

Phase Resolved Method Applied to the Study of *Curcuma Longa* and Blood

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Photoacoustic spectroscopy is singled out for its capability to resolve the optical absorption spectra of each element of a multicomponent system by the named phase resolved method. The possibility of the use of this method is due to the fact that the photoacoustic signal is not only sensitive to the optical absorption of the sample, but also to the non-radiative relaxation times of its elements [1,2]. In the present study, we explore the use of the phase resolved method in two different systems. First, we analyzed a system with two components (*Curcuma longa* and black pepper, in a powder form) with their optical absorption spectra obtained previously. Afterwards, the phase resolved method was used to separate the optical absorption spectrum of each component in a binary mixture sample. Then the phase resolved method was applied to a more complex system as Fisher rat blood in three cases: healthy rat blood; liver cancer rat blood; and liver cancer rat blood, treated with a daily dose of *Curcuma longa*.

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References

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