



# **MICROPARTICLES AND MICROPLASTICS**

## **ANALYTICS FOR THE BEVERAGE INDUSTRY**

**INSTITUT  
FRESENIUS**

**SGS**

Many scientific studies detected microparticles and microplastics in bottled water. There are significant differences between the products and from bottle to bottle. In order to reduce the number of particles a reliable knowledge of where and when which particles have entered the beverage containers is indispensable.

SGS has been working on the development of methods for years, therefore we have the appropriate testing methods for each particle size. With us, you do not only gain a knowledge advantage over authorities and product testers, you also find your position in the best-of-class ranking.

### WHAT IS INVESTIGATED?

- Mineral water, table water, spring water
- Process water
- Food Contact Materials
- Soft drinks, beer in development

### WHAT RESULTS DO YOU GET?

- Total particle number per liter
- Particle size distribution
- Morphologic description
- Material of particles: Plastic yes / no?
- Microplastics number per l
- Polymer type of microplastics

### YOUR BENEFITS

- The results of the investigation support your corporate communication strategy provide valuable guidance for improvements in the production process and supply chain

### WHAT METHODS?

- Light microscopy
- Raman spectroscopy
- FTIR-Spectroscopy
- SEM - EDX

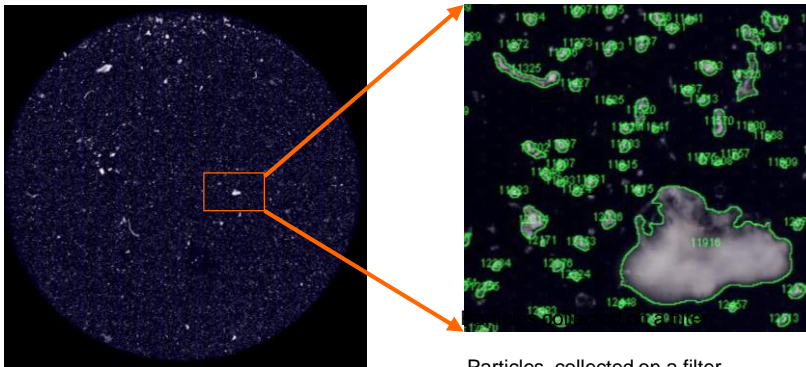
### OUR COMPETENCE

SGS Fresenius is able to analyze particles in the particularly interesting size range of 5 to 20 microns – because 80% of the microplastics in water samples are found in this range.

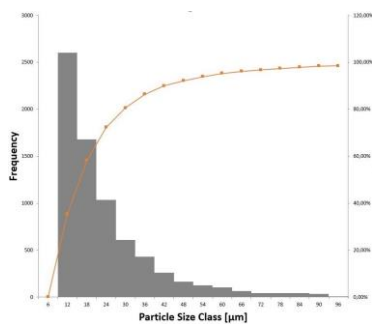
All work is carried out in low-particle laboratory areas (laminar flow box) and carefully monitored with blank values. Very low blank values are a prerequisite for reliable analysis and can only be achieved with high effort.

We are closely linked and actively engaged in international working groups on the harmonization of methods and in the working committees of the DIN, the VUP and others.

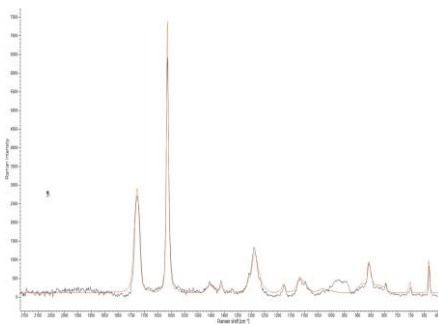
Last but not least, the experience gained from numerous customer projects helps us to interpret the results.



Particles, collected on a filter



Particle size distribution



Raman Spectrum

Black: Sample, Orange: Reference (PET)

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WHEN YOU NEED TO BE SURE

