**The effect of humic acids on lead accumulation by *Agropyron repens* L. and biochemical parameters**

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The effect of humic acids (HA) on the uptake of lead by quack grass plants was studied. Lead levels in the variant (Pb (1000 mg/kg + 2,5 g/m2 HA) increased in the roots almost twofold and in the shoots - in 16 times. With increasing content HA (5 g/m2) in the soil Pb content in the shoots increased by 27% in comparison with low concentration, but in the roots Pb concentration decreased by 40%, may be, at the expense of translocation of Pb to the shootsBiochemical parameters were studied with plants grown hydroponically in 5 variants 1- 0 (control); 2 - 1 mM Pb (Pb1); 3 - 2 mM Pb (Pb2);4 - Pb1 + HA (0,5 mM); 5 - Pb2 + HA (0, 5 mM). Chlorophyll (Chl) *a* content decreased in all treatments. Content of carotenoids remained unchanged or increased. Proline content increased in the shoots in all variants and in the roots - about three-fivefold. Proline content in the variants was lower in the presence of HA in comparison with variants without HA. HA stimulated the Pb uptake and it translocation from roots to shoots. Lead caused decrease of Chl a content, but increased Chl b and carotenides, it might be adaptive reaction. Lead increased proline content about four-fivefold, this increasing roles as osmotic compatible and osmoprotector under heavy metals stress.

Key words: lead, humic acids, chlorophyll, carotenoids, proline.

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