

Supplementary material for

Acute toxicity assessment of orally administered microplastic particles in adult male Wistar rats

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The systematic monitoring (average food and water intake, sensorimotor deficits, clinical signs of toxicity, and levels of biochemical parameters) was performed to detect potential alterations between intact (I) and Q (Milli-Q treated) rats during animals' life and at the terminal experimental endpoint. The rats in I group were not subjected to any specific treatment, while animals in Q group received 2.5 ml of Milli-Q by oral gavage. As presented in **Tables S1 – S5**, no variations in all investigated parameters between these experimental groups were observed, so the intact animals were excluded from further consideration whereas the rats in the Q group served as controls.

Table S1. Average food and water intake as indicators of the general health status of adult male Wistar rats 24 h after intragastric treatments. I group–intact rats; Q group–rats that received 2.5 ml of Milli-Q. Data are presented as the mean \pm SEM.

Groups Parameters	I	Q
Food intake (g)	23.80 \pm 0.73	25.20 \pm 0.49
Water intake (ml)	53.80 \pm 0.73	51.80 \pm 0.49

Table S2. Sensorimotor functions as indicators of the general health status of adult male Wistar rats 24 h after intragastric treatments. I group–intact rats; Q group–rats that received 2.5 ml of Milli-Q. Data are presented as the mean \pm SEM whereas the values of the I group were set as 100%.

Groups Parameter	I	Q
Sensorimotor functions	100 \pm 1.12	98.90 \pm 1.38

Table S3. Clinical signs of toxicity as indicators of the general health status of adult male Wistar rats 24 h after intragastric treatments. I group–intact rats; Q group–rats that received 2.5 ml of Milli-Q. Data are presented descriptively (–no effect).

Groups Parameters	I	Q
Agitation	-	-
Convulsion	-	-
Ataxia	-	-
Touch response	-	-
Piloerection	-	-
Sleepiness	-	-
Lethargy	-	-
Respiratory distress	-	-
Mortality	0/5	0/5

Table S4. Levels of markers of organ/tissue function in serum of adult male Wistar rats 24 h after intragastric treatments. I group–intact rats; Q group–rats that received 2.5 ml of Milli-Q. Aspartate transaminase (AST), alanine transaminase (ALT), bilirubin, gamma-glutamyl transferase (GGT), alkaline phosphatase (ALP), cholesterol, high density lipoprotein (HDL), low density lipoprotein (LDL), triglycerides, glucose, urea and creatinine. Data are presented as the mean \pm SEM.

Groups Parameters	I	Q
AST (U/L)	129.80 \pm 8.06	118.00 \pm 7.23
ALT (U/L)	52.80 \pm 3.94	46.00 \pm 5.33
Bilirubin (μ mol/L)	0.84 \pm 0.05	0.94 \pm 0.07
GGT (U/L)	0.16 \pm 0.02	0.18 \pm 0.02
ALP (U/L)	113.00 \pm 8.00	114.40 \pm 6.29
Cholesterol (mmol/L)	1.84 \pm 0.12	1.88 \pm 0.16
HDL (mmol/L)	1.42 \pm 0.10	1.40 \pm 0.11
LDL (mmol/L)	1.22 \pm 0.10	1.30 \pm 0.07
Triglycerides (mmol/L)	1.92 \pm 0.18	1.92 \pm 0.16
Glucose (mmol/L)	7.86 \pm 0.42	7.80 \pm 0.50
Urea (mmol/L)	8.00 \pm 0.57	8.00 \pm 0.57
Creatinine (μ mol/L)	41.40 \pm 3.30	43.80 \pm 4.50

Table S5. Levels of oxidative-stress indicators in serum of adult male Wistar 24 h after intragastric treatments. I group–intact rats; Q group–rats that received 2.5 ml of Milli-Q. Prooxidant-antioxidant balance (PAB), advanced oxidation protein products (AOPP), end products of lipid peroxidation: malondialdehyde (MDA) and 4-hydroxynonenal (HNE). Data are presented as the mean \pm SEM, whereas the values of the I group were set as 100%.

Groups Parameters	I	Q
PAB (HKU)	100 \pm 0.56	95.77 \pm 1.84
AOPP (μ mol/l)	100 \pm 7.64	100.07 \pm 7.95
MDA (μ M)	100 \pm 3.87	97.60 \pm 3.74
HNE (μ M)	100 \pm 12.80	111.84 \pm 9.15