TELEDYNE | Teledyne LABS

# ACCQ*Prep*® HP150

## Preparative HPLC System


CHROMATOGRAPHY

# ACCQ*Prep*® HP150

*Achieve High Performance Liquid Chromatography (HPLC) simply, without compromise.*

## Standard System Features

- **Flow rates from 1 to 150 mL/min allows analytical scouting and Prep methods on one system**
- **Operating pressure up to 6,000 psi**
- **Choice of UV or UV-Vis plus ELSD and MS options**
- **One touch Focused Gradient Generator minimizes purification time while maximizing sample recovery**
- **Complete control of the system on one screen**
- **Lifetime of free software upgrades**

The Teledyne ISCO ACCQ*Prep* HP150 is designed to be intuitive and easy-to-use with all the performance and accuracy of an HPLC system. The system focuses on purification with the highest sample recovery.

With ease of purification in mind, the user-friendly ACCQ*Prep* HP150 eliminates unnecessary and complex method parameters found in many of the HPLC systems in today's market. Our PeakTrak® software, designed with the user in mind, is the basis for controlling the ACCQ*Prep* HP150. The integrated software, eliminates the need for a stand-alone PC. This results in a more compact unit with a touch screen interface. Software evolves with user needs and updates are always free.

Enjoy the confidence associated with Teledyne ISCO's active solvent and waste level monitoring, which reduces the risk of solvent spills. In addition, never miss or overfill test tubes again with RFID collection racks.

The ACCQ*Prep* HP150 creates high accuracy gradients and low dwell volumes using dual piston, high pressure pumps. Operate across the full range of flow rates from analytical (1 mL/min) to 50 mm and larger preparative columns (150 mL/min), without the need to switch out pump heads. Save method development time by running a scouting method on an analytical column, and scale up to prep on one system, with a single touch.

### Compact Space Saving Design

- Uses minimal bench space with built-in fraction collector and integrated touchscreen.


### Powerful Easy-to-Use PeakTrak® Control

- Intuitive PeakTrak software minimizes the learning curve, enabling the user to efficiently complete their purification, saving time and solvent consumption.
- Log in through a network connection and control the separation from your desktop.

### One Screen Operation

- Start a separation in seconds. Choose a column, press play, load your sample, and walk away.
- On-the-fly chromatographic changes are easy to make on the touchscreen, even during the run.

### Column Selector Valve (CSV-4 Optional)

- Users can run samples on up to four different columns containing different media or different dimensions based on sample size needs.

### Active Solvent and Waste Level Sensing

- Never run a column dry or overfill a waste container.

### Rack Sensing

- System reads the RFID rack and sets the fill volume avoiding tube overfills or missed tubes.
- Supports a variety of collection rack sizes so that purified compounds can be collected in volumes appropriate for the column size being used.

### Photo Diode Array Detection

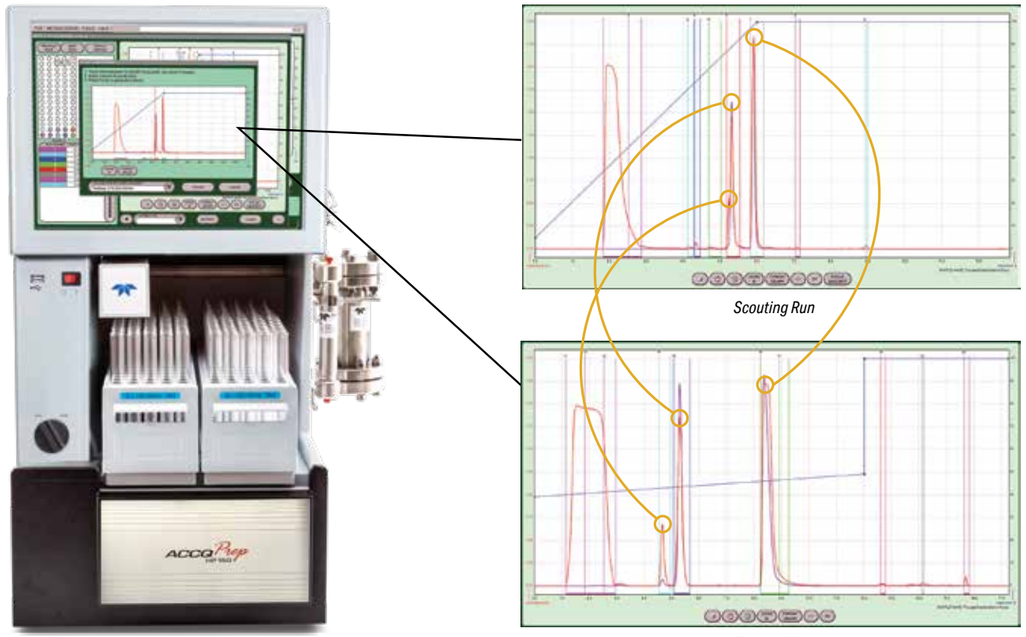
- UV and UV-Vis detectors use PDA technology
- Display spectra in real time or post run
- Collect based on purity indicators

# Focus Gradient Generator

*Improved Resolution is One Touch Away!*

Focus Gradient Generator

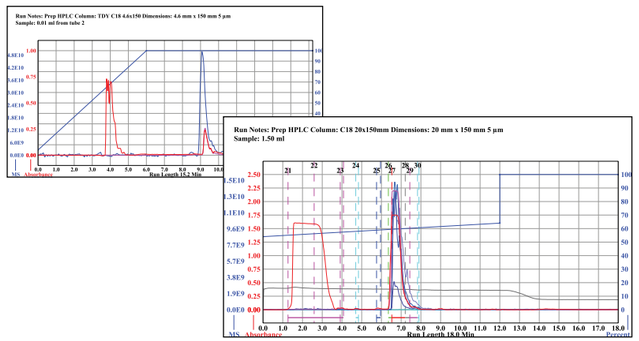
**Save time and solvent while increasing column loading.**
Designed to allow quick method optimization to get to your purified product by every chemist. Run a single scouting run, then use our exclusive Focus Gradient feature, where you are a touch of the peak away from an optimized gradient that maximizes efficiency and resolution around your target compound. This method is automatically scaled up to the column size (of matching media) of choice. Seamless integration with our Purlon MS confirms you have selected the right peak to optimize.




### Focus Gradient Generator paired with the Purlon Mass Spectrometer

*Easy to Use Method Optimization Right the First Time!*

No more guessing which peak is your compound! Coupling a scouting run with MS data means you can now have confidence that the separation is optimized for your target compound. Getting things done right the first time, saves money, solvent and most importantly time.

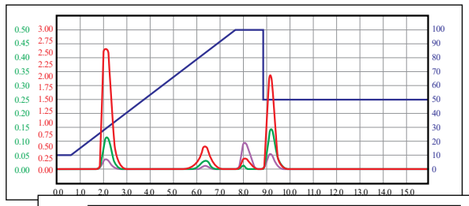



*Use of Focused Gradient Generator and Purlon MS to scale up purification of peptide from 4.6 x 150 mm column to 20 x 150 mm column.*

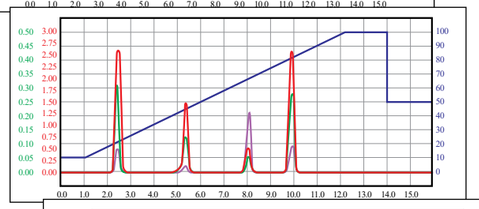
# Integrated ELSD

*Collect weak UV absorbing compounds with certainty.*

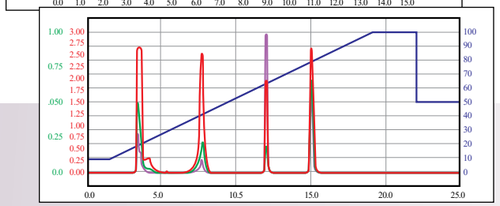
- Fully-integrated into the ACCQPrep with no additional bench-space needed.
- Offers scalability and sensitivity for a wide range of sample loading with easy-to-change method parameters.
- Peak alignment automatically adjusted for varying solvent mixtures and different flow rates.
- Alignment from 2 to 150 mL/min with no user-hardware changes.



*4.6 x 150 @ 2 mL/min*



*20 x 150 @ 20 mL/min*



*30 x 250 @ 42.5 mL/min*

**No Chromophore—**
**No Problem** with our
**ELSD** and **MS modules!**

# Mass-Directed Preparative HPLC

*Verify before you purify!*

The PurIon mass spectrometer is fully integrated with PeakTrak® software. The ability to manually inject samples prior to purification and collecting based on mass(es) makes this mass-directed ACCQ*Prep* system ideal for many applications.

- Using the Method Development screen, easily adjust loading and ionization settings before committing your valuable sample for purification.
- Use IonFinder to easily pick out more abundant MS adducts or multiply charged species of your unique compounds.
- See past the noise and maximize MS sensitivity and sample recovery by using Single Ion Monitoring (SIM).
- Collect on up to 6 SIM masses or 5 SIM masses and a mass range.
- Get the whole picture with full MS spectral range traces throughout your chromatogram.
- Set asymmetric peak threshold to account for the MS sensitivity changes and tailing after target mass elution.

# Automation Options

*Maximize the throughput and flexibility of your ACCQPrep system by adding automation options for longer unattended operation.*

**432**

TUBE CAPACITY WITH **AS 2x2***

## Unlimited rack swapping with AutoSamplers

The two rack **AS 2x2** and four rack **AS 4x2** sampler options allow different chromatographic conditions to be applied to a variety of different samples and doubles or triples the fraction collection capabilities of the base system.

**648**

TUBE CAPACITY WITH **AS 4x2***

**13mm tubes*

## Accessories for everyday simplicity

### Waste Collection Switching Valve

Interfaces with AS 2x2 and AS 4x2. Directs waste from up to 12 samples into separate waste reservoirs. Ideal for open access to separate individual sample wastes. Requires presence of either the AS 2x2 or AS 4x2.

### Third Solvent Modifier Pump

Controlled via PeakTrak and provides delivery of a third solvent at a fixed percentage during the purification.

### Solvent Select Valve

Easily change your chromatographic selectivity by changing to a different solvent system. The 3 x 2 solvent modifier allows any combination of 3 different A solvents with 3 different B solvents.

### Column Select Valve

Change between up to 4 different installed columns with the CSV-4 module. Fully integrated automation with PeakTrak makes changing stationary phases or sizes a breeze.

### Vapor Enclosure

Vapor enclosures are optional to free up hood space with an adjacent enclosure dedicated to the autosampler. Connect to the hood ventilation system to safely remove organic vapors and residual $CO_2$ from the SFC fractions. Availiable for AS 2x2 and AS 4x2.

### Large Volume Sample Load Pump

Perfect for peptides and natural applications dilute samples. Inject volumes of samples greater than 10 mL directly onto the column bypassing the injection loop. Pump control is integrated with PeakTrak.

## RediSep® Prep HPLC Columns

### Maximize Your Preparative HPLC Performance

When you need the highest purity compound, your first choice should be to equip your ACCQ*Prep* HP150 with Redi*Sep* Prep columns.

Teledyne ISCO has built a quality reputation on the high performance of our flash purification columns. Redi*Sep* Prep columns are specifically designed for high performance liquid chromatography (Prep HPLC).

**Features:**

- Prep column diameters ranging 10 to 50 mm with lengths of 150 and 250 mm, all in 5 µm media.
- Available matching UPLC (2 x 50 mm, 2.8 µm) and analytical HPLC (4.6 x 150 mm, 5 µm) columns for method development.
- Available stationary phases include bare silica, C18, C18Aq and C8 chemistries. All matching available flash stationary phase chemistries.
- Protect your column investment with our 20 x 30 mm guard columns with matching stationary phase.

# Purification, Performance, and Reproducibility without Compromise

Start with the binary gradient base system or add the optional solvent selection valve to allow selection from six solvents. The minimal gradient delay design allows purification method development on the ACCQ*Prep* HP150 using a 4.6 mm analytical column. The method can be automatically scaled to a larger preparative column.

### Performance Without Compromise

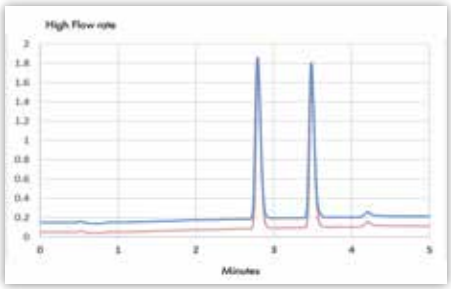
Graph 1 illustrates no compromise in performance even when the system is operating close to the maximum system pressure of 6000 psi and running flow rates that are higher than ideal.

### Gradient Reproducibility

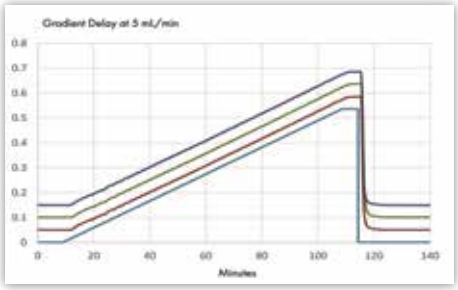
Graph 2 compares the programmed gradient against the profile obtained from three consecutive runs at 5 mL/min. The gradient closely follows the programmed profile, indicating minimal delay volumes, and the reproducibility is unmatched.

### No Need for Temperature Control

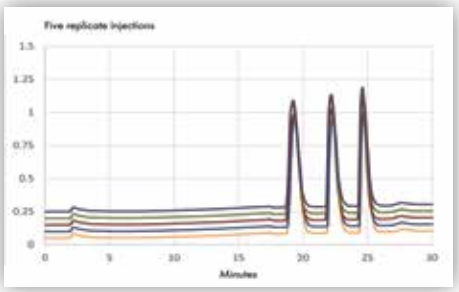
Graph 3 shows five injections overlaid using a test mixture of ethyl, propyl, and butyl paraben. There is minimal retention time shifts over a three hour period with out the use of any temperature control.




*Graph 1 – Mixture of methyl and propyl paraben run on a 10 x 150 mm column at 19 mL/min with a pressure of 5,000 psi*




*Graph 2 – Gradient Delay*
*This gradient reproducibility results in repeatable chromatographic runs*




*Graph 3 – Five Injection Test*

# Going Green and Saving Time in the Laboratory

An important principle towards greener chemistry and processes is to "Maximize Efficiency: Meet Need, Minimize Excess." One of the ways the new ACCQPrep HP150 helps users implement this principle is with the new Focused Gradient Generator. The use of optimized gradient methods maximizes efficiency (allowing purification with larger sample loadings) minimizing both the waste output and the amount of solvent used, all while saving user time. The use of focused gradients eliminates the need for over 80% of the default gradient profile where the compound is not moving down the column or already eluted off.

Reducing waste in our Chromatography line is just another way we are using our innovative products to increase productivity while improving the quality of life on our planet.

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