

FLASH



CombiFlash[®] NextGen

SOLUTIONS FOR ORGANIC PURIFICATION

COMBIFlash[®] NEXTGEN

Setting the Standard in Flash Chromatography Performance

Save time, save space

- Flow rates, up to 300 mL/min
- Higher pressures, up to 300 psi (20 bar)
- Bigger touchscreen, 12 or 15 inches
- Wider Dynamic Range UV Detector
- Improved baseline correction supports use of absorbing solvents
- Faster processing with streamlined user interface
- Space saving top tray holds four 4 L bottles

Teledyne ISCO's line of CombiFlash[®] NextGen systems take the guesswork out of your purifications and increase productivity, whether you are purifying synthetic compounds, natural products, peptides, or polymers.

The intuitive PeakTrak[®] software starts a separation in seconds. Select a normal phase or reversed phase column based on the type and amount of sample to purify; allow the radio frequency identification (RFID) tag on the Teledyne ISCO column to load the run parameters; confirm your detector settings (UV, Vis, ELS and MS); press "play"; load your sample; and walk away. Need to change the parameters? Modify any of the setpoints, including solvent percentages, wavelengths, flow rates, and run time while the separation is taking place. No need to repeat a separation.

A CombiFlash you can count on

The CombiFlash NextGens have all the features of our CombiFlash systems, active solvent and waste level sensing, optimized separation conditions, and an automated injection valve for walk-away solid loading. What makes the NextGen even better is its larger touchscreen, higher maximum flow rate and pressure, UV detection with increased dynamic range to accommodate higher sample loading, and updated PeakTrak control with new methods to speed up the purification process without sacrificing purity.

The NextGen 300+ includes RFID to identify Teledyne ISCO's system racks and RediSep or RediSep Gold columns. It is also available with a larger, 15-inch touchscreen with a variety of detection capabilities, such as baseline correction visible wave lengths, Evaporative Light Scattering Detectors (ELSD) and mass spectrometry, and a vapor enclosure for the collection racks for benchtop operation.

Three Systems to Fit Your Needs

CombiFlash[®] NEXTGEN 300+

Fully featured and ready to go

Our top-of-the-line CombiFlash NextGen 300+ features a full list of performance and safety options. Flow rate range is from 1 to 300 mL/min at operating pressures up to 300 psi (20 bar). The system is fitted with a solid load injection valve that can be bypassed if you decide to perform a liquid injection. RFID technology comes standard and automatically reads the size and type of Teledyne ISCO RediSep or RediSep Gold column being used for the purification. Based on this information, the proper method parameters are automatically programmed into the system. Simply insert the column, press "play" and the separation begins. This same RFID technology automatically reads the rack types being used, ensuring there is never a missed or overfilled tube. Active solvent, waste-level, and vapor sensing monitoring is standard on the NextGen 300+, ensuring that the column never dries out and eliminating messy waste overflows.

- Flow rates from 1 to 300 mL/min
- Operating pressure up to 300 psi (20 bar)

NEXTGEN 300

Customizable for your application

The CombiFlash[®] NextGen 300 is configurable to your needs. Like the 300+, active solvent, waste-level, and vapor sensing is standard. The system is designed for liquid injections, operating at up to 300 psi (20 bar) to increase the system's versatility. Automated Solid Sample Load Injection Valve option can be added, which also enables baseline correction for separation with absorbing solvents. You determine what your needs are; don't invest in unused or unwanted features.

- Flow rates from 1 to 300 mL/min
- Operating pressure up to 300 psi (20 bar)

NEXTGEN 100

Budget friendly gets the job done

The CombiFlash[®] NextGen 100 offers flow rates up to 100 mL/min at operating pressures up to 150 psi (10 bar). This economical system is designed to perform both normal and reverse phase purifications.

- Flow rates from 1 to 100 mL/min
- Operating pressure up to 150 psi (10 bar)

Space Saving Design

- Place all four 4L solvent bottles on top of the units, saving hood space
- Uses minimal hood space, only 14.1 inches wide and 17 inches deep, including the columns
- Optional vapor enclosure allows for bench top operation

12- or 15-inch Touch Screen

Standard on all systems is a 12-inch display screen (right). A 15-inch screen (left) is optional on the 300+.



PeakTrak[™] Powerful, Easy-to-Use

Our intuitive PeakTrak software minimizes the learning curve, enabling you to efficiently complete your 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. Select a column based on the amount of sample to purify, allow the RFID tag to load the run parameters, press play, load your sample, and walk away. On-the-fly chromatographic changes are easy to make on the touchscreen, even during the run.

Purify more! Up to 75 g with Higher Flow Rates and Pressure

- Run 750 g columns (with optional column stand)
- Purify lower solubility samples with higher, 300 psi (20 bar) pressure limit
- Extended dynamic range UV detection and dual sensitivity ELSD detects high sample loads while maintaining sensitivity for smaller samples

Rack Sensing

- System senses what size tubes are being used, eliminating potential missed tubes or overfills
- 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

Integrated ELSD to Collect Non-Chromophoric Non-Volatile Compounds

- Integrated into the CombiFlash: No additional system footprint
- All parameters programmed based on the solvent used or optimize operating conditions for your separation
- Offers scalability and sensitivity for a wide sample load range

Mass Directed Purification

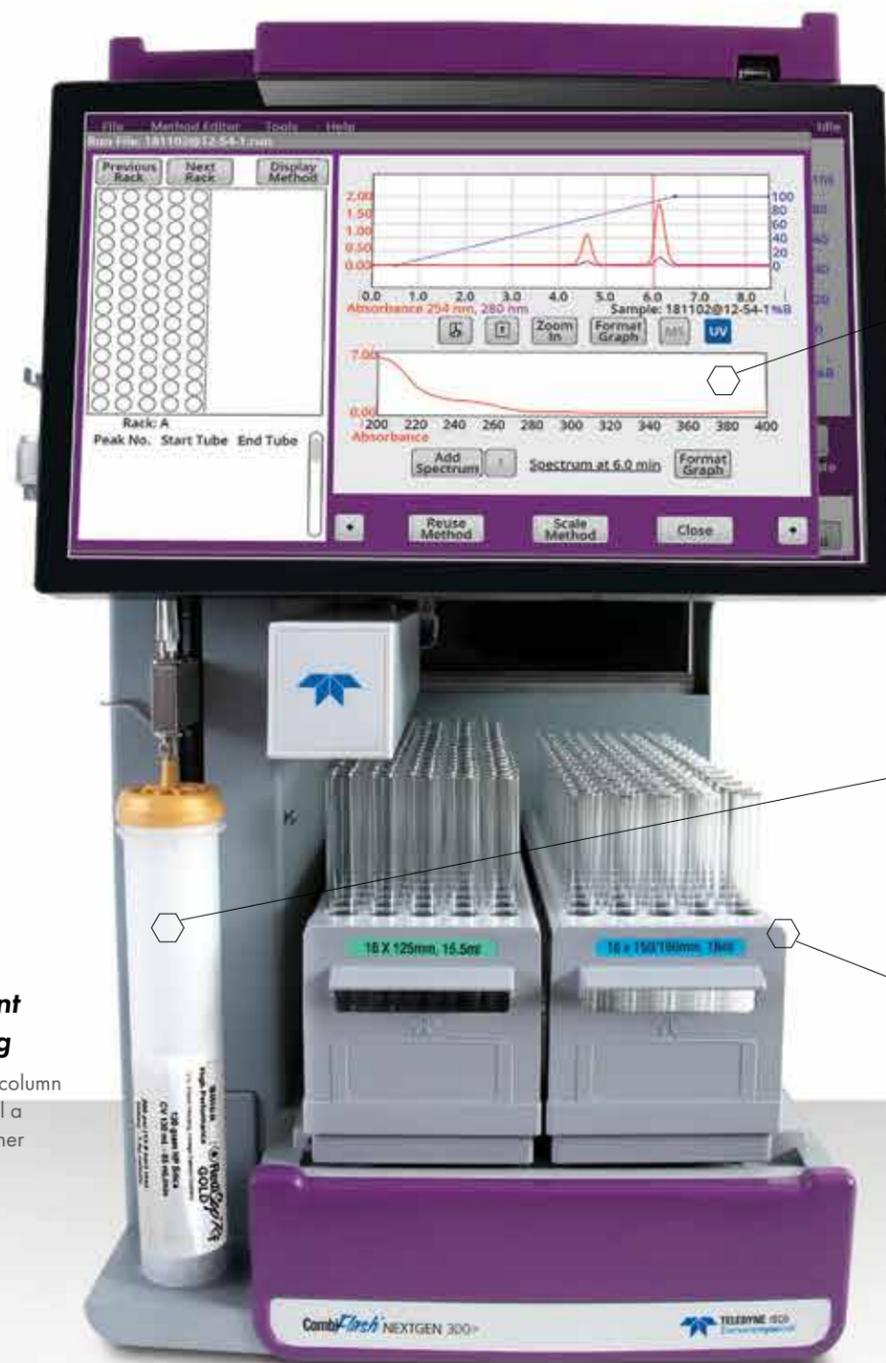
- Collect only those peaks matching the mass of your compound
- Eliminate the need for further analysis—save time in post-purification processing

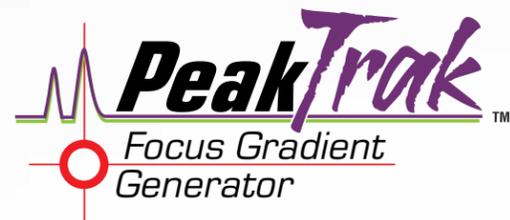
Internal Vapor Sensor

- Automatically stop the system if vapors are detected (level is user-configurable) for safe operation.

Active Solvent Level Sensing

- Never run a column dry or overflow a waste container

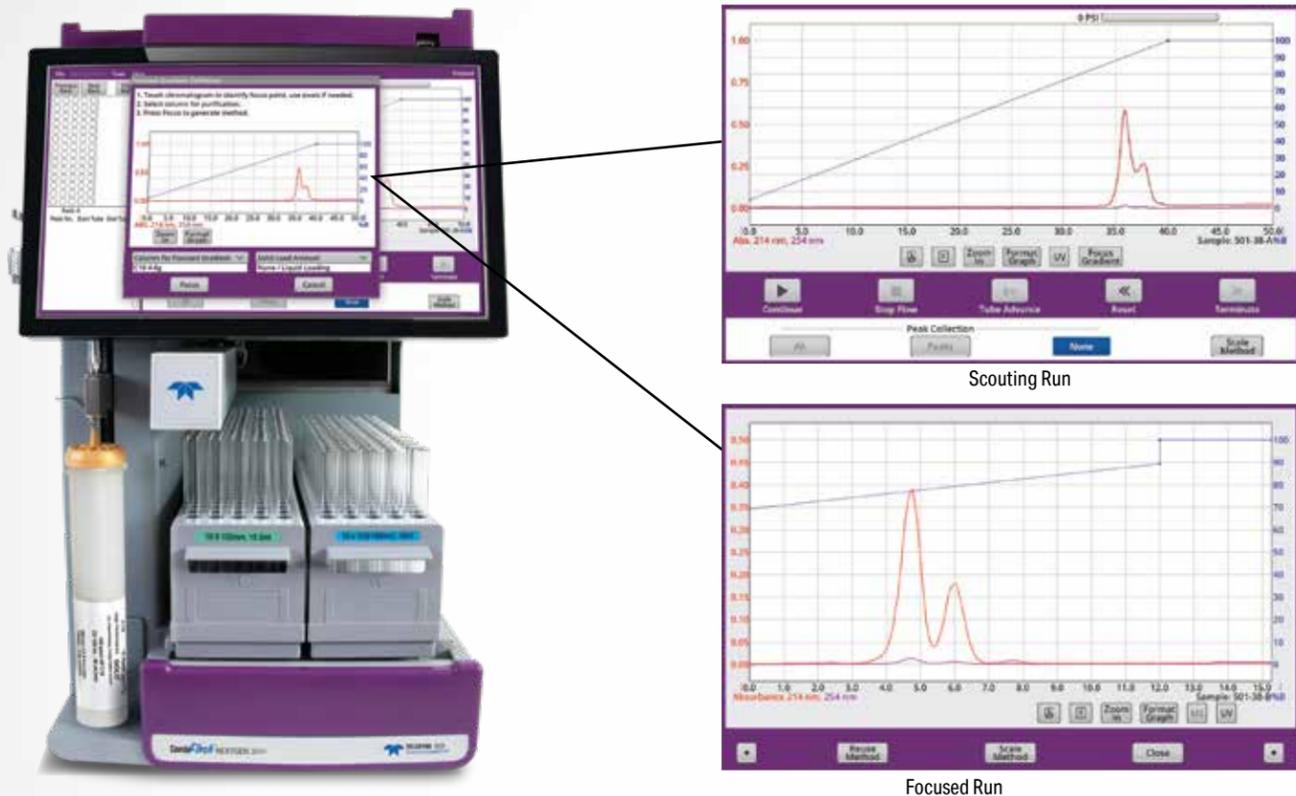




Improved Resolution is One Touch Away!

Save time and solvent while increasing column loading.

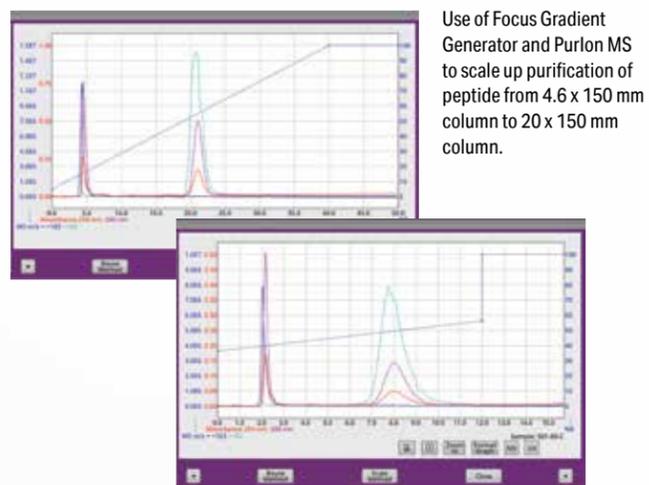
The Focus Gradient Generator for flash delivers optimized, predictive preparative method development using the results of a scouting run more quickly and efficiently than TLC. The Focus Gradient Generator in the CombiFlash® NextGen system makes calculations fast and easy, eliminating the need to run multiple TLCs with different mobile phase concentrations. When combined with a PurIon™ mass spectrometer, you actually know which peak represents your compound of interest to optimize the method around — no guessing which spot is the target material.



Easy to Use Method Optimization Gets It Right the First Time!

Focus Gradient Generator paired with the PurIon Mass Spectrometer

No more guessing which spot or 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 Focus Gradient Generator and PurIon MS to scale up purification of peptide from 4.6 x 150 mm column to 20 x 150 mm column.

PurIon™ Mass-Directed Flash Chromatography

Verify before you purify!

The PurIon Mass Spectrometer is fully integrated with Teledyne ISCO's PeakTrak® software. The ability to manually inject samples prior to purification and collection based on mass(es), makes this mass-directed NextGen 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 of your unique compounds.
- Use "Terminate on Target" to shorten your separation after your desired mass is detected to save solvent and time.
- Collect on up to six masses or five masses and a mass range.



RediSep® Columns



RediSep® Silver Columns

Economic alternative for your normal-phase separations

- 40–60 μm Irregular
- Market Leader
- Industry Standard
- Reliable/Reproducible



RediSep Gold® Columns

Precision-packed spherical media for high resolution and reproducibility

- 20–40 μm Spherical
- Load More
- High Purity
- Greener/Faster Separations

Accessories



Large Column Adapter

Adds support for 750 g, 1.5 kg, and 3.0 kg columns (sizes based on silica capacity). No more juggling columns and loading multiple samples, so you get more done in less time.



Vapor Enclosure

For bench use outside of a fume hood. Gain greater control over your lab layout and convenience while maintaining safe operation.

Going Green and Saving Time in the Laboratory

The **CombiFlash® NextGen** line has been designed to be greener. The NextGen's gradient profiles use less solvent. These solvent savings (up to 50 percent, depending on column size) are seen using the NextGen's optimized default or RediSep Gold® Resolution methods. Switching to reusable reverse-phase-media packed columns for purifications provides another step forward in reducing your lab's carbon footprint.

This line of systems has been designed to be faster. By increasing flow rates while shortening gradient times and eliminating unnecessary re-equilibration steps, NextGens offer faster methods, which increases lab efficiency and throughput. Depending on column size, the time savings can be anywhere from 20–50 percent using the optimized default or RediSep Gold resolution methods.

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.

"...another step forward in reducing your lab's carbon footprint."



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Teledyne ISCO is continually improving its products and reserves the right to change product specifications, replacement parts, schematics, and instructions without notice.

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