

Features of the induction of chlorophyll fluorescence in leaves of woody plants in urban environment

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A comparative evaluation of the functional state of the pigment complex of deciduous timber most common unit (*Tilia cordata* Mill.) and less common (*Rhus typhina* L.) woody plants using CFI of plantations in Kiev.

The ability to successfully carry out photosynthesis plants depends on several factors, including stress factors caused by external conditions. In most studies to measure the photosynthetic apparatus of plants used indicator of rapid fluorescence measurements of that which is not entered in the photosynthesis reaction and not passed to the heat after absorbing a photon cell. The dependence of the fluorescence of time after the light curve is called chlorophyll fluorescence induction or induction curve.

Conducted a study of chlorophyll fluorescence in leaves amounts lime cordata and staghorn sumac in Kiev during vegetation periods 2011 and 2012 years. Samples of leaves were selected in different areas of the city, depending on the transformation of ecotypes.

During the research analyzed the following parameters fluorescence emission layers: the maximum intensity of fluorescence of chlorophyll a stationary level induction curve ratio of fluorescence induction.

The main parameters of the induction curve can be used as test parameters to determine the stability of ornamental woody plants to the unfavorable technologically generated lands. Changes in these parameters characterize the processes related to the influence of the environment on the course as light and of dark phase of photosynthetic processes in chloroplasts.

Despite the prevalence of the use of *T. cordata* Mill. stands in Kyiv, revealed worsening functional status of trees depending on the level of transformation ecotypes. Indicators induction of chlorophyll fluorescence in leaves *Rh. typhina* L. demonstrate its tolerance to the effects of the urban environment, allows to assert feasibility of wider use of *Rh. typhina* L. from street stands, namely in terms of the high level of transformation ecotypes.