**General information and conditions**

**Chemical Biological Laboratory (CBLB)**

♦ **Organization/work area**

The Chemical Biological Laboratory is part of the Chair group Soil Chemistry & Chemical Soil Quality (Department Environmental Sciences) of the Environmental Sciences Group of Wageningen University and Research (WUR).

The Chemical Biological Laboratory is a leading laboratory for analysis in soil, plant and water samples. It is primarily a service unit to support research and teaching functions of the Environmental Sciences Group of the WUR at the work area described below. Besides this, the laboratory committed her knowledge for other research groups inside and outside the WUR.

The work field includes:

- the analysis (total amounts) of inorganic components in soil, plant, soil moisture and water;

- the determination of available nutrients and metals in soil using different extraction methods;

* determination of soil characteristic parameters, such as granular composition, CEC, Pw, P-Al, etc.;
* development and improvement of analysis;
* experimenteel labonderzoek op de aandachtsgebieden van bodembiologie, bodemvruchtbaarheid en bodemscheikunde. Soms in combinatie met kasproeven. Voorbeelden: respiratie- en emissiemetingen, denitrificatie-, mineralisatie- en ad-/desorptieproeven, kolom- en DMT-experimenten, kwantificeren en determineren van regen- en potwormen en nematoden;

- drying, grinding and mixing of soil and plant material.

♦ **Quality assurance**

The target of the Chemical Biological Laboratory of WUR Centre Soil is satisfied clients/employees and a customer-oriented management. All general protocols, forms, work and operating instructions are recorded in the Quality Manual. The laboratory has a quality system according to ISO-17025. The quality system is not covered by an accreditation body.

The laboratory tests the quality of the analysis by first, second and third line controls. The latest by participating in several collaborative studies.

♦ **Rates**

In the attached price list rates for the standard analysis of the team Analysis are mentioned.

The price list is also available online at [www.cblb.wur.nl](http://www.cblb.wur.nl).  
For each order € 35.00 administration costs is charged.

For possibilities and prices of not mentioned analysis, laboratory research and sample preparation please contact the manager of the laboratory (tel. 0317-482070 or e-mail andre.vanleeuwen@wur.nl). Offers are without obligations and are valid for a month.

♦ **Contract Grant**

Orders according to the price list must always be provided by a completed filled in ’application form’ (F0139, F0140 or F0159). Forms are electronically available and can be downloaded at [www.cblb.wur.nl](http://www.cblb.wur.nl).  
The samples should be accompanied together with this form.   
After the delivery of the samples an order confirmation with an order number and an estimation of the costs will be sent. Please make a confirmation through an EBS booking on basis of the data provided in the analyses order.

♦ **Sample delivery**

Samples can be delivered daily at the laboratory between 8:00 and 16:00 hours.

The laboratory is obliged (according EU directive 2008/61/EU) to make a difference between samples directly from the lab as well as samples from the Netherlands and other EU countries (see A) and countries form outside the EU (see B).

1. **Samples from the Netherlands and other EU countries**

Samples must be delivered properly packed and clearly labeled with a unique serial number (1 to ...). Packaging preferably in the (free available) standard packaging material:

- Liquid samples in plastic cups (urine cup) of 100 ml;   
- Wet plant samples in plastic bags and wet soil in soil sample bags;   
- Dried and grinded soil samples in polypropylene container of 180 ml;   
- Dried and grinded plant samples in plastic bags (with grip closure).

It is preferred to directly filter liquid samples using a 0.45 um filter after collection in the field. At request the samples can be filtrated by the lab. Please take the shelf life times into account for liquid samples which are provided in the table at page 3.

##### Table: Guidelines for the preservation of filtered (0.45 μm) water samples

|  |  |  |  |
| --- | --- | --- | --- |
| *Parameter* | *Type sample container* | *Preservation technique* | *Maximum preservation time* |
| (heavy) metals | Urine cup | cooling < 5°C | 24 hours |
| 0.14 M HNO3\* | 1 month |
| Phosphorus (total) | Urine cup | 0.14 M HNO3\* | 1 month |
| Boron | Urine cup | n.a. | 1 month |
| pH | Urine cup (completely filled) | cooling < 5°C | Sample measuring is preferred directly after sampling or at least within 24 hours |
| Conductivity | Urine cup (completely filled) | cooling < 5°C | Sample measuring is preferred directly after sampling or at least within 24 hours |
| Chloride | Urine cup | n.a. | 1 month |
| Sum (nitrate+nitrite) | Urine cup | cooling < 5°C | 48 hours |
| Ammonium | Urine cup | cooling < 5°C | 48 hours |
| Nts | Urine cup | cooling < 5°C | 48 hours |
| Phosphate (dissolved PO4) | Urine cup | cooling < 5°C | 48 hours |
| TOC/DOC | Urine cup | cooling < 5°C | 24 hours |

\*) Deposits can be formed In organic-rich samples and extracts with EDTA due to acidification.

1. **Samples from not EU countries**

Samples from not EU countries are marked as Quarantine material (according EU directive 2008/61/EU).

For these samples is an Import Licence required. The procedure how to import these samples is described in work instruction WI-0028, available from KAM-team (biosafety officer B. Diekema) ESG.

CBLB is not allowed to accept samples without a corresponding copy of the Import License. The “*registration form samples”* should be accompanied with this copy of the Import License.

♦ **Delivery times**

The Chemical Biological Soil Laboratory aims to finalize the standard analysis in soil and plant samples within 6 to 8 weeks. For water samples this time period is less than 2 weeks.

♦ **Reporting**

A written report will be provided to the client.   
Furthermore, the results will be provided electronically in Excel format.   
For additional information contact the department Customer Service (tel. 0317-482070 or CBLB.Klantenservice@wur.nl).

♦ **Storage periods**

After written report water samples will be stored for one week and then removed. Soil and plant samples will be stored for maximum 2 months after written report. If samples are not collected by the client within these times samples will be disposed. Any costs involved will be charged to the client. Analysis results are archived for a period of 5 years.

♦ **Payment**

The costs of the analysis order will be determined via the actual work executed and in accordance with the rates of the applicable price list. The account will be charged directly via EBS after reporting. Please approve these costs within 14 days.

♦ **Complaints**

A complaint will be regarded as a signal for further improvement. Please provide a complaint in writing (e-mail or letter) or telephone to the Lab manager ([andre.vanleeuwen@wur.nl](mailto:andre.vanleeuwen@wur.nl); tel. 0317-482070). Your complaint will be properly recorded and a confirmation of the complaint receipted will be provided. The complaint will be processed as soon as possible (at least within 2 weeks).