

DETERMINATION OF ENVIRONMENTAL QUALITY USING EPR SPECTRA OF GRAPE SNAILS

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In our previous works, we investigated various plant species using EPR spectroscopy. Our experimental research has had very important and relevant results. We have discovered new paramagnetic centers in plants under the influence of various stressors and have shown that the results obtained can be used as a bioindication parameter in environmental monitoring [1-4].

Currently, the object we are exploring is grape snails. EPR studies have shown that radiation plays a stimulating role in the creation of new paramagnetic centers in grape snails. This effect can be used as a bioindication parameter in environmental assessment of the environment.

Detection of paramagnetic centers in animal organisms can provide completely new biophysical and biochemical information. The results will allow us to gain a deeper understanding of the origin and role of biogenic paramagnetic centers in living systems.

References.

1. R.I.Khalilov, A.N.Nasibova., V.A.Serezhenkov, M.A.Ramazanov, M.K.Kerimov, A.A.Garibov, A.F. Vanin. Accumulation of Magnetic Nanoparticles in Plants Grown on Soils of Apsheron Peninsula. // J.Biophysics. Vol.56, N2, 2011, P.316-322.
2. Rovshan I. Khalilov, Aygun N. Nasibova, Naglaa Youssef. The use of EPR signals of plants as bioindicative parameters in the study of environmental pollution.// International Journal of Journal of Pharmacy and Pharmaceutical Sciences. Issue 9, Vol 7. S.1. P.172-175. 2015.
3. Nasibova A.N., Khalilov R.I. Preliminary studies on generating metal nanoparticles in pomegranates (*Punica Granatum*) under stress. // International Journal of Development Research. Vol.6, N 3, 2016, P.7071-7078.
4. A.N.Nasibova, İ.Y.Fridunbayov, R.I.Khalilov. Interaction of magnetite nanoparticles with plants. European Journal of Biotechnology and Bioscience. 2017. Volume 5; Issue 3; P. 14-16.