

## **The activity of copper-containing enzymes in the birch leaves in the conditions of the built environment**

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### **Abstract**

© 2016, International Journal of Pharmacy and Technology. All rights reserved. In work dynamics of cupriferous enzymes in leaves of silver birch which is constant object of green construction in the anthropogenous environment is shown. Many researches indicate interrelation of adaptive opportunities of a vegetable organism and functioning of enzymatic system, including cupriferous enzymes of a poliphenoloxidaza and ascorbinatoxidaza. Activity of an ascorbinatoxidaza was determined by a method which is based on property of ascorbic acid to absorb light with a maximum at the wavelength of 265 nanometers. About activity of enzyme judged by reduction of size of optical density, considering that the oxidation level of ascorbic acid is proportional to amount of enzyme. Activity of a poliphenoloxidaza was determined by spectrotometric method which is based on measurement of optical density of products of reaction which are formed at oxidation of pyrocatechin for a certain period. During all vegetative period, plants in the conditions of the urban environment, had an increase in activity of a poliphenoloxidaza with achievement of the maximum value in August. In both years of observations (2014 and 2015) there was a decrease of the activity of an ascorbinatoxidaza in leaves during active vegetation of plants, and in the native habitat, on the contrary, its increase. The minimum values of activity of this enzyme are noted in August in the near-road plantings.

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### **Keywords**

Adaptation of plants, Anthropogenous environment, Ascorbinatoxidaza, Poliphenoloxidaza, Silver birch