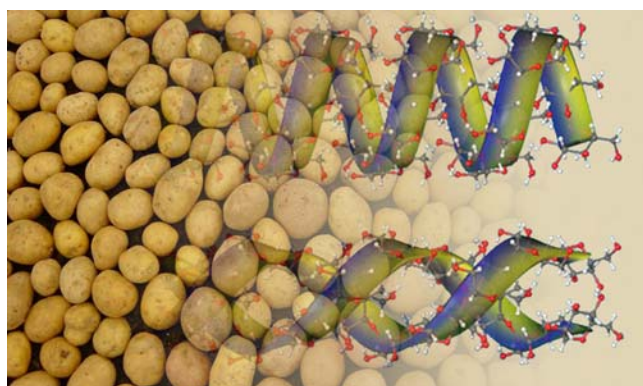


IsoLife BV

produces plant components, uniformly labelled with stable isotopes like ^{13}C and ^{15}N . They are obtained by the cultivation of food plants and pharmaceutical herbs in advanced phytotrons, which are specifically designed for high abundance labelling techniques.



Our goal is to serve research in the *Life Sciences* with stable isotope labelled biochemicals for use as (metabolic) tracers or as a tool to reveal protein dynamics and 3D-structures of molecules in:

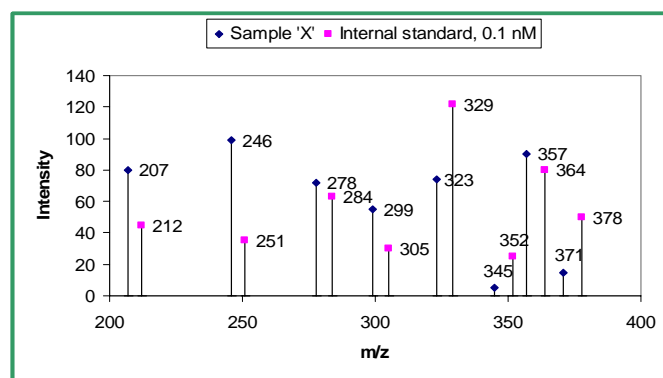
- Medicine and Nutrition: LC-MS internal standards, bioavailability or metabolic studies, e.g. carotene uptake, starch metabolism, effects of plant sterols
- Pharmaceuticals and Medical diagnostics: internal standards, ADME-studies, tracing API's, drug scaffolds, breath tests, blood & urine analyses
- Biotechnology: NMR-metabolomics, Biomolecular NMR for 3D-structure
- Ecology: decomposition studies, trophic levels and food webs, stable isotope probing.

Our new line of unique products comprises a range of nutritional and pharmaceutical biochemicals, like (poly)saccharides, proteins, flavanoids, terpenoids, or even whole organs, like leaves or tubers, from various food plants and pharmaceutical herbs. Two important advantages are that:

- they have a high detection sensitivity based on a uniform, stable isotope enrichment up to 98%
- they are edible and safe for humans, animals, and for the environment.

Example

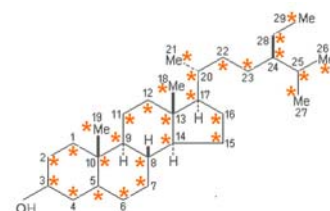
High-throughput metabolomics of complex mixtures by LC-MS is generally not quantitative. Stable-isotope internal standards offer a solution to this problem. As an illustrative example, the figure below shows a Sample 'X' that has been spiked with an internal



standard. All metabolites in sample 'X' now have a stable isotope labelled 'twin'-metabolite present in the mixture during processing. This technique will allow automated and quantitative analyses of complete 'metabolomes' in a wide range of fields, e.g. medicine and pharmaceuticals (e.g. blood and urine metabolite analyses), biotechnology and crop breeding (e.g. selection of individuals from a large population).

IsoLife BV provides powerful tracers for a range of applications and we create tailor-made solutions for your specific demands.

We collaborate with partners inside and outside Wageningen UR to explore cutting-edge technologies, product development, component purification, and research facilities.



Sitosterol

