

ABSTRACT

METHOD OF NONINVASIVE DETERMINATION OF GLUCOSE CONCENTRATION IN BLOOD

5 The invention relates to the field of survey and analysis of materials chemical composition and can be preferentially used in diagnostic medical equipment for noninvasive determination of glucose content in blood.

 The method includes radiation treatment of a biomaterial alternately in any sequence with optical radiation of the first wavelength band 950-970 nm, 10 optical radiation of the second wavelength band 1020-1060 nm, optical radiation of the third wavelength band 930-950 nm, optical radiation of the fourth wavelength band 740-760 nm and optical radiation of the fifth wavelength band 830-850 nm, receiving of the optical radiation diffusely reflected by biomaterial, conversion of the received optical radiation into an electric signal and 15 determination of glucose concentration in blood on basis of the sum of electric signals received at radiation treatment of the biomaterial with optical radiation of the second, third and fourth bands which is reduced by the values determined by the electric signal received at radiation treatment of the biomaterial with optical radiation of the first and fourth bands.

20 The invention ensures enhanced accuracy of determination of glucose concentration in blood due to reducing of the error of measurements caused by presence of water and melanin in the biomaterial under survey.