

Laboratory for Chemical Analytics

The Laboratory for Chemical Analytics has been established in 2002 according to demands for R&D and quality control and quality assurance for production within the Ökopharm group and its subsidiaries.

Regarding equipment the laboratory is equipped with state-of-the-art analytical devices.

The execution of chemical analyses is offered to business partners and customers as a service.

Organic Analytics:

The following substances and substance classes are analyzed by high-performance liquid chromatography (HPLC):

- Watersoluble vitamins
- Fatsoluble vitamins
- NADH/NAD⁺ in pharmaceutical formulations
- caffeine

Inorganic Analytics :

Elements belonging to the groups of metals and metalloids can be analyzed by ICP-MS (incl. Octopole Reaction System results in an improvement in sensitivity for certain elements such as e.g. chromium, iron or selenium) on ppb-level ($\mu\text{g}/\text{kg}$) down to 10-100 ppt (ng/L) in water samples.

It is essential for ICP-MS analysis to bring the sample into a liquid form. This sample preparation is achieved with pressurized microwave-assisted acid digestion for a huge range of possible samples (e.g. parts of plants, flour, oil, hair, blood, soils or sludges,...)

Analytical devices:

HPLC:

Agilent 1100 Series

Quaternary pump with online-mobile phase degasser, autosampler, column thermostat

Detectors:

DAD (diode array detector),

FLD (fluorescence detector)

optional: device for post-column derivatisation



ICP-MS:
Agilent 7500c (incl. Octopole Reaction System ORS, reaction gas: hydrogen)
Sample Preparation: MLS Ethos Plus (Microwave Laboratory System)

