Uses of gas analysis/chemometrics in relation to health.

Disease diagnosis by analysis of human breath as opposed to diagnosis based on blood has the advantage of being noninvasive. Breath based diagnosis is based on the analysis of certain molecules indicatory of healthy, so called biomarkers, which diffuse from the bloodstream into the lungs and breath.

Research on diagnosing asthma

In this paper a particular gas analysis setup and the subsequent data processing is treated. More specifically the goal is twofold. Firstly to decrease the uncertainties with which the compounds and its concentrations are determined. Secondly the goal is to find a reliable way of distinguishing and identifying breath of healthy and asthmatic children by way of the compounds present and their concentrations.

A quantum cascade laser scanning in the wavenumber range of 832 cm^(-1) to 1263 cm^(-1) and a