

Table S1. Quality Assurance/Quality Control assessment, based on de Ruijter et al. (de Ruijter et al. 2020).

Technical quality assessment		
Particle characterization		Score
1. Particle size and Particle shape	0.9 µm microspheres according to manufacturer. Size and shape was confirmed by Carl Zeiss, AxioImager A1, microscope, equipped with a digital camera AxioCam MRc. Results are presented in Figure S1	2+2
3. Polymer type	Polystyrene according to manufacturer. Type of polymer was confirmed by FTIR spectroscopy (IRAffinity-1S, Shimadzu). FTIR spectra was presented in Figure S2.	2
4. Source of NP	Commercial Tianjin BaseLine ChromTech Research Centre (China)	2
5. Data reporting	PS NPs concentrations in this study were reported as number (10 ⁵ microspheres/L).	1
Experimental Design		Score
6. Chemical purity	MPs have not been subjected to any cleaning	0
7. laboratory preparation/	To minimize possible NPs contamination during the manipulation and test exposure, all the instruments were previously washed with Milli-Q® water. Glass materials were also used to perform the test and keep the all work solutions. Cotton lab coats were also used.	2
8 verification of contamination	Background contamination was checked visually and was not detected.	1
9. verification of exposure	The work concentration (10 ⁵ pcs/L) was maintained by changing the water every 24 h.	1
10. homogeneity of exposure	Homogeneous particle distribution was ensured by daily water changes and intensive aeration.	1
11. exposure assessment	The location of MPs inside the body of the molluscs has not been considered.	0
12. replication	Minimum three replicates for statistical rigor were performed for bioassays and characterization measures.	2
Applicability in ecological risk assessment		
Applicable for Risk Assessment		Score
13. endpoints	Several biochemical endpoints have been considered. Including DNA damage, changes in lysosome stability and indicators of oxidative stress.	1
14. presence of natural (food) particles	During experiment the mussels were not fed.	0
15-16. reporting of effect thresholds	Dose-response relationships were not investigated in this article	0

and quality of dose-response relationship		
Ecological Relevance		Score
17. concentration range tested	Only one concentration of MPs has been used.	0
18. aging and biofouling	MPs has not been aged in this article	0
19. diversity of NPs tested	Only one type of polymer with one size range was tested.	0
20. exposure time	The exposure time was 5-d.	0
Total Score		17

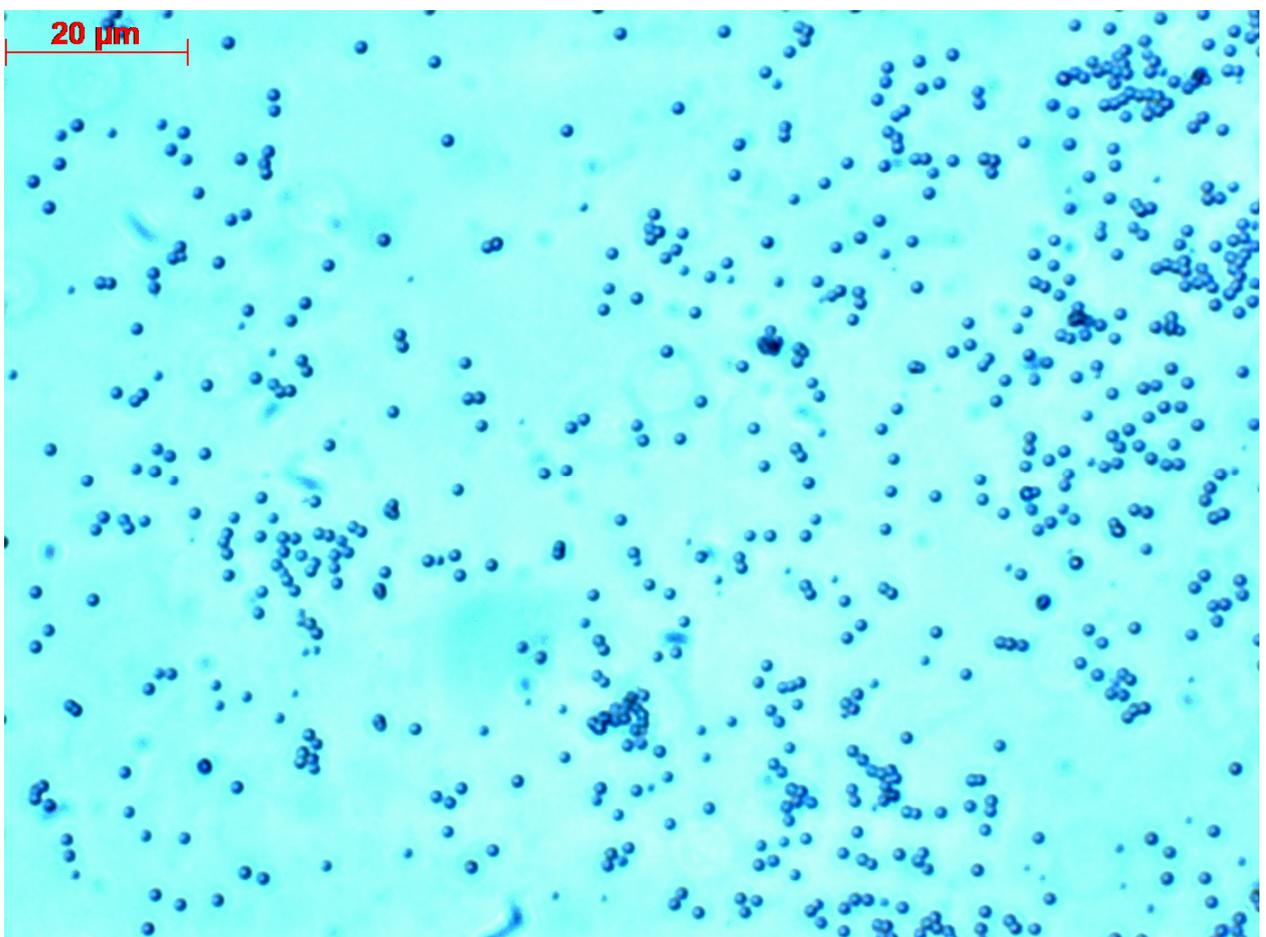


Figure S1. Photo of used PS MPs.

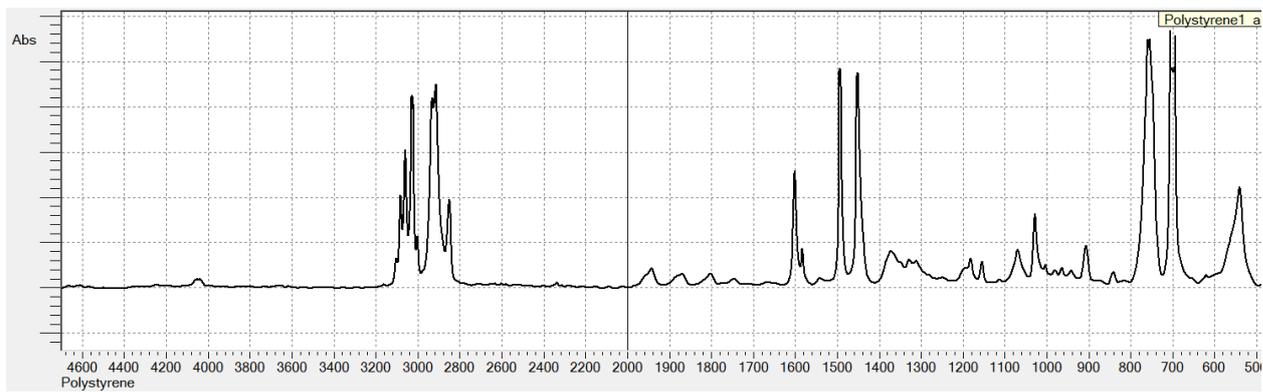


Figure S2. Spectra of used PS MPs.