

Dielectric Spectroscopy as a method for *in vitro* diagnostic

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Dielectric properties of human blood cell suspensions (lymphocytes and erythrocytes) were studied by time domain dielectric spectroscopy (TDDS) [1-5]. Analysis of the dielectric parameters of cell structural parts was performed in the framework of Maxwell-Wagner mixture formula and the one or double-shell model of cell depending of its type. It was shown that membrane capacitance could be used as a very sensitive parameter to distinguish between normal and malignant lymphocytes. Moreover it was demonstrated that the *in vitro* studied erythrocyte membrane capacitance alterations due to varying sugar concentrations can provide an essential basis for further understanding and development of non-invasive glucose monitoring methods for *in vivo* application [6].

References

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