



# For multi-mycotoxin analysis

## 18 mycotoxins at one go!

The CrossTOX® columns by LCTech allow a high efficient sample clean-up of regulated and expected mycotoxins in many matrices. At the same time, the columns improve the conventional dilute-and-shoot process via an QuEChERS based procedure:


- ✓ **High purity** of extracts due to special sorbents for high matrix binding; no separate syringe filtration
- ✓ **Significantly less 13C Internal standard** required due to special affinity mechanism of the columns
- ✓ **Extension of cleaning and maintenance intervals** of your LC-MS/MS system due to the high purity of the extracts
- ✓ **Only one column for a wide range** of applications

### Catch them all

Aflatoxine B1, B2, G1, G2  
Ochratoxin A  
Zearalenon  
Deoxynivalenol  
Fumonisin B1, B2  
T-2  
HT-2  
Nivalenol  
3-Acetyl-DON  
15-Acetyl-DON  
DON-3Glc  
Sterigmatocystin  
Citrinin  
Diacetoxyscirpenol



The CrossTOX® columns are suitable for both manual and automated processing. Please find in the following **your advantages compared to the conventional Dilute-and-Shoot** procedure:

		Dilute-and-Shoot	CrossTOX® Manual processing	CrossTOX® Automated processing with FREESTYLE
Extraction ▶	●	30 – 90 minutes	● 5-10 minutes	● 5-10 minutes
13C Internal Standard ▶	●	For all Toxins needed	● For less toxins needed	● For less toxins needed
Dilution of Extract ▶	●	Necessary	● Not necessary	● Not necessary
Way of Filtration ▶	●	Syringe filtration	● Column filtration	● Not necessary
Dispensing ▶	●	In vial	● In vial	● Direct injection to LC-MS/MS
Cleanliness of Extract ▶	●	Not clean enough	● Very clean	● Very clean
LC-MS/MS Maintenance ▶	●	Permanent maintenance	● Less maintenance	● Less maintenance
Process time / Man power ▶	●	Heavy workload	● Heavy workload	● Less workload



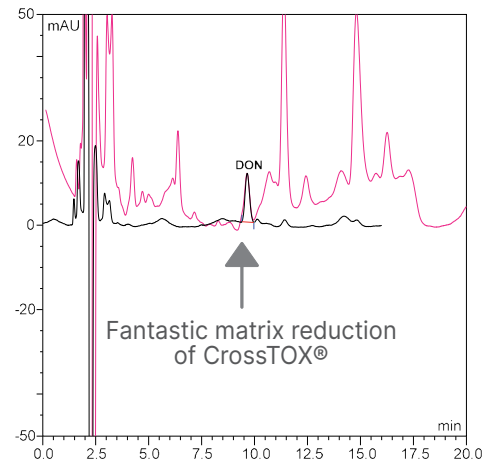
# Range of Applications

The range of applications for CrossTOX® is remarkably wide. With only one extraction protocol the columns can be used for all matrices commonly in this analysis, e.g. cereals, nuts or dried fruits. The UV-chromatogram shows the very high clean-up efficiency of CrossTOX®. The **pink** line represents a wheat sample cleaned via the conventional dilute-and-shoot procedure (syringe filtration). The **black** line represents clean-up via CrossTOX®.

This shows the substantial improvement using dilute-and-shoot compared to CrossTOX® column clean-up.

\*A constantly growing list of all matrices tested so far can be found at [www.LCTech.de](http://www.LCTech.de). We would also be happy to receive your feedback.

Recovery rates compliant to EN 401/2006

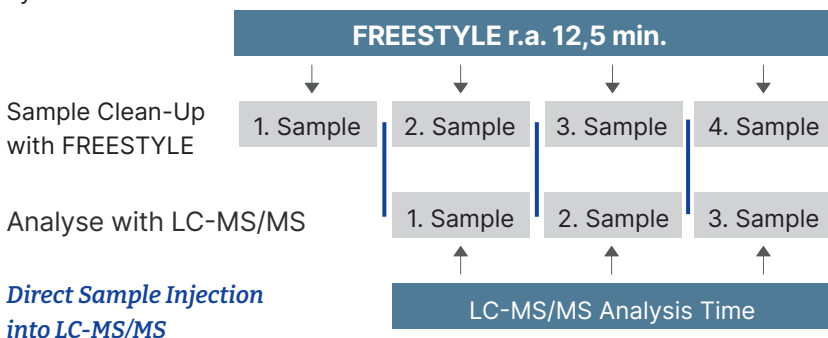


# Processing via FREESTYLE

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

- from raw extract to cleaned sample or
- from raw extract to chromatogramm (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.



*Direct Sample Injection into LC-MS/MS*



# Ordering Information

P/N	Description	Pc. / Pck.
17900	CrossTOX® Clean-up Columns Manual processing	100 Pc. / Pck.
17901	CrossTOX® Clean-up Columns Automated processing	100 Pc. / Pck.



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