



## New generation multi-residue pesticide analysis method based on the latest High Resolution- Accurate Mass technology.

Pesticide analyses have changed a lot during the last 10 years. Further improvements in detection and separation technologies have clearly been the basis for 2 trends in pesticide analyses. Not only did the improved resolution allowed for expansion of the number of pesticides quantitatively analysed in multi-residue methods but the improved sensitivity also allowed for reliable results at much lower reporting limits.

The current state of the art MS/MS technologies ( GMS/LMS methods) are capable of not only achieving most of the time the quantification limits set by the official food legislations but also are capable in multiple occasions to provide reliable data at an even lower level of detection. However one major disadvantage of this technology is the limitation towards numbers of pesticides which can be included in the multi-residue methods. Currently GC-MS/MS and LC-MS/MS combined scopes have reached their maximum capacity of around 500 pesticides. Increasing this number will not be possible without impacting the quality and reliability of the analysis results.

The above technology restriction is contradictory to the challenges and expectations set on food Safety caused by globalization of the food industry worldwide. Local differences in pesticide legislation and pesticide usage (worldwide more then 1000 pesticides are authorized for use on different crops) are clearly pushing laboratories in developing new analysis methods capable of extending the current scope of pesticides analysed. All of this with the purpose to increase conformity with legislations worldwide, automatically resulting in an increased global level of food safety.

Fytolab as a specialised food laboratory has now launched an additional analysis method based on the High Resolution – Accurate Mass technology (HR-AM).

### Advantages of the HR-AM technology compared to MS/MS

- Use of Accurate mass as detection tool provides very high resolution and ultimately higher reliability.
- No limit on the number of pesticides which can be included, scope can be built up to well above 500 if needed.
- Retrospective data evaluation possible.

This multi-residue method is now available under accreditation (fruit, vegetables, and cereals) and is completely complementary to the scope of pesticides included in the GMS and LMS scopes.

Detection Technology:	HR-AM, LCMS
Method Code:	LHR_01_A
Reporting limits:	10 ppb
Number of substances currently incl.:	110



Additional information can be obtained via your Fytolab contact person or by contacting Fytolab by phone: +32 9 330 10 10 or by e-mail: [info@fytolab.com](mailto:info@fytolab.com)