

**ALAT, AsAT AND GGT ACTIVITY IN CARP HEPAR
UNDER HERBICIDE ROUNDUP INFLUENCE
AND THE OPPORTUNITY OF ITS COMPENSATION
WITH PROBIOTIC BPS-44**

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Herbicides as the necessary compound of agriculture may enter water sources and make influence directly on water plants, protozoa and then by means of nutrification on hydrobionts and water birds. Carp as one of the main objects of fishbreeding in Ukraine can also feel negative influence of herbicides and separately roundup (active substance – glyphosat) – one of the famous herbicide with total action. The probiotics as factors of nonspecific protection can be used to compensate negative herbicides action on hydrobionts. Our experiment concerned with the influence of herbicide roundup on ALAT (alaninaminotransferase, 2.6.1.1), AsAT (aspartataminotransferase, 2.6.1.2) and GGT (gammaglutamiltransferase, 2.3.2.1) activity in carp 0+ blood and hepar and the opportunity of its compencation with probiotic BPS-44 (based on *Bacillus subtilis*). ALAT activity in blood rose by 10.7-fold under roundup action and by 18.2-fold under roundup and BPS-44 action. This can be explained by activization of alanin syntetation system as the aminoacide which mainly used on energetical demands. In hepar under roundup action ALAT activity decreased by 2-fold, that can be connected with NH₃ binding, which intensively formed in process of alanin using on energetical demands. Under roundup and BPS-44 action the activity of AlAT in hepar raised by 3-fold. AsAT in blood increase by 1.5-fold under roundup action and by 3.5-fold under roundup and BPS-44 action. In hepar 3.1-fold decrease under roundup action and 1.4-fold decrease under roundup and BPS-44 action can be seen. Such variations of AsAT activity in hepar might be a result of glycolis activation and Crebs cycle inhibition (no more substrates for Crebs cycle is needed). GGT activity in blood had a tendency to increase under roundup action and under roundup and BPS -44 action GGT activity had no reliable variation in compare with control group. In hepar roundup action also led to some increase of GGT activity. Complex action of roundup with probiotic considerably decreased the activity of GGT. The conclusion could be made that using of probiotic BPS-44 as a compensatory factor of herbicide roundup action had led to same positive influence on biochemical features of blood and hepar. The effect observed needs further investigation.