

Design of the Portable Mass Spectrometric Sensor for Vascular and Endocrine Disease Diagnostics

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Design and testing of the interface systems between the entrance of a portable mass spectrometric sensor and human skin for noninvasive diagnostics of vascular and endocrine diseases with monitoring of transcutaneous (through the skin) gas composition were reported. The description of the interface systems, the operating mode and the factors making an impact on the efficiency of measurement procedure were considered. The transcutaneous gas tensions were evaluated through mass spectrometry gas flow determination at skin surface. The results of testing of the mass spectrometric sensor were presented. The efficiency of mass spectrometry method application was discussed.