

HOW IT WORKS

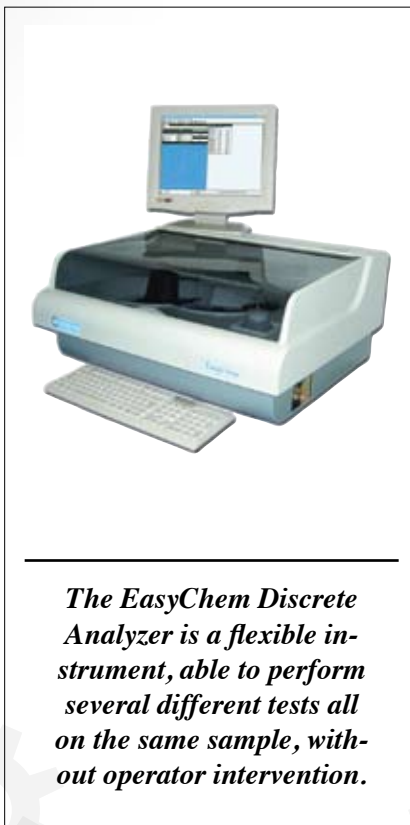
Wet Chemistry Made Easy

Problem:

The way laboratories operate and perform analyses is changing. The market is demanding that laboratories become more efficient and reduce overall operating costs. At the same time, less-skilled personnel are more affordable or more available to perform these functions. Liability associated with operating a laboratory and producing quality defensible data has increased. Turnover remains high in positions that perform the most labor-intensive functions. Nowhere is this truer than in the Wet Chemistry department, where many laboratories are still using manual techniques or outdated technology such as segmented flow analysis (SFA) and flow injection analysis (FIA). Several problems exist with these technologies: lengthy start-up and shutdown times, carryover, hydraulic noise, clogging valves, etc. SFA and FIA analyzers require much more attention and better-skilled personnel to operate. Changing from one method to another can also be very labor intensive. True unattended operation is not possible.

Solution:

The EasyChem automated discrete analyzer meets the demands of the changing marketplace without compromising performance. EasyChem is a flexible instrument, able to perform several different tests all on the same sample, without operator intervention. EasyChem requires no specific experience to operate, and can be learned by anyone in a matter of minutes. Operation consists of simply loading the sample tray and reagents, selecting the tests to be performed, and clicking start. It's that simple. Virtually no time is required for start-up or shutdown. Labor costs are greatly reduced and productiv-



The EasyChem Discrete Analyzer is a flexible instrument, able to perform several different tests all on the same sample, without operator intervention.

ity is increased, enabling technicians to perform other tasks.

The EasyChem automated discrete analyzers can best be described as robotic systems that perform manual and automated chemistries on a micro scale. The EasyChem employs a computer-controlled needle connected to a high-precision micro syringe for transferring and dispensing precise amounts of sample and reagent. After being preheated in a coil positioned in the body of the needle arm, sample and reagents are inserted into a reaction cuvette that is temperature

controlled up to 50°C. A proper wash cycle between movements ensures there is no carryover from the previous sample or reagent. Upon completion of incubation, depending on the type of discrete analyzer, the reacted sample is then drawn into a flow cell or read directly through the reaction cuvette at the desired wavelength.

Costs associated with operating and maintaining a discrete analyzer compared with a flow analyzer are greatly reduced. EasyChem has virtually no consumables and requires a minimal amount of maintenance, which can be performed by the technician. Maintenance consists of replacing a small piece of waste tubing once a week, lubricating a few parts each month, and changing the system's tubing every six months to a year. EasyChem comes with a customized version of TimeKeeper America® Continuous Maintenance Monitoring software. This software package alerts technicians when maintenance needs to be preformed and then logs its completion, demonstrating NELAP compliance. The system uses micro quantities, on average 3-500µl/test, minimizing reagent consumption. Waste generation is dramatically reduced, saving laboratories money and reducing potential liability.

EasyChem does all the work. No longer is there any variation in results based on who the operator is or what kind of day they may be having. EasyChem performs up to 180 tests per hour of true unattended operation, with the highest possible data quality, regardless who "clicks" start. For more information on the EasyChem discrete analyzer, visit www.easychem.com.