Physiological reaction of ELODEA SP. under direct action of different substances with sulphur content

Monica FLEANCU, Daniela GIOSANU, Emanuela BISOIU - Universitatea din Pitesti

This report is presenting our research results regarding the change in the photosynthesis intensity on Elodea sp. under the action of various polluting agents and substances (sodium sulphate, sodium sulphite and sodium meta-bisulphite), the sulphur being the main element of influence in the photosynthesis intensity. During the experiment the magnesium sulphate in the Knop nutritive solution has been changed with standards containing 10 times and 50 times respectively more sulphur. An Elodea sp. witness was maintained submerged in the Knop nutritive solution as subject of comparison in the experiment. Other plants were submerged in the above mentioned sulphur enriched variants of Knop solutions and measurements of the photosynthesis intensity using the Winkler method have been determined after a period of 7 and 14 days respectively. Correlating the sulphur content with the photosynthesis intensity values for each tested substance it was observed that higher sulphur content is decreasing the photosynthesis intensity, in other words the sulphur is acting as a photosynthesis inhibitor. It was also observed that sodium sulphate is acting as an inhibitor after a longer period of time compared with the other