

# **CEM7000**, the Generation **3**

*Mini Capillary Electrophoresis System can deliver a higher performance than ever*

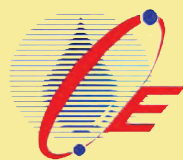
Now it is,

**f**ully automated with

**i**ntegrated detector (choice of UV/Vis, LIF or C4D) and autosampler all-in-one

**e**asy to maintain and operate

**p**erforms with high sensitivity and efficiency



## **CE Resources Pte Ltd**

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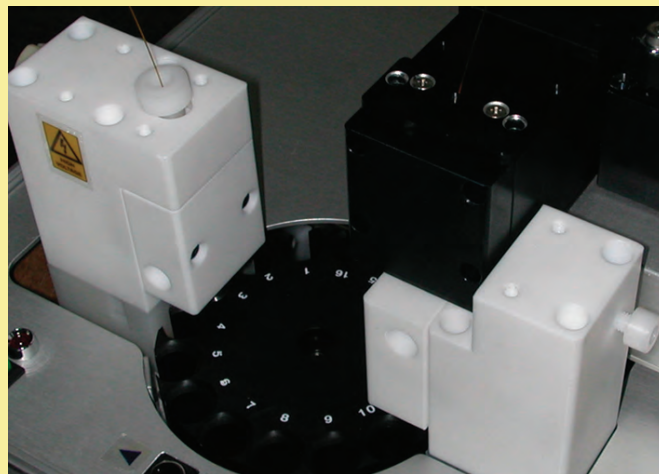
**Design Integration:** Mini Capillary Electrophoresis System **CEM7000** embraces all the best features accumulated from years of experience working with CE.

**Unique “Plug-and-Play” Concept:** allows many dedicated detectors modules to be easily made available for users selection. There are UV/Vis (variable and fixed wavelength), LIF<sup>1</sup>, C4D<sup>2</sup>, and the upcoming PDA<sup>3</sup> detectors to cater to different analytical requirements. Users can plug any detectors onto the autosampler with great ease without the need to perform tedious alignment and calibration.

**Automation:** Complete automation due to unique **A DUAL LIFTERS** juxtapositioning. All activities pertaining to sample injection, flushing, cleaning, and waste delivery are software controlled. This frees researchers from repetitive and mundane work. Sample injection can be applied at both capillary ends. Detachable injector cover allows easy access to cleaning and maintenance.

**Liquid Cooling:** is just one of the 3 choices for Capillary Temperature Control. User can choose at will either **Liquid** (4° - 50°C) or **Air**<sup>6</sup> (10°C <RT - 30°C >RT) or **Ambient** temperature cooling method. User will not have to tolerate operational downtime due to leaky cassette or low coolant level.

- ◆ Hydrodynamic injection: 0-5psi for accurate injection (precision CV <0.5% at 0.3psi for injection time of 10 sec and with correction <0.2%); and 0-25psi for flushing and filling; With external pressure up to 80psi is achievable for CEC<sup>4</sup> application.
- ◆ Electrokinetic injection, voltage ±30kV, 0.1kV step, injection precision CV <0.2%.
- ◆ HVPS module delivers ±30 kV voltage for all separation modes, software controlled automatic polarity switch. Voltage deviation <0.05% peak to peak at maximum output, <0.1% RSD. HV current 0 - ±300uA. HV power 0 - 6W.



**Carousel Cooling for Samples:** is available as an option for biologics and proteomics work.

**Explore the CEC<sup>4</sup> Options:** when you are ready for it. The built-in CEC<sup>4</sup> feature can be easily activated.

**Best Bargain Possible:** Small foot-print, lab space saving, user friendliness, ideal for method development, just the right size for routine application work, and more...

### Specification:

- ◆ Autosampler carousel provides 20 loading slots suitable for 0.2 - 2.0ml vials
- ◆ 16-bit Voltage and Current Control giving gradual and uniform output.
- ◆ 2-channel AD converter with 24 bit resolution for data acquisition (DAQ) function.
- ◆ Three interfacing modes for better connectivity and versatility: RS232, USB, and TCP/IP.
- ◆ Electrical rating: 80-260V/47-63Hz AC; Power: 150W
- ◆ Dimension (WxDxH): 400x410x305mm; or 15.7x16.1x12 in

### CE-Station Software:

**C**E-Station Software provides an integrated environment for system administration, system configuration, instrument connection and control, data acquisition (DAQ), data analysis, calibration and reporting.

**T**he System Administration allows you to enable GLP<sup>5</sup> compliance, set different level of user rights and other security levels. The universal Instrument Configuration feature facilitates automatic instrument searching and connection through the use of unique

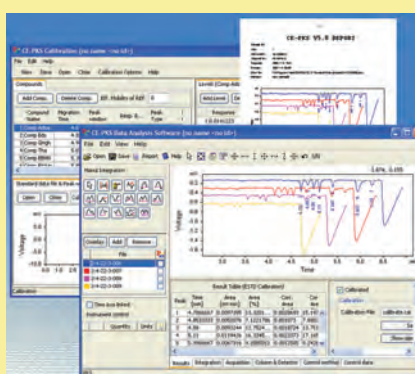
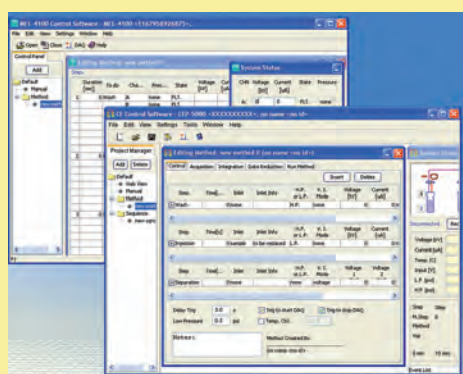
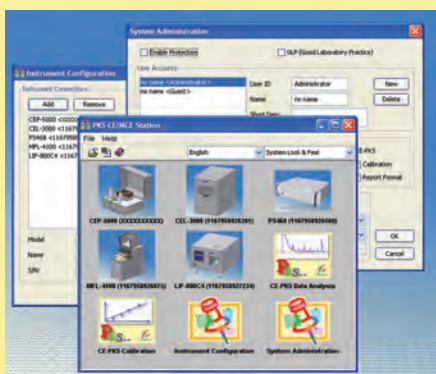
serial numbering for each instrument.

**M**ethod development is made simple with PKS CE Station method editing module. The CE method can be divided into three main steps, i.e., wash, inject and separate, each containing multiple micro-steps. By combining these steps to run sequentially many complicated tasks can be performed effortlessly.

**W**hen a method is run, it collects sample detection data (SDD) and instrument control data (ICD) simultaneously. Both the SDD and ICD are saved in the .pks

data file small enough to be emailed for evaluation or remote trouble-shooting.

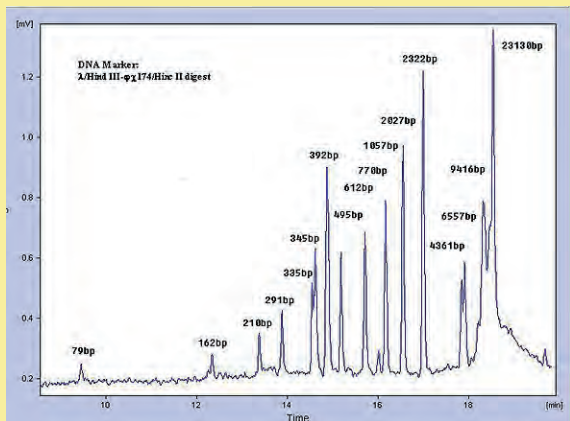
**P**KS<sup>TM</sup> CE Station has two modules, Calibration and Data Analysis, to conduct peak identification, multi-level calibration and data reduction. Unlimited number of .pks data files can be called into the workspace for analysing and comparison. The analysed results can be output to printer or saved to a html file for sharing and further editing. The report style can be customized.



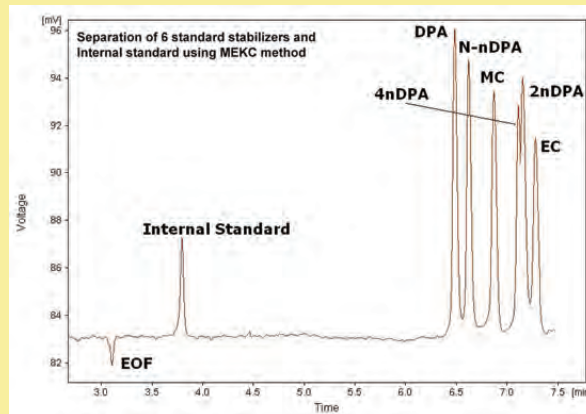
## We provide method development, customization & optimization of tailor-made applications

CEM7000 provides an open platform for analysing a wide range of analytes from relatively simple inorganic compounds to complex organic biomolecules. Customers can choose from the complete range of detection systems, UV-visible, laser induced fluorescence, conductivity detectors and even mass spectrometers to allow uncompromising sensitive detection of the analytes of interest. Providing the necessary hardware

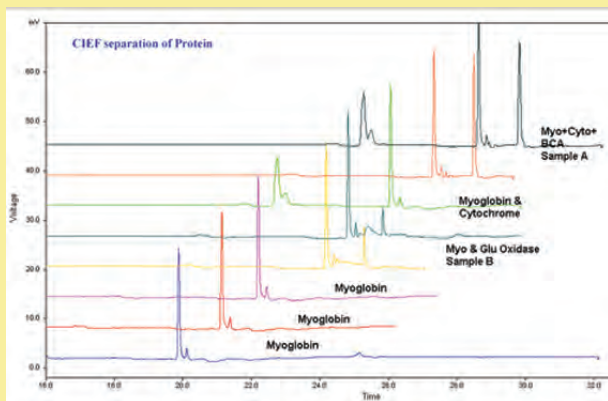
is just half the solution. Customers appreciate us for the total solution that we provide. For challenging applications, our chemists are at hand to give one-to-one consultation and assist with the optimisation. If you are faced with the problems of low abundance compounds, or compounds that have no UV absorbing properties, or the need to derivatize a compound to give a fluorescing label, we would be pleased to discuss with you.



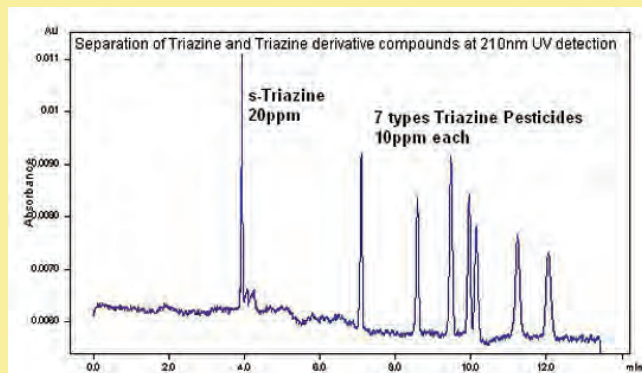
DNA Marker:  $\lambda$ /Hind III- $\phi$ x174/Hind II digest



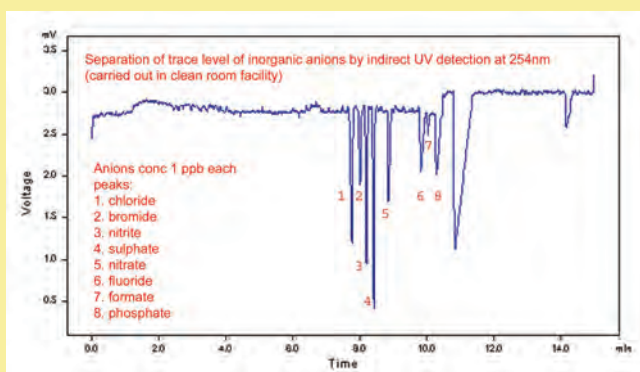
Separation of 6 stabilisers from ammunition explosives



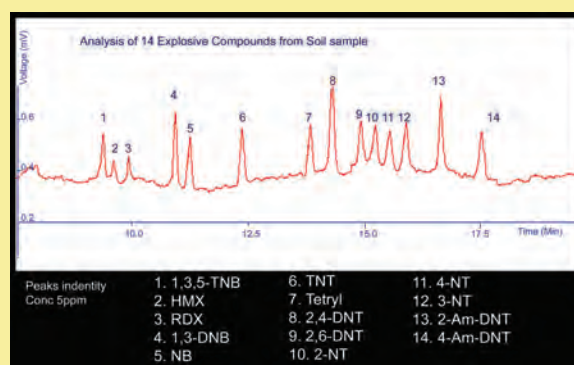
Separation of protein mixtures by CIEF mode



Separation of Triazine and its derivatives at  $\lambda$  210nm



Trace Analysis of Anions at sub-ppb level

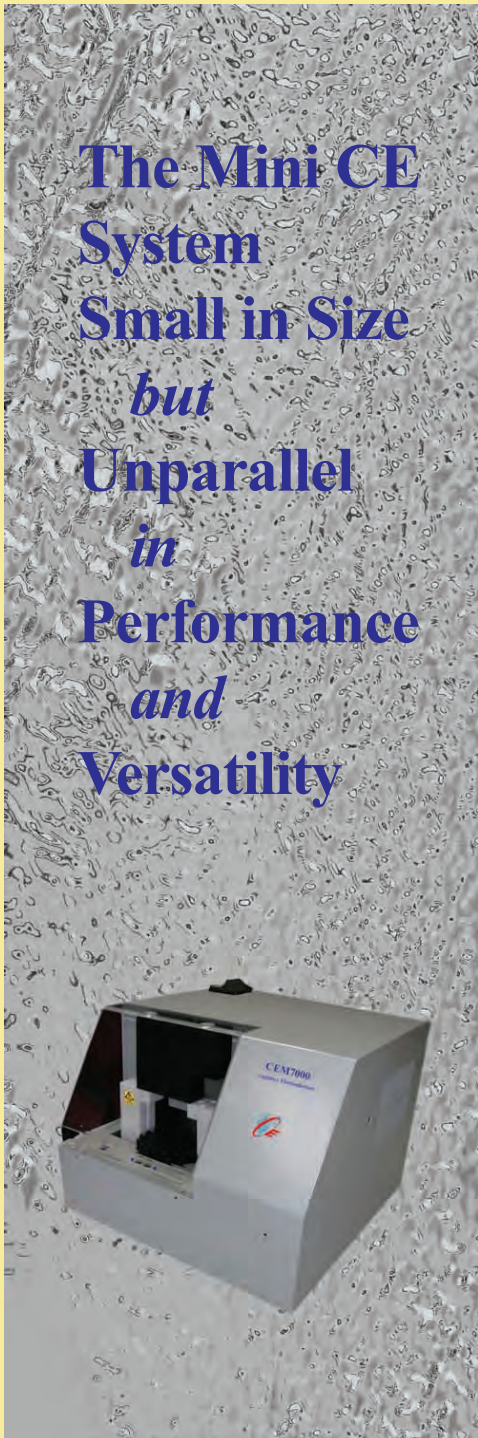


Analysis of 14 explosive compounds from soil sample

### Abbreviation:

- LIF<sup>1</sup> - Laser Induced Fluorescence Detector
- C4D<sup>2</sup> - Capacitively Coupled Contactless Conductivity
- PDA<sup>3</sup> - Photodiode Array Detector
- CEC<sup>4</sup> - Capillary ElectroChromatography
- GLP<sup>5</sup> - Good Laboratory Practice
- Air<sup>6</sup> cooling is 10°C below to 30°C above room temp

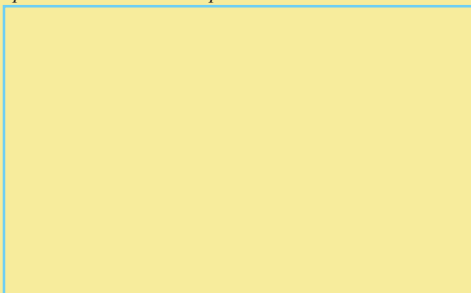
*To own a powerful instrument for both in-lab and on site uses or to find out more about capillary electrophoresis, please contact*  
**CE Resources Pte Ltd.**



To learn more about CE Technology and product, please visit our website:

[www.ce-resources.com](http://www.ce-resources.com)

For all orders, enquiries and application support, please contact our Representatives :



## About CE Resources Pte Ltd

The company designs, manufactures and supplies capillary electrophoresis (CE) instruments in modular systems for biochemical analysis. CE is a modern analytical technique that uses narrow-bore fused silica capillaries to separate a wide range of large and small molecules, such as DNA, proteins, carbohydrates, drugs and inorganic ions. It is the enabling technology behind the recent success of DNA sequencing and the human genome project.

### Our Products Program

Our core products comprise the portable CE System (**CEP5000, previously CE-P2**) and desktop CE System (**CEL3000, previously CE-L1**), and with the latest addition, the Mini CE System (**CEM7000**). Built on our proprietary technology platform, CEP5000 is currently the only portable automated CE system in the world. CEM7000 fullfills the need for a small footprint, automated, high performance instrument. Another product, the Multichannel High Voltage Power Supply, is popular for researchers working on CE-on-Chips technology.

### Our Extended Services Program

Besides CE products program, we undertake jobs for consultancy services, collaborations with research institutes and industries to advance the state-of-the art CE technology to a new level. We also work closely with leading Third Party Manufacturers to promote new products and technology concept for the benefits of our customers. As a service oriented company, we supply consumables and accessory items for CE, and chemicals and biochemicals testing services for a comprehensive user-support program.

### Know-how Expertise & Customization

CE Resources does not sell instruments alone. What makes us different is that we are a **provider of solutions** to our customers. Our scientists and engineers have in-depth knowledge of instrumentation and applications. We have the know-how to package the best of technology and techniques, and provide tailor-made solutions, and customize them to the exact requirement of our customers' lab and production processes. This 'one-stop-shop' approach ensures compatibility of parts and provides a tailor-made solution from a single supplier. For your special needs, do contact our sales team to discuss your requirements.

### Service

We pride ourselves to excellence in the delivery of high quality service with a human touch. Our staff will go the extra mile to assist our customers with method development, trouble-shooting of a lab process, and process analysis problems, either face-to-face, or online through the internet.

### Reliability

CE systems are designed to provide years of dependable trouble-free operation. Our fully trained representatives respond promptly to your needs. Our company is committed to provide comprehensive product training and high standard of after sales support.

### Our Future

We focus on what we do best and leverage on our know-how and nimbleness to capitalize on the services strategy, and bring new product capabilities to a new platform. We will continue to listen to our customers and deliver the technology and products for the advancement of science in the 21st century.



**The Future, our Goal ... be a Prolific CE and Microchip CE Company!**