

## FT-IR spectrometer

<https://labfacilities.wur.nl/SearchDetail.aspx?deviceid=38da7ce2-2587-4939-85ea-1029d04bea26>

### **Brand**

Bruker

### **Type**

TENSOR II



### **Contact**

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### **Organisation**

Agrotechnology & Food Sciences Group

### **Department**

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### **Description**

Fourier Transform Infrared (FTIR) spectrometry is a non-destructive, fast, and sensitive optical technique for detailed material, interface and surface analysis. It provides information about the chemical structure of a sample, i.e. the presence of specific chemical groups, by probing vibrational modes of the chemical bonds within molecules. FTIR spectrometer Bruker Tensor II with Harrick AutoSeagull option TENSOR II is a high performing FTIR spectrometer with a compact size. It has a large sample compartment which can accommodate different FTIR sampling accessories. In this set-up, it is equipped with either:

- a Seagull Variable Angle Reflection Accessory designed for examining films and coatings, or
- a transmission accessory for solid, IR-transparent samples.

### **Technical Details**

TENSOR II (Bruker) is designed to combine high light-throughput and a large sample compartment with compactness. Bruker's detector technology ensures lowest electronic noise. It is based on modern dual-channel detsigma ADC's with true 24-bit dynamic range integrated into the detector preamplifier electronics.

The AutoSeagull (Harrick) is a powerful attachment for examining samples using a variety of reflection techniques. In addition, it can be operated over a broad range of incident angles without misaligning the system, without defocusing the incident radiation, and without changing the polarization of the incident beam.

Specifications

- internal, external and diffuse reflectance capabilities
- angle of incidence 5 - 85°

### **Applications**

The instrument can be used for analyzing samples such as:

- powders
- optical coatings
- (films on) opaque substrates
- (films on) liquids

More information:

Bruker: <https://www.bruker.com>

Harrick: <https://www.harricksci.com>