Supplementary Materials



Figure S1. PLA-based Cup (material indicated by arrow) on the left and biodegradable shopping Bag (https://biobagworld.com/products/retail-2/) on the right. Both products had a ''compostable'' symbol in accordance with the European Standard EN 13432 and hence were declared as fully biodegradable materials.



Figure S2. Particles of biodegradable shopping Bag sunk within a few days of addition to the tank.

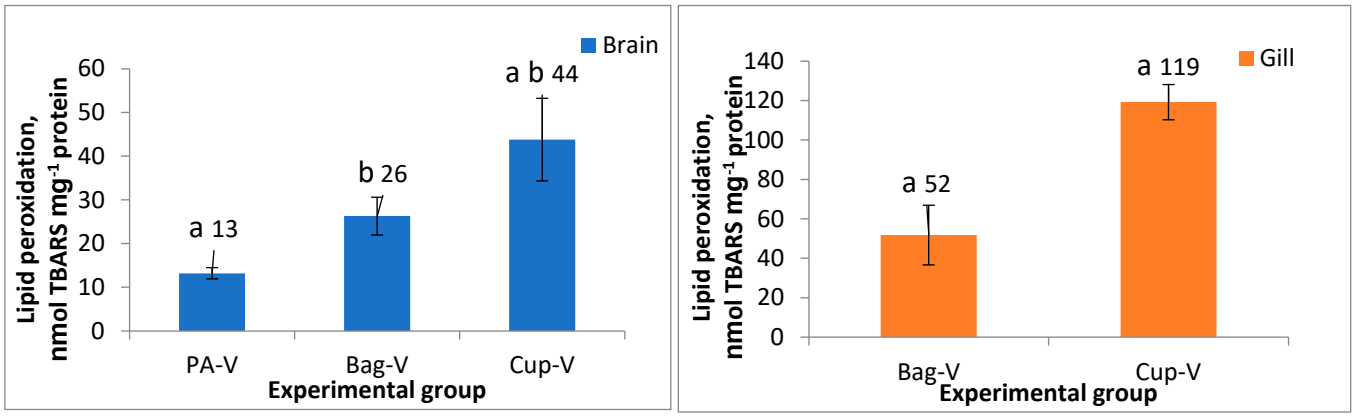


Figure S3. Lipid peroxidation measured as nmol TBARS mg^{-1} protein (mean ± SD, n=3) in the brain (left) and gills (right) of *Carassius auratus* exposed to virgin plastic materials: bioplastics (Bag and Cup) and petroleum-based polyamide (PA). V: material before being subjected to UV irradiation (virgin). Same letters show significant differences between denoted groups ($p<0.05$).

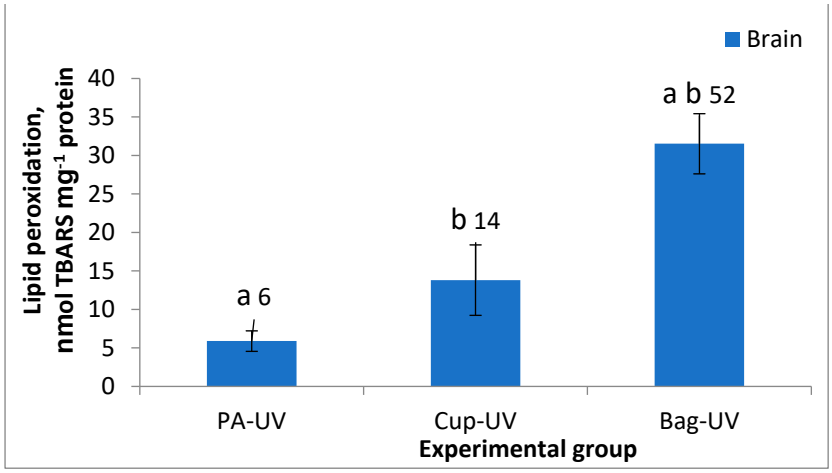


Figure S4. Lipid peroxidation measured as nmol TBARS mg^{-1} protein (mean ± SD, n=3) in the brain of *Carassius auratus* exposed to UV-degraded plastic particles: bioplastics (Bag and Cup) and petroleum-based polyamide (PA). UV: material after being subjected to UV degradation for 26 days. Same letters show significant differences between denoted groups ($p<0.05$).

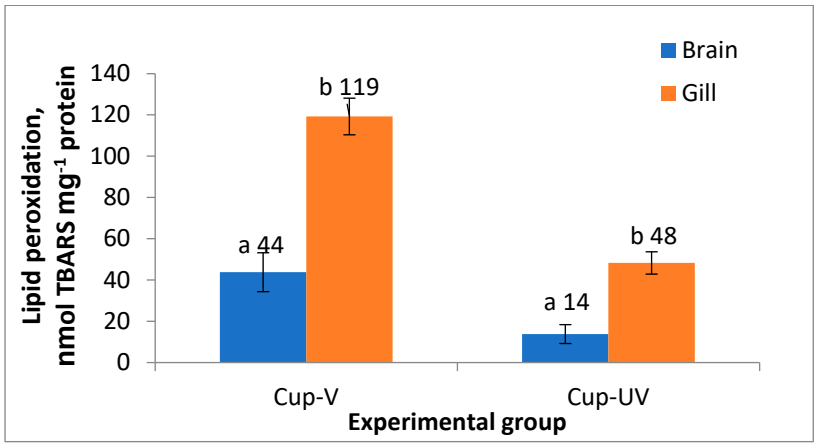


Figure S5. Lipid peroxidation measured as nmol TBARS mg^{-1} protein (mean ± SD, n=3) in brain and gill of *Carassius auratus* exposed to virgin and UV-degraded bioplastics (Cup). V: material before subjecting to UV irradiation (virgin), UV: material after being subjected to UV degradation for 26 days. Same letters show significant differences between denoted groups ($p<0.05$).