



INTEGRATED ANALYTICAL LABORATORY

Classical and instrumental analytical methods for the determination of organic and inorganic components. Instruments for determination of elemental composition. Chromatography techniques for the analysis of organic compounds.

COMPETENCIES

- Analytical measurements
 - Determination of organic and inorganic components by classical and instrumental analytical chemical methods
 - Determination of the physicochemical parameters of organic and inorganic components,
 - Determination of the elemental composition of different samples
 - Determination of corrosion aggressiveness of soil samples
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- Water analytical measurements (p-number, m-number, content of carbon dioxide, carbonate, hydrogen-carbonate, chloride, sulphate, calcium, or magnesium, COD (chemical oxygen demand), water hardness (temporary, permanent, total), evaporation residue determination
 - Gravimetric measurements (determination of moisture content, loss on ignition, ash content, non-volatile matter content of solids)
 - Determination of specific electrical conductivity of liquids, total salinity. Determination of pH value of liquids, determination of inorganic ions with potentiometric and pH-metric indication
 - Spectrophotometric measurements: determination of inorganic and organic substances, phosphate, nitrate, ammonia, phenol content, etc.
 - Determination of elemental composition (CHNS analyser, FAAS, ICP-OES)
 - Functional group identification with FT-IR
 - Chromatography measurements:
 - gas chromatography (separation, qualitative and quantitative determination of thermally stable, evaporable, organic compounds (GC-MS))
 - liquid chromatography (determination of difficult-to-evaporate, heat-sensitive, higher molecular weight organic compounds and inorganic anions (HPLC-DAD, UPLC-MS))



SERVICES



TOOLS

- Varian Inc., axial view, simultaneous, multielement ICP spectrometer (Varian 720ES)
- PU 9111 AAS, PU 9400X AAS ETA, ATI Unicam Solar AAS-Hydride
- Elementar Vario macro CHNS
- Agilent 7890A GC, Agilent 5975C MSD, Shimadzu 2010 plus GC, Shimadzu GCMS-QP2020 MSD, Shimadzu LC-20 HPLC system



REFERENCES

- Wanhua Borsodchem Co Ltd.
- Kischchemicals Co Ltd.
- BC-KC Formalin Ltd.
- Dynea Hungary Ltd.
- Magnetec Ltd.
- Tekoma Ltd.
- Modine Hungária Ltd.
- DIPA Diósgyőri Papírgyár Co Ltd.
- Bosch group
- Ecseri Ltd.
- Heiche Hungary Lp.
- Johnson Electric Ózd Ltd.