

# PRICE LIST



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



**Edition 2023**

(prices are valid from January 1, 2023 till the new edition)

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## Introduction

Before the start of the work, it is recommended to read the requirements for samples submitted for the respective analyses, or to address the respective contact persons (in the order given in the booklet) to consult the details and the time needed for the analyses to be completed. The samples should be clearly labelled including a reference to the person responsible. Results of the analyses will be released, together with the spared/excess sample portions (if required), in the form agreed upon during the submission (printed reports, electronic outputs, etc.). The prices are tentative in some cases; ultimate prices depend on sample types, adjustments needed against the standard setup of laboratory devices, numbers of samples etc.

### 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	Price (CZK)
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 in Czech. <b>These prices are liable to VAT in compliance with regulations effective at the time of invoicing.</b>

### 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 electron beam analysis (scanning electron microscopy and chemical microanalysis)  
Laboratory of Raman and infrared 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 marked appropriately with a detailed description of the required type of processing. In general, it is strongly recommended to consult the sample processing directly with a technician. In the case of larger or repeated orders, it is possible to negotiate contractual prices.

**Contact:** Jaroslava Jabůrková, [jaburkova@gli.cas.cz](mailto:jaburkova@gli.cas.cz), +420 233 087 244; Roman Skála, [skala@gli.cas.cz](mailto:skala@gli.cas.cz), +420 233 087 249

Code	Service / product	Unit	Price (CZK)
380.1.1	Covered thin section, standard size	sample	400.-
380.1.2	Covered thin section, standard size, oriented	sample	500.-
380.1.3	Covered thin section, friable material	sample	550.-
380.1.4	Covered thin section, friable material, oriented	sample	600.-
380.1.5	Covered thin section, heavily friable material	sample	700.-
380.1.6	Polished thin section, standard size	sample	700.-
380.1.7	Polished thin section, standard size, friable	sample	800.-
380.1.8	Polished thin section from multiple grains, standard size	sample	800.-
380.1.9	Polished section, diameter of 2.5 cm (1 inch)	sample	550.-
380.1.10	Polished section, diameter of 2.5 cm (1 inch) from multiple grains	sample	700.-
380.1.11	Polished section, diameter of 3 cm	sample	600.-
380.1.12	Polished section, diameter of 3 cm from multiple grains	sample	800.-
380.1.13	Large thin section 4×3 cm	sample	price by agreement
380.1.14	Cutting & polishing of a plane	1 cm <sup>2</sup>	price by agreement
380.1.15	Re-polishing of (thin) sections	1 cm <sup>2</sup>	100.-
380.1.16	Modification of non-standard polished sections/thin sections for analysis by electron probe microanalyzer (see 380.2.2) or LA-ICP-MS (see 310.5.1, 310.5.2)	sample	price by agreement

### Laboratory of electron beam analysis (scanning electron microscopy and chemical microanalysis)

**Specifications for samples (price variations)/notes:** In case of complex or unusual systems, a surcharge may apply to cover the expenses associated with the development and tuning of specific analytical protocols. The type of samples and their preparation must be consulted with analysts before ordering work. For analyses using an electron microanalyzer (380.2.2) or elemental mapping (380.2.3), we recommend sample preparation in the form of polished (thin) sections at Inst Geol (see services 380.1.6 to 380.1.12). In the case of larger or repeated orders, it is possible to negotiate contractual prices.

**Contact:** Zuzana Korbellová, [korbellova@gli.cas.cz](mailto:korbellova@gli.cas.cz), +420 233 087 214; Noemi Mészárosová, [meszarosova@gli.cas.cz](mailto:meszarosova@gli.cas.cz); Eva Pecková, [peckova@gli.cas.cz](mailto:peckova@gli.cas.cz), +420 233 087 214; +420 233 087 256/214; Roman Skála, [skala@gli.cas.cz](mailto:skala@gli.cas.cz), +420 233 087 249

Code	Service / device	Unit	Price (CZK)
380.2.1	Scanning electron microscope <b>TESCAN VEGA3XMU</b> + energy dispersive X-ray spectrometer <b>Oxford Instruments Ultim Max 65 (EDS)</b>	hour	1,400.-
380.2.2	Electron probe microanalyzer (microprobe) <b>JEOL JXA-8230</b> with five wave-dispersive X-ray spectrometers (WDS), energy dispersive X-ray spectrometer (EDS) and panchromatic cathodoluminescence detector	hour	1,400.-
380.2.3	Elemental mapping of large areas of polished (thin) sections with Oxford Instruments Ultim Max EDS using Large Area Mapping (LAM) software. Typically taken overnight or over the weekend. Postprocessing is required (see 380.2.4)*	sample	500.-
380.2.4	Stitching of maps acquired with LAM (see 380.2.3)	sample	1,200.-
380.2.5	Carbon-coating of samples for chemical analyses (EDS or WDS) or for back-scattered electron (BSE) imaging†	sample	100.-
380.2.6	Gold-sputtering of samples for secondary electron (SE) imaging	sample	150.-

\*The minimum payment charged for the map collection is for 6 hours regardless of actual time spent by the mapping.

†In the case that the analyses/measurements are made out in our laboratory, the item is not charged.

### Laboratory of Raman and infrared 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.

Contact: Roman Skála, [skala@gli.cas.cz](mailto:skala@gli.cas.cz), +420 233 087 249; Noemi Mészárosová, [meszarosova@gli.cas.cz](mailto:meszarosova@gli.cas.cz), +420 233 087 256/214

Code	Service / device	Unit	Price (CZK)
380.3.1	Raman microspectrometer <b>S&amp;I MonoVista CRS+</b> (location and documentation of measurement spots, selection of suitable excitation laser wavelength, measurement conditions optimization, spectrum collection, etc.)	hour	1,400.-
380.3.2	Fourier-transform infrared (FTIR) spectrometer <b>Nicolet i550</b> . 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	1,400.-
380.3.3	Preparation of a KBr pellet	pellet	800.-
380.3.4	Identification of minerals with the RRUFF database	hour	1,400.-
380.3.5	Mathematic processing of spectra (baseline correction, band deconvolution)	spectrum	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  $\theta$ – $2\theta$  geometry with  $\text{CuK}\alpha_1$  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  $\mu\text{m}$  grain size, a surcharge of CZK 150 per sample is added to the price of the analysis. Sample weight must not be larger than 500 g. Samples for which the customer explicitly requests their return will be stored for a maximum of 2 months after the analysis has been performed; other samples will be discarded immediately after analysis. In the case of larger or repeated orders, it is possible to negotiate contractual prices.

Contact: Petr Mikysek, [mikysek@gli.cas.cz](mailto:mikysek@gli.cas.cz), +420 233 087 289; Roman Skála, [skala@gli.cas.cz](mailto:skala@gli.cas.cz), +420 233 087 249

Code	Service / device	Unit	Price (CZK)
380.4.1	Acquisition of preliminary overview pattern to optimize subsequent data collection strategy	pattern	400.-
380.4.2	Data collection for phase identification (typically in the range 3–70 $^{\circ}2\theta$ with a step width of 0.02 $^{\circ}2\theta$ and exposure of 1 s/step) <sup>¶</sup>	pattern	600.-
380.4.3	Data acquisition of oriented specimens for clay mineral identification (normally in the range 2–40 $^{\circ}2\theta$ with a step width of 0.017 $^{\circ}2\theta$ and exposure of 0.8 s/step) <sup>**</sup>	pattern	600.-
380.4.4	Data collection for microstructure analysis, unit-cell dimension refinement, (semi)quantitative analysis or quantitative analysis or crystal structure refinement with the Rietveld method or data collection based on customer request	pattern	price by agreement
380.4.5	Change of diffractometer configuration	once-time payment	10,000.-
380.4.6	Basic pattern evaluation – calculation of d's & l's	sample	200.-
380.4.7	Identification of clay minerals <sup>‡</sup>	sample	800.-
380.4.8	Qualitative phase analysis	sample	600.-
380.4.9	Semi-quantitative phase analysis of a mixture by the DIFFRAC.EVA <sup>#</sup> program	sample	1,000.-
380.4.10	Quantitative phase analysis of a mixture by the Rietveld method <sup>&amp;</sup>	sample	price by agreement
380.4.11	Other types of data handling/processing	sample	price by agreement

<sup>¶</sup>In the case that the data collection requires, based on the results of the preliminary overview diffraction pattern (380.4.1), a setting resulting in total experimental time exceeding 90 minutes, an extra payment of CZK 400 may be charged for each additional hour of data acquisition.

<sup>\*\*</sup>Normally, for clay mineral identification, two or three separate diffraction patterns are required for each sample; 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 a potential third pattern is acquired after heating the sample to 550  $^{\circ}\text{C}$

<sup>‡</sup>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 Separation of clay fraction / Sample saturation by ethylene glycol / Sample heating of the Laboratory of mineral separation (see services 310.1.17 / 310.1.18 / 310.1.14)

<sup>#</sup>Identification of clay minerals requires a collection of diffraction patterns of oriented specimens (see 380.4.3)

<sup>&</sup>The method requires that the corundum number for each phase in the mixture is available in the ICDD PDF2 database

<sup>&</sup>The method requires that the structure model is known for each phase in the mixture; the results may be negatively influenced by a 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.

**Contact:** Jan Rohovec, [rohovec@gli.cas.cz](mailto:rohovec@gli.cas.cz), +420 233 087 258; Šárka Matoušková, [matouskov@gli.cas.cz](mailto:matouskov@gli.cas.cz), +420233 087 212; Tomáš Navrátil, [navratilt@gli.cas.cz](mailto:navratilt@gli.cas.cz), +420 233 087 222

Code	Service / device	Matrix / material	Unit	Price (CZK)
	<b>Basic sample workup before analysis</b>			
340.352.1	Filtration through a 0.45 µm RC-disc	aqueous solution	sample	75.-
340.352.2	Filtration through a 0.45 µm (glass fiber disc)	aqueous solution	sample	90.-
340.352.3	Filtration through a paper filter (blue strip type)	aqueous solution	sample	70.-
340.352.4	Centrifugation of a liquid sample, 50 ml Apollo vial	aqueous solution	sample	30.-
	<b>Drying, homogenization, calcination</b>			
340.351.1	Lyophilization of a liquid sample or suspension	liquid or solid material	sample	600.-
340.346.1	Drying (overnight, dryer at 105 °C)	solid	sample	80.-
340.346.2	Water loss after drying at 105 °C in a dryer, overnight	solid, powdered	sample	100.-
340.346.3	Calcination at 550 °C	solid, powdered	sample	180.-
340.346.4	Weight loss after drying at 900 °C in an oven (LOI)	solid, powdered	sample	180.-
	<b>Milling, oscillating mill</b>			
340.330.1	Milling vessels: steel	solid	sample	420.-
340.330.2	Milling vessels: zirconia, without contamination with metals	solid	sample	450.-
340.330.3	Microscale milling; vessels: zirconia	solid	sample	500.-
340.330.4	Cryo-milling, T=77 K (liquid N <sub>2</sub> ), vessels: steel	solid	sample	800.-
	<b>Milling, agate ball mill</b>			
340.346.5	Sample homogenisation in an agate mill	solid	sample	150.-

Code	Service / device	Matrix / material	Unit	Price (CZK)
	<b>Sample decomposition</b>			
340.346.10	Sample decomposition, mixture of HNO <sub>3</sub> and HF in a PTFE beaker	solid, powdered, homogenised	sample	350.-
340.346.20	Sample decomposition, mixture of ultrapure HNO <sub>3</sub> and HF in a PTFE vessel at normal pressure, for trace element analysis	solid, powdered, homogenised	sample	500.-
340.346.30	Sample decomposition in a mixture of HNO <sub>3</sub> and HF, pressure ampoule, microwave oven	solid, powdered, homogenised	sample	800.-

Code	Service / device	Matrix / material	Unit	Price (CZK)
	<b>Soil and sediments analyses</b>			
340.348.1	Extraction according to the Mehlich III protocol. Element analyses please see 340.350.1	solid, powdered, homogenised	sample	150.-
340.348.2	Extraction with buffered oxalate according to Tamm. Element analyses please see 340.350.1	solid, powdered, homogenised	sample	150.-
340.348.3	Extraction with buffered citrate (pH 8.5). Element analyses please see 340.350.1	solid, powdered, homogenised	sample	150.-
340.348.4	Determination of leachable calcium and phosphate, extraction with aq. HCl	solid, powdered, homogenised	sample	420.-
340.348.5	Determination of pH (active, in suspension)	soil, sieved	sample	100.-
340.348.6	Determination of pH (exchangeable, KCl)	soil, sieved	sample	100.-
340.348.7	Determination of cationic exchange capacity (Na, K, Mg, Ca) with ammonium acetate	soil, sieved	sample	250.-
340.348.8	Determination of CEC with barium chloride according to the Mehlich procedure, pH 8.1	soil, sieved	sample	250.-
340.348.9	Determination of effective sorption capacity ECEC (Na, K, Mg, Ca)	soil, sieved	sample	200.-
340.348.10	Determination of exchangeable acidity in the extract	soil, sieved	sample	120.-



340.348.11	Extraction of powdered solid sample with aqua regia. Element analyses please see 340.350.1	solid, powdered, homogenised	sample	130.-
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Code	Service / device	Matrix / material	Unit	Price (CZK)
	<b>Electrochemical analyses</b>			
340.352.5	Determination of pH (natural water)	aqueous solution	sample	50.-
340.352.6	Determination of conductivity (natural water)	aqueous solution	sample	50.-
340.352.7	Determination of fluoride (ISE)	aqueous solution	sample	50.-

Code	Service / device	Matrix / material	Unit	Price (CZK)
	<b>Determination of anions using technique of high-pressure liquid chromatography – HPLC</b>			
340.352.8	Simultaneous determination of chloride, sulphate and nitrate	not acidified aqueous solution freshly filtered through a 0.45µm filter	sample	220.-

Code	Service / device	Matrix / material	Unit	Price (CZK)
	<b>Granulometry</b>			
340.G.1	Basic granulometric analysis on a laser granulometer	particle size to 1 mm	sample	300.-
340.G.2	Granulometric analysis of a carbonate free sample	particle size to 1 mm	sample	300.-
340.G.3	Granulometric analysis of a sample without organic mas	particle size to 1 mm	sample	300.-
340.G.4	Sample workup for granulometric study - decomposition of organic compounds in hydrogen peroxide	particle size to 1 mm	sample	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.

**Contact:** Jan Rohovec, [rohovec@gli.cas.cz](mailto:rohovec@gli.cas.cz), +420 233 087 258; Šárka Matoušková, [matouskov@gli.cas.cz](mailto:matouskov@gli.cas.cz), +420 233 087 212; Tomáš Navrátil, [navratil@gli.cas.cz](mailto:navratil@gli.cas.cz), +420 233 087 222

Code	Service / device	Matrix	Unit	Price (CZK)
	<b>ICP OES: optical emission spectroscopy with inductively coupled plasma</b>	filtered liquid solution, 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	480.-
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.-
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.-

Code	Service / device	Matrix	Unit	Price (CZK)
	<b>Determination of mercury by CV AAS technique in a solid sample</b>			
340.351.10	Determination of total mercury, THg content in the range of 0.2 ng·g <sup>-1</sup> to 150 ng·g <sup>-1</sup> of the sample	solid, homogenised powdered	sample	150.-
340.351.20	Determination of total mercury, THg content over 150 ng·g <sup>-1</sup> of the sample	solid, homogenised powdered	sample	180.-
340.351.30	Determination of total mercury, THg in solid sample containing sulphur	solid, homogenised	sample	200.-
	<b>Ultra trace total mercury determination by CV AFS technique in a liquid sample</b>			
340.351.40	Determination of total mercury by CV AFS, limit of quantification 0.25 ppt Hg	liquid, stabilised sample, non-foaming	sample	650.-
	<b>Determination of gaseous Hg<sup>0</sup></b>			
340.351.50	Determination of gaseous mercury Hg <sup>0</sup> in the atmosphere by a portable mercury-meter at the site	atmosphere at the measurement site	1 hour + travel expenses	600.- + travel expenses



Code	Service / device	Matrix	Unit	Price (CZK)
	<b>Speciation analyses</b>			
340.347.1	<b>Speciation analysis of Al using PCV technique (covering 3 items below)</b>	liquid solution with no pH adjustment and no stabilisation	sample	900.-
	Monomeric organic Al			
	Total monomeric Al			
	Acid soluble Al			
340.347.2	<b>Speciation analysis of sulphur (covering 4 items below)</b>	solid homogeneous powdered	sample	2,500.-
	Ionic, exchangeable sulphate	as above		
	Organically bound sulphate	as above		
	Organically bound sulphide sulphur (reduced)	as above		
	Total content of sulphur (ICP OES)	as above		
340.347.3	<b>Speciation analysis of iron (covering 3 items below)</b>	liquid stabilised solution	sample	300.-
	Determination of bivalent Fe (UV VIS)	as above		
	Determination of trivalent Fe (UV VIS)	as above		
	Determination of total Fe (ICP EOS)	as above		
	<b>Speciation analysis of phosphorus:</b>			
340.347.4	Simplified fractionation: inorganic phosphate, organically bound phosphate (2 fractions in total)	solid homogeneous powdered	sample	500.-
340.347.5	Phosphate fractionation: exchangeable, Al/Fe oxyhydroxide bound, organically bound, apatite phosphate (4 fractions in total)	solid homogeneous powdered	sample	900.-

Code	Service / device	Matrix	Unit	Price (CZK)
	<b>UV VIS spectrometry</b>			
340.349.1	Determination of absorbance without adding an auxiliary reagent	turbidity-free aqueous solution	sample	100.-
340.349.2	Determination of absorbance at 410 nm	turbidity-free aqueous solution	sample	100.-
340.349.3	Determination of absorbance at 254 nm	turbidity-free natural water	sample	100.-
340.349.4	Determination of ferrous cation	stabilized, turbidity-free aqueous solution	sample	120.-
340.349.5	Determination of phosphate through phosphomolybdenane	liquid, acidified, filtered	sample	120.-
340.349.6	Determination of sulphide	stabilized, turbidity-free aqueous solution	sample	120.-
340.349.7	Determination of ammonium ion	acidified, turbidity-free aqueous solution	sample	120.-

Code	Service / device	Matrix	Unit	Price (CZK)
	<b>Differential thermal analysis and differential scanning calorimetry, without interpretation</b>			
340.349.11	Determination in corundum crucibles in air atmosphere, temperature range 20–1000 °C. DTA and DSC record	solid, powdered, homogenised	sample	1,450.-
340.349.12	Determination in platinum crucibles in Ar atmosphere, temperature range 20–700 °C. DTA and DSC record	solid, powdered, homogenised	sample	1,800.-
340.349.13	Special works according to customer request	solid, powdered, homogenised	sample	Please contact dr. Matoušková

Code	Service / device	Matrix	Unit	Price (CZK)
	<b>Determination of inorganic, organic and total carbon - DOC, IC, TOC</b>			
340.349.20	Determination of dissolved organic carbon (DOC) in a liquid sample	aqueous solution	sample	350.-
340.349.21	Determination of total organic carbon (TOC) in a liquid sample	aqueous solution	sample	350.-
340.349.22	Determination total carbon (TC) in solid sample	solid, powdered,	sample	800.-





		homogenised		
340.349.23	Determination of total inorganic carbon (IC) in a solid sample after decomposition with H <sub>3</sub> PO <sub>4</sub> (e.g., cave materials, industrially mined rocks)	solid, powdered, homogenised	sample	800.-
340.349.24	Determination of total organic carbon (TOC) in a solid sample of geological origin (e.g., slate, shale, coal, carbonaceous rocks)	solid, powdered, homogenised	sample	850.-

Code	Service / device	Matrix	Unit	Price (CZK)
	<b><i>Simultaneous determination of C, H, N, S</i></b>			
340.349.30	Determination of total organic C, H, N, S content; typical for biomass, soil, environmental samples	solid, powdered, homogenised	sample	360,-

## Department of Paleobiology and Paleoecology

### 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, [slavik@gli.cas.cz](mailto:slavik@gli.cas.cz), +420 233 087 247; Jiří Bek, [bek@gli.cas.cz](mailto:bek@gli.cas.cz), +420 233 087 264

Code	Service	Unit	Price (CZK)
	<b><i>Palynological analysis</i></b>		
330.1.1	Preparation of palynological sample (maceration)	sample	900.-
330.1.2	Palynological evaluation report	sample	1,100.-
	<b><i>Conodont sample analysis</i></b>		
330.1.3	Conodont sample maceration, preparation of residue	each 5 kg	2,300.-
330.1.4	Concentration of insoluble residue	see 310.1.7	see 310.1.7
330.1.5	Biostratigraphic analysis	sample	2,800.-



## 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:** Lucie Mrázková, [mrazkova@gli.cas.cz](mailto:mrazkova@gli.cas.cz) or Martin Šťastný, [stastny@gli.cas.cz](mailto:stastny@gli.cas.cz), +420 233 087 233, +420 233 087 285. For rock block cutting with diamond cutting discs (310.1.20): Ladislav Polák, [polakl@gli.cas.cz](mailto:polakl@gli.cas.cz), +420 233 087 212; Michal Roll, [roll@gli.cas.cz](mailto:roll@gli.cas.cz), +420 233 087 233; Šimon Kdýr, [kdyr@gli.cas.cz](mailto:kdyr@gli.cas.cz), +420 272 690 115.

Code	Service	Unit	Price (CZK)
310.1.1	Crushing	each 5 kg	120.-
310.1.2	Draining	each 5 kg	80.-
310.1.3	Drying	each 5 kg	45.-
310.1.4	Floating	each 5 kg	100.-
310.1.5	Sieving	each 5 kg	140.-
310.1.6	Magnetic separation	each 5 kg	250.-
310.1.7	Separation in bromoform	each 100 g	200.-
310.1.8	Separation in methylene iodide	each 5 g	200.-
310.1.9	Separation in Clerici solution	each 5 g	220.-
310.1.10	Purification by centrifugation in heavy liquids	each 2 g	140.-
310.1.11	Purification in magnetic separator	each 3 g	90.-
310.1.12	Grinding for analytic methods	sample	190.-
310.1.13	Annealing of sample under 105 °C	sample	45.-
310.1.14	Annealing of sample under 550 °C	sample	80.-
310.1.15	Decomposition of organic matter with hydrogen peroxide	sample	130.-
310.1.16	Decomposition of carbonate with monochloroacetic acid	sample	45.-
310.1.17	Separation of clay fraction	sample	110.-
310.1.18	Sample saturation by ethylene glycol	sample	50.-
310.1.19	Sample heating	sample	60.-
310.1.20	Rock block cutting	hour	1,000.-

### 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 <sup>187</sup>Os/<sup>188</sup>Os isotopic ratios, we request 0.2 to 5 g of material depending on the expected concentrations of these elements (rock matrix). For archaeological materials and their Sr and Pb isotopic analyses, at least 20 mg and 0.2 g of material, respectively, are needed. The Re-Os dating of molybdenite usually requires 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 µm thick (300 µm if possible). Exact positions of the analysed points need to be adjusted before the analyses; please consult the details on this with the corresponding laboratory staff listed below.

The listed prices may vary depending on the amounts of analysed samples, the number of analysed elements, type of material, solution matrix etc.

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

Code	Service / device	Unit	Price (CZK)
	<b>Decomposition and separation protocols</b>		
310.2.1	Decomposition of silicate rocks (HF + HNO <sub>3</sub> )	sample	480.-
310.2.2	Decomposition of silicate rocks (HF + HNO <sub>3</sub> ) with fusion (e.g., zircon and/or spinel-bearing rocks)	sample	750.-
310.2.3	Decomposition of carbonate-rich rocks	sample	300.-
310.2.4	Decomposition of silicate rocks and/or sulphides for the determination of sulphur contents	sample	420.-
310.2.5	Decomposition of silicate rocks and/or sulphides for the determination of Ir, Ru, Pd,	sample	5,200.-



	Pt + anion exchange separation + determination of Ir, Ru, Pd, Pt contents by ICP-MS (isotopic dilution); data processing		
310.2.6	Silicate rock digestion, ion chromatography separation of Hf and determination of Hf isotopic composition ( $^{176}\text{Hf}/^{177}\text{Hf}$ ) using MC-ICP-MS instrument; data processing	sample	2,500.-
310.2.7	Silicate rock digestion, ion chromatography separation of Hf, determination of Hf isotopic composition ( $^{176}\text{Hf}/^{177}\text{Hf}$ ) and precise Hf concentration (isotopic dilution) using MC-ICP-MS instrument; data processing	sample	3,500.-
310.2.8	Silicate rock digestion, ion chromatography separation of Hf and Lu, determination of Hf isotopic composition ( $^{176}\text{Hf}/^{177}\text{Hf}$ ) and precise Hf and Lu concentration (isotopic dilution) using MC-ICP-MS instrument; data processing	sample	4,800.-
310.2.9	Decomposition of $\text{SiO}_2$ -rich silicate rocks (e.g., basalt) for the determination of Re, Os, Ir, Ru, Pd, Pt + anion exchange and $\text{CHCl}_3$ separation + determination of Ir, Ru, Pd, Pt, Re contents by ICP-MS (isotopic dilution) + determination of Os content and $^{187}\text{Os}/^{188}\text{Os}$ by N-TIMS; data processing	sample	8,100.-
310.2.10	Decomposition of $\text{SiO}_2$ -poor rocks (e.g., peridotite, chromitite) for the determination of Re, Os, Ir, Ru, Pd, Pt + anion exchange and $\text{CHCl}_3$ separation + determination of Ir, Ru, Pd, Pt, Re contents by ICP-MS (isotopic dilution) + determination of Os content and $^{187}\text{Os}/^{188}\text{Os}$ by N-TIMS; data processing	sample	8,100.-
310.2.11	Decomposition of silicate or carbonate-rich rocks (including furnace ashing for C-rich samples); Mo separation by anion exchange chromatography; determination of stable Mo isotopic composition ( $\delta^{98}\text{Mo}$ ) a Mo content (isotopic dilution) using MC-ICPMS instrument; data processing	sample	5,050.-
310.2.12	Decomposition of silicate rocks (fusion); Si separation by ion exchange chromatography; determination of Si isotopic composition ( $\delta^{30}\text{Si}$ ) by MC-ICPMS instrument, data processing	sample	5,800.-
310.2.13	Decomposition of archeological material (enamel, bones) or carbonate; Sr separation using ion exchange chromatography, determination of $^{87}\text{Sr}/^{86}\text{Sr}$ using TIMS; data processing	sample	2,820.-
310.2.14	Decomposition of archeological material (e.g., metal artefacts, slag) for the determination of Re, Os + anion exchange and $\text{CHCl}_3$ separation + determination of Re contents by ICP-MS (isotopic dilution) + determination of Os content and $^{187}\text{Os}/^{188}\text{Os}$ by N-TIMS; data processing	sample	5,700.-
310.2.15	Decomposition of archeological material (enamel, bones); Sr and Pb separation using ion exchange chromatography, determination of $^{87}\text{Sr}/^{86}\text{Sr}$ , $^{206}\text{Pb}/^{204}\text{Pb}$ , $^{207}\text{Pb}/^{204}\text{Pb}$ a $^{208}\text{Pb}/^{204}\text{Pb}$ using TIMS; data processing	sample	4,200.-
310.2.16	Decomposition of silicate- or carbonate-rich rocks; Sr and Nd separation using ion exchange chromatography, determination of $^{87}\text{Sr}/^{86}\text{Sr}$ and $^{143}\text{Nd}/^{144}\text{Nd}$ using TIMS; data processing	sample	5,700.-
310.2.17	Decomposition of silicate- or carbonate-rich rocks; Sr, Nd and Pb separation using ion exchange chromatography, determination of $^{87}\text{Sr}/^{86}\text{Sr}$ , $^{143}\text{Nd}/^{144}\text{Nd}$ , $^{206}\text{Pb}/^{204}\text{Pb}$ , $^{207}\text{Pb}/^{204}\text{Pb}$ a $^{208}\text{Pb}/^{204}\text{Pb}$ using TIMS; data processing	sample	7,200.-
310.2.18	Decomposition of silicate rock or biological material; Cd separation by anion exchange chromatography; determination of stable Cd isotopic composition ( $\delta^{114}\text{Cd}$ ) and Cd content (isotopic dilution) using TIMS instrument; data processing	sample	4,700.-
310.2.19	<b>Sm-Nd geochronology and high-precision Sm-Nd analyses</b> (decomposition of silicate rocks or minerals; Sm and Nd separation using ion exchange chromatography, determination of Sm and Nd contents using isotopic dilution and TIMS and $^{143}\text{Nd}/^{144}\text{Nd}$ using TIMS; data processing)	sample	5,500.-
310.2.20	<b>Re-Os geochronology of molybdenite</b> (sample decomposition, determinations of Re and $^{187}\text{Os}$ contents using N-TIMS, data processing); error on the determined age is in the range of 0.6–1.2%	sample	12,500.-
<b>ICP-MS analyses (HR-ICP-MS Element 2)</b>			
<b>Solution trace element analyses</b>			
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, Yb, Lu, Th, U)	sample	300–1,000.-
310.3.2	Middle/High mass resolution (Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, P)	sample	400–1,000.-
<b>Solution isotopic ratios analyses</b>			
310.4.1	Pb: $^{206}\text{Pb}/^{207}\text{Pb}$ , $^{208}\text{Pb}/^{206}\text{Pb}$ (precision <0.5 %)	sample	800.-
310.4.2	Re (determination of isotopic ratios for the concentration calculation using isotopic dilution technique with a precision of <0.2 %)	sample	800.-
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	2,400.-



310.4.4	<b>U-Th geochronology of carbonates using ICP-MS</b> , sample decomposition will be accomplished by external laboratory – ING PAN Warsaw, will be charged together with ICP-MS measuring in total	sample	10,900.-
	<b>Laser ablation ICP-MS analyses</b>		
310.5.1	Laser ablation trace element ICP-MS analyses	hour	2,400.-
310.5.2	U-Pb zircon geochronology using laser ablation ICP-MS analyses	hour	2,400.-
	<b>High-precision isotopic analyses using TIMS (Thermo Triton Plus)</b>		
310.6.1	<sup>87</sup> Sr/ <sup>86</sup> Sr isotopic analyses	sample	600.-
310.6.2	<sup>143</sup> Nd/ <sup>144</sup> Nd isotopic analyses	sample	1,250.-
310.6.3	<sup>206</sup> Pb/ <sup>204</sup> Pb, <sup>207</sup> Pb/ <sup>204</sup> Pb and <sup>208</sup> Pb/ <sup>204</sup> Pb isotopic analyses	sample	1,250.-
310.6.3	<sup>187</sup> Os/ <sup>188</sup> Os isotopic analyses (N-TIMS technique)	sample	1,250.-

### Fission track analysis (FTA) laboratory

**Specifications for samples (price variations)/notes:** The clients may deliver bulk rock samples and use the Laboratory of mineral separation (see 310.1.1 – 310.1.20), or already separated apatite grains. The details need to be consulted and agreed upon in advance with the laboratory staff. The price below does not include potential mineral separation.

**Contact:** Dagmar Kořínková, [korinkova@gli.cas.cz](mailto:korinkova@gli.cas.cz), +420 233 087 216; Martin Svojtka, [svojtka@gli.cas.cz](mailto:svojtka@gli.cas.cz), +420 233 087 242

FTA data can be effectively complemented by follow-up time from the Low-temperature (U-Th)/He (apatite, zircon) dating method using the Alphachron thermochronology instrument. This method is implemented by the Department of Neotectonics and Thermochronology at the Institute of Rock Structure and Mechanics of the Czech Academy of Sciences. The price of analyses and associated sample preparation must be consulted directly with the head of the laboratory: Erhan Gülyüz, [gulyuz@irms.cas.cz](mailto:gulyuz@irms.cas.cz), +420 266 009 325) or Ivana Kolesárová ([kolesarova@irms.cas.cz](mailto:kolesarova@irms.cas.cz), +420 266 009 322)

Code	Service / device	Unit	Price (CZK)
	<b>Fission track dating and modelling of time-temperature curves</b>		
310.7	Preparation of polished sections from separated minerals (apatite); etching of samples and preparation for analysis, fission track analysis, age calculation using ICP-MS and modelling of results	sample	6,000.-

### 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](mailto:chadimova@gli.cas.cz), +420 233 087 280

Code	Service / device	Unit	Price (CZK)
	<b>Field gamma-ray spectrometry</b>		
310.8	Measurements on GR-320 Exploranium; RS-230 BGO Super-SPEC Georadis	day (including an operator)	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](mailto:lisa@gli.cas.cz), +420 233 087 230

Code	Service / device	Unit	Price (CZK)
	<b>Gran size analyses and pH</b>		
310.9.1	Basic grain size analysis using Cillas 2000 laser analyser	sample	320.-
310.9.2	Grain size analysis without carbonates	sample	320.-
310.9.3	Grain size analysis without organic matter	sample	320.-
310.9.4	pH	sample	100.-
	<b>Micromorphology</b>		
310.9.5	Micromorphological description and interpretation of small-size thin sections (including sampling and thin section preparation)	thin section	2,500.-
310.9.6	Micromorphological description of thin section of mammoth size (including sampling and thin section preparation)	thin section	8,200.-
310.9.7	Micromorphological description of thin sections provided to the laboratory	thin section	3,100.-





## Department of Paleomagnetism

**Specifications for samples (price variations)/notes:** Specifications for rock samples: 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. Travel expenses of the Department of Paleomagnetism staff are not included in the price list and will be calculated separately according to the sampling location. Samples of solid rocks for analyses must have one of the following shapes and dimensions: (1) a cube 2x2x2 cm in size or (2) a cylinder 2.5 cm in diameter and 2.1 cm in length. Samples of unconsolidated (loose) sediments/soils must be placed in a special non-magnetic plastic box with a volume of 6.7 cm<sup>3</sup>.

*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.*

Price of instrument usage for PhD students measuring their samples in the paleomagnetic lab will be calculated on an *ad hoc* basis depending on the duration and type of work and the degree of needed assistance by the trained staff of the Institute of Geology, Czech Acad Sci.

**Contact:** Lada Kouklikova, [kouklikova@gli.cas.cz](mailto:kouklikova@gli.cas.cz); Šimon Kdýr, [kdyr@gli.cas.cz](mailto:kdyr@gli.cas.cz); +420 725 261 015, +420 773 071 208

### Sample preparation for paleomagnetic and rock magnetic study

Code	Service/device	Unit	Price (CZK)
360.1.1	Sampling	unit*	*
360.1.2	Acquisition of oriented hand sample	sample	80.-
360.1.3	Acquisition of drilled oriented sample	sample	160.-
360.1.4	Acquisition of loose oriented sample	sample	80.-**
360.1.5	Mechanical preparation of a rock sample into cube samples (1)	sample cube	110.-
360.1.6	Mechanical preparation of a 2.5 cm diam. core sample into cylinder samples (2)	sample cylinder	30.-
360.1.7	Mechanical preparation of a rock sample into cylinder samples (2)	sample cylinder	90.-
360.1.8	Magnetic separation using the Wolbach method	sample	160.-

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

\*\*plus the price for a plastic box (subject to change).

### Paleomagnetic study

The table below shows prices for the first ten (pilot) samples; for additional samples 75% of the price will be charged.

**Specification of complex analyses:**

**RM measurement during a thermal demagnetization** – sample cutting, 17 RM steps, 16 TD steps, 17 k step.

**RM measurement during alternating field demagnetization** – sample cutting, 15 RM steps, 14 AF steps, 1 k step.

Code	Service/device	Unit	Price (CZK)
360.2.1	Remanent magnetization (RM) using the JR-5 or JR-6A Spinner Magnetometer	step	90.-
360.2.2	Remanent magnetization (RM) using the Superconducting Rock Magnetometer	step	180.-
360.2.3	Thermal demagnetization TD (MAVACS, MMTD80)	step	60.-
360.2.4	Alternating field demagnetization AF (LDA -5A)	step	30.-
360.2.5	Magnetic susceptibility <i>k</i> using KLF-3A	step	30.-
360.2.6	RM measurement during thermal demagnetization	analysis	2,650.-
360.2.7	RM measurement during alternating field demagnetization	analysis	1,750.-
360.2.8	Interpretation of paleomagnetic data and creation of graphical outputs	hour	750.-

### Study of rock magnetic properties

The table shows prices for the first ten (pilot) samples, for additional samples 75 % of the price will be charged.

**Specification of complex analyses:**

**Standard magnetomineralogical analysis** – sample cutting, 36 RM steps, 24 DC field magnetization steps, 12 AF steps, dependence of magnetic susceptibility on high temperature (CS-3) and low temperature (CS-L).

**Simplified magnetomineralogical analysis** – sample cutting, 36 RM steps, 24 DC field magnetization steps, 12 AF steps, high temperature magnetic susceptibility dependence (CS-3)

**Lowrie method 3 IRM acquisition steps** – 17 RM steps, 16 TD steps, 17 k steps

**Kruiver's IRM acquisition curve analysis** – 24 RM steps, 24 DC field magnetization steps

Code	Service/device	Unit	Price (CZK)
360.3.1	Direct field magnetization	step	30.-
360.3.2	Alternating field demagnetization AF (LDA -5A)	step	30.-



360.3.3	Anhysteresis magnetization on LDA-5A/PAM1	step	30.-
360.3.4	Field-dependent magnetic susceptibility (MFK-1)	analysis	50.-
360.3.5	Frequency dependence of magnetic susceptibility (MFK-1)	analysis	50.-
360.3.6	Measurement and calculation of Königsberg Q parameter	analysis	110.-
360.3.7	Temperature dependence of magnetic susceptibility up to +700 °C (CS-3)	analysis	1,230.-
360.3.8	Temperature dependence of magnetic susceptibility in range of -190 – 0 °C (CS-L)	analysis	1,230.-
360.3.9	Anisotropy of magnetic susceptibility (KLY-4A, MFK-1)	analysis	60.-
360.3.10	Anisotropy of anhysteretic remanent magnetization (LDA5, PAM1, JR6)	analysis	880.-
360.3.11	Standard magnetomineralogical analysis	analysis	3,630.-
360.3.12	Simplified magnetomineralogical analysis	analysis	2,750.-
360.3.13	Lowrie method	analysis	2,750.-
360.3.14	Acquisition of IRM including Kruiver analysis	analysis	1,880.-
360.3.15	Interpretation of magnetomineralogical data and creating graphic outputs	hour	750.-

### Other magnetic methods

Notes: Inst Geol staff members can borrow the SM-30 magnetic susceptibility meter free of charge.

Code	Service/device	Unit	Price (CZK)
360.4.1	Vacuuming to $1 \times 10^{-6}$ mbar (Pfeifer HiCube 80)	process*	12,000.-
360.4.2	Measurement of magnetic field by Fluxgate magnetometer (Applied Physics FM 520 and/or C3MAG), measurement with an operator not including travel expenses	hour	750.-
360.4.3	Measurement of magnetic susceptibility in the field (SM30, KT-10) measurement with an operator not including travel expenses	hour	370.-

\* 4 days-long lasting process



## Department of Physical Properties of Rocks

**Specifications for samples (price variations)/notes:** The listed prices are approximate. The final price is a 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](mailto:petruzalek@gli.cas.cz), +420 608 061 177; Tomáš Lokajčíček, [tl@gli.cas.cz](mailto:tl@gli.cas.cz), +420 603 439 096

Code	Service / device	Unit	Price (CZK)
<b>Preparation of specimens</b>			
370.1.1	Cutting of a rock block	specimen	600.-
370.1.2	Cube or prism preparation	specimen	1,850.-
370.1.3	Sawing of a drilled core	specimen	750.-
370.1.4	Preparation of a cylindrical specimen (drilling, sawing, grinding)	specimen	900.-
370.1.5	Preparation of a spherical specimen (5 cm in diameter)	specimen	24,000.-
370.1.6	Preparation of a slab specimen	specimen	900.-
370.1.7	Diameter reduction by milling	specimen	1, 250.-
370.1.8	Grinding the top and bottom of specimen	specimen	700.-
370.1.9	Cutting, drilling or milling without water cooling	specimen	1, 050.-
<b>Strength tests*</b>			
370.1.10	Uniaxial compression test	test	900.-
370.1.11	Direct tension test	test	1,200.-
370.1.12	Simple shear test	test	850.-
370.1.13	Shear compression test	3 tests (different inclinations)	1,850.-
370.1.14	Brazilian tension test	test	650.-
370.1.15	Tensile strength (Bending test)	test	1,350.-
370.1.16	Triaxial test	test	6,000.-
<b>Determination of elastic properties**</b>			
370.1.17	Static elastic modulus from uniaxial compressive loading	test (1 loop)	2,100.-
370.1.18	Static elastic modulus from triaxial compressive loading	test (1 loop)	8,000.-
<b>Ultrasonic testing</b>			
370.1.19	P and S wave velocities, dynamic elastic modulus	1 transmission direction	5,650.-
370.1.20	P and S wave velocities, dynamic elastic modulus during uniaxial compressive loading	10 times during the test	10,000.-
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	60,000.-
<b>Index properties</b>			
370.1.22	Grain density (specific gravity)	3 samples	720.-
370.1.23	Density (Buoyancy method)	3–5 specimens	635.-
370.1.24	Density (calliper method)	3–5 specimens	635.-
370.1.25	Water content	3–5 specimens	445.-
370.1.26	Water absorption	3–5 specimens	490.-
370.1.27	Porosity	3–5 specimens	2,100.-
370.1.28	Slate durability test	3–5 specimens	1, 200.-
370.1.29	Swell index test	3–5 specimens	2,700.-
370.1.30	Permeability (coefficient of hydraulic conductivity)	specimen	4,560.-
<b>Other services</b>			
370.1.31	Milling	500 g	620.-
370.1.32	Drying	24 hours	690.-
370.1.32	Particle size distribution (separation by sieving)	sample	1,440.-
370.1.33	Particle size distribution (separation by sedimentation)	sample	2,130.-

\*at least 3–5 test specimens must be considered for testing each sample

\*\* at least 3 test specimens must be considered for testing each sample



## 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](mailto:library@gli.cas.cz) ; +420 233 087 272, +420 233 087 273

Service / method	Unit	Price (CZK)
Copying in the study room	1 item	2.-
Interlibrary reprographic service within the CR via VPK	1 page	2.-
Interlibrary reprographic service within the CR as an electronic delivery of a printed copy via VPK – a scan of a printed document ( <b>for libraries only</b> )	1 page	2.- + copyright fee*
Interlibrary reprographic service within the CR as an electronic delivery of a printed copy via VPK – a copy from licensed online databases ( <b>for libraries only</b> )	up to 7 pages from 8 pages	5.- / page 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.-
International interlibrary loan service (higher price)	1 volume	500.-

\*Copyright fee ranges between CZK 12.10–90.75 (including VAT) depending on the number of pages

VPK = Virtual Polytechnical Library (a joint project of some Czech libraries, Institute of Geology is a part of this project) – for further information see <https://www.techlib.cz/en/2879-virtual-polytechnical-library-vpk>

Service / method	Ring diameter (mm)	Price (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	Type	Price (CZK)
Thermo-binding machine UniBinder 120 (format A4)	1; 2; 3; 5; 7	28.- / 35.-
	9; 12	29.- / 36.-
	15	33.- / 41.-
	18	36.- / 44.-
	21	39.- / 48.-

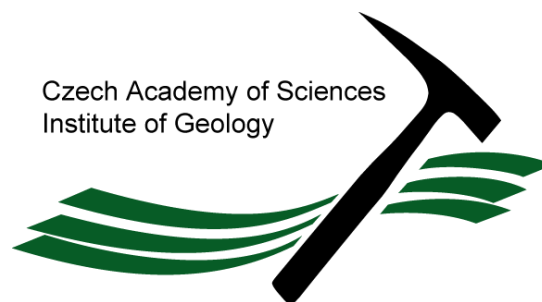
## Expertises

Employees of the Institute of Geology may, upon request and under a contract, elaborate a professional expertise, an expert opinion or other report in scientific fields covered by the individual departments of the Institute of Geology. In reports not requiring analytical data or instrumental measurements, the time spent on such report is remunerated by CZK 1,200.- / hour.





**Thank you for your interest to co-operate**



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Institute of Geology



**Czech Academy  
of Sciences**

Compiled by M. Filippi ([filippi@gli.cas.cz](mailto:filippi@gli.cas.cz)) based on information provided by heads of departments and analytical workers.

English revised by J. Adamovič

WEB:

<https://www.gli.cas.cz/cs/ceniky>

<https://www.gli.cas.cz/en/price-lists>