

7th World Congress on

Mass Spectrometry

June 20-22, 2018 | Rome, Italy

Validation of a new method on LC-MS/MS in the determination of glyphosate and AMPA

J Daems, K Van Den Steen, Evelien Couwbergs and P Joos
Water-link, Belgium

Glyphosate and its metabolite aminomethylphosphonic acid (AMPA) are widespread in the environment, especially in surface waters. Water-link is a drinking water company, located in the Antwerp region (Flanders, Belgium), which distributes drinking water in Flanders and the Netherlands. In our production, surface water is the sole starting material for the making of drinking water. The last step in this production step is charcoal filtration. However, glyphosate and AMPA are not very well removed by this filtration step and, hence, a thorough control of the raw water source is necessary. Determination of these pollutants can be done using a procedure in which the compounds are converted into their FMOC-derivatives and determination with LC-MS/MS using an electrospray-interface. However, this method implies a solid-phase extraction (SPE) purification step, which is time consuming, but is necessary to reach the necessary limits-of-detection (typically smaller than 50 ng/L). Recently a new TQXS- instrument was commercialized by Waters. This new instrument is more sensitive, so we validated a new method that is less time consuming and better for the robustness of the column. A validation on both drinking and surface water was carried out and the results will be shown. Finally, we analyzed a number of samples during a sampling campaign and typical concentration in these real-world samples will be demonstrated.

jo.daems@water-link.be

Notes: