

# Non-dispersive QuEChERS-method

## **The Right Column for Best Results**

QuEChERS à la LCTech is based on a non-dispersive clean-up step with specially adapted columns. Different columns for almost all matrices within pesticide analysis in food and feed.

The advantages compared to the dispersive clean-up are:

UP TO 5 MIN. QUICKER PER SAMPLE

HIGHER MATRIX REMOVAL

HIGH RECOVERIES

FOR MANUAL AND AUTOMATED USE

REDUCED BACKGROUND NOISE

SIGNIFICANT REDUCTION OF LC-MS/MS DOWN-TIMES

**DURING ANALYSIS** 





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.

### Different columns for the whole range

Pesticide I (P/N 19853) for fruit and vegetables

#### Lemon



Matrix removal in an extract of a lemon, shown before and after clean-up on Pesticide I

Pesticide II (P/N 19854) for tea, spices and hops

#### Tea



Matrix retaining of a tea extract, shown on the column Pesticide II

Pesticide III (P/N 19855) for high content fat >10%

#### Avocado/Butter

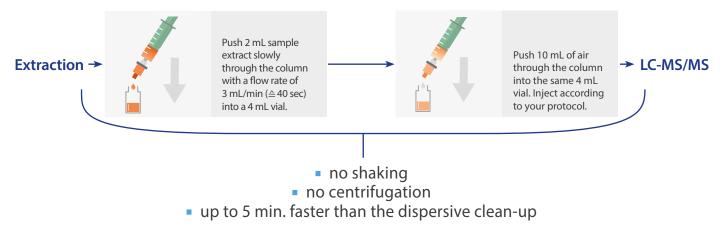




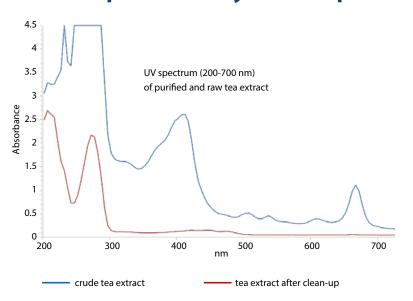


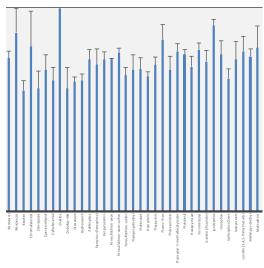
Comparison of the cleaning efficiency of a crude avocado extract (left) with the sample after dispersive clean-up (middle) and non-dispersive clean-up on Pesticide III (right)

## **Quick & Easy Push through SPE clean-up**



## Clean-up efficiency - Example Tea





Extreme low standard deviation even for difficult matrices. For more information about the results of all 220 pesticides, please have a look at our <u>Application Note AN0031</u>

ORDERING INFORMATION LCTech COLUMNS FOR QuEChERS METHOD				
		Manual	Automated	
Pesticide I	Classic QuEChERS Column	P/N 19853	P/N 16301	for fruit and vegetables
Pesticide II	Special QuEChERS Column	P/N 19854	P/N 16683	for tea, spices and hops
Pesticide III	Extra QuEChERS Column	P/N 19855	P/N 16685	for Matrices with high content of fat (> 10 %)

## **Automated processing via FREESTYLE**

For automated processing of the QuEChERS columns the FREESTYLE system offers two options:

- from raw extract to cleaned sample or
- from raw extract to chromatogram (full automation)

In order to realize the highest possible degree of automation, the FREESTYLE SPE robotic system is simply upgraded with an HPLC Direct-Injection module for direct injection into your LC-MS/MS system. This enables the parallelization of clean-up and analysis for up to 120 samples/day and thus to an optimum utilization of your LC-MS/MS system.



Robotic System FREESTYLE SPE + HPLC Direct-Injection-Module We are happy to send you a suitable configuration on request.



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