PRICE LIST



Laboratories of the Institute of Geology, Czech. Acad. Sci.



Edition 2020

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Introduction

Before the start of the work, it is recommended to read the requirements for entering the samples for each of the selected methods, or to address the contact persons (in the order given in the booklet) for the individual laboratories (methods) in order to consult the details and deadlines. Samples should be clearly identified and provided with a reference to the relevant person. The results are released together with the saved parts of the samples (if required) in the form agreed upon during the submission (printed reports, electronic outputs, etc.). Prices are tentative in some cases; the final prices depend on sample types, needed adjustments in the standard setup of laboratory devices, numbers of samples and the like.

Comments on individual categories covered by the price list, explanation of price categories

The prices presented in the tables below are in Czech Crowns (CZK) and vary with respect to the actual exchange rate of CZK to Euro (EUR). The actual exchange rate can be found, for example, here: https://www.cnb.cz/en/index.html.

Code	Service / device	Matrix/material (stated within some services)	Unit	Non-Commercial price	Commercial price
Code on the basis of which the services can be ordered.	A simplified description of the service or method employed. The laboratory device is specified where needed.	Type of matrix or material required for the analysis (unless otherwise agreed upon)	Units used for price calculation (hour/sample/spectrum/pattern, etc.)	Prices intended for internal and external orders financed from public sources (grant projects of the Czech Science Foundation, Government or other projects run by scientific workers collaborating with the Inst. Geol.). These prices are liable to VAT in compliance with regulations effective at the time of invoicing (this does not apply to transfers within Inst. Geol.).	Prices intended for services based on external orders financed from non-public sources. These prices are liable to VAT in compliance with regulations effective at the time of invoicing.

Addresses and locations:

Main Research Centre at Lysolaje

Rozvojová 269 165 00 Praha 6 – Lysolaje Czech Republic Laboratory of sample preparation (grinding shop)

Laboratory of scanning electron microscopy and chemical microanalysis

Laboratory of Raman spectroscopy

Laboratory of X-ray diffraction

Laboratories of physico-chemical parameters determination

Laboratories of element determination

Laboratory of mineral separation

Clean and ICP-MS/TIMS laboratory
Fission track analysis (FTA) laboratory

Field gamma-ray spectrometry

Soil/sedimentological descriptions and analyses

Micropaleontological analysis

Information Centre and Library

Research Centre at Průhonice

252 43 Průhonice Czech Republic Sample preparation for paleomagnetic and rock magnetic studies Paleomagnetic study

Study of rock magnetic properties

Other magnetic methods

Research Centre at Puškinovo náměstí

Puškinovo náměstí 9 160 00 Praha 6 – Bubeneč Czech Republic Department of Physical Properties of Rocks



Department of Analytical Methods

Laboratory of sample preparation (grinding shop)

Specifications for samples (price variations)/notes: Samples should be provided cleaned and suitably marked with a detailed description of the required type of processing. In general, it is strongly recommended to consult sample processing directly with a technician.

Contact: Jaroslava Jabůrková, jaburkova@gli.cas.cz, +420 233 087 244; Roman Skála, skala@gli.cas.cz, +420 233 087 249

Code	Service /product	Unit	Non- commercial	Commercial
380.1.1	Covered thin section, standard size	sample	300	375
380.1.2	Covered thin section, standard size, oriented	sample	350	450
380.1.3	Covered thin section, friable material	sample	400	500
380.1.4	Covered thin section, friable material, oriented	sample	420	525
380.1.5	Covered thin section, heavily friable material	sample	380	475
380.1.6	Polished thin section, standard size	sample	500	625
380.1.7	Polished thin section, standard size, friable	sample	600	750
380.1.8	Section, diameter of 2.5 cm (1 inch)	sample	200	250
380.1.9	Polished section, diameter of 2.5 cm (1 inch)	sample	400	500
380.1.10	Polished section, diameter of 2.5 cm (1 inch) with carbon black	sample	600	750
380.1.11	Polished section, diameter of 3 cm	sample	500	625
380.1.12	Polished section, diameter of 3 cm, with carbon black	sample	700	875
380.1.13	Section for fission track study	sample	500	625
380.1.14	Cutting & polishing of a plane	1 cm ²	25	30
380.1.15	Polishing of a planar cut surface	1 cm ²	20	25
380.1.16	Modification of non-standard polished sections/thin sections for analysis by electron probe microanalyzer (see 380.2.2)	sample	price by agreement	price by agreement

Laboratory scanning electron microscopy and chemical microanalysis

Specifications for samples (price variations)/notes: The same price applies for all types of analyses. In case of complex or unusual systems a surcharge may apply to cover expenses associated with development and tuning of specific analytical protocols. It is highly recommended to consult the types of samples and their preparation prior to the analysis with analysts. We recommend preparing the samples for analyses by electron probe microanalyzer (380.2.2) as polished sections or thin sections in our laboratories (see services 380.1.6, 380.1.7, 380.1.9, 380.1.10).

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Code	Service / device	Unit	Non- commercial	Commercial
380.2.1	Scanning electron microscope TESCAN VEGA3XMU + energy dispersive X-ray spectrometer Bruker QUANTAX200 (EDS) + cathodoluminescence detector CL-SEM TESCAN	hour	1,000	1,250
380.2.2	Electron probe microanalyzer (microprobe) JEOL JXA-8230 with five wave-dispersive X-ray spectrometers (WDS), energy dispersive X-ray spectrometer (EDS) and panchromatic cathodoluminescence detector	hour	1,000	1,250
380.2.3	Carbon-coating of samples for chemical analyses (EDS or WDS) or for back-scattered electron (BSE) imaging	sample	50	70
380.2.4	Gold-sputtering of samples for secondary electron (SE) imaging	sample	100	125

Laboratory of Raman spectroscopy

Specifications for samples (price variations)/notes: Raman spectra can be acquired from samples including fragments, powders, or polished section or thin sections, or liquids enclosed in suitable thin-walled vials. The samples must not be higher than 25 mm, wider than 80 mm and longer than 100 mm. Weight must not exceed 500 g. The collection of spectra is charged on the common hourly price basis. Finding of the analysis spot and possible preparation of the sample for measurements (e.g., sample adjusting, photobleaching) are charged extra at the same price as spectra acquisition. Powdered samples are used to collect infrared spectra.

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Code	Service / device	Unit	Non- commercial	Commercial
380.3.1	Raman microspectrometer S&I MonoVista CRS+ (location and documentation of measurement spots, selection of suitable excitation laser wavelength, measurement conditions optimization, spectrum collection, etc.)	hour	1,000	1,250
380.3.2	Fourier-transform infrared (FTIR) spectrometer <i>Nicolet iS50</i> . Preferably, the spectra are taken by the Attenuated Total Reflection (ATR) technique. It is also possible to take spectra in transmission arrangement (typically in KBr pellet – see 380.3.3)	hour	1,000	1,250
380.3.3	Preparation of a KBr pellet	pellet	500	750
380.3.4	Identification of minerals with the RRUFF database	hour	1,000	1,250
380.3.5	Mathematic processing of spectra (baseline correction, band deconvolution)	spectrum	price by agreement	price by agreement

Laboratory of X-ray diffraction

Diffraction patterns are normally collected with an X-ray powder diffractometer **Bruker D8 DISCOVER** in reflection Bragg-Brentano θ –2 θ geometry with CuK α 1 radiation.

Specifications for samples (price variations)/notes: Sample preparation is not included in the prices for data collection. In case that the sample is not provided ground to a powder of $10-20~\mu m$ grain size a surcharge of CZK 50 per sample is added to the price of analysis. Special price may be negotiated for larger sets of analyses ordered at once or repeated sets of analyses.

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Code	Service / device	Unit	Non- commercial	Commercial
380.4.1	Data collection for phase identification in the range 3–70 °20 with a step width of 0.02 °20 and exposure of 1 s/step	pattern	400	500
380.4.2	Data acquisition of oriented specimens for clay mineral identification in the range 2–40 °2θ with a step width of 0.017 °2θ and exposure of 0.8 s/step*†		250	350
380.4.3	Data collection for microstructure analysis, unit-cell dimension refinement, (semi)quantitative analysis or quantitative analysis or crystal structure refinement with the Rietveld method	pattern	price by agreement	price by agreement
380.4.4	Other diffraction pattern collection procedures based on a customer request	pattern	price by agreement	price by agreement
380.4.5	Change of diffractometer configuration to collect diffraction pattern(s) in transmission geometry or in a capillary‡ (does not require manipulation with the primary monochromator)	once-time payment	4,000	6,000
380.4.6	Change of diffractometer configuration to collect micro-diffraction pattern(s) or standard diffraction data in reflecting Bragg-Brentano arrangement with $\text{CuK}\alpha 1,2$ radiation (requires manipulation with the primary monochromator)	once-time payment	7,000	10,000
380.4.7	Basic pattern evaluation – calculation of d's & I's	sample	100	150
380.4.8	Qualitative phase analysis	sample	400	500
380.4.9	Semi-quantitative phase analysis of a mixture by the DIFFRAC.EVA# program	sample	600	800
380.4.10	Quantitative phase analysis of a mixture by the Rietveld method ^{&}	sample	price by agreement	price by agreement
380.4.11	Other types of data handling/processing	sample	price by agreement	price by agreement

^{*} Normally, for clay mineral identification, two or three separate diffraction patterns are required; the first is collected from an oriented specimen of a separated clay fraction; the second is taken after saturating the specimen with ethylene glycol and potential third pattern is acquired after heating the specimen to 550 °C

[†] Preparation of samples for clay mineral identification is not included in the price of the analysis; payments for the clay sample preparation are charged extra following the pricelist items 310.1.17, 31.1.18 and 310.1.19 of the Laboratory of mineral separation

[‡] If the collection of a diffraction pattern of a sample in capillary is required and the capillary is not provided with the sample, an extra payment of CZK 250 per sample is charged

^{*} The method requires that corundum number for each phase in the mixture is available in the ICDD PDF2 database

[&]amp; The method requires that the structure model is known for each phase in the mixture; results may be negatively influenced by strong preferred orientation, poor crystallinity and/or the presence of an amorphous phase



Department of Environmental Geology and Geochemistry

Laboratories of physico-chemical parameters determination

Specifications for samples (price variations)/notes: Specific requirements for samples, matrices, etc. are given specifically for each analysis. Prices below are indicative only and may vary depending on the number of samples, the number of analysed elements, matrix, homogeneity of the sample, etc. Details on sample preparation for the required determinations and final costs of laboratory works should be consulted with the lab workers, preferably by email.

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Code	Service / device	Matrix / material	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Basic sample workup before analysis				
340.352.1	Filtration through a 0.45 μm RC-disc	aqueous solution	sample	70	100
340.352.2	Filtration through a 0.45 μm glass fiber disc	aqueous solution	sample	70	100
340.352.3	Filtration through a paper filter (blue strip type)	aqueous solution	sample	70	100
340.352.4	Centrifugation of a liquid sample, 50 ml Apollo vial	aqueous solution	sample	30	40
	Drying, homogenization, calcination				
340.352.5	Lyophylization of a liquid sample or suspension	liquid or solid material	sample	200	500
340.346.1	Drying (overnight, dryer at 105 °C)	solid	sample	40	50
340.346.2	Water loss after drying at 105 °C in a dryer, overnight	solid, powdered	sample	50	75
340.346.3	Calcination at 550 °C	solid, powdered	sample	200	250
340.346.4	Weight loss after drying at 900 °C in an oven (LOI)	solid, powdered	sample	280	350
340.346.5	Sample homogenization in an agate mill	solid	sample	40	50
	Sample decomposition		·		
340.346.10	Sample decomposition, mixture of HNO ₃ and HF in PTFE beaker	solid, powdered, homogenized	sample	250	350
340.346.11	Sample decomposition, mixture of ultrapure HNO₃ and HF in an PTFE vessel at normal pressure, for trace element analysis	solid, powdered, homogenized	sample	500	600
340.346.12	Sample decomposition in a mixutre of HNO ₃ and HF, pressure ampoule, microwave oven	solid, powdered, homogenized	sample	600	800
340.346.13	Sample decomposition, pressure ampoule, decomposition of residue by melting with tetraborate	solid, powdered, homogenized	sample	1 500	2,500
340.346.14	Sample decomposition by melting in a Pt crucible with lithium tetrafluoroborate	solid, powdered, homogenized	sample	200	280
340.346.15	Melting with potassium hydrogensulphate	solid, powdered, homogenized	sample	170	350
340.346.16	Melting with sodium tetraborate	solid, powdered, homogenized	sample	200	280
	Soil and sediments analyses				
340.348.1	Extraction according the Mehlich III protocol. Element analyses please see 340.350.1	solid, powdered, homogenized	sample	100	150
340.348.2	Extraction with buffered oxalate according to Tamm. Element analyses please see 340.350.1	solid, powdered, homogenized	sample	100	150
340.348.3	Extraction with buffered citrate (pH 8,5). Element analyses please see 340.350.1	solid, powdered, homogenized	sample	100	150
340.348.4	Determination of leachable calcium and phosphate, extraction with 20% HCl	solid, powdered, homogenized	sample	420	550
340.348.5	Determination of pH (active, in suspension)	soil, sieved	sample	50	80
340.348.6	Determination of pH (exchangable, KCI)	soil, sieved	sample	50	80
340.348.7	Determination of cationic exchange capacity (Na, K, Mg, Ca) with ammonium acetate	soil, sieved	sample	250	300
340.348.8	Determination of CEC with barium chloride according to the Mehlich procedure, pH 8.1	soil, sieved	sample	250	300



340.348.9	Determination of effective sorption capacity ECEC (Na, K, Mg, Ca).	soil, sieved sample		200	250
340.348.10	Determination of exchangable acidity in extract	soil, sieved	sample	80	100
340.348.11	Extraction of powdered solid sample with aqua regia. Element analyses please see 340.350.1	solid, powdered, homogenized	sample	120	150
	Electrochemical analyses				
340.352.6	Determination of pH (natural water)	aqueous solution	sample	50	80
340.352.7	Determination of conductivity (natural water)	aqueous solution	sample	50	80
340.352.8	Determination of fluoride (ISE)	aqueous solution	sample	50	80
	Titration analysis	·			
340.352.9	Determination of total alkalinity	aqueous solution	sample	50	120
340.352.10	Determination of hydrogencarbonate and carbonate	aqueous solution, tightly closed	sample	180	300
	Determination of anions using technique of				
	high-presure liquid chromatography – HPLC				
340.351.10	Simultaneous determination of chloride, sulphate and nitrate	not acidified aqueous solution freshly filtered through a 0.45µm filter	sample	110	250
	Granulometry				
340.G.1	Basic granulometric analysis using a laser granulometer	particle size to 1 mm	sample	250	350
340.G.2	Granulometric analysis of a carbonate-free sample	particle size to 1 mm	sample	250	300
340.G.3	Granulometric analysis of a sample without organic matter	particle size to 1 mm	sample	250	300
340.G.4	Sample workup for granulometric study - decomposition of organic compounds in hydrogen peroxide	particle size to 1 mm	sample	200	250

Laboratories of element determination

Specifications for samples (price variations)/notes: Specific requirements for samples, matrices, etc. are given specifically for each analysis. Prices below are indicative only and may vary depending on the number of samples, the number of analysed elements, matrix, homogeneity of the sample, etc. Details on sample preparation for the required determinations and final costs of laboratory works should be consulted with the lab workers, preferably by email.

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Code	Service / device	Matrix	Unit	Non- Commercial (CZK)	Commercial (CZK)
	ICP OES: optical emission spectroscopy with inductively coupled plasma	filtered liquid sample, according to e.g. 340.352.1			
340.350.1	Basic set (Al, Ca, Fe, K, Mg, Mn, Na, P, S, Si)	aqueous solution, acidified	sample	350	400
340.350.2	One element (not included in the basic set) accessible for ICP EOS in concentration 1–100 ppm	salt-free aqueous solution, acidified	sample	100	200
340.350.3	One element (not included in the basic set) accessible for ICP EOS in concentration 0.5–1 ppm. Trace elements typically	salt-free aqueous solution, acidified	sample	150	300
340.350.4	Determination of elements using hydride generation (As, Se and other elements)	aqueous solution acidified by HCl (for As, Se) or by HNO ₃ (others)	sample	200	550
	Determination of mercury in solid or liquid sample				
340.351.1	Determination of total mercury, THg content in the range of 0.2 ng·g ⁻¹ to 150 ng·g ⁻¹ of sample	solid, homogenized powdered sample or liquid sample	sample	110	150



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	Determination of total mercury, THg content	solid, homogenized			
340.351.2	over 150 ng·g-¹ of sample	powdered sample		450	200
340.351.2	,	or liquid sample	sample	150	200
340.351.3	Determination of total mercury, THg content	solid, homogenized powdered sample	sample	200	250
	over 200 ng·g ⁻¹ of sample Determination of total mercury, THg in solid	solid, homogenized			
340.351.4	sample containing sulphur	powdered sample	sample	200	250
	Ultra trace total mercury determination by	powdered sample			
	CV AFS technique in a liquid sample				
	quality quality	liquid, stabilized			
		sample, non-			
		foaming.			
340.351.5	Determination of total mercury by CV AFS,	Stabilization	sample	1,200	1,500
	limit of quantification 0.25 ppt Hg	according to	5ap.c	2,200.	2,500.
		340.351.6, foaming			
		removal according			
		to 340.351.7–8 liquid sample,			
340.351.6	Sample stabilization by bromate before total	filtered according	sample	100	180
340.331.0	mercury determination	to 340.352.2	Jampie	100.	100.
242 254 7	DOC removal by photodegradation under UV			500	
340.351.7	lamp irradiation	liquid, stabilized	sample	600	1,800
	Foaming sample workup by thermal oxidation	liquid sample		600	
340.351.8	of DOC by persulphate	filtered according	sample		1,800
		to 340.352.2	to 340.352.2		
	Determination of gaseous Hg ⁰		41	500	600
240 254 0	Determination of gaseous mercury Hg ⁰ in		1 hour +	500 +	600+
340.351.9	atmosphere by portable mercurymeter on locality		travelling expenses	travelling	travelling
	Speciation analyses		expenses	expenses	expenses
		liquid sample with			
340.347.1	Speciation analysis of Al using PCV	no pH adjustment	sample	900	1,400
	technique: (covering 340.347.1.1–3)	and no stabilization	·		_,
340.347.1.1	Monomeric organic Al	dtto	sample	350	550
340.347.1.2	Total monomeric Al	dtto	sample	150	350
340.347.1.3	Acid soluble Al	dtto	sample	400	500
340.347.2	Speciation analysis of sulphur:	solid homogeneous	sample	2,500	4,000
	(covering 340.347.2.1–4)	powdered sample	•	,	,
340.347.2.1	Ionic, exchangeable sulphate	as above	sample	400	600
340.347.2.2	Organically bound sulphate	as above	sample	800	1,400
340.347.2.3	Organically bound sulphide sulphur (reduced)	as above	sample	800	1,600
340.347.2.4	Total content of sulphur (ICP OES)	as above	sample	500	600
340.347.3	Speciation analysis of iron: (covering 340.347.3.1–2):	liquid stabilized	sample	300	400
			Sample		
340 347 3 1		sample as above		150 -	200 -
	Determination of bivalent Fe (UV VIS)	as above	sample	150 150	200
340.347.3.2	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS)	·	sample sample	150 150 100	200 200 200
340.347.3.1 340.347.3.2 340.347.3.3	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS)	as above as above	sample	150	200
340.347.3.2	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS)	as above as above as above	sample sample	150	200
340.347.3.2	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus:	as above as above as above solid homogeneous	sample sample	150	200
340.347.3.2 340.347.3.3	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total)	as above as above as above	sample sample sample	150 100	200
340.347.3.2 340.347.3.3 340.347.4	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, Al/Fe	as above as above as above solid homogeneous powdered sample	sample sample sample sample	150 100 400	200 200 500
340.347.3.2 340.347.3.3	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, Al/Fe oxyhydroxide bound, organically bound,	as above as above as above solid homogeneous powdered sample solid homogeneous	sample sample sample	150 100	200
340.347.3.2 340.347.3.3 340.347.4	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, Al/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total)	as above as above as above solid homogeneous powdered sample	sample sample sample sample	150 100 400	200 200 500
340.347.3.2 340.347.3.3 340.347.4	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, AI/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total) Speciation analysis of mercury:	as above as above as above solid homogeneous powdered sample solid homogeneous powdered sample	sample sample sample sample	150 100 400	200 200 500
340.347.3.2 340.347.3.3 340.347.4 340.347.5	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, AI/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total) Speciation analysis of mercury: Determination of methylmercury CH3Hg+ in a	as above as above as above solid homogeneous powdered sample solid homogeneous powdered sample	sample sample sample sample	150 100 400	200 200 500
340.347.3.2 340.347.3.3 340.347.4	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, Al/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total) Speciation analysis of mercury: Determination of methylmercury CH ₃ Hg ⁺ in a liquid sample of natural water.	as above as above as above solid homogeneous powdered sample solid homogeneous powdered sample liquid, acidified, filtered according	sample sample sample sample	150 100 400	200 200 500
340.347.3.2 340.347.3.3 340.347.4 340.347.5	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, Al/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total) Speciation analysis of mercury: Determination of methylmercury CH ₃ Hg ⁺ in a liquid sample of natural water. Preconcentration by distillation	as above as above as above solid homogeneous powdered sample solid homogeneous powdered sample liquid, acidified, filtered according to 340.352.2	sample sample sample sample	150 100 400	200 200 500
340.347.3.3 340.347.4 340.347.5	Determination of bivalent Fe (UV VIS) Determination of trivalent Fe (UV VIS) Determination of total Fe (ICP EOS) Speciation analysis of phosphorus: Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total) Phosphate fractionation: exchangeable, Al/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total) Speciation analysis of mercury: Determination of methylmercury CH ₃ Hg ⁺ in a liquid sample of natural water.	as above as above as above solid homogeneous powdered sample solid homogeneous powdered sample liquid, acidified, filtered according	sample sample sample sample	150 100 400	200 200 500



		according to				
		340.352.5				
		filtered sample				
	UV VIS spectrometry	(340.352.1 or				
		340.352.3				
340.349.1	Determination of absorbance without adding	turbidity-free	sample	95	120	
	auxiliary chemical, VIS area	aqueous solution				
340.349.2	Determination of absorbance without adding	turbidity-free	sample	110	150	
	auxiliary chemical, UV area	aqueous solution	54p.c			
340.349.3	Determination of absorbance at 410 nm	turbidity-free	sample	80	110	
	Betermination of absorbance at 110 mm	natural water	Sample		110.	
340.349.4	Determination of absorbance at 254 nm	turbidity-free	sample	110	150	
3 10.3 13. 1	Betermination of absorbance at 254 min	natural water	Sample	110.	150.	
		stabilized,				
340.349.5	Determination of ferrous cation	turbidity-free	sample	150	200	
		aqueous solution				
340.349.6	Determination of phosphate through	liquid, acidified,	cample	150	200	
340.349.0	phosphomolybdenane	filtered	sample	150	200	
		stabilized,				
340.349.7	Determination of sulphide	turbidity-free	sample	150	200	
	·	aqueous solution				
		acidified, turbidity-				
340.349.8	Determination of ammonium ion	free aqueous	sample	120	180	
		solution		-	200.	
		liquid sample in an				
340.349.9	Determination of free chlorine	air-tight glass	sample	150	200	
3 10.3 13.3	Betermination of free emornie	bottle	Sample	130.	200.	
		typical sample				
	Differential thermal analysis and differential	weight 5–30 mg,	after			
	scanning calorimetry, without interpretation	typical upper	consultation			
		temp. 1000 °C	Consultation			
	Determination in corundum crucibles in air	temp. 1000 C				
240 240 40		solid, powdered,		1 250	1 450	
340.349.10	atmosphere, temperature range 20–1000 °C.	homogenized	sample	1,250	1,450	
	DTA and DSC record					
240 240 44	Determination in corundum crucibles in argon	solid, powdered,		4 200	4 500	
340.349.11	atmosphere, temperature range 20–1000 °C.	homogenized	sample	1,300	1,500	
	DTA and DSC record	_				
	Determination in platinum crucibles in air	solid, powdered,				
340.349.12	atmosphere, temperature range 20–700 °C.	homogenized	sample	1,500	1,800	
	DTA and DSC record					
		solid, powdered,		please	please	
340.349.13	Special works according to customer request	homogenized	sample	contact Dr.	contact Dr.	
				Matoušková	Matoušková	
	1		 			
		filtered liauid				
		filtered liquid sample (340.352.1				
	Determination of inorganic, organic and	sample (340.352.1				
	Determination of inorganic, organic and total carbon - DOC. IC. TOC	sample (340.352.1 or 340.352.3) or				
	Determination of inorganic, organic and total carbon - DOC, IC, TOC	sample (340.352.1 or 340.352.3) or solid, powdered,				
		sample (340.352.1 or 340.352.3) or solid, powdered, homogenized				
	total carbon - DOC, IC, TOC	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample				
340.349.20	total carbon - DOC, IC, TOC Determination of dissolved organic carbon	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized	sample	250	350	
	Determination of dissolved organic carbon (DOC) in a liquid sample	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution	·			
340.349.20 340.349.21	Determination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample	sample sample	250 250	350 350	
	Determination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution	sample	250		
	Determination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution aqueous solution solid, powdered,	·			
340.349.21	betermination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid sample	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution	sample	250	350	
340.349.21	betermination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid sample Determination of total inorganic carbon (IC)	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution aqueous solution solid, powdered, homogenized	sample	250	350	
340.349.21	betermination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid sample Determination of total inorganic carbon (IC) in a solid sample	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution aqueous solution solid, powdered, homogenized solid, powdered,	sample	250	350	
340.349.21 340.349.22	betermination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid sample Determination of total inorganic carbon (IC) in a solid sample Determination of total inorganic carbon (IC) in a solid sample after decomposition with H ₃ PO ₄ (e.g. cave materials, industrially mined	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution aqueous solution solid, powdered, homogenized	sample sample	250 750	350 800	
340.349.21	betermination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid sample Determination of total inorganic carbon (IC) in a solid sample after decomposition with H ₃ PO ₄ (e.g. cave materials, industrially mined rocks)	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution aqueous solution solid, powdered, homogenized solid, powdered,	sample sample	250 750	350 800	
340.349.21 340.349.22	betermination of dissolved organic carbon (DOC) in a liquid sample Determination of inorganic carbon (IC) in a liquid sample Determination total carbon (TC) in a solid sample Determination of total inorganic carbon (IC) in a solid sample Determination of total inorganic carbon (IC) in a solid sample after decomposition with H ₃ PO ₄ (e.g. cave materials, industrially mined	sample (340.352.1 or 340.352.3) or solid, powdered, homogenized sample aqueous solution aqueous solution solid, powdered, homogenized solid, powdered,	sample sample	250 750	350 800	



Department of Geological Processes

Laboratory of mineral separation

Specifications for samples (price variations)/notes: The listed prices are approximate. Price increase or decrease may occur after the placement of an order and consultation, depending on the number of samples, the amount of material, the type of rock etc. Sample size should not exceed ca. 10 cm, otherwise a surcharge of CZK 50 is imposed for the crushing of oversized samples.

Contact: Martin Šťastný, stastny@gli.cas.cz, +420 233 087 233, +420 233 087 285

Code	Service	Unit	Non- Commercial (CZK)	Commercial (CZK)
310.1.1	Crushing	each 5 kg	110	120
310.1.2	Draining	each 5 kg	80	90
310.1.3	Drying	each 5 kg	45	50
310.1.4	Floating	each 5 kg	100	120
310.1.5	Sieving	each 5 kg	140	150
310.1.6	Magnetic separation	each 5 kg	160	170
310.1.7	Separation in bromoform	each 100 g	180	200
310.1.8	Separation in methylene iodide	each 5 g	200	250
310.1.9	Separation in Clerici solution	each 5 g	220	270
310.1.10	Purification by centrifugation in heavy liquids	each 2 g	140	160
310.1.11	Purification in magnetic separator	each 3 g	90	100
310.1.12	Grinding for analytic methods	sample	160	180
310.1.13	Annealing of sample under 105 °C	sample	45	50
310.1.14	Annealing of sample under 550 °C	sample	80	90
310.1.15	Decomposition of organic matter with hydrogen peroxide	sample	30,-	40,-
310.1.16	Decomposition of carbonate with monochloroacetic acid	sample	45,-	55,-
310.1.17	Separation of clay fraction	sample	110	200
310.1.18	Sample saturation by ethylene glycol	sample	50	60
310.1.19	Sample heating	sample	60	70

Clean and ICP-MS/TIMS laboratory

Specifications for samples (price variations)/notes: Powdered samples for the analyses (200 mesh) should weigh at least 0.5 g and MUST be delivered in plastic bottles whose size reflects the amount of the sample. For the determination of highly siderophile elements (Os, Ir, Ru, Pd, Pt and Re) and ¹⁸⁷Os/¹⁸⁸Os isotopic ratios, we will request 0.2 to 5 g of material depending on the expected concentrations of these elements (rock matrix). For archeological materials and their Sr and Pb isotopic analyses, at least 20 mg and 0.2 g of material, respectively, is needed. The Re-Os dating of molybdenite usually needs 10 to 50 mg of material depending on the size of molybdenite crystals and expected Re contents. In general, all decomposition procedures and the type of the analyses should be consulted with laboratory staff listed below.

Solid samples for the laser ablation analyses should be prepared as rounded-polished sections (2.5 cm in diameter) and/or thin sections at least 150 μ m thick (300 μ m if possible). Exact positions of the analysed points need to be adjusted before the analyses; please consult the details on this with corresponding laboratory staff listed below.

The listed prices may vary depending on the amount of analysed samples, number of analysed elements, type of material, solution matrix etc. The prices include (depending on the type of service): measurement time, all consumables and data reduction.

Contact: Jana Ďurišová, <u>durisova@gli.cas.cz</u>, +420 233 087 212 (ICP-MS/LA-ICP-MS trace element and Pb isotopic analyses); Šárka Matoušková, <u>matouskov@gli.cas.cz</u>, +420 233 087 212 (ICP-MS trace element analyses, U-Pb carbonate geochronology, Pb isotopic analyses); Lukáš Ackerman, <u>ackerman@gli.cas.cz</u>, +420 233 087 240 (clean lab, highly siderophile element and Re-Os isotopic analyses, Re-Os geochronology, TIMS analyses); Martin Svojtka, <u>svojtka@gli.cas.cz</u>, +420 233 087 242 (LA-ICP-MS U-Pb geochronology and LA-ICP-MS trace element analyses); Jiří Sláma, <u>slama@gli.cas.cz</u>, +420 233 087 236 (LA-ICP-MS U-Pb geochronology and Lu-Hf geochronology isotopic analyses)

Code	Service / device	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Decomposition and separation protocols			
310.2.1	Decomposition of silicate rocks (HF + HNO ₃)	sample	250	400
310.2.2	Decomposition of silicate rocks (HF + HNO ₃) with fusion (e.g., zircon and/or spinel-bearing rocks)	sample	500	800
310.2.3	Decomposition of carbonate-rich rocks	sample	250	400
310.2.4	Decomposition of silicate rocks and/or sulphides for the determination of sulphur contents	sample	250	400



J1U.7.2	using isotopic dilution technique with a precision of <0.2 %)	Janiple	500	1,000
310.4.2	Re (determination of isotopic ratios for the concentration calculation	sample	500	1,000
310.4.1	Pb: ²⁰⁶ Pb / ²⁰⁷ Pb, ²⁰⁸ Pb / ²⁰⁶ Pb (precision < 0.5 %)	sample	500	1,000
510.5.2	Ge, As, Se, P) Solution isotopic ratios analyses	Junipic	1,000	2,000
310.3.2	Yb, Lu, Th, U) Middle/High mass resolution (Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga,	sample	400 –	600 –
310.3.1	Low mass resolution (Li, Be, Rb, Sr, Y, Cs, Ba, Zr, Hf, Nb, Ta, Pd, Ag, Cd, Sn, Sb, Te, Pt, Au, Tl, Pb, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm,	sample	300 – 1,000	500 – 2,000
	Solution trace element analyses			
	ICP-MS analyses (HR-ICP-MS Element 2)			
310.2.17	Re-Os geochronology of molybdenite (sample decomposition, determinations of Re and ¹⁸⁷ Os contents using N-TIMS, data processing); error on the determined age is in the range of 0.6–1.2 %	sample	12,500	22,000
	contents using isotopic dilution and TIMS and ¹⁴³ Nd/ ¹⁴⁴ Nd using TIMS; data processing).			
310.2.16	(decomposition of silicate rocks or minerals; Sm and Nd separation using ion exchange chromatography, determination of Sm and Nd	sample	5,500	8,900
	data processing. Sm-Nd geochronology and high-precision Sm-Nd analyses			
310.2.15	Decomposition of silicate- or carbonate-rich rocks; Sr, Nd and Pb separation using ion exchange chromatography, determination of 87Sr/86Sr, 143Nd/144Nd, 206Pb/204Pb, 207Pb/204Pb a 208Pb/204Pb using TIMS;	sample	6,500	9,800
310.2.14	separation using ion exchange chromatography, determination of ⁸⁷ Sr/ ⁸⁶ Sr and ¹⁴³ Nd/ ¹⁴⁴ Nd using TIMS; data processing.	sample	5,700	9,200
	processing. Decomposition of silicate- or carbonate-rich rocks; Sr and Nd			
310.2.13	Decomposition of archeological material (enamel, bones); Sr and Pb separation using ion exchange chromatography, determination of ⁸⁷ Sr/ ⁸⁶ Sr, ²⁰⁶ Pb/ ²⁰⁴ Pb, ²⁰⁷ Pb/ ²⁰⁴ Pb a ²⁰⁸ Pb/ ²⁰⁴ Pb using TIMS; data	sample	3,250	6,100
310.2.12	Decomposition of archeological material (enamel, bones) or carbonate; Sr separation using ion exchange chromatography, determination of ⁸⁷ Sr/ ⁸⁶ Sr using TIMS; data processing.	sample	2,550	4,200
310.2.11	ashing for C-rich samples); Mo separation by anion exchange chromatography; determination of stable Mo isotopic composition (δ^{98} Mo) a Mo content (isotopic dilution) using MC-ICPMS instrument; data processing.	sample	4,250	8,300
310.2.10	determination of Re, Os, Ir, Ru, Pd, Pt + anion exchange and CHCl ₃ separation + determination of Ir, Ru, Pd, Pt, Re contents by ICP-MS (isotopic dilution) + determination of Os content and ¹⁸⁷ Os/ ¹⁸⁸ Os by N-TIMS; data processing Decomposition of silicate or carbonate-rich rocks (including furnace	sample	6,500	11,000
310.2.9	Decomposition of SiO ₂ -rich silicate rocks (e.g., basalt) for the determination of Re, Os, Ir, Ru, Pd, Pt + anion exchange and CHCl ₃ separation + determination of Ir, Ru, Pd, Pt, Re contents by ICP-MS (isotopic dilution) + determination of Os content and ¹⁸⁷ Os/ ¹⁸⁸ Os by N-TIMS; data processing Decomposition of SiO ₂ -poor rocks (e.g., peridotite, chromitite) for the	sample	7,200	12,500
310.2.8	Silicate rock digestion, ion chromatography separation of Hf and Lu, determination of Hf isotopic composition (176Hf/177Hf) and precise Hf and Lu concentration (isotopic dilution) using MC-ICP-MS instrument; data processing	sample	4,000	8,000
310.2.7	Silicate rock digestion, ion chromatography separation of Hf, determination of Hf isotopic composition (176Hf/177Hf) and precise Hf concentration (isotopic dilution) using MC-ICP-MS instrument; data processing	sample	2,700	5,000
310.2.6	Silicate rock digestion, ion chromatography separation of Hf and determination of Hf isotopic composition (176Hf/177Hf) using MC-ICP-MS instrument; data processing	sample	2,000	4,000
310.2.5	Decomposition of silicate rocks and/or sulphides for the determination of Ir, Ru, Pd, Pt + anion exchange separation + determination of Ir, Ru, Pd, Pt contents by ICP-MS (isotopic dilution); data processing	sample	4,500	8,000



310.4.3	Re, Ir, Ru, Pd, Pt (determination of isotopic ratios for the concentration calculation using isotopic dilution technique with a precision of <0.2%)	sample	2,000	4,000
310.4.4	U-Th geochronology of carbonates using ICP-MS, sample decomposition will be accomplished by external laboratory – ING PAN Warsaw, will be charged together with ICP-MS measuring in total	sample	10,900	12,000
	Laser ablation ICP-MS analyses			
310.5.1	Laser ablation trace element ICP-MS analyses	hour	2,000	4,000
310.5.2	U-Pb zircon geochronology using laser ablation ICP-MS analyses	hour	2,000	4,000
	High-precision isotopic analyses using TIMS (Thermo Triton Plus)			
310.6.1	⁸⁷ Sr/ ⁸⁶ Sr isotopic analyses	sample	600,-	1,100
310.6.2	¹⁴³ Nd/ ¹⁴³ Nd isotopic analyses	sample	820,-	1,250
310.6.3	²⁰⁶ Pb/ ²⁰⁴ Pb, ²⁰⁷ Pb/ ²⁰⁴ Pb and ²⁰⁸ Pb/ ²⁰⁴ Pb isotopic analyses	sample	820,-	1,250
310.6.3	¹⁸⁷ Os/ ¹⁸⁸ Os isotopic analyses (N-TIMS technique)	sample	820,-	1,250

Fission track analysis (FTA) laboratory

Specifications for samples (price variations)/notes: The sampling (form and locality) should be consulted and agreed upon in advance with the laboratory staff. The listed prices do not include the separation of minerals.

Contact: Dagmar Kořínková, korinkova@gli.cas.cz, +420 233 087 216; Martin Svojtka, svojtka@gli.cas.cz, +420 233 087 242

FTA data can be usefully complemented by the follow-up time low-temperature (U-Th) / He (apatite, zircon) dating method using the Alphachron thermochronology instrument. The method is implemented by the Department of Neotectonics and Thermochronology at the Institute of Rock Structure and Mechanics (IRSM) of the Czech Academy of Sciences. The price of this opportune analysis and the associated sample preparation should be agreed upon with Dagmar Kořínková (korinkova@gli.cas.cz, +420 233 087 216) or directly after the consultation with the head of the laboratory at IRSM. Contact: Annika Szameitat, szameitat@irsm.cas.cz, +420 266 009 325

Code	Service / device	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Fission track dating and modelling of time-temperature curves			
310.7	Preparing of polished sections from separated minerals (apatite, zircon, titanite); irradiation of a sample in a nuclear reactor; sample preparation before analysis; fission track analysis; calculation of age and modelling results	sample	3,900	4,500

Field gamma-ray spectrometry

Specifications for samples (price variations)/notes: The client should be well prepared for fieldwork and should provide information needed for the evaluation of measurement difficulty and effectiveness prior to the onset of fieldwork, including the measurement interval, safety etc. (maps, photographic documentation of measured outcrops or strata where possible).

Contact: Leona Chadimová, chadimova@gli.cas.cz, +420 233 087 280

Code	Service / device	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Field gamma-ray spectrometry			
310.8	Measurements on GR-320 Exploranium; RS-230 BGO Super-SPEC Georadis	day (including an operator)	7,000	7,900



Soil/sedimentological descriptions and analyses

Specifications for samples (price variations)/notes: Please provide bulk samples for grain size and pH analyses (fraction below 1.5 mm) in amounts of at least 20 g. Micromorphological analyses are performed if the samples or thin sections are provided. For a full geoarchaeological description of the site it is preferred that the samples are collected in the field by a specialist. Field reconnaissance without further sampling will be charged based on the agreement.

Contact: Lenka Lisá, lisa@gli.cas.cz, +420 233 087 230

Code	Service / device	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Gran size analyses and pH			
310.9.1	Basic grain size analysis using Cillas 2000 laser analyser	sample	150	200
310.9.2	Grain size analysis without carbonates	sample	200	250
310.9.3	Grain size analysis without organic matter	sample	250	300
310.9.4	рН	sample	80	100
	Micromorphology			
310.9.5	Micromorphological description and interpretation of small-size thin sections (including sampling and thin section preparation)	thin section	2,000	2,500
310.9.6	Micromorphological description of thin section of mammoth size (including sampling and thin section preparation)	thin section	6,500	7,000
310.9.7	Micromorphological description of thin sections provided to the laboratory	thin section	3,000	3,500

Department of Paleobiology and Paleontology

Micropaleontological analyses

Specifications for samples (price variations)/notes: Samples have to be prepared in accordance with demands of the laboratory workers, see the contacts below.

Contacts: Ladislav Slavík, slavík@gli.cas.cz, +420 233 087 247; Jiří Bek, bek@gli.cas.cz, +420 233 087 264

Code	Service	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Palynological analysis			
330.1.1	Preparation of palynological sample (maceration)	sample	350	900
330.1.2	Palynological evaluation report	sample	500	1,100
	Conodont sample analysis			
330.1.3	Conodont sample maceration, preparation of residue	each 5 kg	1,000	2,300
330.1.4	Concentration of insoluble residue	see 310.1.7	see 310.1.7	see 310.1.7
330.1.5	Biostratigraphic analysis	sample	1,800	2,800



Department of Paleomagnetism

Specifications for samples (price variations)/notes: The samples must be acquired by the staff of the Department of Paleomagnetism, Institute of Geology, Czech Acad Sci, or by individuals trained by the staff.

The price for transport of the staff of the Department of Paleomagnetism to the sampling site and back and within the location, accommodation in the field and daily allowances are not included in the list price and will be calculated separately.

The prices of work on devices in the paleomagnetic lab for PhD students are calculated *ad hoc* based on the duration and type of work and the degree of needed assistance by trained staff of the Institute of Geology, Czech Acad Sci.

Sample specifications: the sample of solid rocks must be of one of the following shapes and dimensions: (1) a cube $2 \times 2 \times 2$ cm in size or (2) a cylinder 2.5 cm in diameter and 2.1 cm in height.

The sample of unconsolidated (loose) sediments/soils must be kept in a special non-magnetic plastic case (box) 6.7 cm³ in volume. The samples must be clean, compact, and free of any leaking water/liquids.

Sample transport by train, underground, trolleybus, and/or tramway must be avoided.

Contact: Tiiu Elbra, elbra@gli.cas.cz; Šimon Kdýr, kdyr@gli.cas.cz; tel.: +420 272 690 115, +420 773 071 208

Sample preparation for paleomagnetic and rock magnetic study

Code	Service/device	Unit	Non- Commercial (CZK)	Commercial (CZK)
360.1.1	Sampling	unit*	*	*
360.1.2	Acquisition of oriented hand sample	sample	60	80
360.1.3	Acquisition of drilled oriented sample	sample	130	150
360.1.4	Acquisition of loose oriented sample	sample	60**	80**
360.1.5	Mechanical treatment of hand sample (cutting, grinding)	sample cube	75	100
360.1.6	Mechanical treatment of hand sample (cutting)	sample cylinder	22	30
360.1.7	Mechanical treatment of hand sample (drilling, cutting)	sample cylinder	75	100
360.1.8	Magnetic separation using the Wolbach method	sample	130	160
360.1.9	Cutting of samples max. 11 cm in thickness	100 cm ²	40	not available

^{*}unit price includes: direct person/day costs (daily allowances according to CZ law + accommodation – multiplied by number of personnel involved in sampling) and costs of transport according to CZ law incl. car consumption and use per 1 km (car).

Paleomagnetic study

The table below gives the price for the first ten (pilot) samples; other samples are charged 75 % of the given price.

Specification of complex analyses:

RM measurement in thermal demagnetization – sample acquisition and cutting, 16 RM steps, 15 TD steps, 16 k steps.

RM measurement during alternating field demagnetization – sample acquisition and cutting, 14 RM steps, 13 AF steps, 1 k step.

Code	Service/device	Unit	Non- Commercial (CZK)	Commercial (CZK)
360.2.1	Remanent magnetization (RM) using the JR-5 or JR-6A Spinner Magnetometer	sample	70	90
360.2.2	Remanent magnetization (RM) using the Superconducting Rock Magnetometer	sample	140	180
360.2.3	Thermal demagnetization TD (MAVACS, MMTD80)	sample	45	60
360.2.4	Alternating field demagnetization AF (LDA -3A)	sample	20	30
360.2.5	Magnetic susceptibility k using KLF-4	sample	20	30
360.2.6	RM measurement in thermal demagnetization	analysis	2,100	2,700
360.2.7	RM measurement during alternating field demagnetization	analysis	1,400	1,860
360.2.8	Presentation of lithological sections and plotting of paleomagnetic diagrams	hour	Individual	450

^{**}plus price for plastic box (subject of change).



Study of rock magnetic properties

Code	Service/device	Unit	Non- Commercial (CZK)	Commercial (CZK)
360.3.1	Direct field magnetization	sample	20	30
360.3.2	Alternating field demagnetization AF (LDA -3A)	sample	20	30
360.3.3	Field dependence of magnetic susceptibility (MFK-1)	sample	150	200
360.3.4	Frequency dependence of magnetic susceptibility (MFK-1)	sample	150	200
360.3.5	Measurement and calculation of Köenigsberg Q parameter	sample	90	120
360.3.6	Temperature dependence of magnetic susceptibility up to +700 °C (CS-3)	sample	240	280
360.3.7	Temperature dependence of magnetic susceptibility in range -190°C–0°C (CS-L)	sample	250	270
360.3.8	Anisotropy of magnetic susceptibility (KLY-4A, MFK-1)	sample	280	300
360.3.9	Anisotropy of anhysteretic remanent magnetization (LDA5, PAM1, JR6)	sample	1,400	1,860
360.3.10	Standard magnetomineralogical analysis	analysis	2,000	2,500
360.3.11	Simplified magnetomineralogical analysis	analysis	1,850	2,300
360.3.12	Lowrie method	analysis	2,050	3,000
360.3.13	Acquisition of IRM including Kruiver analysis	analysis	1,300	1,600
360.3.14	Recording of magnetic properties to graphs and maps	hour	300	450

Other magnetic methods

Code	Service/device	Unit	Non- Commercial (CZK)	Commercial (CZK)
360.4.1	Vacuuming to 1x10-6 mbar (Pfeifer HiCube 80)	unit*	10,000	12,000
360.4.2	Measurement of magnetic field by Fluxgate magnetometer (Applied Physics FM 520 and/or C3MAG)	hour	500	600
360.4.3	Measurement of magnetic susceptibility in the field (SM30, KT-10)	hour	300	350

^{*}unit = 4 days-long process.



Department of Physical Properties of Rocks

Specifications for samples (price variations)/notes: The listed prices are approximate. The final price will be subject to consultation, depending on the number of samples, the amount of material, the type of rock, etc.

Contact: Matěj Petružálek, petruzalek@gli.cas.cz, +420 608 061 177; Tomáš Lokajíček, tl@gli.cas.cz, +420 603 439 096

Code	Service / device	Unit	Non- Commercial (CZK)	Commercial (CZK)
	Preparation of specimens			
370.1.1	Cutting of a rock block	specimen	150	260
370.1.2	Cube or prism preparation	specimen	500	865
370.1.3	Sawing of drilled core	specimen	300	520
370.1.4	Preparation of a cylindrical specimen (drilling, sawing, grinding)	specimen	400	690
370.1.5	Preparation of a spherical specimen (5 cm in diameter)	specimen	10,000	17,300
370.1.6	Preparation of a slab specimen	specimen	400	690
370.1.7	Diameter reduction by milling	specimen	400	690
370.1.8	Grinding the top and bottom of specimen	specimen	300	520
370.1.9	Cutting, drilling or milling without water cooling	specimen	450	780
	Strength tests			
370.1.10	Uniaxial compression test	test	400	690
370.1.11	Direct tension test	test	500	865
370.1.12	Simple shear test	test	400	690
370.1.13	Shear compression test	3 tests (different inclinations)	800	1,385
370.1.14	Brazilian tension test	test	300	520
370.1.15	Tensile strength (Bending test)	test	600	1,040
370.1.16	Triaxial test	test	2,500	4,325
	Determination of elastic properties	1000	_,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
370.1.17	Static elastic modulus from uniaxial compressive loading	test (1 loop)	1,000	1,730
370.1.18	Static elastic modulus from triaxial compressive loading	test (1 loop)	3,000	5,190
	Ultrasonic testing	, , ,		
370.1.19	P and S wave velocities, dynamic elastic modulus	1 transmission direction	300	520
370.1.20	P and S wave velocities, dynamic elastic modulus during uniaxial compressive loading	10 times during the test	3,000	5,190
370.1.21	Detailed P and S wave velocity anisotropy measured on a spherical specimen, full stiffness tensor (21 components), hydrostatic pressure up to 400 MPa	132 independent transmission directions, 7 pressure levels	30,000	51,900
	Index properties			
370.1.22	Grain density (specific gravity)	3 samples	300	520
370.1.23	Density (Buoyancy method)	3–5 specimens	250	435
370.1.24	Density (caliper method)	3–5 specimens	250	435
370.1.25	Water content	3–5 specimens	200	345
370.1.26	Water absorption	3–5 specimens	250	435
370.1.27	Porosity	3–5 specimens	800	1,385
370.1.28	Slate durability test	3–5 specimens	500	865
370.1.29	Swell index test	3–5 specimens	900	1,560
370.1.30	Permeability (coefficient of hydraulic conductivity)	specimen	2,000	3,460
	Other services			
370.1.31	Milling	500 g	300	520
370.1.32	Drying	24 hours	400	690
370.1.32	Particle size distribution (separation by sieving)	sample	600	1,040
370.1.33	Particle size distribution (separation by sedimentation)	sample	1,000	1,730



Information Centre and Library

Specifications for samples (price variations)/notes: The prices can change depending on current prices in co-operating libraries. **Contact:** library@gli.cas.cz; +420 233 087 272, +420 233 087 273

Service / method	Unit	Price (CZK)
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Interlibrary reprographic service within the CR as an electronic delivery of a printed copy via VPK – a scan of a printed document (for libraries only)	1 page	2 + copyright fee*
Interlibrary reprographic service within the CR as an electronic delivery of a printed	up to 7 pages	5 / page
copy via VPK – a copy from licensed online databases (for libraries only)	from 8 pages	2 / article
International interlibrary reprographic service (basal price – subject to change, specified by the requested library)	Every 10 pages	80
International interlibrary reprographic service (higher price – subject to change, specified by the requested library)	1 article	350
International interlibrary loan service (basal price)	1 volume	250
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Service / method	Ring diameter (mm)	Non-Commercial / Commercial (CZK)
Ring-binding machine OPERA 25 (format A4)	6	8 / 14
	8	8 / 15
	10	10 / 16
	12.5	10 / 17
	14	10 / 18
	16	11 / 20
	19	12 / 22
	22	13 / 24
	25	14 / 26
	32	19 / 28

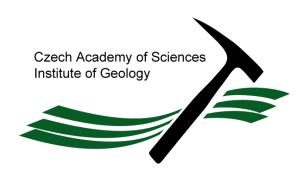
Service / method	Туре	Non-Commercial / Commercial (CZK)
Thermo-binding machine UniBinder 120 (format A4)	1; 2; 3; 5; 7 9; 12	28 / 35 29 / 36
	15	33 / 41
	18	36 / 44
	21	39 / 48

Expertises

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Thank you for your interest to co-operate





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English revised by J. Adamovič

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