

Data summary

Number of samples analyze: **18**
Total volume of water analyzed: **19.85 L**
Total number of particles: **155**
Average particles per liter: **8**
Samples containing particles: **19 of 20**
Sample containing highest count: **Boxed Water (56)**
Sample containing no particles: **Aquafina**

Shape:
 Microfiber: **56%**
 Fragment: **44%**

Color
 Transparent: **61%**
 Blue: **17%**
 Other color: **9%**

Size:
 < 1.5 mm: **96%**
 1.6-3.1: **4%**

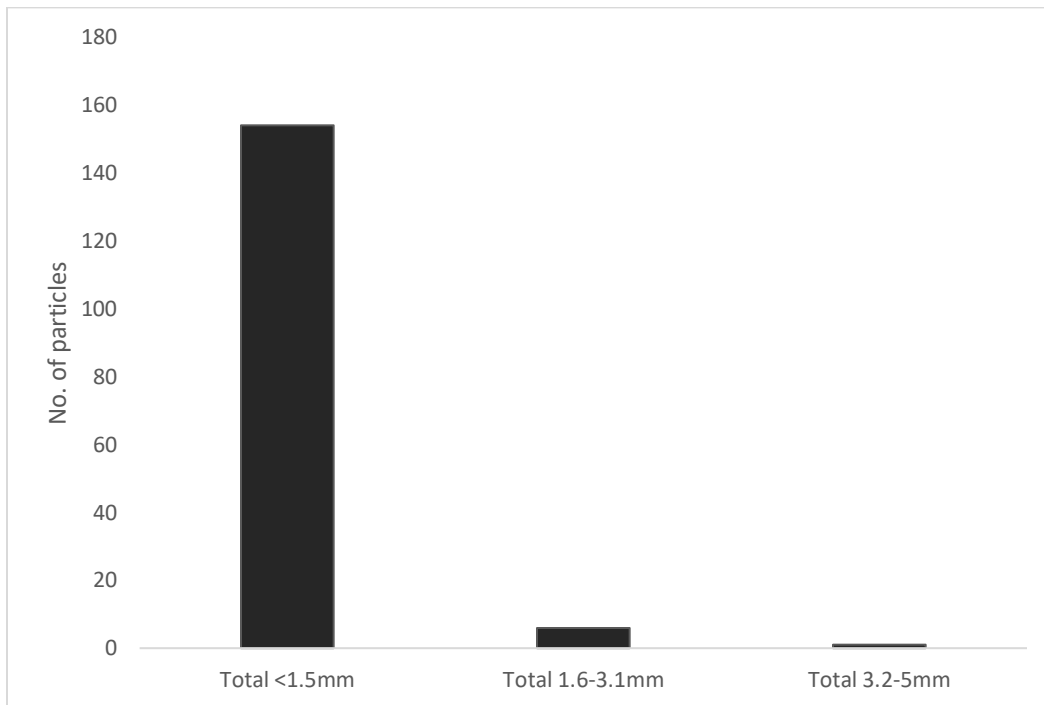


Fig 1. Size classes of enumerated particles in 20 samples.

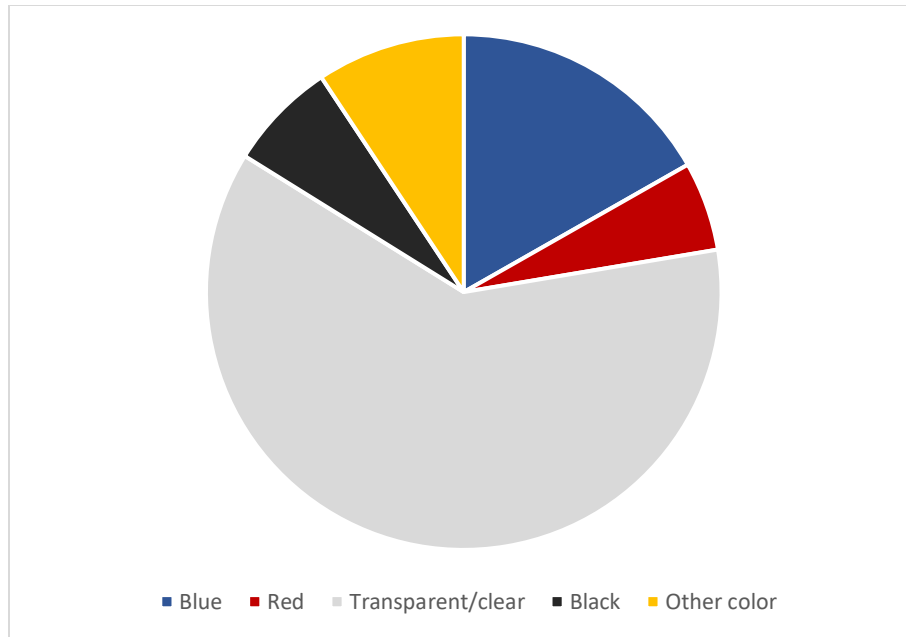


Fig 2. Percentage of enumerated particle colors in 20 samples.

Brand	Sum of Total Particles	Sum of Total Particles per Liter
Aquafina	0	0.0
Arrowhead	6	3.9
Boxed Water	56	58.6
Crystal Geyser	8	7.7
Dasani	2	2.1
Deer Park	5	4.8
Eternal water	1	1.0
Evian	10	9.5
Fiji	19	12.3
Glaceau Smart	6	5.8
Ice Mountain	6	11.3
Icelandic Glacial	8	7.8
Ozarka	11	15.1
Penta	5	4.9
Poland Spring	2	1.9
Texas Spring Water	5	7.9
Trader Joes Mountain Spring	2	1.9
True Zealand	6	5.9
Zephyrhills	3	2.9
Grand Total	161	165

Ocean Analytics Sample Processing

High quality assurance and quality control is of utmost importance in the laboratory. During filtration, we run numerous air blanks (exposing a dampened filter to the air adjacent to the filtration apparatus) and water blanks with the filtered water used for rinsing glassware, hands and forceps. During particle enumeration, an air blank is exposed concurrently to sample filter exposure. Each sample is vacuum pumped over a 0.45 μm filter and placed in a triple rinsed glass petri dish. Using a microscope at 45x magnification the filter is systematically counted, with each plastic piece categorized based on shape (round, fiber, fragment) and color (blue, red, black, transparent/clear, other) and size (100 μm – 1.5 mm, 1.6-3.1 mm, 3.2-5 mm, and 5.1-9.6 mm). The size classes are based on the filter grid. The final count for the sample is divided by the sample volume. This calculation helps to standardize the results, as water samples are often not exactly one liter of water. Particles are photographed from each filter using an amscope microscope camera. Scale bars are applied to the photographs after calibration with ImageJ software.

The Story of Stuff samples did not contain any round particles or particles in the 5.1-9.6 mm size class, so for simplification these categories were not included in the datasheet.

Definition of shape categories:

- **Fragment:** a fragment is any non-linear, non-round piece. Generally, they have jagged edges from breaking off larger pieces of plastic, but can also have smooth edges or be elastic. Fragments can be three dimensional or two dimensional, such as a chip or plastic film.
- **Fiber:** They are long, thin and thread-like with a length between 100 μm and 5 mm and a width of approximately 1.5 orders of magnitude shorter. Typically, plastic fibers are consistent in shape and size along their length. They are the most abundant type of microplastic found worldwide.

