

Ján Brindza¹, Katarína Fortuniková¹, Zara Harutyunyan², Jana Šimková¹, Vladimíra Horčínová Sedláčková¹, Leonora Adamchuk³

¹ Slovak University of Agriculture in Nitra, Slovak Republic, Institute of Plant and Environmental Sciences, Faculty of Agrobiological and Food Resources

² Scientific Centre of Agrobiotechnology, Armenian National Agrarian University, Yerevan, Republic of Armenia

³National University of Life and Environmental Sciences of Ukraine, Kiev, Ukraine

EFFECT OF LAMINATE RESONATOR ON ANTIOXIDANT ACTIVITY OF DIFFERENT HONEYS IN AQUEOUS EXTRACT

The aim of the experiment – determination of the effect of the influence of the laminate resonator (LR) on the antioxidant activity of different honeys in aqueous extracts. **Materials and methods** – in the experiment, 20 samples of honey from different plants species obtained from beekeepers of Ukraine were tested. In the first experiment, antioxidant activity was determined in honey samples by the DPPH method in aqueous extracts (WE). In the second experiment, water extracts of the tested honeys were placed on the laminate resonator for 2 minutes, and then the antioxidant activity (AAWE+LR) of the samples was determined by the DPPH method. The laminate resonator was developed by the team of the Institute of Human Ecology in Kyiv within the program of New Information Technologies. The resonator generates an electromagnetic field of ultra-low intensity, which affects various biological objects, but also ensures the structuring of aqueous solutions and changes in their taste, aroma and other properties. The application of the resonator does not require any external power sources or switching on and is always functional. **Results** – the graphic presentation (Figure 1) shows that the antioxidant activity in water extracts of the tested honey samples was determined in the range from 2.20% (H02) to 16.98% (H23). After applying the laminate resonator, the antioxidant activity of the same tested honey samples was determined in the range from 3.38% (H25) to 18.35% (H23). At the same time, the comparison of the data shows that the antioxidant activity of the tested honeys increased more or less in 9 samples and the antioxidant activity decreased in 10 samples. **Conclusions** – The application of the laminate resonator was effective in the antioxidant activity change of the tested honey samples. These effects can also be used practically when improving the quality of some beverages and aqueous solutions.

