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Robotic System for Automated Sample Preparation: FREESTYLE
FREESTYLE QuEChERS

Automated QuEChERS-Method à la LCTech FREESTYLE LC-MS/MS and GC-MS/MS Residue Analysis in Food and Feed



Quick, Easy, Cheap, Effective, Rugged, and Safe: QuEChERS, the most widely used method for pesticide residue analysis in food and feed laboratories.

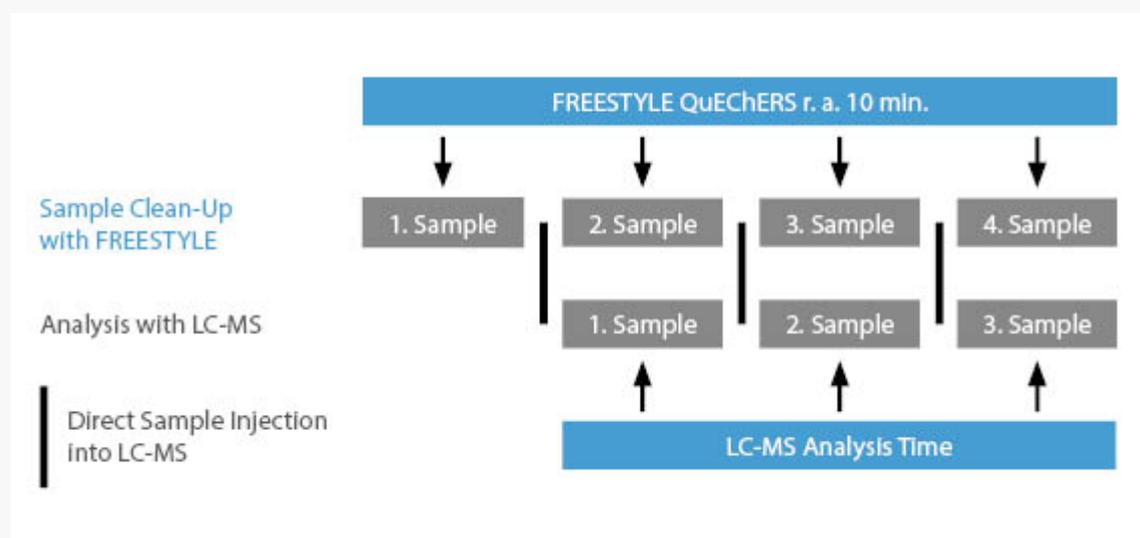
QuEChERS à la LCTech for Food and Feed Samples



With the fast, simple, cheap, effective, robust, and safe QuEChERS method à la LCTech you can automated the sample clean-up of your pesticide analysis with exactly these characteristics.

Less manual work in combination with a high clean-up efficiency makes the new method even more straightforward than the conventional QuEChERS method.

Especially with an on-line connection to the LC-MS/MS system and the clean-up step synchronized with it's runtime, overlapping of the process and thus a perfect sample throughput is achieved. Furthermore, the sample that you measure with a GC-MS/MS system also benefit from the efficient clean-up.



Simultaneous processing of QuEChERS steps and analysis in LC-MS

The approved FREESTYLE system, on which the QuEChERS method is automated, convinces with its easy operation, low maintenance, and low purchase and operating costs as well as processing around the clock. In addition to all standard matrices such as fruit and vegetables, you can also process difficult dried matrices such as tea, spices, or "TCM" and samples with high fat content, for which no QuEChERS procedure could be used previously. Without any manual intermediate step, the FREESTYLE system processes up to 120 samples per run.

The Right Column for Best Results

QuEChERS à la LCTech is based on a non-dispersive procedure and has specially adapted columns. This covers almost all matrices within pesticide analysis in food and feed:



- Classic QuEChERS Column
for fruit and vegetables
- Special QuEChERS Column
for tea, spices, and hops
- Extra QuEChERS Column
for matrices with high content of fat (> 10 %)

The non-dispersive application with the columns results in a better chromatography due to the high clean-up efficiency and the related reduced matrix ion suppression. This is reflected in very good recovery rates and high reproducibility.

After clean-up, the extract is eluted into a 4 mL vial and an aliquot is injected on-line directly into the LC-MS/MS system via the HPLC Direct Injection module. In this way, you receive the chromatogram without any manual step. The rest of the eluate remains in the vial and can be used for subsequent analysis, e.g. for GC-MS/MS or as backup.

Robust Automation via FREESTYLE HPLC Direct Injection



For the QuEChERS method, the FREESTYLE BASIC system is equipped with the [SPE module](#) and the [HPLC Direct Injection module](#) for the additional on-line connection to your LC-MS/MS system.

Already existing FREESTYLE SPE systems can be retrofitted for the QuEChERS application at any time.

The QuEChERS application on FREESTYLE is an outstanding and cost-effective high-throughput solution for pesticide analysis in laboratories with all the advantages of full automation.

Please contact us

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Prices and Example Offers

Information on prices and example offers can be found in the [Distributor-Login](#) area.
We will be happy to send you your access data on request to info@lctech.de.

Flyer

[FREESTYLE QuEChERS flyer \(pdf | 2 MB \)](#)

Application note

[Automated determination of pesticides in fruits and vegetables \(pdf | 730 KB \)](#)

[Automated determination of pesticides in tea \(pdf | 667 KB \)](#)

[Automated determination of pesticides in tobacco \(pdf | 673 KB \)](#)

Poster presentation

A new automated on-line QuEChERS - HPLC Direct Injection clean-up for difficult and standard matrices (pdf | 2 MB)

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