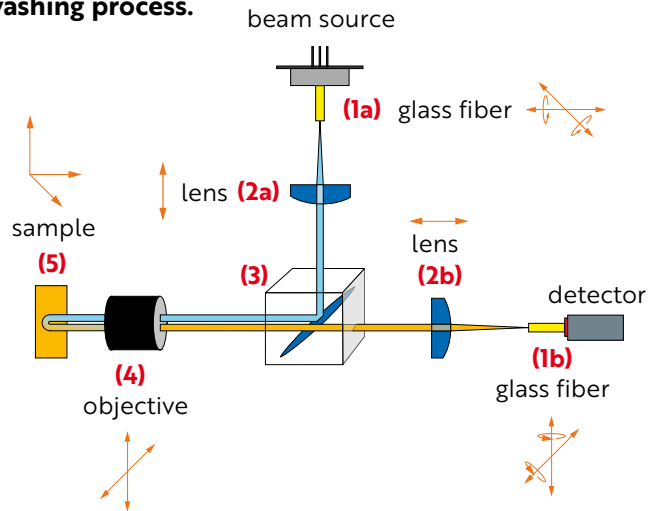


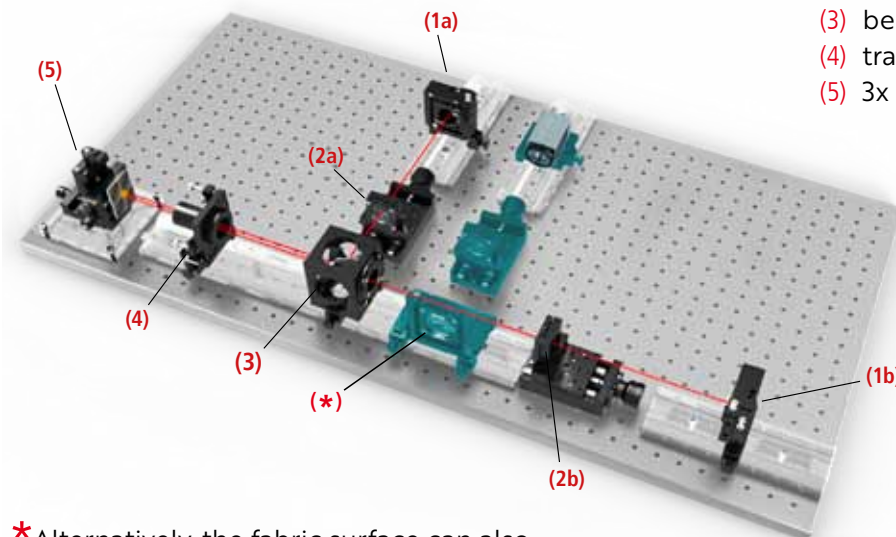
Solid phase fluoro spectrometer

The **fluorescence spectroscopy** uses fluorescence phenomena for the **analysis of substances**. It differs from several other spectroscopies as it measures the emission instead of the absorption of fluorescent radiation. The **research institute „wfk – Cleaning Technology Institute e.V.“** in Krefeld, Germany, for example examines dirt on fabric surfaces in order to identify **fluorescent-marked bacteria**. This procedure is used for the evaluation of a **successful hygiene of a washing process**.



For this sensitive measuring method, the **highly precise guidance of the measuring beam** is essential. In order to keep the **beam height steady** on one level, the OWIS system consisting of **rails and slides** is used in the fluoro spectrometer. The light is **coupled** out of the beam source through the glass fibers (1a) **into the beam path**. The beam is **collimated** (2a) and **redirected** to the sample (3). A microscope objective (4) adjusts the appropriate **beam diameter** in order to **scan the fabric sample three-dimensionally** (5). For the electronic measurement of the wavelengths, the fluorescent light emitted from the surface of the substance is **coupled into the optical fiber of the detector** (1b). The linear stages (2a+2b) are used to precisely adjust the **position of the two lenses along the optical axis** in order to achieve the **maximum signal intensity**.

- (1) fiber positioner [FAPO65](#)
- (2) optic holder on linear stage [LT60](#)
- (3) beam splitter in cube [W65](#)
- (4) transmitting mount [TRANS65L](#)
- (5) 3x translation stage [VT45N](#)



* Alternatively, the fabric surface can also be monitored by a camera.