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CLAM-2000

Fully automated sample preparation module for LC-MS/MS.

Produced by Shimadzu

The CLAM-2000* (Clinical Laboratory Automated sample preparation Module) automates the pretreatment of blood or other biological samples before LC-MS analysis.

By simply placing blood collection tubes in the system, the CLAM-2000 performs all processes through to LC-MS analysis automatically. Unlike dispensing systems based on batch processing 96-well plates, the CLAM-2000 is completely automatic from pretreatment to analysis, and processes individual samples successively in parallel.

This results in uniform pretreatment times between samples without slowing processing speed, and improves data reproducibility and accuracy.

Available pretreatment processes include dispensing samples, dispensing reagents, stirring, suction filtration, incubation, and automatic transfer of sample vials to an autosampler after pretreatment.

Potential impact

The new CLAM-2000 is the world's first system able to fully automate all steps from pretreatment of the sample to LC-MS analysis. It requires only the simple task of placing the blood or biological fluids collection tubes, reagents, internal standards and specialized pretreatment vials in the system. The user-friendly management functions provide a dramatically improved workflow with better safety for clinical research along with higher reproducibility.

**For Research Use Only. Not for use in diagnostic procedures. Not available in the USA, Canada, or China.*

ALLTESTA HPLC-BASED ANALYZER

Compact HPLC system: portability, simplicity, affordability, and precision.

Produced by SIELC Technologies

The Alltesta Analyzer is compact and lightweight (200 x 330 x 180 mm and under 10 kg), and is operated by a user-friendly touch-screen interface that requires only a tablet for operation – no desktops, monitors, or cables. The analyzer features a patented wash system, adjustable needle depth, and a flexible communication protocol (RS485/RS232/CAN). Its LED-based detector delivers a narrow, intense bandwidth, and uses a long-lasting, low-noise light source for high sensitivity. The short internal flow path volume minimizes band spreading, and only very stable materials (PEEK, PTFE and quartz) contact the fluid. The Alltesta pump precisely delivers fluid at flow rates from 0.10 ml/min to 4.0 ml/min using up to 5000 psi (350 bar) of continuous pressure. The Analyzer comes preloaded with over 1,000 methods for a diverse array of compounds and does not require comprehensive knowledge of chemistry or chromatography. It is backed up with lifetime free method development screening.

Potential impact

The Alltesta Analyzer overcomes the challenges of downscaling hardware and reducing solvent consumption, which have previously hindered the development of a portable LC system despite advances in stationary phase chemistry, flow rate hardware, and particle miniaturization. The Alltesta Analyzer represents a novel approach to compact HPLC. Targeting applications in pharmaceutical, agricultural, and consumer goods, the Alltesta Analyzer has the potential to transform how chromatography is performed in myriad fields and industries.

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What the judges say:

"Simplifies HPLC analysis for non-specialists working in key applications."performance."