10.7/1.07	16.05/1.60	21.4/2.14
Hardwood	37.45/5.35	56.18/8.02	74.9/10.7
Industrial wood	10.7/1.07	16.05/1.60	21.4/2.14
Copper sheet or rod	48.15/4.81	72.23/7.22	96.3/9.63