

Detecting microplastic with single particle ICP-MS

In recent years, many researchers have applied single particle inductively coupled plasma mass spectrometry (Single Particle ICP-MS, spICP-MS) to study the migration, transformation and toxicology of nanoparticles (NPs). Due to the conveniences of the spICP-MS method, it has become a regular method for analyzing the NPs' particle size, concentration, solubility and other aspects of NPs. Recently, investigating the possibility for using spICP-MS method for microplastic (MPs) has also become an emerging hot topic. In this study, we discovered the pros and cons of using spICP-MS method for analyzing polystyrene and polyethylene MPs. Preliminary results shown that analyzing polystyrene microbeads within 1 to 10 μm diameter is achievable with spICP-MS method. However, it might be challenging for polyethylene MPs.

Primary author: DONG, Shuofei (Agilent Technologies Co. Ltd (China))

Presenter: DONG, Shuofei (Agilent Technologies Co. Ltd (China))