

SERVEIS TÈCNICS DE RECERCA

The current reference document can be consulted in this link: [UdG budget 2024](#)

Description of the service	Article code	Billable unit	Minimum and billable slots	A0	A1	B	C	D	E	F
				euros	euros	euros	euros	euros	euros	euros
CHEMICAL and STRUCTURAL ANALYSIS UNIT (UAQIE)										
Technical staff	AQHTxx	hour	0,25	-	30,65	59,50	79,33	30,65	71,40	67,43
Elemental Analysis (CHNS)										
Combustion elemental analysis (CHNS)	AQCRAE	sample	1	9,42	13,22	35,11	43,89	17,56	39,50	38,17
Magnetic Resonance										
Nuclear Magnetic Resonance (RMN)	AQHRMN	hour	0,25	7,34	11,68	30,29	37,87	15,15	34,08	32,93
Nuclear Magnetic Resonance (RMN) (night and weekend)	AQBRMN	hour	0,25	5,24	8,34	21,64	27,05	10,82	24,34	23,52
Microwave digestion										
Microwave digestion (It doesn't include acids or other reagents)	AQPRMW	process	1	20,98	24,17	65,24	65,24	32,62	58,71	56,73
Inductive Coupling Plasma (ICP)										
Inductive Coupling Plasma (ICP-MS)	AQHICPM	hour	0,5	11,51	18,17	82,40	117,72	23,54	105,94	102,36
Inductive Coupling Plasma (ICP-OES)	AQHICPO	hour	0,5	37,76	43,39	87,87	87,87	58,58	79,09	76,41
X-ray diffraction										
X-ray diffraction - powder	AQDRXP	hour	1	1,78	2,51	8,32	16,65	3,33	14,98	14,48
X-ray diffraction - single crystal (Doesn't include IN2)	AQDRXM	hour	1	2,96	8,28	33,27	44,36	11,09	39,92	38,57
ENVIRONMENTAL ENGINEERING UNIT (UEA)										
Technical staff	EAHTxx	hour	0,25	-	30,65	59,50	79,33	30,65	71,40	67,43
Total Organic Carbon, Inorganic Carbon and Total Carbon Analyzer										
Determination of TOC/IC o NPOC	EATOC1	sample	1	12,39	14,28	55,07	55,07	19,27	49,56	47,89
Ion Chromatography										
Determination of cations	EACI01	sample	1	4,51	5,45	21,91	36,52	7,30	32,87	31,76
Determination of anions	EACI02	sample	1	2,43	3,05	12,20	20,33	4,07	18,29	17,68
Determination of anions and cations	EACI03	sample	1	6,80	8,02	32,37	43,16	10,79	38,84	37,53
Determination of sugars	EACI04	sample	1	6,10	9,05	23,61	29,52	11,81	26,56	25,67
Gas chromatography										
Determination of volatile fatty acids and alcohols	EAFID1	sample	1	3,24	4,34	22,95	28,69	5,74	25,82	24,95
Determination of N2, CO, CO2, CH4, H2 i O2	EATCD1	sample	1	2,62	7,48	18,40	23,00	9,20	20,70	20,00
Gas chromatography FID-TCD2-autosampler	EAFID2	hour	0,25	3,77	12,98	31,59	39,49	15,80	35,54	34,34
Gas chromatography FID-TCD2-manual	EAFID3	hour	0,25	3,27	12,43	30,09	37,62	15,05	33,85	32,71
Lyophilizer										
Lyophilization	EAFD01	day	1	0,82	5,06	12,02	48,09	6,01	43,28	41,82
MASS SPECTROMETRY UNITS (UEM)										
Technical staff	MEHTxx	hour	0,25	-	30,65	59,50	79,33	30,65	71,40	67,43
Gas chromatography										
Gas chromatograph - MS Electronic Impact	MEGCEI	hour	0,25	4,50	10,08	82,09	82,09	12,63	73,88	71,38
Gas chromatograph - MS Chemical ionization	MEGCCI	hour	0,25	4,79	10,40	83,63	83,63	13,07	75,27	72,72
Mass spectrometry										
Mass spectrometry QTOF	MEQTOF	sample	1,00	1,77	3,36	46,92	115,36	4,30	103,83	100,32
Mass spectrometry QTOF amb crioesprai	MECRIO	hour	0,25	3,97	7,18	104,45	207,98	9,24	187,18	180,85
Mass spectrometry MALDI-TOF - Determination of de masses moleculars	MEMTOF	hour	1	1,60	78,48	323,43	369,63	106,27	332,67	321,42
Infrared Spectroscopy										
Infrared Spectroscopy, FTIR-ATR	MEFTIR	sample	0,25	0,90	1,58	9,93	14,79	2,03	13,31	12,86
HPLC-Mass Spectrometry										
HPLC-Mass Spectrometry injection by column	MEICOT	hour	0,25	3,79	7,27	91,36	173,49	9,23	156,14	150,86
HPLC-Masses direct injection	MEIDIT	sample	1,00	1,06	2,76	33,65	62,15	3,43	55,94	54,05
MICROSCOPE and BIOTECHNOLOGY UNIT (UMiB)										
Technical staff	MBHTxx	hour	0,5	-	30,65	59,50	79,33	30,65	71,40	67,43
Electron Microscopy										
Field Emission Scanning Electron Microscope (FE-SEM)	MBEHIR	hour	0,5	9,27	16,32	41,59	69,32	22,18	62,39	60,28
Ultramicrotomy										
Ultramicrotomy - Semi-thin cuts	MBLU1S	1 block	1	12,33	13,56	73,73	92,16	18,43	82,95	80,14
Ultramicrotomy - Ultra-thin cuts	MBLU2U	1 block	1	16,04	17,64	86,33	95,92	23,98	86,33	83,41
Sample preparation techniques										
Glutaraldehyde fixation	MBLABA	ml gluta 25%	1ml	2,14	2,35	6,40	8,00	3,20	7,20	6,95
Postfixation with OsO4	MBLABB	ml OsO4 2%	1ml	8,52	9,37	25,48	31,84	12,74	28,66	27,69
Dehydration with ethanol or acetone	MBLABC	process	1	6,28	6,91	18,78	23,48	9,39	21,13	20,42

Spurr resin inclusion	MBLABD	process	26grNSA	33,52	36,87	104,41	125,29	50,12	112,76	108,95
Contrast of thin cuts	MBLU3C	process	1	3,10	3,40	13,88	16,20	4,63	14,58	14,08
Negative staining	MBLU6T	process	1	1,90	2,09	22,70	28,38	2,84	25,54	24,68
Critical Point Drying (CPD)	MBLABE	process	1	14,95	16,44	37,99	42,46	22,35	38,21	36,92
Assembly on MER sample holder	MBLABF	stub	1	3,25	3,58	7,29	9,72	4,86	8,75	8,45
Coating with C	MBLABH	process	1	4,16	5,86	11,54	15,38	7,69	13,85	13,38
Cu grids with Formvar/C membrane	MBLU4C	grid	1	1,11	1,22	3,32	4,15	1,66	3,73	3,61
Axon resin inclusion	MBTIAX	sample	1	3,89	6,93	8,33	10,41	8,33	9,37	9,05
Sample polish	MBTIPM	sample	1	10,48	14,53	31,87	39,84	19,12	35,86	34,64
Grinding with an oscillating ball mill RESTCH MM200	MBTMBO	sample	1	0,42	3,54	8,25	8,25	4,12	7,42	7,17
Determination of fiber density and volume in test tubes reïna-fibra de carboni	MBZVFC	sample	1	3,57	3,93	106,81	133,52	5,34	120,17	116,10

Classic Optical Microscopy

Direct optical microscope Leica DMR-XA	MBOLDI	hour	0,5	3,01	3,31	24,75	33,75	4,50	30,38	29,35
Direct optical microscope Leica DMR-XA epifluorescence	MBOLEF	hour	0,5	6,73	7,41	33,55	40,27	10,07	36,24	35,01
Stereoscopic optical microscope Zeiss StereoDiscovery V12	MBOZST	hour	0,5	1,99	2,19	20,82	29,75	2,97	26,77	25,87

Confocal Spectral Laser Optical Microscopy (CLSM) and structured illumination microscopy (SIM)

Inverted optical microscope NIKON Eclipse Ti-E + Spectral confocal NIKON A1R	MBONC1	hour	0,5	2,58	7,95	58,41	70,58	9,74	63,52	61,38
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THERMAL ANALYSIS UNIT (UAT)

Technical staff	ATHTx	hour	0,25	-	30,65	59,50	79,33	30,65	71,40	67,43
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Differential Scanning Calorimetry

Differential Scanning Calorimetry. Q2000	ATDSCT	hour	0,5	5,50	13,10	34,77	43,46	17,38	39,11	37,79
Differential Scanning Calorimetry. DSC 822	ATDSCTM	hour	0,5	0,92	6,25	29,60	37,00	7,40	33,30	32,18

Rheometry

Rheometry	ATREOM	hour	0,5	0,16	2,24	12,13	24,26	3,03	21,83	21,09
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DSC, TGA, TMA

Setsys Analysis	ATSETS	hour	0,5	0,14	1,18	5,55	11,10	1,39	9,99	9,66
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Dynamomechanical analysis

Dynamomechanical Analysis (DMA)	ATDMAM	hour	0,5	0,00	3,49	16,04	32,08	4,01	28,87	27,89
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Thermogravimetric Analysis

Thermogravimetric Analysis	ATTGAM	hour	0,5	0,33	1,84	9,39	9,39	2,35	8,45	8,17
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Dilatometry

Dilatometry	ATDILN	hour	0,5	0,00	42,62	173,06	173,06	57,69	155,75	150,49
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SUBMARINE TECHNOLOGY UNIT (UTS)

Technical staff	TSHTxx	hour	0,5	-	30,65	59,50	79,33	30,65	71,40	67,43
Sextant Ship	TSEMB1	hour	1	11,13	28,91	53,71	60,87	35,81	54,79	52,93
GPS RTK	TSGPS1	day	1	0,00	1,43	29,51	32,79	1,64	29,51	28,51
Submarine positioning and underwater communication system	TSSPS1	day	1	0,00	1,70	78,33	88,12	1,96	79,31	76,62
Multibeam sonar	TSSOMR	day	1	0,00	3,83	57,28	57,28	4,41	51,55	49,81
Experimentation tank	TSTEX	hour	1	0,92	2,20	12,34	13,72	2,74	12,34	11,93
Hyperbaric chamber	TSCHI	hour	1	0,66	1,84	11,35	13,62	2,27	12,26	11,85

GENERAL LABORATORY (LG)

Cryogenics - Liquid nitrogen supply

Containerized supply - self service	LGCR11	liter	25	0,40	0,63	1,63	2,04	0,82	1,84	1,77
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TOMOGRAPHY

Technical staff	TOMHTxx	hour	0,5	-	30,65	59,50	79,33	30,65	71,40	67,43
Tomography / X-ray radiography equipment time	TOMHR	hour	0,5	38,45	76,12	194,09	242,61	97,04	218,35	210,97
Tomography reconstruction	TOMRC	unitat	1	0,00	59,77	156,05	195,06	78,02	175,55	169,62
Tomographic image processing	TOMPI	hour	0,5	0,00	63,79	160,58	200,73	80,29	180,66	174,55
Sample preparation with penetrant liquids	TOMPM	sample	1	37,07	59,17	153,15	191,43	76,57	172,29	166,46

Criteria for applying STR rates:

1. Tariff category A0 applies to UdG Users who incur expenses for projects with external financing and are always adjusted to the basis of each convocation.
2. Tariff category A1 applies to UdG Users who incur expenses for research projects and other expenditure units not included in section 1.
3. Tariff category B applies to non-profit Public Research Organizations (OPI) that have reciprocity agreements with the UdG.
4. Tariff category C applies to other public organizations, private companies, and particulars.
5. Under the agreements in force, the research centers participated by the UdG (tariff category D) and the member companies of the EPS board (tariff category E) will enjoy the agreed discounts.
6. To tariff categories B, C, D, E, and F, the VAT in force at the date of issue of the invoice will be applied
7. When a UdG User carries out a work assignment for a third party, rate category F will apply.

8. For the services that can be provided and aren't charged, they will be calculated in technician hours + cost of materials.
9. Materials according to cost.
10. All requests for services will have a prior budget.
11. The STR may establish specific agreements for large volumes of samples, repetitive analyses, or special collaborations.