

Microplastics Analysis



Recognising the major global environmental problem that microplastics present, Eurofins is at the forefront of providing testing solutions to identify the prevalence of microplastics in our environment.

"Microplastics are everywhere. When we wash our clothes, they shed fibres, and a lot of those fibres are synthetic. Those microplastics find their way into the sewage treatment plants."

"Most of the micro plastics do not break down in the wastewater treatment process. They are concentrated into biosolids, which then get applied to agricultural land, creating a loop where microplastic pollution gets back into the food chain."

Dr. Bob Symons, Technical Director Eurofins Environment Testing AU/NZ

## Type of Samples

Eurofins microplastics analysis methods have been developed and validated to measure microplastics in a range of samples including:

- Biota (mollusks, mussels, fish, prawns)
- Drinking water (tap and bottled)
- Surface water (rivers and lakes)
- Food products (salt, tea bags, rice)
- Consumer products (coffee cups, personal care products)

## Infra-red imaging

Using an innovative laser direct infra-red imaging (LDIR) system, Eurofins not only identifies the polymers present but also the size of the microplastic particles. In addition, high-resolution images are taken, this is especially useful for particles greater than 500µm and ≤5 mm to characterise the particles as to whether they are films, fibres, foams, spheres etc. Eurofins now offers Microplastics Analysis reporting on:

Polymer ID Morphology Size Colour

Quantity

# **Quality Assurance**

Each batch of results will be accompanied with both positive and negative controls. Positive controls (Laboratory Control Samples), negative controls (Method Blank). Recoveries of reference materials for both polyethylene and polystyrene of different particle sizes are added to each sample to monitor recoveries throughout the extraction and clean-up steps. All analyses are conducted in a positive pressure laboratory along with good laboratory practices in order to reduce or negate background impurities.

#### **Reporting Parameters**

All samples will be analysed for the eight most common microplastics detected in the environment (polyethylene, PE; polystyrene, PS; polypropylene, PP; polyvinyl chloride, PVC; polyethylene terephthalate, PET; polycarbonate, PC; polymethylmethacrylate, PMMA; and polyamide, PA)

Total number of microplastics per sample Total number of each polymer per sample



# Please contact us for advice on the protocols for the collection of samples.

**Eurofins Food and Water Testing NZ** 

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