PRICE LIST

Institute of Geology of the CAS, v. v. i.

Czech Academy of Sciences
Institute of Geology

Edition 2017

(prices are valid from March 6, 2017 until the release of a new edition)

CONTENTS

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.

Service / device	Unit	Non-Commercial price	Commercial price
A simplified description of the service or method employed. The laboratory device is specified where needed.	Units used for price calculation (hour/sample/spectrum/ pattern, etc.)	Prices intended for scientific workers not employed with the GLI. The prices apply to grant projects financed from public sources, other scientific projects financed by the Government or other projects run by scientific workers collaborating with the GLI in research.	Prices intended for commercial services based on orders (orders within GLI main activities, other activities) which are charged as a whole – usually services for private subjects and services aiming at non-scientific goals.

Addresses and locations:

Main Research Centre 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 spectroscopy
Laboratory of X-ray diffraction
Laboratories of physico-chemical parameters determination
Laboratories of element determination
Laboratory of mineral separation
Clean and ICP-MS 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 study
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 Method

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 required type of processing. In general, it is strongly recommended to consult the 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

Service /product	Unit	Non-Commercial (CZK)	Commercial (CZK)
Covered thin section, standard size	sample	240.-	300.-
Covered thin section, oriented	sample	260.-	325.-
Covered thin section, friable material	sample	320.-	400.-
Covered thin section, friable material, oriented	sample	380.-	475.-
Polished thin section, standard size	sample	400.-	500.-
Polished section, friable	sample	420.-	525.-
Section, diameter of 2.5 cm (1 inch)	sample	180.-	225.-
Polished section, diameter of 2.5 cm (1 inch)	sample	300.-	375.-
Polished section, diameter of 3 cm	sample	400.-	500.-
Polished section, diameter of 3 cm, with carbon black	sample	440.-	550.-
Section for fission track study	sample	400.-	500.-
Cutting & polishing of a plane	1 cm^2	18.-	25.-
Polishing of a planar cut surface	1 cm^2	12.-	15.-

Laboratory of electron beam analysis (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 the development and tuning of specific analytical protocols.

Contact: Zuzana Korbelová, korbelova@gli.cas.cz, +420 233087 214; Šárka Jonášová, jonasova@gli.cas.cz, +420 233087 214; Noemi Mészárosová, meszarosová@gli.cas.cz, +420 233087 214; Roman Skála, skala@gli.cas.cz, +420 233087 249

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
TESCAN VEGA3XMU scanning electron microscope + ***Bruker QUANTAX200 (EDS)*** energy dispersive X-ray spectrometer + ***CL-SEM TESCAN*** cathodoluminescence detector	hour	1,000.-	1,250.-
CAMECA SX-100 electron microanalyzer (microprobe) with four wave-dispersive X-ray spectrometers (WDS) and ***Bruker*** energy dispersive X-ray spectrometer (EDS)	hour	1,000.-	1,250.-
Carbon-coating of samples for chemical analyses (EDS or WDS) or for back-scattered electron (BSE) imaging	sample	30.-	40.-
Gold-sputtering of samples for secondary electron (SE) imaging	sample	100.-	125.-

Laboratory of Raman spectroscopy

Specifications for samples (price variations)/notes: The samples may include fragments, powders, or polished section or thin sections, or liquids enclosed in thin-walled vials free of Raman signal. The samples must not be higher than 25 mm, wider than 80 mm and longer than 100 mm. Weight must not be larger than 500 g. The spectra collection 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.

Contact: Roman Skála, skala@gli.cas.cz, +420 233087 249; Šárka Jonášová, jonasova@gli.cas.cz, +420 233087 214; Noemi Mészárosová, meszarosova@gli.cas.cz, +420 233087 214

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
S&I MonoVista CRS+ Raman microspectrometer (location and documentation of measurement spots, selection of suitable excitation laser wavelength, measurement conditions optimization, spectrum collection, etc.)	hour	1,000.-	1,250.-

Identification of minerals with the RRUFF database	spectrum	200.-	250.-
Mathematic processing of spectra (baseline correction, band deconvolution)	spectrum	500.-	625.-

Laboratory of X-ray diffraction

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 µm grain size, a surcharge of CZK 30 per sample is added to the price of the analysis. If data collection in a capillary is required without providing the capillary together with the specimen, a surcharge of CZK 100 is added to the analysis price. If a change in diffractometer configuration is required for a given analysis type, a one-off surcharge of CZK 1000 is added to the set of analyses requiring such an instrument setting. Given a configuration change includes unmounting of a primary monochromator, this surcharge is CZK 2000. A special price may be negotiated for larger sets of analyses ordered at once or for repeated sets of analyses.

Contact: Roman Skála, skala@gli.cas.cz, +420 233087 249; Petr Mikysek, mikysek@gli.cas.cz, +420 233087 289

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Bruker D8 DISCOVER powder X-ray diffractometer			
Data collection for phase identification, sample without fluorescence	pattern	300.-	380.-
Data collection for phase identification, sample with fluorescence	pattern	400.-	500.-
Data acquisition of oriented specimens for clay mineral identification	pattern	250.-	320.-
Data collection for (micro)structure analysis, unit-cell dimension refinement or (semi)quantitative analysis	pattern	600.-	750.-
Data collection for Rietveld refinement	pattern	800.-	1,000.-
Micro-diffraction, depending on experiment setup complexity	pattern	600 – 1,000.-	700 – 1,200.-
Data processing and evaluation			
Basic pattern evaluation – calculation of d's & I's	sample	80.-	100.-
Qualitative phase analysis – single-phase material	sample	200.-	250.-
Qualitative phase analysis – mixture	sample	400.-	500.-
Semi-quantitative phase analysis of a mixture by the DIFFRAC.EVA program *	sample	600.-	750.-
Quantitative phase analysis of a mixture by the Rietveld method**	sample	1,000.-	1,250.-
Other types of data handling/processing	sample	negotiable	negotiable
Export of the source data to an ASCII or XLS file	sample	20.-	30.-

Notes: **The method requires that corundum number for each phase in the mixture is available in the ICDD PDF2 database; **The method requires that the structure model is known for each phase in the mixture; results may be negatively influenced by a strong preferred orientation, poor crystallinity and/or presence of amorphous phase*

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Philips PW3020 powder X-ray diffractometer			
Data collection for phase identification	pattern	450.-	570.-
Data acquisition of oriented specimens for clay mineral identification	pattern	350.-	440.-
Data processing and evaluation			
Data processing and evaluation prices are identical to those from Bruker diffractometer			

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.

Contact: Jan Rohovec, rohovec@gli.cas.cz, +420 233087 258; Šárka Matoušková, matouskov@gli.cas.cz, +420233087212; Tomáš Navrátil, navratilt@gli.cas.cz, +420 233087 222

Service / device	Matrix / material	Unit	Non-Commercial (CZK)	Commercial (CZK)
Sample workup before analysis				
Filtration through 0.45 µm RC-disc	not acidified aqueous solution	sample	70.-	100.-
Drying (overnight, dryer at 105 °C)	solid	sample	40.-	50.-
Sample homogenisation in agate mill	solid, powdered	sample	40.-	50.-
Water loss after drying at 105 °C in dryer, overnight	solid, powdered	sample	50.-	75.-
Weight loss after calcination at 900 °C, overnight	solid, powdered	sample	280.-	350.-
Sample decomposition				
Extraction of powdered solid sample with 20% HCl	solid, powdered, homogenised	sample	75.-	100.-
Extraction of powdered solid sample with aqua regia	solid, powdered, homogenised	sample	120.-	150.-
Extraction of powdered solid sample with aq. ammonium acetate	solid, powdered, homogenised	sample	90.-	120.-
Sample decomposition, mixture of HNO_3 and HF in PTFE beaker	solid, powdered, homogenised	sample	150.-	350.-
Sample decomposition, mixture of ultrapure HNO_3 and HF in PTFE beaker, for trace element analysis	solid, powdered, homogenised	sample	450.-	600.-
Sample decomposition in mixutre of HCl a HF, pressure ampoule, microwave oven Milestone or MW Mars	solid, powdered, homogenised	sample	600.-	1,200.-
Sample decomposition in pressure asher Anton Paar	solid, powdered, homogenised	sample	600.-	1,550.-
Sample decomposition, pressure ampoule, decomposition of residue by melting with tetraborate	solid, powdered, homogenised	sample	1,500.-	2,500.-
Sample decomposition by melting in Pt cruicible with lithium tetrafluoroborate	solid, powdered, homogenised	sample	200.-	280.-
Melting with potassium hydrogensulphate	solid, powdered, homogenised	sample	170.-	350.-
Melting with sodium tetraborate	solid, powdered, homogenised	sample	200.-	280.-
Electrochemical analyses				
Determination of pH	aqueous solution	sample	40.-	50.-
Determination of conductivity	aqueous solution	sample	40.-	50.-
Lyophilisation of liquid sample or suspension	solid or liquid material	sample	200.-	500.-
Soil analyses				
Soil extraction according the Melich III protocol	solid, powdered, homogenised sample of soil	sample	150.-	300.-
Determination of exchangable calcium and phosphate by extraction with hydrochloric acid	solid, powdered, homogenised	sample	420.-	550.-
Determination of CEC	sieved soil	sample	480.-	600.-
Granulometry				
Sample workup for granulometric study -	solid, particle size below	sample	350.-	500.-

decomposition of organic compounds in hydrogen peroxide	1 mm			
Granulometric determination of particles size (0.04 µm – 1 mm, percentage representation)	solid, particle size below 1 mm	sample	500.-	750.-

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.

Contact: Jan Rohovec, rohovec@gli.cas.cz, +420 233087 258; Šárka Matoušková, matouskov@gli.cas.cz, +420233087212; Tomáš Navrátil, navratilt@gli.cas.cz, +420 233087 222

Service / device	Matrix	Unit	Non-Commercial (CZK)	Commercial (CZK)
ICP OES: spectroscopy with inductively coupled plasma and optical detection				
Main elements (Al, Ca, Fe, K, Mg, Mn, Na, P, S, Si)	water, acidified	sample	360.-	1,000.-
Selection of elements for method, up to 15 elements in samples	salt-free aqueous solution, acidified	sample	600.-	2,000.-
One element available for method in concentrations 1 to 100 ppm	salt-free aqueous solution, acidified	sample	75.-	500.-
One element available for method in concentrations 0.05 to 1 ppm	salt-free aqueous solution, acidified	sample	150.-	500.-
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.-
Titration				
Determination of total alkalinity	liquid	sample	50.-	120.-
Determination of bicarbonate	"fresh" liquid in an air-tight bottle	sample	180.-	300.-
DOC, IC, TOC				
Determination of dissolved organic carbon in a liquid sample	aqueous solution	sample	120.-	180.-
Determination of organic carbon in a solid sample	powder, homogenized	sample	250.-	300.-
Determination of inorganic carbon in a solid sample using phosphoric acid	powder, homogenized	sample	250.-	300.-
UV VIS spectrometry				
Determination of absorbance without adding auxilliary chemical, VIS area	turbidity-free aqueous solution	sample	95.-	120.-
Determination of absorbance without adding auxilliary chemical, UV area	turbidity-free aqueous solution	sample	110.-	150.-
Determination of absorbance at 410 nm	turbidity-free natural water	sample	80.-	110.-
Determination of absorbance at 254 nm	turbidity-free natural water	sample	110.-	150.-
Determination of ferrous cation	stabilized, turbidity-free aqueous solution	sample	150.-	200.-
Determination of phosphate through phosphomolybdenane	liquid, acidified, filtered	sample	150.-	200.-
Determination of sulphide	stabilized, turbidity-free aqueous solution	sample	150.-	200.-
Determination of amonnium ion	acidifed, turbidity-free aqueous solution	sample	120.-	180.-
Determination of free chlorine	liquid sample in an air-tight glass bottle	sample	150.-	200.-
Determination of anions using technique of high-presure liquid chromatography – HPLC				

Simultaneous determination of chloride, sulphate and nitrate	not acidified aqueous solution freshly filtered through a 0.45µm filter	sample	110.-	250.-
AMA 254: determination of mercury concentration in liquid or solid sample				
Determination of total mercury, Hg contents of 0.2 to 150 ng/g sample	solid, homogeneous powdered or liquid material	measurement	95.-	150.-
Determination of total mercury, contents higher than 150 ng/g sample	solid, homogeneous powdered or liquid material	measurement	200.-	250.-
PSA: fluorimetric determination of ultra-trace concentrations of Hg and MeHg				
Determination of total mercury, fluorimetry, Hg concentrations above 0.5 ppt	organic-free, liquid, stabilized material	measurement	1,500.-	2,500.-
Processing of liquid samples with a bromate solution / UV lamp ***– removal of organic substances prior to Hg determination***	liquid, stabilized material	sample	600.-	1,800.-
Speciation analysis				
Speciation analysis of Al using PCV technique:	liquid sample with no pH adjustment and no stabilization	sample	900.-	1,400.-
monomeric organic Al	as above	sample	350.-	550.-
total monomeric Al	as above	sample	150.-	350.-
acid-soluble Al	as above	sample	400.-	500.-
Speciation analysis of sulphur:	solid homogeneous powdered sample	sample	2,500.-	4,000.-
ion exchangeable sulphate	as above	sample	400.-	600.-
organic-bound sulphate	as above	sample	800.-	1,400.-
organic-bound sulphide sulphur (reduced)	as above	sample	800.-	1600.-
total content of sulphur (ICP OES)	as above	sample	500.-	600.-
Speciation analysis of iron using Phen technique:	liquid stabilized sample	sample	300.-	400.-
Determination of bivalent Fe (UV VIS)	as above	sample	150.-	200.-
Determination of trivalent Fe	as above	sample	150.-	200.-

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 or 285

Service	Unit	Non-Commercial (CZK)	Commercial (CZK)
Crushing	each 5 kg	110.-	120.-
Draining	each 5 kg	80.-	90.-
Drying	each 5 kg	45.-	50.-
Floating	each 5 kg	100.-	120.-
Sieving	each 5 kg	140.-	150.-
Magnetic separation	each 5 kg	160.-	170.-
Separation in bromoform	each 100 g	180.-	200.-
Separation in methylene iodide	each 5 g	200.-	250.-
Separation in Clerici solution	each 5 g	220.-	270.-
Purification by centrifugation in heavy liquids	each 2 g	140.-	160.-
Purification in magnetic separator	each 3 g	90.-	100.-
Flotation of quartz	each 150 g	115.-	120.-
Grinding for analytic methods	sample	160.-	180.-
Annealing of sample under 105 °C	sample	45.-	50.-
Annealing of sample under 550 °C	sample	80.-	90.-
Separation of clay fraction	sample	110.-	200.-
Sample saturation by ethylene glycol	sample	50.-	60.-
Sample heating	sample	60.-	70.-

Clean and ICP-MS laboratory

Specifications for samples (price variations)/notes: Powdered samples for the analyses (200 mesh) should weigh at least 1 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 $^{187}Os/^{188}Os$ isotopic ratios, we will request 0.2 to 5 g of material depending on the expected concentrations of these elements (rock matrix). 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 µm thick (300 µm if possible). Exact position of analysed points needs 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, 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, +420 233 087 212 (ICP-MS trace element analyses, U-Pb carbonate geochronology, Pb isotopic analyses); Lukáš Ackerman, ackerman@gli.cas.cz, +420 233 087 240 (Os, Ir, Ru, Pd, Pt, Re and osmium isotopic analyses, Re-Os geochronology, trace element analyses); Martin Svojtka, svojtka@gli.cas.cz, +420 233 087 242 (LA-ICP-MS U-Pb geochronology and trace element analyses) ; Jiří Sláma, slama@gli.cas.cz, +420 233 087 236 (LA-ICP-MS U-Pb geochronology and Lu-Hf geochronology); Jan Rohovec, rohovec@gli.cas.cz, +420 233 087 258 (ICP-MS analyses)

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Decomposition and separation protocols			
Decomposition of silicate rocks (HF + HNO_3)	sample	250.-	400.-
Decomposition of silicate rocks (HF + HNO_3) with fusion (e.g., zircon and/or spinel-bearing rocks)	sample	500.-	800.-
Decomposition of carbonate-rich rocks	sample	250.-	400.-
Decomposition of silicate rocks and/or sulphides for the determination of sulphur contents	sample	250.-	400.-
Decomposition of silicate rocks and/or sulphides for the determination of Ir, Ru,	sample	4,500.-	8,000.-

Pd, Pt + anion exchange separation + determination of Ir, Ru, Pd, Pt contents by ICP-MS (isotopic dilution); data processing			
Silicate rock digestion, ion chromatography separation of Hf and determination of Hf isotopic composition ($^{176}Hf/^{177}Hf$) using MC-ICP-MS instrument; data processing	sample	2,000.-	4,000.-
Silicate rock digestion, ion chromatography separation of Hf, determination of Hf isotopic composition ($^{176}Hf/^{177}Hf$) and precise Hf concentration (isotopic dilution) using MC-ICP-MS instrument; data processing	sample	2,700.-	5,000.-
Silicate rock digestion, ion chromatography separation of Hf and Lu, determination of Hf isotopic composition ($^{176}Hf/^{177}Hf$) and precise Hf and Lu concentration (isotopic dilution) using MC-ICP-MS instrument; data processing	sample	4,000.-	8,000.-
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	sample	7,200.-	12,500.-
Decomposition of SiO_2-poor rocks (e.g., peridotite, chromitite) 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	sample	6,500.-	11,000.-
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.-
ICP-MS analyses (HR-ICP-MS Element 2)			
Solution trace element analyses			
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.-	500 – 2,000.-
Middle/High mass resolution (Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, P)	sample	400 – 1,000.-	600 – 2,000.-
Solution isotopic ratios analyses			
Pb: $^{206}Pb/^{207}Pb$, $^{208}Pb/^{206}Pb$ (precision <0.5 %)	sample	500.-	800.-
Sr: $^{86}Sr/^{87}Sr$ (precision <0.5 %, previous separation of Sr using anion exchange chromatography needed, see above)	sample	500.-	1,000.-
Re (determination of isotopic ratios for the concentration calculation using isotopic dilution technique with a precision of <0.2 %)	sample	1,000.-	1,200.-
Re, Ir, Ru, Pd, Pt (determination of isotopic ratios for the concentration calculation using isotopic dilution technique with a precision of <0.2%)	sample	1,700.-	2,000.-
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 trace element ICP-MS analyses	hour	1,400.-	1,900.-
U-Pb zircon geochronology using laser ablation ICP-MS analyses; data reduction and interpretation	hour	1,700.-	3,200.-

Fission track analysis (FTA) laboratory

Specifications for samples (price variations)/notes: The sampling (form and locality) should be consulted and agreed 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 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

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Fission track dating and modelling of time-temperature curves			
Preparing of polished sections from separated minerals (apatite, zircon, titanite); irradiation of a sample in a nuclear reactor; sample preparation before analysis; the fission track analysis; calculation of age and modelling results.	sample	2,400.-	3,000.-

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, +420 233 087 252, chadimova@gli.cas.cz

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Field gamma-ray spectrometry			
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 will be performed only as a part of geoarchaeological description of the site which will be done in the field by a specialist. These analyses will not be performed for samples sent to the laboratory separately.
Contact: Lenka Lisá, lisa@gli.cas.cz, +420 233 087 230

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Gran size analyses and pH			
Basic grain size analysis using Cillas 2000 laser analyser	sample	100.-	120.-
Grain size analysis without carbonates	sample	150.-	200.-
Grain size analysis without organic matter	sample	200.-	250.-
pH	sample	40.-	50.-
Micromorphology			
Micromorphological description and interpretation of small-size thin sections	thin section	1,300.-	1,500.-
Micromorphological description of thin section of mammoth size	thin section	6,500.-	7,000.-

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, +420 233 087 247; Jiří Bek, bek@gli.cas.cz, +420 233 087 264

Service	Unit	Non-Commercial (CZK)	Commercial (CZK)
Palynological analysis			
Preparation of palynological sample (maceration)	sample	250.-	600.-
Palynological evaluation report	sample	400.-	800.-
Conodont sample analysis			
Conodont sample maceration, preparation of residue	each 5 kg	900.-	1,800.-
Concentration of insoluble residue	see heavy liquids separation	see heavy liquids separation	see heavy liquids separation
Biostratigraphic analysis	sample	1,200.-	2,000.-

Department of Paleomagnetism

Samples preparation for paleomagnetic and rock magnetic study

Specifications for samples (price variations)/notes: The samples must be acquired by the staff of the Department of Paleomagnetism or by individuals trained by this staff. The price for transport of the staff of the Department of Paleomagnetism to the sampling site and their accommodation in the field is not included in the list price and will be calculated separately. The costs of non-magnetic plastic sampling cases, used for the acquisition of loose oriented samples, are included in the list price.
Contact: Petr Pruner, pruner@gli.cas.cz, +420 272 690 115; Petr Schnabl, schnabl@gli.cas.cz, +420 272 690 115

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Acquisition of oriented hand sample	sample	60.-	80.-
Acquisition of drilled oriented sample	sample	130.-	150.-
Acquisition of loose oriented sample	sample	60.-	80.-
Mechanical treatment of hand sample (cutting, grinding)	sample cube	75.-	100.-
Mechanical treatment of hand sample (cutting)	sample cylinder	22.-	30.-
Mechanical treatment of hand sample (drilling, cutting)	sample cylinder	75.-	100.-
Magnetic separation using the Wolbach method	sample	130.-	160.-
Cutting of samples max. 11 cm in thickness	100 cm^2	40.-	not available

Paleomagnetic study

Specifications for samples (price variations)/notes: The sample must be of one of the following shapes and dimensions: a cube 2×2×2 cm in size, a cylinder 2.5 cm in diameter and 2.1 cm in height. Alternatively, the samples must be kept in a special plastic case 6.7 ccm in volume. The samples must be clean, compact, and free of any leaking water. The table below gives the price for the first ten (pilot) samples; other samples are charged 75 % of the given price. The costs of non-magnetic plastic sampling cases, used for the acquisition of loose oriented samples, are included in the list price. 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. In magnetic scanning, the price of the analysis includes the cost of the preparation of a polished section.
Contact: Petr Pruner, pruner@gli.cas.cz, +420 272 690 115; Petr Schnabl, schnabl@gli.cas.cz, +420 272 690 115
Specification of complex analyses:
RM measurement in thermal demagnetization – sample acquisition and cutting, 16 RM steps, 15 TD steps, 16 *k* steps.
RM measurement in AF demagnetization – sample acquisition and cutting, 14 RM steps, 13 AF steps, 1 *k* step.

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Remanent magnetization (RM) using the JR-5 or JR-6A Spinner Magnetometer	sample	70.-	90.-
Remanent magnetization (RM) using the Superconducting Rock Magnetometer	sample	140.-	180.-
Thermal demagnetization TD (MAVACS, MMTD80)	sample	45.-	60.-
Direct field magnetization	sample	20.-	30.-
Alternating field demagnetization AF (LDA -3A)	sample	20.-	30.-
Magnetic susceptibility *k* using KLF-4	sample	20.-	30.-
Remanent magnetization (RM) measurement after thermal demagnetization	analysis	2,100.-	2,700.-
RM measurement at alternating field demagnetization	analysis	1,400.-	1,860.-
RM measurement at alternating field demagnetization incl. determination of rock magnetic carriers using magnetic scanning	analysis	2,100.-	2,700.-
Presentation of lithological sections and plotting of paleomagnetic diagrams	hour	individual	450.-

Study of rock magnetic properties

Specifications for samples (price variations)/notes: The sample must be of one of the following shapes and dimensions: a cube 2×2×2 cm in size, a cylinder 2.5 cm in diameter and 2.1 cm in height. Alternatively, the samples must be kept in a special plastic case 6.7 ccm in volume. The samples must be clean, compact, and free of any leaking water. The table below gives the price for the first ten (pilot) samples; other samples are charged 75 % of the given price. The costs of non-magnetic plastic sampling cases, used for the acquisition of loose oriented samples, are included in the list price. 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 a trained staff of the Institute of Geology.
Contact: Petr Pruner, pruner@gli.cas.cz, +420 272 690 115; Petr Schnabl, schnabl@gli.cas.cz, +420 272 690 115
Specification of complex analyses:

Anisotropy of anhysteretic remanent magnetization (LDA5, PAM1, JR6) – sample acquisition and cutting, 6 RM steps, 6 steps in anhysteretic RM acquisition, 6 steps of AF demagnetization steps, diagram plotting.
Standard magnetomineralogical analysis – sample acquisition and cutting, 34 RM steps, 18 steps in direct field magnetization, 13 AF steps, magnetic susceptibility vs. temperature dependence (CS-3) and (CS-L), interpretation.
Simplified magnetomineralogical analysis – sample acquisition and cutting, 34 RM steps, 18 steps in direct field magnetization, 13 AF steps, magnetic susceptibility vs. temperature dependence (CS-3), interpretation.
Lowrie method 3 steps of IRM acquisition – 16 RM steps, 15 TD steps, 16 *k* steps, interpretation.
Kruiver analysis of IRM acquisition curve – 19 RM steps, 18 steps in direct field magnetization, interpretation.

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Remanent magnetization (RM) on Spinner Magnetometer JR-5 or JR-6A	sample	70.-	90.-
Thermal demagnetization TD (MAVACS, MMTD80)	sample	35.-	40.-
Direct field magnetization	sample	20.-	30.-
Alternating field demagnetization AF (LDA -3A)	sample	20.-	30.-
Magnetic susceptibility *k* on KLF-4	sample	20.-	30.-
Field dependence of magnetic susceptibility	sample	150.-	200.-
Measuring and calculating of Köenigsberg Q parameter	sample	90.-	120.-
Thermal dependence of magnetic susceptibility up to +700 ^{o}C (CS-3)	sample	240.-	280.-
Dependence of magnetic susceptibility on temperature in range -190°C – 0°C (CS-L)	sample	250.-	260.-
Anisotropy of magnetic susceptibility (KLY-4A, MFK-1)	sample	280.-	300.-
Anisotropy of anhysteretic remanent magnetization (LDA5, PAM1, JR6)	sample	1,400,-	1,860,-
Standard magnetomineralogical analysis	analysis	2,000.-	2,500.-
Simplified magnetomineralogical analysis	analysis	1,850.-	2,300.-
Lowrie method	analysis	2,500.-	3,000.-
Acquisition of IRM including Kruiver analysis	analysis	1,300.-	1,600.-
Recording of magnetic properties to the graphs and maps	hour	300.-	450.-

Other magnetic methods

Specifications for samples (price variations)/notes: -
Contact: Petr Pruner, pruner@gli.cas.cz, +420 272 690 115; Petr Schnabl, schnabl@gli.cas.cz, +420 272 690 115

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Vacuuming to 1x10^{-6} mbar (Pfeifer HiCube 80)	process (4 days)	10,000.-	12,000.-
Measuring of magnetic field by Fluxgate magnetometer (Applied Physics FM 520)	hour	500.-	600.-
Measuring of magnetic susceptibility in the field (SM30, KT-10)	hour	300.-	350.-

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 608061177; Tomáš Lokajíček, tl@gli.cas.cz, +420 224313 520; Tomáš Svitek, svitek@gli.cas.cz, +420 224313 520

Service / device	Unit	Non-Commercial (CZK)	Commercial (CZK)
Preparation of specimens			
Cutting of a rock block	specimen	150.-	260.-
Cube or prism preparation	specimen	500.-	865.-
Sawing of drilled core	specimen	300.-	520.-
Preparation of a cylindrical specimen (drilling, sawing, grinding)	specimen	400.-	690.-
Preparation of a spherical specimen (5 cm in diameter)	specimen	10,000.-	17,300.-
Preparation of a slab specimen	specimen	400.-	690.-
Diameter reduction by milling	specimen	400.-	690.-
Grinding the top and bottom of specimen	specimen	300.-	520.-
Cutting, drilling or milling without water cooling	specimen	450.-	780.-
Strength tests			
Uniaxial compression test	test	400.-	690.-
Direct tension test	test	500.-	865.-
Simple shear test	test	400.-	690.-
Shear compression test	3 tests (different inclinations)	800.-	1,385.-
Brazilian tension test	test	300.-	520.-
Tensile strength (Bending test)	test	600.-	1,040.-
Triaxial test	test	2,500.-	4,325.-
Determination of elastic properties			
Static elastic modulus from uniaxial compressive loading	test (1 loop)	1,000.-	1,730.-
Static elastic modulus from triaxial compressive loading	test (1 loop)	3,000.-	5,190.-
Ultrasonic testing			
P and S wave velocities, dynamic elastic modulus	1 transmission direction	300.-	520.-
P and S wave velocities, dynamic elastic modulus during uniaxial compressive loading	10 times during the test	3,000.-	5,190.-
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			
Grain density (specific gravity)	3 samples	300.-	520.-
Density (Buoyancy method)	3-5 specimens	250.-	435.-
Density (caliper method)	3-5 specimens	250.-	435.-
Water content	3-5 specimens	200.-	345.-
Water absorption	3-5 specimens	250.-	435.-
Porosity	3-5 specimens	800.-	1,385.-
Slate durability test	3-5 specimens	500.-	865.-
Swell index test	3-5 specimens	900.-	1,560.-
Permeability (coefficient of hydraulic conductivity)	specimen	2,000.-	3,460.-
Other services			
Milling	500 g	300.-	520.-
Drying	24 hours	400.-	690.-
Particle size distribution (separation by sieving)	sample	600.-	1,040.-
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: Sabina Janíčková, janickova@gli.cas.cz ; Václava Škvorová, skvorova@gli.cas.cz ; +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 (**for libraries only**)	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 (**for libraries only**)	2.- / page 15.- / article	2.- / page 15.- / article
International interlibrary reprographic service (continental Europe)	Every 10 pages	80.-
International interlibrary reprographic service (British Library and overseas countries)	1 article	350.-
International interlibrary loan service (continental Europe)	1 volume	250.-
International interlibrary loan service (British Library and overseas countries)	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	8.-
	10,12.5,14	10.-
	16	11.-
	19	12.-
	22	13.-
	25	14.-
	32	19.-

Service / method	Type	Price (CZK)
Thermo-binding machine UniBinder 120 (format A4)	1, 2, 5, 7	28.-
	9, 12	29.-
	15	33.-
	18	36.-
	21	39.-

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 750.- / hour.

Thank you for your interest to co-operate

The Czech Academy of Sciences

Compiled by M. Filippi (filippi@gli.cas.cz)
English revised by J. Adamovič
WEB:
https://www.gli.cas.cz/cs/ceniky
https://www.gli.cas.cz/en/price-lists