VSB TECHNICAL UNIVERSITY OF OSTRAVA | FACULTY OF SAFETY ENGINEERING

FTIR Spectrometer Nicolet iS10

SPECIFICATIONS

The Fourier transform infrared spectrometer enables fast and non-destructive qualitative and quantitative analyses. It is equipped with SMART extensions, so it allows 3 types of analyses:

- when connecting a highly sensitive gas cuvette (optical length 10 m) it is possible to perform component analyses in trace amounts in gas mixtures (impurities in pure gases)
- when connecting a gas cuvette (optical length 5 cm) it is possible to perform analysis of highly concentrated gas mixtures in industry and in the environment (analysis of thermal decomposition and combustion products),
- when the ATR attachment is connected, it is possible to monitor the structure and changes in the structure of solids and liquids.

MEASURING METHODS

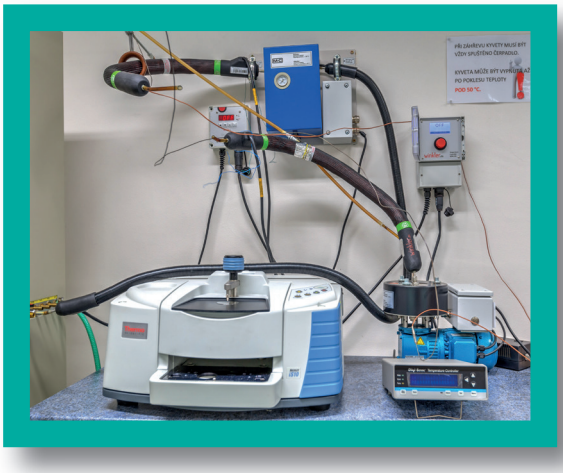
The measurement is controlled by OMNIC software, qualitative evaluation using data from libraries within the software, or using data in the literature, quantitative evaluation using chemometric procedures.

OVERVIEW OF MEASURABLE PARAMETERS / OUTPUT INFORMATION

The analysis is based on the vibration of bonds in functional groups due to interaction with IR radiation. Output is the identification of substances or analysis of structure and changes in structure, structure of plastics, determination of the concentration of individual components, etc.

TYPES OF SAMPLES SUITABLE FOR ANALYSIS / MEASUREMENT CONDITIONS

Gases, the ATR method is intended for liquids and solids. The measurement takes place in laboratory conditions.



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