

Axcend DAD 1000

Diode Array Detector for Capillary Liquid Chromatography and Process Technology

190 -700 nm, diode array detector

The Axcend DAD 1000™ is the ideal choice for your challenging liquid chromatography requirements. The only DAD for capillary HPLC offers a full three orders of magnitude linearity needed to identify trace elements in the presence of your target analytes. The Axcend DAD 1000 delivers where others do not.

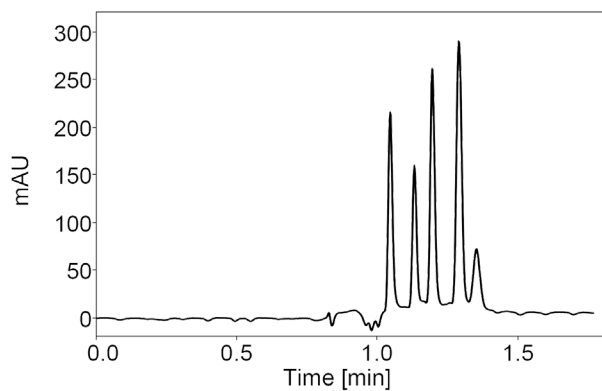
Axcend partnered with two industry greats: KNAUER and Agilent Technologies; combining an optical bench from KNAUER with an Axcend-designed housing for a capillary z-cell from Agilent Technologies. This combination delivers three orders of magnitude linearity across the wavelength range that has not previously been available for capillary HPLC. The 1.1 mm path-length in an 11 nL volume provides outstanding sensitivity when combined with the Axcend Focus LC®. Fluidic connections are made easy with a 25 µm ID / 360 µm OD PEEKsil transfer-line and Axcend's award-winning cartridge that contains the separation column. The easy-to-move Axcend Focus LC® can be placed anywhere in proximity to the Axcend DAD 1000 to accommodate introduction of the analyte, whether from a reaction vessel or any variety of sample handling systems.



The Axcend DAD 1000 combines high performance with intuitive handling at an affordable price. Easy integration with the Axcend Focus LC makes this device the right choice for fast, standard analytical, semi-preparative and preparative separations. The deuterium lamp, covering 190 to 700 nm, can be quickly changed as needed through the quick-access removable front panel for short downtimes. The Axcend Focus LC and Axcend DAD 1000 can be simultaneously controlled via a single user-interface from Agilent OpenLab CDS®, and DataApex Clarity.

AT A GLANCE

- Removes the constraint from LED-based light sources - Radio frequency identification (RFID) tags for all flow cells and UV lamp provide new levels of data traceability by recording parameters such as cell dimensions, lamp usage, serial number.
- Full UV absorption spectrum to view maximum absorbent points.
- More reliable and robust peak integration process due to less baseline drift.

**Pharma Test Mix:**

sulfamethazine, carbamazepine,
ketoprofen, flavone, amcinonide (100 µg/mL)

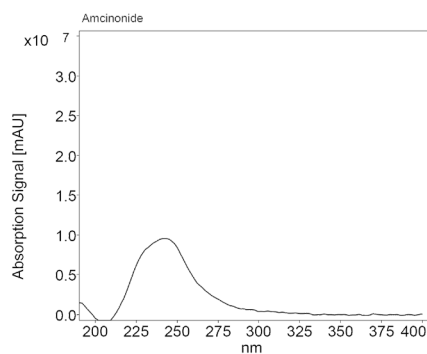
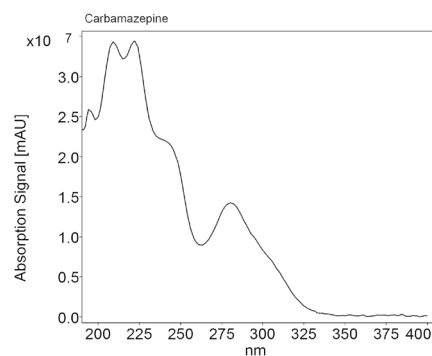
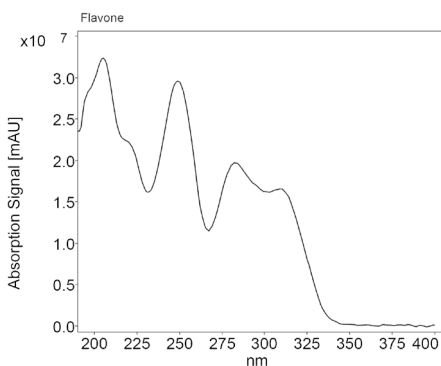
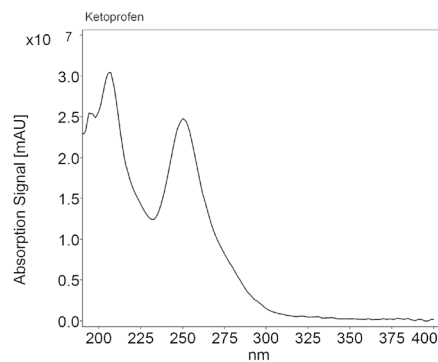
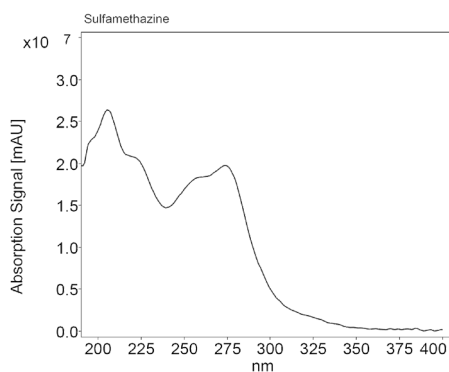
Column:

HSS T3, 100 Å, 1.8 µm, 150 µm x 100 mm

Method:

Gradient at 2 µL/min flow rate

Injection Volume: 40 nL



Technical Data

Flow cell	12 nL volume, 1.2 mm pathlength
Maximum flow cell operating pressure	6.8 bar (100 psi)
Detection channels	8 (digital)/4 (analog)
Number of diodes	256
Pixel pitch	2 nm/diode
Light source	Deuterium (D ₂) lamp with integrated GLP chip
Wavelength range	190 - 700 nm
Spectral bandwidth	<10 nm at 254 nm Hg line (FWHM)
Wavelength accuracy	± 1 nm
Wavelength verification	Internal holmium filter and deuterium lines
Maximum data rate	100 Hz (LAN)/12.5 Hz (analog)
Time constants	0.00 / 0.01 / 0.02 / 0.05 / 0.1 / 0.2 / 0.5 / 1.0 / 2.0 / 5.0 / 10.0 s
Integration time	Automatic
Drift	400 µAU/h at 255 nm (2 Hz data rate)
Linearity	Up to 3 orders of magnitude (peak area of propylparaben at 255 nm)
Limit of detection	0.0125 ppm (propylparaben at 255 nm at S/N = 3)
Dimensions	(W x D x H): 36.1 x 52.3 x 15.8 cm (14.2 x 20.6 x 6.2 in.)
Weight	27.7 lbs/12.6 kg
Power supply	100 - 240 V, 50 - 60 Hz, 75 W

Communication

Inputs	Error (IN), Start (IN), Autozero
Outputs	Events 1 - 2 (Relay and TTL compatible), Error (OUT), + 5 V, Valve + 24 V, Valve (OUT)
Analog outputs	4 x 0 - 5 V, 20 bit, offset adjustable
Control	Control: Software, event control, analog, terminal protocol
Interfaces	LAN (RJ-45), RS-232 (SUB-D 9, service only), multi-pin connector, analog (RCA cinch connector)



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