

## Fully Automated Processing of Azo Dyes

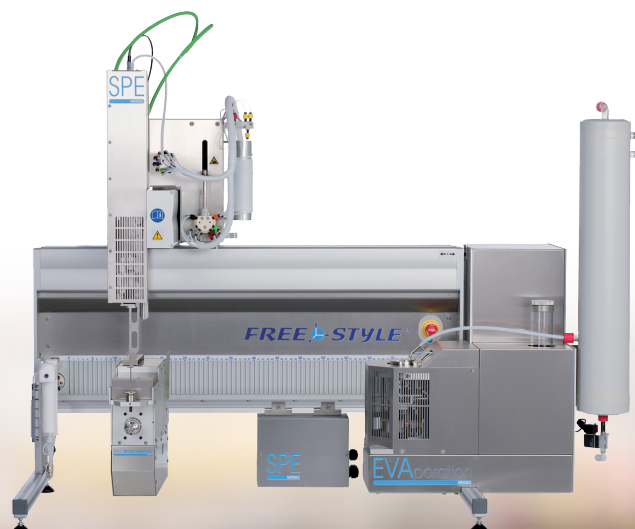
*Fast, Economical, Simple, and Robust*

LCTech's established high-tech robotic system FREESTYLE enables 24/7 processing of your azo dye samples. The system works fully unattended over night or the weekend and thus allows higher sample throughput and minimizes personal costs.

Compared to common 70 mL columns, the use of the new alkaline activated CHROMABOND® XTR columns with a volume of 15 mL enables easy handling via automation and leads to the following advantages:

- ✓ 85 % less solvent consumption
- ✓ around 60 % lower price of the 15 mL column (reported by manufacturer MACHEREY-NAGEL)
- ✓ Excellent reproducibility due to full automation
- ✓ Ready-to-use-columns - no preparation needed:  
Alkaline sorbent spares the need to adjust the pH value of the sample
- ✓ Higher efficiency due to parallel processing of sample preparation and analysis via online connection to LC-MS/MS
- ✓ Very robust system without unplanned downtimes
- ✓ 24/7 processing

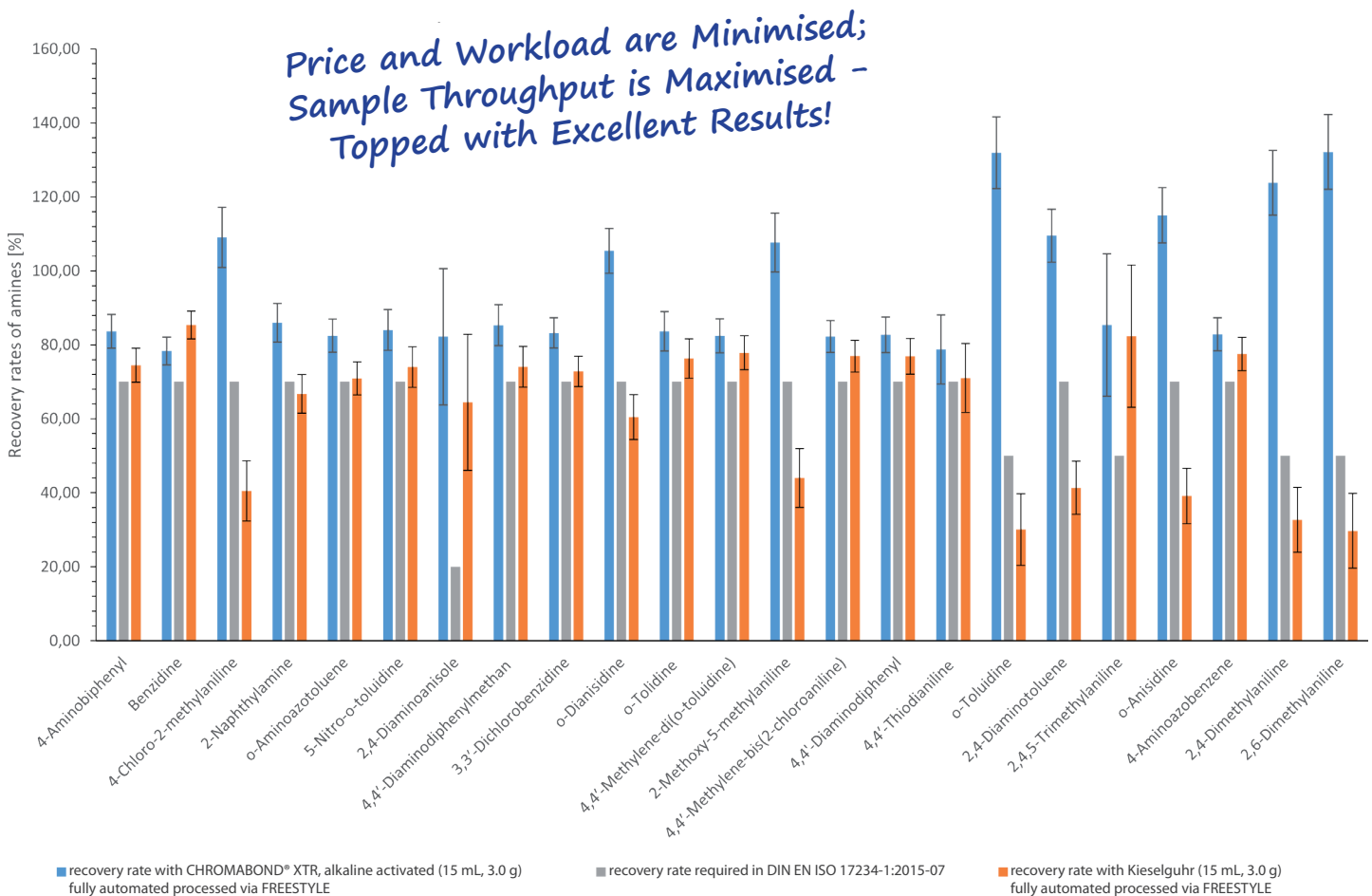
For More Information Have a Look at  
[www.LCTech.de](http://www.LCTech.de) For the Following  
Application Note:  
Determination of Aromatic Amines from Azo Colorants  
According to DIN EN ISO 17234-1



For the azo dye application, the FREESTYLE system consists of the robotic platform BASIC, equipped with the SPE as well as the EVaporation module. Additionally the HPLC Direct Injection module is directly connected with any brand of HPLC system for processing from sample to chromatogram.

## Excellent and Reproducible Results

In the following recovery rates of aromatic amines derived from azo colorants are shown. The recovery rates are much higher, than with the Kieselguhr phase. In addition to that, the LC-MS/MS analysis detected 23 of the 24 aromatic amines. The azo dye samples were cleaned-up via CHROMABOND® XTR columns and fully automated processed via FREESTYLE.



## Ordering Information

Automation by LCTech - Columns by Local Supplier MACHEREY-NAGEL

P/N 730489.NB

CHROMABOND® XTR Columns, Volume 15 mL