

USE OF OPTICAL RADIATION FOR DIAGNOSTICS OF BLOOD IN THE INFRARED SPECTRAL RANGE

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The modern medicine is in continuous search of new methods of diagnosing which would open physiological and biochemical essence of processes, which proceed in an organism.

In recent years the clinical medicine is interested new actual to methods of diagnostics, treatment and prevention of different types of diseases that more, is cause by emergence of numerous medical development, which possess the wide range of opportunities. One of such methods is the infrared spectroscopy (IR). The IR-spectroscopy is one of fundamental methods of research of organic substances, which is widely used in chemistry, biology and medicine. Infrared ranges can indicate presence of certain structures at unknown organic compounds. They can be also used for detecting of sub-fractional composition of biological liquids (in given cases - blood). The method is highly specific as allows determining by characteristics of a range of absorption of infrared radiation by chemical bonds in blood practically any substances qualitatively and quantitatively.

For registration of IR-spectrums, classical spectrophotometers and Fourier-spectrometers are used. The main components of the spectrophotometer, the source of continuous thermal radiation, the monochromator and not selective receiver of radiation are.

The method of IR-spectroscopy of blood gives opportunity of research of influence of an ozone therapy, electro reflexology as these types of influence affect concentration of phosphorus-containing connections in blood that often leads to violation of a power exchange of an organism and in most cases does not cause positive therapeutic effect. Therefore, research of the characteristic of IR spectrums of blood of tumor-bearing organisms under the influence by modern therapeutic interventions, for identification of the most effective and in too time of safe methods of diagnosing and treatment of oncological diseases, remains to the most actual and allows to formulate the purpose and problems of the real work.