

VITAMINS AND FOOD CONTAMINANTS BY UPLC/MS/MS

LAREAL is a food research and analysis laboratory that offers customers a wide range of physical-chemical analyses in every food-processing sector: animal feed, pet food, human food, health foods and nutraceuticals.

The arrival of the mass spectrometry in laboratories, has permitted the improvement of the quality of analyses, with a better sensibility, a better selectivity and a simplification of sample preparation. To increase the productivity of mass spectrometers, UPLC can be a solution, with a reduction of run time, a better resolution and a better sensibility, in comparison with classical HPLC systems.

Since more than 5 years, LAREAL developed over 25 analytical methods to detect and quantify vitamins and food contaminants by LC/MS/MS and UPLC/MS/MS. Today, LAREAL can quantify 4 vitamins and more than 20 food contaminants by UPLC/MS/MS.

LAREAL will present advantages of mass spectrometry, and benefits of UPLC/MS/MS versus HPLC/MS/MS in vitamins analyses and food contaminants analyses, with examples :

- Specificity, sensibility, low detection limits,
- Simplification of sample preparation
- Several transitions (for quantification and for confirmation)
- Possibility to develop multi-residue methods
- Reduction of run times with UPLC
- Improvement of the productivity of mass spectrometers with UPLC