**SIMULTANEOUS SCREENING OF SEPSIS BIOMARKERS OF PHENOL AND INDOL STRUCTURE IN BLOOD SERUM OF RESUSCITATION PATIENTS USING MICROSORPTION CONCENTRATING WITH THE FOLLOWING GC-MS DETERMINATION**

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The study of the biodegradation of such alpha-amino acids as tyrosine, phenylalanine and tryptophan is a promising direction of metabolomics. Their metabolites – phenolic acids (PA) and the compounds of the indole structure are biomarkers of sepsis and other bacterial diseases, therefore the rapid method of their determination in the biological fluids of patients will allow early diagnosis of the disease and effectiveness of the treatment process.

This paper presents the results of simultaneous screening of phenolic and indole compounds. It compares various approaches to sample preparation (liquid-liquid extraction and microsorption concentration in a syringe, filled with C18 sorbent (MEPS)) and carried determination of target components by gas chromatography - mass spectrometry.

The PA degrees of extraction from the serum of resuscitation patients using MEPS were 40-95%, for compounds of the indole structure – 30-70%. The calibration curve in a clinically significant range of concentrations (0–30 mM) made it possible to determine the absolute content of sepsis biomarkers in the blood serum of resuscitation patients. Sample preparation using MEPS can facilitate the introduction of GC-MS for determination of biomarkers of sepsis into clinical practice and early diagnosis of the disease.