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VENDOR WEBINAR:

From Research to Routine - Analysis of Titanium Dioxide Nanoparticles in Food by Single Particle ICP-MS

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The food color E171 (titanium dioxide) is known to contain a fraction of nanoparticles and has been investigated both, in the context of labelling of food for the content of engineered nanomaterials as ingredients and in the context of risk assessment.

It was recently decided to ban the use of E171 in Europe. A single particle ICP-MS method was developed for the determination and characterization of TiO_2 NPs in foods based on ICP-MS/MS. To check the effectiveness of the method, two different TiO_2 NPs were spiked to milk.

The method was further tested in a study that compared the performances of both high-resolution ICP-MS and ICP-MS/MS in single-particle mode for characterization of TiO_2 NPs in food. Finally, the method was applied in an interlaboratory study among seven experienced European food control and food research laboratories.