

*FCM Clustering and SIMCA  
to waysfor interpreting FT-IR-microspectroscopic maps  
of tumor thin sections*

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FCM (fuzzy c-means) clustering and SIMCA (soft independent modeling of class analogy) are used to identify spectral differences of FT-IR-spectra of thin sections of different tissues. The impact of data pretreatment and data acquisition parameters on the possibility of classification is outlined. Three different types of tumor were investigated, HT29 (human colon adenocarcinoma), MCF-7 (human breast adenocarcinoma) and FaDu (human squamous cells). These tumor cells were grown in nude mice until they reached approximately 5 mm in diameter. They were cut into 10µm thin sections, which were mapped with an IR microscope equipped with a computerized XY-stage.