

2018

# EQUIPMENT FOR ANALYTICAL, PREPARATIVE AND FLASH LIQUID CHROMATOGRAPHY

**HPLC SERIES 2000  
includes:**

- Gradient Box  
ECB2004

- Analytical Pump  
ECP2010

- Column Oven  
ECO2080

- UV-VIS Detector  
ECD2600



**ECOM**  
HPLC FROM PRAGUE

Check out  
our brand  
new TOYDAD  
and BABYDAD  
detectors



# ANALYTICAL SYSTEMS

**Modular Analytical HPLC system** includes **PDA Detector** or **UV-VIS Detector**, **autosampler** for 96 vials, **isocratic pump** with flow rate up to 10ml/min works together with **gradient box** with degasser as **gradient pump** and **column oven** with heating/cooling. Communication is through RS232 or LAN. New addition to these units is **ECB2004PC box which has built-in PC**.

**Gradient box with degasser ECB2004 or ECB2004PC box with built-in PC**

**Column oven ECO2080 with heating and cooling or ECO2099 with heating only**

**Analytical HPLC pump ECP2010 with flow-rate up to 10 ml/min and pressure up to 40 MPa**

**ECDA2800 PDA scanning detector or ECD2800 / ECD2600 UV-VIS detector with continuously variable wavelength**

**L3320 Autosampler with excellent accuracy and linearity**

Units controlled by Clarity SW

## System configuration examples

Equipment	ECS01	ECS02	ECS03	ECS04	ECS05
	ASA0100X	ASA0200X	ASA0300X	ASA0400X	ASA0500X
	<b>Gradient</b>	<b>Gradient</b>	<b>Isocratic</b>	<b>Gradient</b>	<b>Gradient</b>
Detector	ECD2800	ECD2600	ECD2600	ECD2800	ECDA2800
Pump	ECP2010	ECP2010	ECP2010	ECP2010	ECP2010
Column Oven	ECO2080	ECO2099	—	ECO2080	ECO2080
Box	ECB2004	ECB2004	ECB2006	ECB2004	ECB2004
Sampling	Manual	Manual	Manual	L3320	L3320

### NOTE:

- For more information and technical specifications see pages 4 and 5.
- This system is controlled by Clarity Chromatography software.
- Ask us for different configuration.

# ANALYTICAL UNITS OVERVIEW

## DETECTORS

### ECDA2800 UV-VIS PDA Detector



Analytical Diode Array Detector measures at eight wavelengths simultaneously or full scan with speed up to 100 Hz. 3D support in Clarity SW. Noise level  $\pm 5 \times 10^{-6}$  AU. Four ana-

log outputs. Two special mathematical channels are available. Wavelength range 200-800 nm. AD05 analytical cell included.

**ECDA2800**

**P/N ANW0000X**

### ECD2800 / ECD2600 UV-VIS Detector



UV-VIS detector with continuously variable wavelength in range of 190-800 (600) nm and noise level  $\pm 3 \times 10^{-6}$  AU controlled by RS232, LAN or keypad. Automatic

wavelength calibration using deuterium spectral lines. AC05 analytical cell included.

**ECD2800**

**P/N ADA0000X**

**ECD2600**

**P/N ADB0000X**

### ECD2800 / 2600 EX UV-VIS Detector



Modification of basic ECD2800/2600 unit suited for **external cell** connecting using optical cables with SMA 905 connectors. Noise level  $\pm 1.5 \times 10^{-5}$  AU.

Wide range of external cells available.

**ECD2800 EX**

**P/N ADAEX00X**

**ECD2600 EX**

**P/N ADBEX00X**

### ECD2800 / 2600 CE UV-VIS Detector



Modification of basic ECD2800/2600 unit suited for **capillary electrophoresis**. Easily replaceable capillary in cell compartment. Noise level  $\pm 1.5 \times 10^{-5}$  AU.

**ECD2800 CE**

**P/N ADACE00X**

**ECD2600 CE**

**P/N ADBCE00X**

### L3320 Autosampler



Autosampler for 96 vials with excellent accuracy and linearity of sample injection. Inovated needle design significantly reduces sample residue contamination. Wide range of sample volumes, even  $\mu$ l pick-up mode with zero sample loss.

**L3320**

**P/N ARA03320**

### AC05 / AD05 Analytical Cells



Standardly included cells with 5 mm optical path length. Cells with optical path length 2 and 10 mm are available on request. Cells are designed with a temperature exchanger which suppresses the temperature changes.

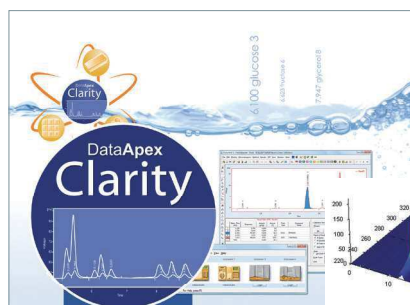
**AC05 (for ECD2800 / 2600)**

**P/N ADA7000X**

**AD05 (ECDA 2800)**

**P/N ANW7000X**

## CLARITY Chromatography Station



Clarity is an advanced Chromatography Data Station with optional software modules for data acquisition, data processing and instrument control. Its wide range of data acquisition interfaces (A/D converters, LAN, USB, RS232) allows connection to any ECOM unit. Single Instrument SW can be extended by SW modules for LC control, AS control, System Suitability Test, PDA Data processing, Single Instrument Add-on and Offline version for data processing.

**All ECOM units drivers are included in Module LC Control.** Drivers contain **full control** of instruments as well as **diagnostics tools** and are made by ECOM with DataApex supervision that guarantees the highest quality and full integration into the Clarity station.



# ANALYTICAL UNITS OVERVIEW

## PUMPS

### ECP2010 / ECP2010H Analytical HPLC Pump



Works as isocratic pump, together with Gradient Box also as gradient pump. It has two pump heads connected in series with a piston diameter of 1/8". Unit software includes new learning algorithm for pulsation suppression and many testing and diagnostic features.

Flow rate 0.02–10 ml/min  
ECP2010 40 MPa (5800 PSI)  
ECP2010H 60 MPa (8700 PSI)

**ECP2010**

**P/N ACA0000X**

**ECP2010H**

**P/N ACF0000X**

### KAPPA10 / KAPPA10PP Isocratic One Piston Pump



Single piston pump suited for column washing and columns regeneration process. Kappa 10PP includes pressure sensor. It is designed with piston diameter of 1/8". Completely new concept of electronic control and drive of pump allows it to be used as a standalone unit.

Flow rate 0.01–10 ml/min  
40 MPa (5800 PSI) up to 2 ml/min  
20 MPa (2900 PSI) 2.01 to 10 ml/min

**KAPPA10**

**P/N PK00000X**

**KAPPA10PP**

**P/N PL00000X**

### ECB2004 / ECB2004PC Gradient Box with Degasser



Box is suited for handling liquids in ECOM gradient systems. It accommodates container for solvent bottles, built-in high-efficiency vacuum de-gasser and four way gradient valve. Four way gradient

valve is controlled via ECP2010 pump. Up to four solvent lines may be degassed simultaneously. ECB2004PC has a built-in PC included inside.

**ECB2004**

**P/N ABA0000X**

**ECB2004PC**

**P/N ABAPC00X**

### ECB2006 Box for solvent bottles



ECB2006 is a simple container for solvent bottles.

**ECB2006**

**P/N ABC000X**

### ECO2080 / ECO2099 Column Oven



Peltier heating/cooling column oven (0–80°C) with a big compartment room can accommodate up to 3 columns with length up to 25 cm. Unit is controlled via keypad, RS232 or LAN Interface.

Column oven can be also supplied with heating only, temperature range up to 99°C as ECO2099.

**ECO2080**

**P/N AOA0000X**

**ECO2099**

**P/N AOB0000X**

These graphs show linear and stepped gradient (10 % steps and at the beginning and end 1 %) performed on HPLC pump ECP2010 and gradient box ECB2004. This is used for measuring and testing performance criteria such as accuracy and reproducibility of solvent delivery system in production.

