## Supplementary Information

**Table S1**. The content of heavy metals in lettuce in the presence of different microplastics.

| Plant Part | Microplastic Treatment | | Heavy Metal (mg/kg) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | **Co** | **Cr** | **Cu** | **Zn** | **Pb** | **As** | **Cd** |
| Leaves | Control | Mean ±SE | 2.84±0.29 | 53.45±22.49 | 80.84±10.87 | 55.96±4.29 | 10.05±3.47 | 1.86±0.68 | 2.08±0.18 |
| | P1 (Fiber) | | 2.32±1.00 | 27.35±34.00 | 49.98±46.60 | 57.75±64.72 | 14.31±16.75 | 1.65±1.22 | 1.62±0.52 |
| | | p-value | 0.35 | 0.15 | 0.04* | 0.41 | 0.28 | 0.38 | 0.26 |
| Roots | Control | Mean± SE | 4.81±0.29 | 29.33±21.84 | 189.69±10.87 | 84.87±4.29 | 12.13±3.47 | 2.51±0.68 | 1.70±0.18 |
| | P1 (Fiber) | | 3.42±1.53 | 32.53±19.80 | 159.07±143.07 | 87.19±85.89 | 33.57±26.86 | 3.72±3.72 | 2.05±0.00 |
| | | p-value | 0.50 | 0.73 | 0.71 | 0.65 | 0.02* | 0.54 | 0.02* |
| Leaves | Control | Mean± SE | 2.84±0.29 | 53.45±22.49 | 80.84±10.87 | 55.96±4.29 | 10.05±3.47 | 1.86±0.68 | 2.08±0.18 |
| | P2 (Glitter) | | 2.55±0.52 | 17.43±15.00 | 26.35±19.30 | 62.21±59.95 | 5.56±8.73 | 1.06±1.53 | 2.29±0.52 |
| | | p-value | 0.26 | 0.08 | 0.00** | 0.21 | 0.13 | 0.19 | 0.21 |
| Roots | Control | Mean± SE | 4.81±0.29 | 29.33±21.84 | 189.69±10.87 | 84.87±4.29 | 12.13±3.47 | 2.51±0.68 | 1.70±0.18 |
| | P2 (Glitter) | | 3.64±1.56 | 25.99±34.41 | 111.65±148.63 | 66.90±88.98 | 20.34±27.12 | 2.25±2.82 | 1.55±0.52 |
| | | p-value | 0.87 | 0.37 | 0.57 | 0.31 | 0.04* | 0.82 | 0.04* |
| Leaves | Control | Mean± SE | 2.84±0.29 | 53.45±22.49 | 80.84±10.87 | 55.96±4.29 | 10.05±3.47 | 1.86±0.68 | 2.08±0.18 |
| | P3 (Plastic Bags) | | 3.99±0.02 | 36.55±25.90 | 40.77±24.30 | 60.62±58.69 | 7.36±2.44 | 1.62±2.44 | 2.29±0.77 |
| | | p-value | 0.02* | 0.25 | 0.02* | 0.21 | 0.26 | 0.40 | 0.24 |
| Roots | Control | Mean± SE | 4.81±0.29 | 29.33±21.84 | 189.69±10.87 | 84.87±4.29 | 12.13±3.47 | 2.51±0.68 | 1.70±0.18 |
| | P3 (Plastic Bags) | | 5.83±1.41 | 27.05±27.05 | 116.79±116.79 | 85.68±85.68 | 10.92±10.92 | 2.15±2.15 | 2.10±0.00 |
| | | p-value | 0.67 | 0.76 | 0.39 | 0.93 | 0.86 | 0.64 | 0.06 |
| Leaves | Control | Mean± SE | 2.84±0.29 | 53.45±22.49 | 80.84±10.87 | 55.96±4.29 | 10.05±3.47 | 1.86±0.68 | 2.08±0.18 |
| | P4 (Plastic Bottles) | | 4.87±0.90 | 29.70±18.00 | 30.85±22.00 | 62.70±62.22 | 4.49±3.65 | 0.72±0.90 | 2.41±0.60 |

| Plant Part | Microplastic Treatment | | Heavy Metal (mg/kg) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Co | Cr | Cu | Zn | Pb | As | Cd |
| Leaves | Control | Mean ±SE | 2.84±0.29 | 53.45±22.49 | 80.84±10.87 | 55.96±4.29 | 10.05±3.47 | 1.86±0.68 | 2.08±0.18 |
| | P1 (Fiber) | | 2.32±1.00 | 27.35±34.00 | 49.98±46.60 | 57.75±64.72 | 14.31±16.75 | 1.65±1.22 | 1.62±0.52 |
| | | p-value | 0.35 | 0.15 | 0.04* | 0.41 | 0.28 | 0.38 | 0.26 |
| | | p-value | 0.13 | 0.18 | 0.00** | 0.18 | 0.08 | 0.07 | 0.12 |
| Roots | Control | Mean± SE | 4.81±0.29 | 29.33±21.84 | 189.69±10.87 | 84.87±4.29 | 12.13±3.47 | 2.51±0.68 | 1.70±0.18 |
| | P4 (Plastic Bottles) | | 10.60±2.27 | 29.60±29.60 | 173.50±173.50 | 76.99±76.99 | 24.28±8.84 | 3.76±3.76 | 2.21±0.00 |
| | | p-value | 0.21 | 0.97 | 0.84 | 0.54 | 0.35 | 0.51 | 0.05* |

** highly significant *significant

**Table S1.** Heavy metal concentrations (mg/kg, mean ± SE, $n$ = 3) in lettuce leaves and roots grown in microplastic-contaminated soils. Treatments included Control (polluted soil without microplastics), P1 (Fiber), P2 (Glitter), P3 (Plastic Bags), and P4 (Plastic Bottles). The levels of cobalt (Co), chromium (Cr), copper (Cu), zinc (Zn), lead (Pb), arsenic (As), and cadmium (Cd) were measured. Statistical differences between treatment means were assessed using independent $t$-tests ($p < 0.05$). Asterisks (*) denote significant differences ($p < 0.05$); double asterisks (**) indicate highly significant differences ($p < 0.01$).