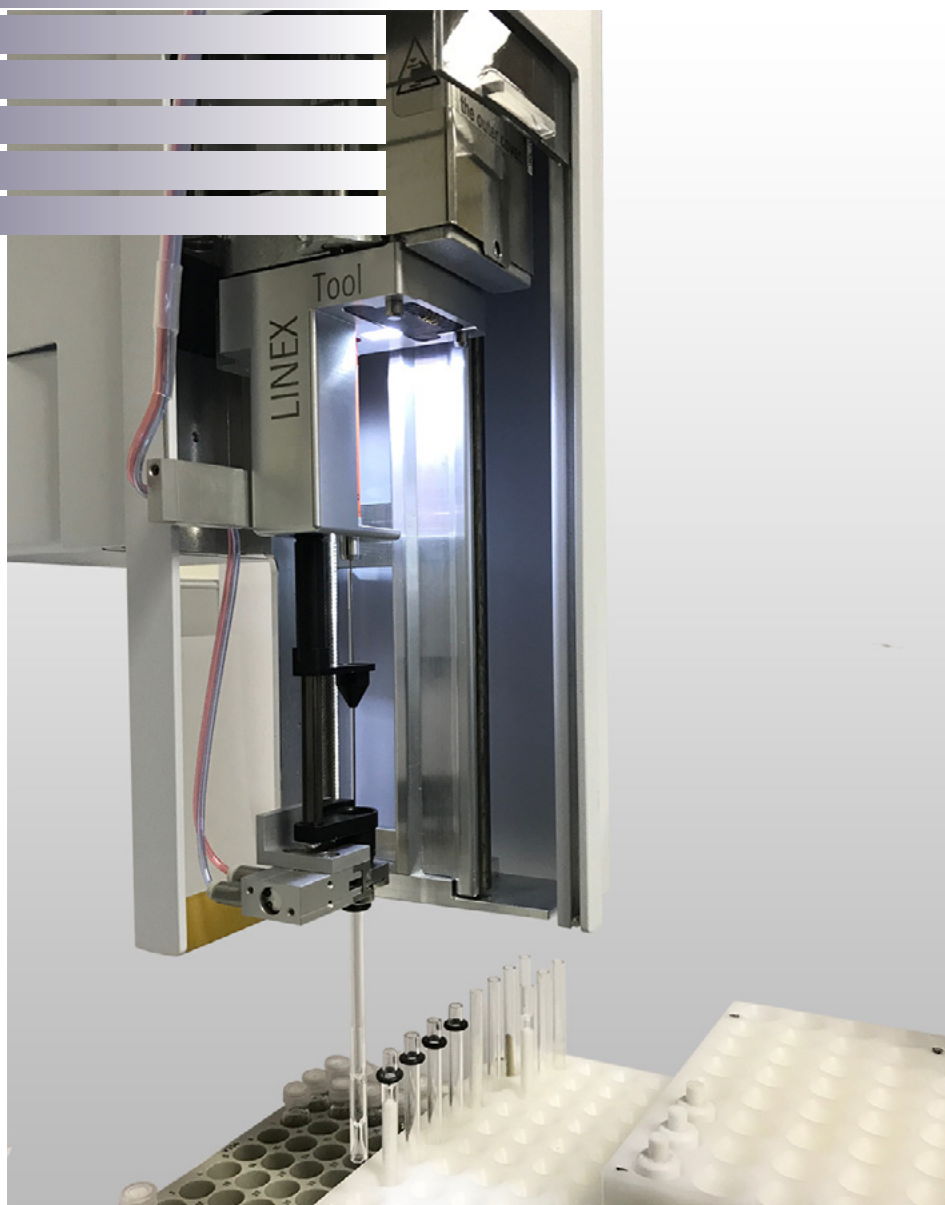


Automated LINer EXchanger for Gas Chromatography

LINEX



Automatically changing OPTIC liners

Automated GC liner exchange is a technique that was introduced by GL Sciences. LINEX is a new revolutionary approach, allowing you to perform direct (in-injector) analysis of different samples with little, if any, sample preparation.

LINEX Advanced Features

- Can be installed on any type of GC
- Little, if any, sample preparation is required
- Can be automated by CTC Analytics PAL 3 systems
- Based on proven OPTIC injection technology
- Uses standard wide bore (3.4 mm ID) OPTIC liners
- Also available for 1/4 x 3.5" tubes.
- Sample tray for 54 liners or 40 capped liners
- Uses standard 11 mm septa or Merlin Microseal™
- Retains true injector septum purge
- Liquid injection can also be done while injector head is closed
- No liner transport adapter is required
- Low consumable costs

LINEX Direct Thermal Desorption

With LINEX-TD, the multi-sample analysis sequence works in a simple way: head of the inlet is automatically opened and a liner containing sample is introduced into the inlet. The head is closed and the liner is purged with carrier gas. Next, the inlet is heated and volatile and semi-volatile compounds are extracted and transferred onto the column. At the end of the analysis the liner is moved back to the tray and the cycle is repeated.

Capping and De-Capping Station for LINEX

In many cases the GC injector liner should be sealed (capped) from both sides. This is normally done in order to either protect the sample placed (collected) into the liner or keep the liner clean after conditioning. The liner thus should be de-capped just before it is placed into the GC inlet port. The GL Sciences Capping-De-Capping (CDC) Station is designed to automate this procedure. It works under control of the PAL System. The CDC Station is sold as an option for the LINEX.

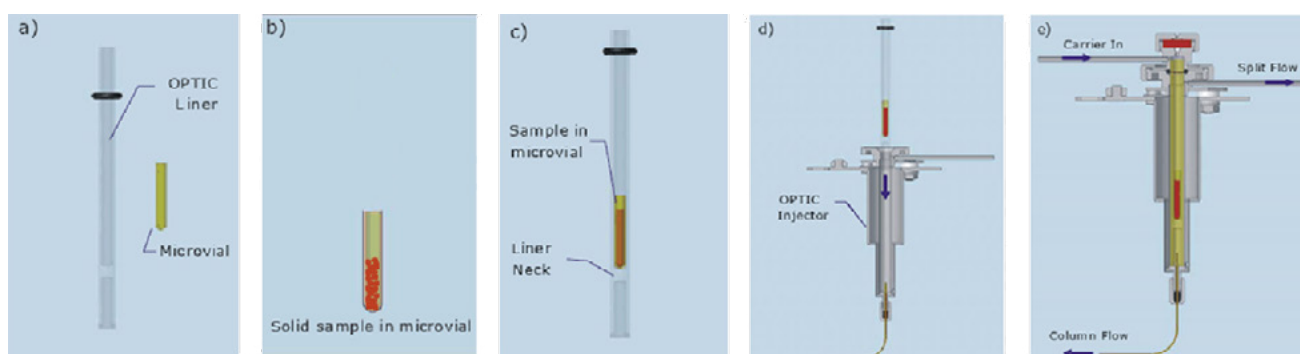


LINEX DMI (Difficult Matrix Introduction)

LINEX-DMI is a system designed to be used for the GC analysis of dirty samples. It can be quickly, in a matter of minutes, mounted on any standard OPTIC injector. Standard wide-bore DMI liners can be handled by LINEX either in manual or automated mode. In the automated mode liners are transported between the sample tray and inlet by CTC Analytics PAL sampling robot equipped with a pneumatic gripping arm.

With LINEX-DMI, the multi-sample analysis sequence works in a simple way: head of the inlet is automatically opened and a liner containing sample in a sample container (micro-vial) or the liner with the empty micro-vial is introduced into the inlet. The head is closed and the liner is purged with carrier gas. Next, after the sample injection (if it was not done outside the inlet), the inlet is heated and the sample is transferred onto the column. At the end of the analysis the liner is moved back to the tray and the cycle is repeated.

The LINEX-DMI is a most promising automated system for the analysis of samples containing difficult non-volatile or solid-like suspended matrix.



LINEX-DMI Features

A GC analysis of difficult samples containing dirty matrix is now simple. The extract is introduced directly into the inlet in a DMI micro-vial, which in turn is inserted into an inlet liner – minimum, if any, sample preparation is required.

Sample is desorbed directly onto head of the GC capillary column – fewer steps involved, less opportunities for analytes losses.

In case of Large Volume Injection, solvent is removed by venting under controlled conditions. Non-volatiles from the matrix are kept in the micro-vial that is disposed after use – no contamination of injector, liner can be re-used.

Compounds of interest can be transferred onto the column using the lowest possible final temperature – limiting matrix pyrolysis.

Specifications

For PAL2:

LINEX tray	28 positions
LINEX CDC tray	28 positions
Software	Cycle Composer, Chronos
PAL Version	PAL Combi-xt with any firmware version

For PAL3:

LINEX tray	54 positions
LINEX CDC tray	40 positions
Software	Chronos. As set of scrips is supplied and can be used for third parties
PAL Version	PAL RTC with firmware 2.3 of newer. Shimadzu AOC6000 with firmware 2.3 of newer.

Available systems

For PAL2

2411-3001	LINEX -TD Liner Exchanger for OPTIC-4, Standard
2411-3001-L	LINEX -TD Liner Exchanger for OPTIC-4, Long Tubes
2411-3002	LINEX-DMI Liner Exchanger for OPTIC-4, Standard
2411-3002-L	LINEX-DMI Liner Exchanger for OPTIC-4, Long Tubes
2411-3003	LINEX Capping-Decapping Station 2.0
2411-3006	LINEX 1/4 x 3.5" tubes Liner Exchanger for OPTIC-4S-1/4 (for 80cm PAL2)

For PAL3

2411-3010	LINEX-2 TD Liner Exchanger for OPTIC-4 (for 80 and 120cm PAL3)
2411-3011	LINEX-2 DMI Liner Exchanger for OPTIC-4 (for 80 and 120cm PAL3)
2411-3012	LINEX Capping-De-Capping Station, PAL3 version
2411-3019	LINEX-2 1/4 inch Liner Exchanger for OPTIC-4 and PAL3 (for 80 and 120cm PAL3)
2411-3020	LINEX-2 1/4 inch Liner CDC Station, PAL3 version

Contact

GL Sciences B.V.
De Sleutel 9
5652AS Eindhoven
The Netherlands
Tel. +31 (0)40 2549531
info@glsciences.eu
www.glsciences.eu