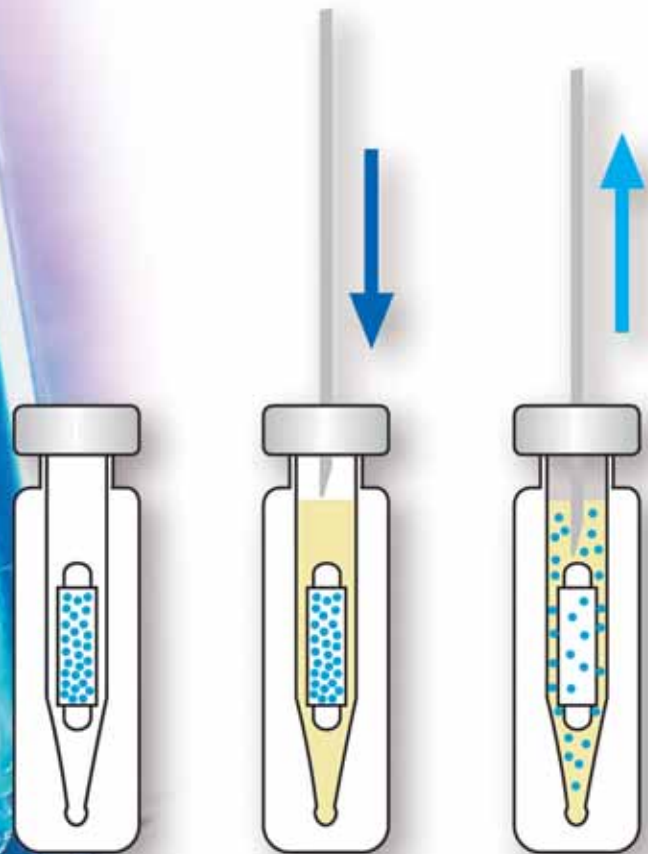




# Solvent Back-Extraction Automation Option

Twister automation for new applications, including LC and direct-injection GC/MS



*Addition of back-extraction solvent*

*Removal of solvent extract for injection*



**GERSTEL**

## MPS 2 Twister™ Back-Extraction\* MPS Option

GERSTEL Twister stir bar sorptive extraction (SBSE) is a powerful tool for efficiently extracting organic compounds from aqueous and other polar solutions. When volatile and semi-volatile compounds are to be determined by GC or GC/MS, thermal desorption using a GERSTEL TDS 3 or TDU is the most effective technique for transferring analytes from the stir bar for analysis. This produces the highest recoveries of analytes from the stir bars, and the lowest detection limits and background levels. Analytes are transferred almost 100% to the GC column. However, when non-volatile or thermally labile compounds are of interest, solvent back-extraction of the Twister followed by injection into an LC system is the method of choice. This Twister back-extraction method can also be used for GC, but detection limits will be lower compared to us-

ing thermal desorption unless large-volume injection techniques are used.

### Simple Procedure

Analytes are extracted into the Twister stir bar by stirring 10 mL of sample at room temperature for 1 hour. The stir bar is placed into a conical vial and the vial is capped. The rest of the procedure is completely automated by the MPS. Steps performed by the MPS include solvent addition, vial heating and agitation, solvent extract withdrawal, and final injection into the LC or GC instrument.

\*Developed by UFZ Leipzig Halle GmbH in close cooperation with GERSTEL.



### GERSTEL MAESTRO MPS Software including Option Sample Preparation

The Twister solvent back-extraction procedure is completely controlled and automated through the user-friendly sample preparation mode of the GERSTEL MAESTRO software.

## Important advantages of GERSTEL back-extraction technology

- ▶ **Back-extraction of non-volatile and thermally labile compounds**
- ▶ **Extends Twister capabilities to non-thermal desorption techniques and to LC analysis.**
- ▶ **Compatible with common LC mobile phase solvents**
- ▶ **No solvent exchange necessary, nearly no limits on which mobile phase to use.**
- ▶ **Full MPS elution automation**
- ▶ **High sample throughput  
Saves time  
Improved reproducibility**
- ▶ **Twisters can be re-conditioned and re-used**
- ▶ **Low cost-per-analysis**
- ▶ **MPS Option**
- ▶ **Easy upgrade of existing MPS**

**Ask us how GERSTEL technology can benefit you!**



For detailed information on other GERSTEL products and systems as well as a complete list of available publications, please visit our web page at [www.gerstel.com](http://www.gerstel.com)



Information, descriptions and specifications in this publication are subject to change without notice.  
 GERSTEL®, GRAPHPACK® and TWISTER® are registered trademarks of GERSTEL® GmbH & Co. KG.  
 Printed in Germany.  
 © Copyright by GERSTEL® GmbH & Co. KG

