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# Single Particle ICP-MS : How to use MassHunter nanoparticle module for method creation and data processing.

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## Abstract

The study of nanoparticles and their size has been a growing topic in recent years. These compounds are widely used in several industries such as pharmaceutical, food or material science. The full characterization of nanoparticles (size, shape, crystal structure, porosity,...) still remains a challenge to take on and requires the use of multiple analytical techniques among which ICP-MS can play its part.

Single Particle ICP-MS can be a powerful tool for screening as it enables within a few minutes to determine the size repartition of the nanoparticles composing a sample. These measurements generate a large amount of data whose processing could be quite time consuming. The nanoparticle module build within the MassHunter software can reduce significantly the data processing time as it guides the user through the different steps of method creation and realizes the calculation of the size distribution.

**Keywords:** single particle, SP, ICP, MS, nanoparticle, size distribution, software

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