

Extremely flexible



FREE STYLE™ SPE

Automated SPE Processes

SOLUTIONS BY **LC** *Tech*



FREESTYLE™

The new generation of LCTech Systems allows for unique flexibility - all due to new mechanics and software.

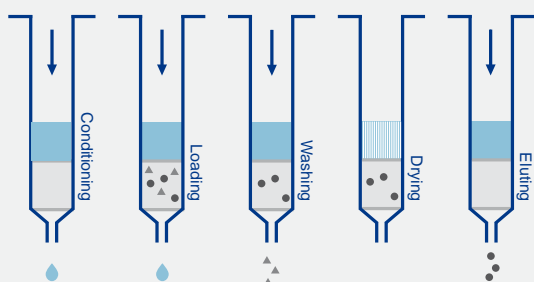
The sample preparation systems are designed for the fully automated handling of foods and feeds, environmental samples, and other comparable tasks round the clock.

The FREESTYLE™ SPE automates all processes of solid phase extraction (SPE) - if desired in combination with evaporation and solvent exchange.



The FREESTYLE™ SPE handles SPE and immunoaffinity columns of diverse manufacturers.

The columns can be placed into the system with or without caps.



Solid phase extraction (SPE) often is the method of choice for cleaning up and concentrating analytes.

It stands out due to flexibility, selectivity, rapidity and last but not least, low solvent consumption.

Automating SPE results in more reproducible results and fewer mistakes.

FREE-STYLE™ SPE

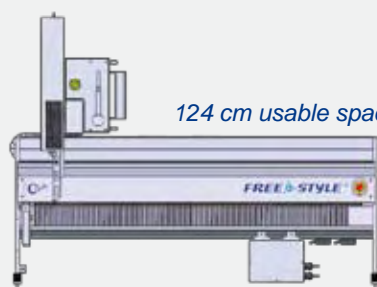
Automates all manual steps
in solid phase extraction (SPE)



Usable space according to requirements



Recommended:
74 cm usable space



124 cm usable space

At a glance: 5 reasons for the FREESTYLE™ SPE

1

Perfect and simple automatization of processes in solid phase extraction

Using the FREESTYLE™ all steps of solid phase extraction can be automated.

The system is easily integrated into laboratory routine.

The gripper arm can grip SPE columns are air and solvent tight and move them to any place at the platform.

2

Use of different columns

Standard adapters are available for SPE columns of diverse manufacturers in the sizes 1, 3, 6 mL and for LCTech Elufix™ glass columns.

Adapters for other sizes are also available. Please ask us!



More about this **flexibility** at page 4

3

Unique rack design (patent pending)

Into the new racks the SPE columns, sample and eluate vials are placed. They allow for diverse combinations according to the task.

Thermostatable racks are available on request.



No tools are needed for assembling the racks!



More about the **racks** at pages 5 - 6

4

Clear and powerful software

The software allows taking over individual methods into automatization.

Sample lists with different methods can be easily created.



More about the **software** at pages 7 - 8

5

Get in touch with us!

Such a flexible sample preparation system can only be presented by person.

Please directly inform your distributor about your requirements and ask for a presentation of the system!



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FREESTYLE™ SPE

Do you want to use different SPE columns?

Do you want to combine several sample and eluate vials?

The FREESTYLE™ SPE offers nearly unlimited possibilities for adaptation from day to day, from run to run, from sample to sample, without any changes to the robotic system.

Efficient sample clean-up - flexibility at highest level

Due to unique mechanics and intelligent software the FREESTYLE™ SPE is very flexible and can be adapted to changing requirements at any time.

It allows arbitrarily combining different glass sizes for samples and eluates.

Similarly, a mixture of SPE and immunoaffinity columns can be placed into the system simply by changing a small reusable adapter ring holding the columns.

Of course the system is also suitable for the LCTech Florisil® glass columns for the detection of the Carbon Oil Index according to EN ISO 9377-2 (H53 method).

Proven quality and safety

The foundation for FREESTYLE™ SPE is a proven and thousand fold tested robotic system with an accordingly high level of performance.

Only high quality components are used, the need for maintenance and repair is extremely low.

The system was developed and produced at highest level according to Machine Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast), including CE certification.

It shows safety features like a stop at collision of the robotic arm or an emergency switch just in case.



The company LCTech is certified according to ISO 9001:2008.



The rack for the SPE columns



The columns can be handled with or without caps



The columns are placed into the special rack.
Different columns can be combined arbitrarily.
The sole modification is the corresponding adapter.

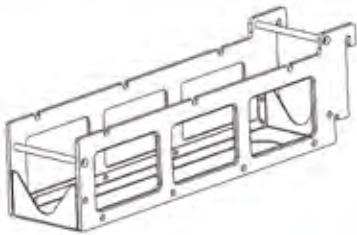


Several adapters for different column sizes are available.

The column is directly handled at the picker arm with positive pressure.

The racks for the eluate vials

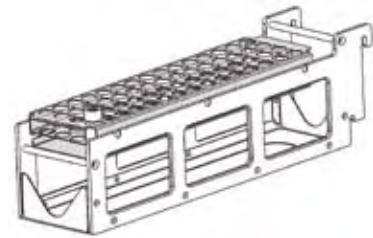
The mechanism for positioning the sample racks into the system is unique on the market (patent pending) and in combination with the intelligent software allows for flexibility which has never been possible before.



+



=



The **frame** is available in two versions (10 oder 12 cm wide).
It can be used for different glass types.

The samples are positioned into the **tray**.
The position numbers are etched into it.

By simply putting the tray into the frame the **rack** is completed.
It can directly be positioned into the SPE system.



Equipping the system - easy

The racks are quickly and easily assembled on the system. No tools necessary!

Then, the user simply informs the software about the rack positions and handling instructions. The system automatically handles the rest.


In case there is an urgent sample, it can easily be given top priority.


For the FREESTYLE™ SPE these racks and adapters are available:


Selection out of the complete product range

Description	Max. N° columns	Product N° of the rack	Frame needed?
Rack for SPE or immunoaffinity columns Necessary: the right adapter for the columns	18	12398	Type 12 cm (12103)

Column size	Pieces / pack	Product N° of the adapter
Standard adapter for open SPE or closed immunoaffinity columns		
1 mL column	10 pieces / pack	12808
3 mL column	10 pieces / pack	12334
6 mL column	10 pieces / pack	12809
LCTech Elufix™ glass columns	10 pieces / pack	12337
Further adapters are available anytime at same costs		

Glass type and size	Max. vials / rack	Product N° of the rack	Frame needed?	
Racks for sample vials				
	1 mL (GC)	60	11920	Type 10 cm (11915)
	4 mL	30	11926	Type 10 cm (11915)
	5 mL round bottom	30	11933 with adapter 10430	Type 10 cm (11915)
	16 mL	30	11933	Type 10 cm (11915)

Racks for test tubes				
	75 x 12 mm	30	12117	Type 10 cm (11915)
	100 x 16 mm	30	12116	Type 10 cm (11915)

Racks for laboratory bottles				
	60 mL (Dionex ASE)	30	12106	Type 12 cm (12103)
	100 mL	14	12107	Type 12 cm (12103)
	250 mL	10	11962	-

Rack for EN ISO 9377-2 (H53) method, detection of Carbon Oil Index in water and soil			
2 x 60 mL	12	12399	Type 12 cm (12103)

Thermostatable racks are available on request.

Do you want to work with another glass type or size?

We are able to produce new racks according to your requirements - simply ask us.

The software - easy in daily routine, unlimited possibilities

For daily work the FREESTYLE™ SPE can easily be controlled with the intuitive software. New laboratory personnel can handle it after a short instruction.

Diverse **safety features** and inquiries ensure a trouble-free routine operation, avoiding the loss of a sample or the waste of solvents.

The software is always included in the purchase price for the system and is easily installed.

For very common applications, e.g. the H53 method, pre-programmed methods are provided.



A software for the user

Method creation: easy handling - comprehensive parameters

Basic tools
General selection of SPE steps

Chosen SPE steps
for the method to be created

Parameter for the individual step
e.g. loading (shown here)

Calculated time for the individual step

Memo
Space for notes that are saved with the method

Park Position
SPE steps and their parameters can be parked here and taken over into other methods from here

Overview of sample and eluate vials

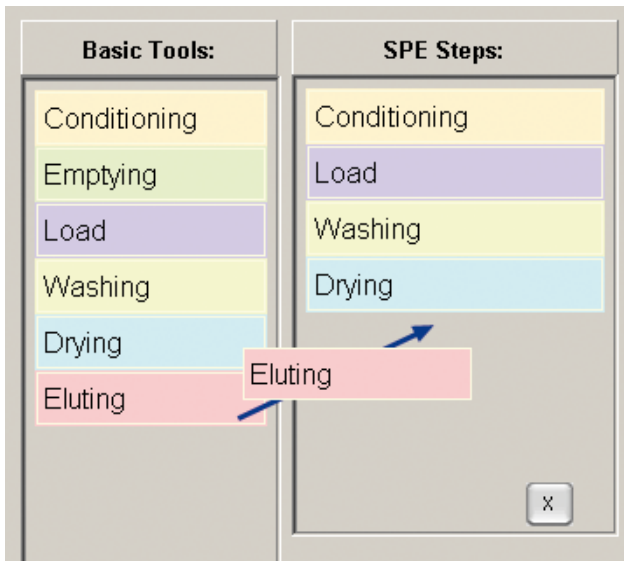
Step N°.	Owner	Count	Type	Basic type	ID
2	Load	1	Type1@16	LAD	530

Step N°.	Owner	Count	Type	Basic type
4	Drying	1	Type1@60	DR

Number of SPE steps and calculated total time for the entire method

Easy method creation in detail:

Firstly: Choose steps and their order

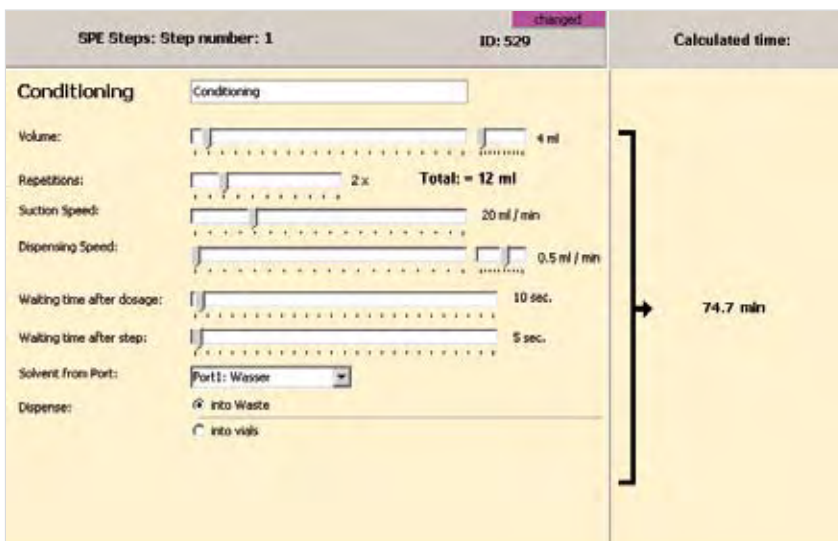


First, the basic structure of the method has to be determined:

For this purpose the user pulls the next step to be fixed per drag&drop from the left column "Basic Tools" to the right one "SPE Steps".

The steps remain in the left column and can be used several times.

Secondly: Define individual parameters



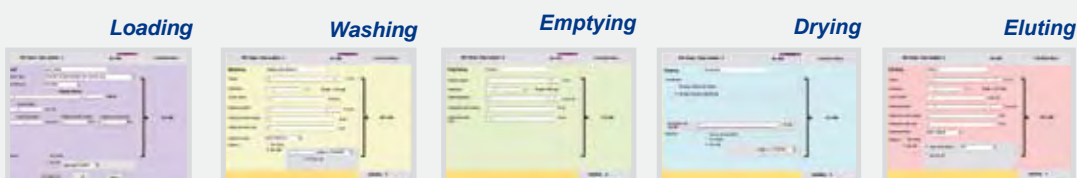
Then for each individual step the decisive parameters can be defined - the bar simply has to be pulled to the right value.

At the right the calculated time for this step is displayed.

If the user enters a wrong value, error recognition is at once activated.

The entire method can be saved and related to the samples in the sample list.

Ask us to present the software in detail!



A clear color code guides through the individual steps of a method.

Further Modules and Accessories:

Module for EVAporation, with online connection to SPE



The FREESTYLE™ SPE can be supplemented with a **module for EVAporation** anytime and easily.

The module can concentrate samples of undefined volumes (max. 330 mL) to any end volume between 0.2 und 5 mL (in steps of 0.1 mL).

For this purpose two evaporation procedures are available:

- Vacuum with regulated heating
- Nitrogen blow-down (or air) with or without regulated heating

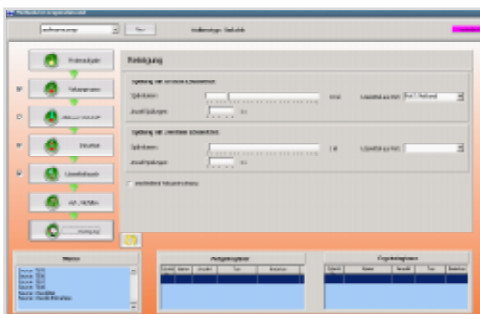
Solvent exchange is possible (liquid/liquid or evaporation to dryness and taking up a new solvent).

Thus, the user has many different possibilities

- of aliquotation
- of automated solvent exchange
- of quantitative transfer

The compactly designed evaporation module is built up of an evaporation chamber, an integrated, extremely quiet membrane pump with vacuum control, a cooler for solvent recovery and a sensor system for the accurate measurement of final volume.

The result: Following a defined, reproducible procedure the concentrated sample at the desired end volume is ready for further treatment.



With the software of the FREESTYLE™ EVAporation all individual steps of the evaporation process can be controlled in detail.



A **barcode reader** can be connected to the system to read in samples faster.



The FREESTYLE™ SPE can anytime be combined with a **module for preparative gel permeation chromatography (GPC)**.

Further useful accessories are available, e.g. a liquid level switch for the waste reservoir. Please ask us!

Simply contact us!

We are within reach for you
- for further information or a quotation.

We will be pleased to configure the suitable system for you.

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