

Available Equipment:

UV-Vis-NIR (200-2500 nm) double beam recording spectrophotometer JASCO V-570 equipped with:

- cell holder for cells from 0.1 to 100mm;
- thermostatted cell holder connected to laboratory cooling/heating thermostat Huber Ministat (computer control; -50 to 300°C; temperature stability 0.1°C);
- low temperature cryostat Oxford Instruments DN with a temperature controller ITC-502 for measuring spectra in the range 100-300K (precision 1K);
- integrating sphere ISN-470 (200-2000 nm) for measurement of diffuse reflectance and diffuse transmittance spectra of solid samples, liquids and powders.

UV-Vis (200-900 nm) double beam recording spectrophotometer Perkin Elemer Lambda 16 equipped with:

- cell holder for cells from 0.1 to 100mm;;
- thermostatted cell holder connected to laboratory thermostat Julabo U3 (-10 to 60°C; temperature stability 1°C);
- low temperature cryostat Oxford Instruments D10200 with a temperature controller ITC-3 for measuring spectra in the range 100-300K (precision 1K);
- multiple internal reflectance accessory;
- polarizer;
- accessory for spectrophotometric titration including Metrohm 725 Dosimat.

Service:

1. *Recording of absorption spectra* in the UV-Vis-NIR area (transmittance and/or reflectance) of gas phase, solution and solid state in the temperature range from -270 to 300°C;
2. *Interpretation and processing of absorption spectra* – derivative spectroscopy, smoothing/filtering, resolution of overlapping bands;
3. *Quantitative spectrophotometric analysis* of dyes, cosmetics, food and food additives, soft drinks, wines and spirits, drugs and environment related samples. Development and validation of methodology for analysis;
4. *Spectrophotometric titration* – determination of pKa values and stability constants;
5. *Kinetics measurements*;
6. *Consulting in spectroscopy and data processing*.