

Development of sensitive analytical method of body odor components using solid-phase microextraction, and analysis of their changes by use of cosmetics, food intake and stress load

Hiroyuki Kataoka

School of Pharmacy, Shujitsu University

Since the odors and emanations released from human body can include essential information about the state of health and diseases, chemical analysis of their components is attracting attention as an objective quantitative evaluation. In this study, we developed a non-invasive analytical method for the determination of 2-nonenal as a body odor component by headspace solid-phase microextraction/gas chromatography-mass spectrometry (SPME/GC-MS). 2-Nonenal in skin emissions and secretions collected by gauze wiping were easily extracted onto the SPME fiber, and then analyzed sensitively by GC-MS. Using this method, we analyzed body odor changes by use of cosmetics, food intake, cigarette smoking and stress load.