Laboratory protocol for microplastics extractions from personal care and cosmetic products

1. Weigh approximately 0.1 g (wet weight, recorded to the second decimal case) of the product and add it into a small beaker containing 10 ml of absolute ethyl alcohol;
2. Stir the solution gently with a glass rod until thoroughly dissolved;
3. Transfer the solution into a larger beaker containing 250 ml of distilled water (rinse the beaker and glass rod);
4. Stir the solution gently with a glass rod until thoroughly dissolved;
5. Transfer the solution into a separatory funnel (previously mark the 3 ml level) gently to minimize foaming. Rinse the beaker;
6. After 10 min, discard the bottom fraction by opening the tap in the bottom of the separatory funnel and gently allow the solution to flow until the 3 ml mark;
7. Collect the 3 ml fraction into a 8 cm ø glass Petri dish. Rinse the funnel with a small volume of absolute ethanol (this will help to further reduce foaming). Make sure the bottom of the Petri dish is fully covered;
8. Place the Petri dish in a leveled hot plate at 60°C for 30 min or until all water evaporates;
9. After drying, observe the Petri dish with a binocular stereoscope at 20X magnification placing a black gridded paper with 1 cm^2 numbered squares under the Petri dish;
10. Count and record all visible microbeads on the sheet provided. Alternatively, count the number of microbeads in a subset of squares uniformly distributed in the Petri dish (at least 10) and extrapolate for the total area of the Petri dish. Also note the color and shape of the microplastic particles.

Microplastics recording table

Square number	Number of particles	Shape (irregular, round)	Color	Square number	Number of particles	Shape (irregular, round)	Color
1				51			
2				52			
3				53			
4				54			
5				55			
6				56			
7				57			
8				58			
9				59			
10				60			
11				61			
12				62			
13				63			
14				64			
15				65			
16				66			
17				67			
18				68			
19				69			
20				70			
21				71			
22				72			
23				73			
24				74			
25				75			
26				76			
27				77			
28				78			
29				79			
30				80			
31				81			
32				82			
33				83			
34				84			
35				85			
36				86			
37				87			
38				88			
39				89			
40				90			
41				91			
42				92			
43				93			
44				94			
45				95			
46				96			
47				97			
48				98			
49				99			
50				100			