**Price list for laboratory sample processing in the Palaeoecological Laboratory**

|  |  |
| --- | --- |
| Reference number: | BÚ-861/2024/SŘ |
| Prepared by: | P. Bobek |
| Valid from: | July 18, 2024 |
| Effective from: | July 18, 2024 |
| Replaces order No.: | 20/2019 |
| Keywords: | sample processing , Palaeoecological Laboratory |

I hereby set the following prices for the laboratory sample processing at the Palaeoecological Laboratory of the Institute of Botany, CAS:

|  |  |
| --- | --- |
| **Sample preparation** | **External orders**  **CZK/EUR per sample**  **(incl. VAT)** |
| A: 1) surface sample | 290.00/11.60 |
| 2) annual pollen trap sample | 290.00/11.60 |
| 3) recent pollen sample | 288.00/11.50 |
| 4) pollen concentrate for 14C dating | 278.00/11.10 |
| 5) fossil sample | 290.00/11.60 |
| 6) fossil sample: acetolysis + HCl (glycerine) | 306.00/12.30 |
| 7) fossil sample: acetolysis + HF (glycerine) | 317.00/12.70 |
| 8) fossil sample: acetolysis + HCl + HF (glycerine) | 331.00/13.30 |
| B: 9) plant macroremains | 120.00/4.80 |
| C: 10) diatom permanent slide | 120.00/4.80 |
| D: 11) CHAR sample – macrocharcoal concentration (> 125 μm) | 288.00/11.50 |

|  |  |
| --- | --- |
| **Expert analyses** | **External orders**  **CZK/EUR per sample (incl. VAT)** |
| A: 12) microscopic pre-screening – presence/absence of pollen | 600.00/24.00 |
| 13) microscopic quantitative pollen analysis (identification and counting of min. 300 pollen grains per slide) | 3000.00/120.00 |
| B: 14) pre-screening of plant macroremains | 600.00/24.00 |
| 15) quantitative analysis of plant macroremains | 3000.00/120.00 |
| C: 16) microscopic pre-screening of native phytoplankton/phytobenthos sample – estimate of relative representation of dominants | 600.00/24.00 |
| 17) microscopic quantitative analysis of diatoms (identification and counting of 300 valves in a permanent slide) | 3000.00/120.00 |
| D: 18) taxonomic identification of wood charcoal, min. 100 per sample | 2400.00/96.00 |

**If markers are required (e.g., *Lycopodium* spore tablets), they will be provided by the customer.** **If provided by the Paleoecological Laboratory, they are charged at current prices.**

**For a specific quote (including possible quantity discounts), please contact us:**

**Brno Research Division: +420 541 126 223,** [**eva.jamrichova@ibot.cas.cz**](mailto:eva.jamrichova@ibot.cas.cz)

**Průhonice Research Division: +420 777 477 785,** [**premysl.bobek@ibot.cas.cz**](mailto:premysl.bobek@ibot.cas.cz)

**Notes on methodology**:

* pollen concentrate for 14C radiometric dating: Schultz solution instead of acetolysis, no glycerine preservation
* diatoms: treated with H2O2 (if carbonates are present, HCl is added), washing out, samples mounted in Naphrax/Pleurax
* CHAR samples: profile sampling, deflocculation, wet sieving, NaOCl bleaching, manual separation of organic impurities, microscopic scanning of sample, processing by optical image analysis methods, basic morphometry, quantification by area and number of charcoals, sample archiving
* wood charcoal identification includes floating, wet sieving, and manual separation of charcoal particles

**The processing procedures on offer apply to the following sample types:**

A) Pollen samples:

1) surface humus (plant/pollen litter)

2) annual pollen traps

3) recent pollen (from anthers)

4) fossil samples for 14C dating

5) fossil samples without mineral component (peat, humolite)

6-8) fossil samples with mineral admixture (humolite, peat, lacustrine sediments, archeological cultural layers – sand, gravel, clay, limestone, tufa, etc.)

B) Plant macroremains:

9) fossil samples (humolite, peat, lacustrine sediment)

C) Diatoms:

10) sediment, phytoplankton and phytobenthos samples

D) CHAR samples:   
 11) fossil peat and lacustrine sediments

18) microscopic identification of charcoals >2 mm from archaeological material, soil, peat and lacustrine sediments

|  |  |
| --- | --- |
| **Use of scanning electron microscope (Phenom ProX)** | **External orders**  **CZK/EUR per hour**  **(incl. VAT)** |
| observation and photography of uncoated, dry objects on a standard sample holder | 960.00/38.40 |
| observation and photography of uncoated objects containing water on a temperature-controlled sample holder – cooling of samples | 1020.00/40.80 |
| elemental analysis – energy-dispersive X-ray spectroscopy (EDS) | 960.00/38.40 |

The Phenom ProX benchtop scanning electron microscope with BSE backscattered electron imaging detector can be used to observe uncoated objects magnifications up to 130,000x and resolution of 10 nm. It also allows for elemental X-ray analysis (EDS – energy-dispersive X-ray spectroscopy) with detection of elements ranging from Boron to Americium.

Delivery times will be set by agreement with the customer.

Methodologies described in detail are available on request.

*Note:*

*Internal pricing covers only direct material and laboratory overhead costs, does not include labour costs, margins, or the administrative and operational overhead cost of the Institute, prices are charged exclusive of VAT.*

*External pricing includes all costs, including the Institute´s margin, and is subject to VAT.*

Průhonice, July 17, 2024

doc. Ing. Jan Wild, Ph.D.

Director, Institute of Botany

of the Czech Academy of Sciences