

**Spectroscopic properties of *Pisum Sativum* immobilized Photosystem I**

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The isolated Photosystem I (PS I) complex from pea *Pisum Sativum*, immobilized in the polyvinyl alcohol film shows energy dissipation by heat in the  $\beta$ -carotene absorption region by means of the photoacoustic spectroscopy. The linear dichroism measurements of the oriented photosynthetic pigments of the PS I complex indicate two forms of  $\beta$ -carotene molecules with max. at around 490 nm and 500 nm. In the thermal deactivation takes part only long wavelength form. The 730 nm fluorescence maximum, characteristic only for chlorophyll *a* bind to the reaction center protein, has higher intensity when PS I complex is in more rigid environment (e.g. film).