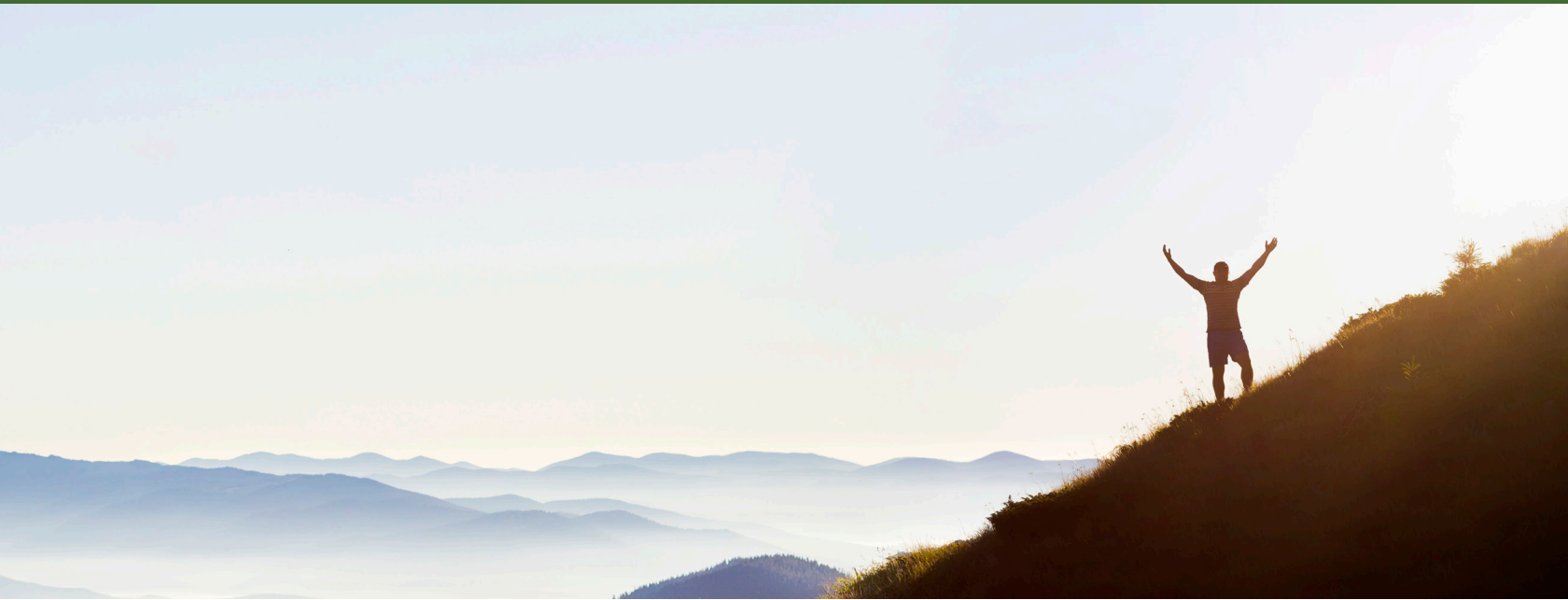


# The Axcend Focus LC<sup>®</sup>



*The Future of HPLC is Here Today™*

**Thomas**  
Scientific

**Axcend**<sup>®</sup>

With over 50 years of high-performance liquid chromatography history as our guide, we deliver the future of HPLC to you today.



## Small and Powerful

The Axcend Focus LC® is a revolutionary, shoebox-sized HPLC. But don't let its small size fool you. With a pressure range of up to 10,000 psi, nano-flow capillary columns, and single or dual UV-detectors for on-column detection, Axcend's sleek and miniaturized system delivers results on par with today's leading HPLC platforms.

## Lightweight and Portable

Why does the Axcend Focus LC have a handle? Because at under 18 pounds, this instrument is literally hand-portable and can be used anywhere, including any place within your laboratory, close to the ion source of a mass spectrometer, inside a fume hood, on a factory floor, and in the field. Small solvent and waste vials are even enclosed inside the Axcend Focus LC so you don't have to worry about transporting separate solvent or waste bottles when you move the device.

*At under 18 pounds, the Axcend Focus LC is literally hand-portable and can be used anywhere*

# Unique Cartridge System

Key to the breakthrough design of the Axcend Focus LC is our creation of compact, easy-to-use cartridges that contain our UV-detectors and capillary columns supporting flow rates as low as 800 nL/minute. A cartridge (and consequently the column) slides easily into an Axcend Focus LC and is then hand-tightened into place by twisting the AssurLoc™ knob on the front of the instrument; this obviates the need for any wrenches or tools and saves significant time. In fact, changing a column is as simple as swapping cartridges, and a variety of detector and column configurations are available.



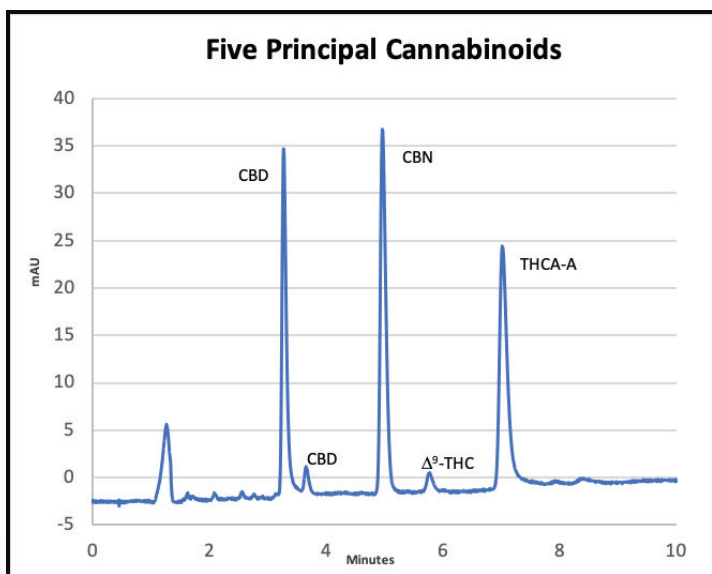
*Delivers savings of 90% or more from reduced solvent needs and lower waste disposal costs*

## Dramatic Reduction in Solvent Use and Costs

By using small-diameter capillary columns with on-column UV-Absorption detection at extremely low flow rates, you will see a dramatic reduction in solvent use of up to 90% or more with the Axcend Focus LC. This translates into huge savings in solvent costs as well.

# Dramatically Less Waste and Lower Disposal Costs

Not only does the Axcend Focus LC use significantly less solvent to get the same results as traditional HPLCs, this instrument also generates comparably less waste – a lot less. In fact, you should see waste production and disposal cost reductions of 90% or more with the Axcend Focus LC.



UV detection of five cannabinoids at 255 nm using the Axcend Focus LC. Elution Order – 3.3 min: CBDA; 3.6 min: CBD; 5 min: CBN; 5.8 min: Δ<sup>9</sup>-THC; and 7 min: THCA-A. Flow rate: 3 μL/min; Gradient: 65% - 85% B, 10 min; Equilibration Time: 2 min; Mobile Phase A (3:97:0.1 acetonitrile [ACN]:water [H<sub>2</sub>O]:trifluoroacetic acid [TFA]); Mobile Phase B (97:3:0.1 ACN:H<sub>2</sub>O:TFA); Column: 10 cm x 150 μm i.d.; 1.8 μm C18.



The Axcend Focus LC uses so little solvent that our waste and solvent vials are contained within the instrument itself.

## Lower Purchase Cost

In addition to the benefits noted above, the Axcend Focus LC features an extremely affordable price point vs. traditional HPLCs, delivering even more value to you.

*A truly "green" HPLC that is "friendly" to the planet, you and your team*

# A Truly Green HPLC

Such a huge reduction in solvent usage and waste production means that the Axcend Focus LC is environmentally unmatched – a truly “green” HPLC that is “friendly” to the planet, you and your team.

*A revolutionary, shoebox-sized HPLC on par with today’s leading HPLC platforms*

## The TCO Winner

When taken together ...

- *Its lower purchase price as a truly “green” HPLC, with*
- *Lower waste production and costs, and*
- *Lower solvent use and costs, plus*
- *A unique, easy-to-use cartridge system that*
- *Houses nano-flow capillary columns, with*
- *On-column, UV-Absorption detectors*
- *Inside a powerful yet lightweight, shoebox-sized HPLC ...*

it’s clear that the Axcend Focus LC delivers the winning combination that also lowers your overall **Total Cost of Ownership (TCO)** in the HPLC market.

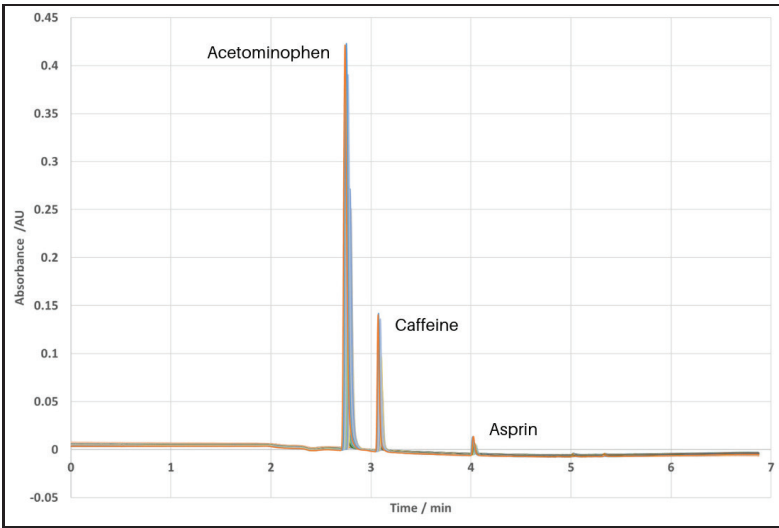


The Axcend Focus LC dramatically lowers solvent use and waste production making it a truly “green” HPLC.

# See For Yourself

But don't take our word for it. Find out for yourself how Axcend delivers the HPLC of the future today – a solution that makes *HPLC Anywhere™* a reality.

Sign-up today for a hands-on (or *Web-based*) demonstration of the Axcend Focus LC. Then you'll understand why we say the "*The Future of HPLC is Here Today.*"



Overlapping chromatograms of 55 runs acquired over 12 hours with the Axcend Focus LC. Flow rate: 2  $\mu$ L/min; Gradient: 5% - 95% B, 0-5 min.; Equilibration Time 0.5 min; Mobile Phase A (97:3 Water:AcN); Mobile Phase B (3:97 Water:AcN); Column: 10 cm x 150  $\mu$ m i.d.; 1.7  $\mu$ m C18 column; Injection volume: 40 nL; Detection: UV at 255 nm. Elution peak order: acetaminophen, caffeine, aspirin.

# Axcend Focus LC Specifications

## PHYSICAL SPECIFICATIONS

### Axcend Focus LC (Height x Width x Depth)

20.1x23.1x32.0 cm (7.9x9.1x12.6 in)

Weight (without cartridge): 7.82 kg (17.25 lbs)

### Axcend Focus LC Cartridges (Height x Width x Depth)

4.1x11.2x18.8 cm (1.6x4.4x7.4 in)

Single detector cartridge: 0.26 kg (9.0 oz)

Dual detector cartridge: 0.29 kg (10.1 oz)

### Solvent & Waste Vials (Height x Diameter)

Solvent-A Vial: 6.0x1.6 cm (2.38x0.63 in)

Solvent-A Vial (volume): 9.0 mL

Solvent-B Vial: 4.5x1.5 cm (1.75x0.56 in)

Solvent-B Vial (volume): 5.0 mL

Waste Vial: 7.0x2.0 cm (2.75x0.81 in)

Waste Vial (volume): 17.0 mL

## INSTRUMENT CONTROLS

### Axcend Focus LC Cartridge

Simple one-way manual insertion/removal

Hand-tightened *AssurLoc*<sup>™</sup> system provides ferrule alignment and leak prevention

### Sample Delivery

Topside port with manual or automated injection

### Solvent & Waste Vial Access

Easy front panel insertion/removal into/from the **Axcend Focus LC** front panel

### Power

One-button Start/Stop control

## SYSTEM FEATURES

### Pressure

Up to 10,000 psi (689 bar)

### UV-Absorption Detectors (single or dual)

255 or 275 nm wavelength

### Capillary Columns (single or dual)

Length: 50, 100, 150, 200, or 250 mm

Internal Diameter (ID): 150 µm

### Packing Material

Standard: 1.7 – 3.0 µm fused silica particles

Optional: Up to 5.0 µm, with other packing

### Flow Rate Range

0.5 – 10 µL/min

### Delay Volume

1.0 µL

### pH Range

2.0 – 10.0

## SOLVENT & SAMPLE MANAGEMENT

### Number of Solvents

Up to two: A and/or B

### Injection Volume Range

Internal loop: 4, 10, 20, 30, or 40 nL

External loop: 175 nL and greater

### Injection Modes

Manual and automated

### Gradient Formation

High-pressure mixing, binary gradient

### Flow Ramping

User-defined via software interface

### Primary Wetted Materials

- Fused Silica
- PEEK
- 316 Stainless Steel
- Polyimide

### Solvent & Waste Storage

All vials easily accessible and integrated inside the **Axcend Focus LC**

## SOFTWARE

Secure wireless and wired HPLC output and control of the **Axcend Focus LC** occurs through computers that support HTML5. Specific operating systems supported include:

### Computer Operating Systems Supported

- Windows v7 and higher
- Mac High Sierra and later
- Ubuntu 16.04 and later

## POWER SPECIFICATIONS

### AC

100-240 V (AC); 50/60 Hz; 1.4 amp

### DC (Battery)

12 V (DC), 126 Wh (LiFePO<sub>4</sub>, with higher thermal and chemical stability than standard Li-ion batteries)

### Operating Time

10+ hours without recharging

### Expected Life

>2000 charge/discharge cycles

The Axcend logo features the word "Axcend" in a bold, sans-serif font. Above the letter "x", there is a stylized graphic of three green mountain peaks.

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