



Enjoy a unique experience  
**puriFlash<sup>®</sup> 360<sup>°</sup>**  
**LC Purification Platform**

 **interchim<sup>®</sup>**

 **Advion**

# Interchim<sup>®</sup>, already more than 50 years at your service

Interchim SAS is a company with subsidiaries on 5 continents and its own distribution network. Founded in 1970, the company has many years of experience and knowledge in the field of synthesis, the life sciences, as well as chromatography, separation, purification, identification and characterisation.

As far back as 1990, as pioneers in the market, we introduced one of the first spherical silicon dioxides with small granulometry, which revolutionised the analytical and preparative liquid chromatography.

Following our great success in the early 2000s, we developed the concept of "Ultra Performance Flash Purification", becoming the first company to produce cartridges for Flash Chromatography on the basis of spherical silicon dioxide and small granulometry to obtain even more powerful separations, even greater loading capacity, even better recoveries and even more unparalleled reproducibility.

In 2008, we took an even more important step forward with the development and manufacture of instruments with which the flash cartridges and preparative columns could be used even more efficiently. These innovative instruments can reach a flow rate of up to 300 mL/min and pressure of up to 400 bar, offering incredible accuracy and reproducibility. We incorporate these instruments into integrated solutions for multi-detection systems (Mass, ELSD, UV-dad, IR ...) as well as in systems for increasing productivity in laboratories (CarouXel) - control of 10 columns, AutoSampler, 5X, ...). Their success is worldwide and they are available from our subsidiaries or our dealers.

In 2018, we have been surpassing ourselves by using the (patent protected) artificial intelligence "Genius" in our instruments. Since reading the TLC plate, it has never been easier and more intuitive to achieve the best possible separations in flash and prep and to transfer methods of the analytical LC to the preparative and increase the productivity without reservation.

With our selection of puriFlash<sup>®</sup> instruments, our Artificial Intelligence "Genius"<sup>™</sup>, our Flash Chromatography Interchim<sup>®</sup> puriFlash<sup>®</sup> cartridges as well as our analytical and preparative HPLC columns Interchim<sup>®</sup> Uptisphere<sup>®</sup> puriFlash<sup>®</sup>, the Flash chromatography and preparative purification, are accessible to all who want to achieve expert results.

For more information, visit [www.interchim.com](http://www.interchim.com) and [www.flash-chromatography.com](http://www.flash-chromatography.com).

## Contact us

You need advice to choose the best product suitable to your needs?

Our scientific experts are here to share both their knowledge and expertise and advise you.

Please feel free [contact us](#).

## Live Demo



Our team are also pleased to present and demonstrate our products to you in live.

Let's arrange a personal appointment!

## How to place your orders

Always attentive to your different needs, Interchim<sup>®</sup> offer four solutions to quickly and easily order your products.

### By Phone:

+33 4 70 03 88 55

Chemicals Hotline: +33 4 70 03 73 01

### By Email:

[interchim@interchim.com](mailto:interchim@interchim.com)  
[flashpurification@interchim.fr](mailto:flashpurification@interchim.fr)

### By Mail:

INTERCHIM  
211 bis Avenue J.F Kennedy - BP 1140  
03103 Montluçon cedex - France

### Online:

[www.interchim.com](http://www.interchim.com)  
[www.flash-chromatography.com](http://www.flash-chromatography.com)

“Interchim and Advion led the market by being the first to develop integrated Flash-MS and seamlessly coupling Advion's high performance [expression<sup>®</sup> Compact Mass Spectrometer](#) with Interchim's puriFlash<sup>®</sup> purification systems.”



# Get a LC purification platform as unique as your work! Customize it and make yours the puriFlash® 360° now



## Key features:

- . Simplicity: Powerful features but easy to use
- . Concentrated of technologies in a minimum of space that improve the Chemists sphere of use
- . Easy Accessibility of multi-profile users with a minimum of training thanks to InterSoft®X software.

## Low to high pressure LC purification of small & large molecules with 3X detection UV, ELSD & MS

The puriFlash® 360° LC Purification Platform combines Simplicity & Best-in-Class design to make Chemists purifications by liquid chromatography easier, intuitive & productive. No matter what is your own expertise level, the platform piloted by InterSoft®X, with Genius our embedded artificial intelligence, allows routine to sophisticated RP purification of small organics, natural products, peptides & proteins. You can stay focused on your job with the necessary peace of mind while having the certainty to get the best purification as possible. There is no risk of product loss thanks to the full monitoring of the system through sensors, the management of overpressures and pauses. The platform runs 24/7 with Confidence for a minimum of After Sales Service required.

Small, but Mighty the puriFlash® XS 520 Plus with its specification able to run 300 ml/min @ up to 20 bar is the ideal entry system for routine NP purification of small organics. The puriFlash® 5.250, with up to 250 bar, as for it, offers a second dimension to enlarge the separation potential to isolate safely high value compounds.

Discover it in video

## Ultra Performance Flash Purification



up to  
**800G**

**300**  
mL/min

**20**  
bar

# puriFlash<sup>®</sup> XS 520Plus

## Small but mighty

Concentrated technology for unmatched performance.

Designed for routine flash purifications, the technology and unique quality of the pump will take you much further. Increase the pressure, the puriFlash<sup>®</sup> XS 520Plus will nevertheless offer precision, linearity and repeatability and allows you to perform complex and sophisticated purifications.

No matter whether you're an expert or not, Genius will support you to achieve the best purification possible.

|                            |       |
|----------------------------|-------|
| Small Organic molecules    | ★★★★★ |
| Impurities Identification  | ★★★★☆ |
| Natural Products           | ★★★★☆ |
| Peptides, Oligonucleotides | ★★★★☆ |
| Proteins, Bio-drugs        | ★★★★☆ |
| Metabolites Isolation      | ★★★★☆ |
| Traces Enrichment          | ★★★★★ |



Get more information or configure yours now

P/N: PFXS50

# Ultra High Performance Purification



up to  
80mm i.d.  
Col.

250  
mL/min

250  
bar

## puriFlash® 5.250

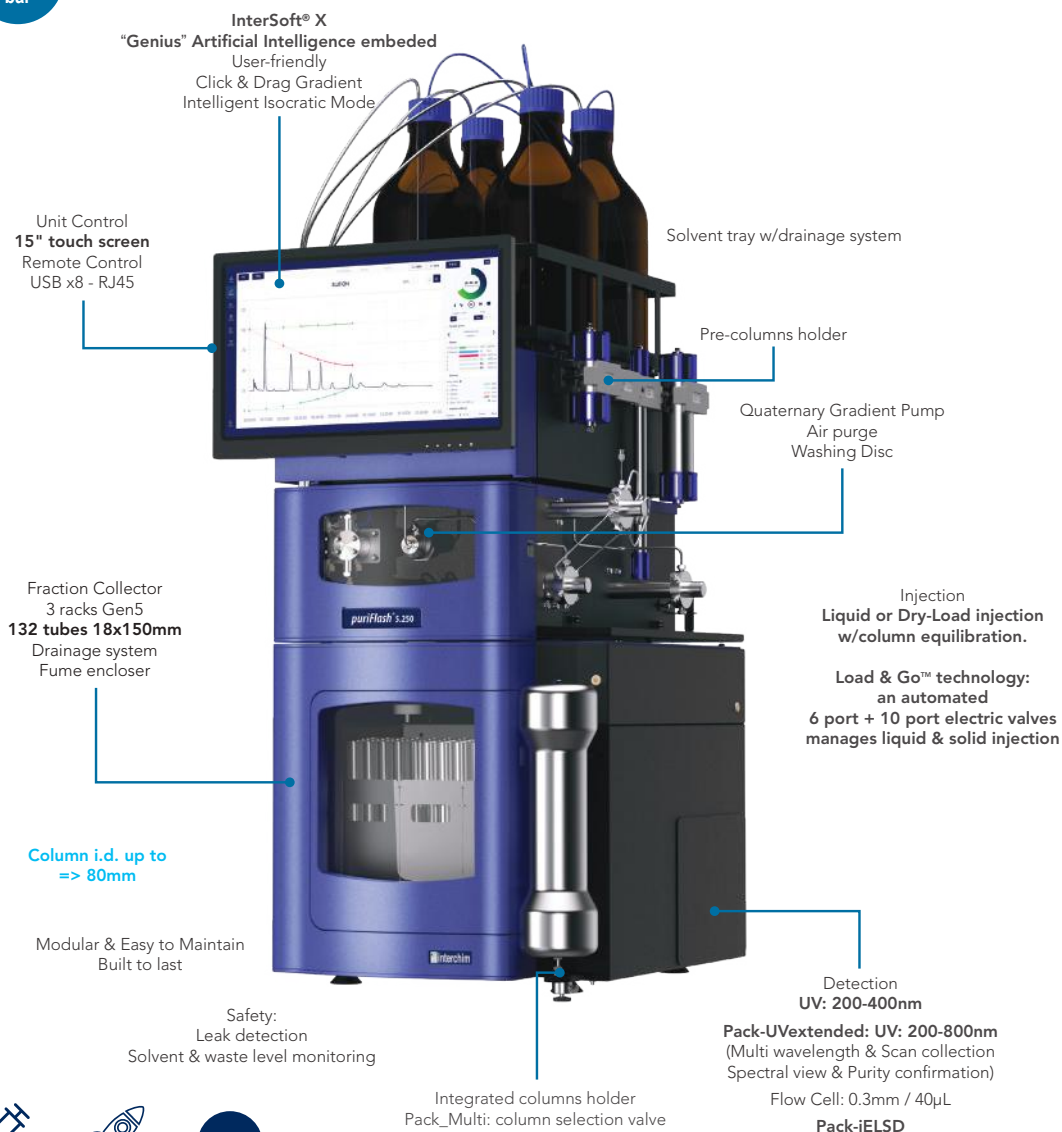
### Small but limitless

Maximum Versatility and Flexibility.

The system brings a unique performance in all circumstances. It adapts to all needs from routine purification to complex mixtures, impurity separation, or trace enrichment.

It is continuously ready to start multiple purifications in normal or reverse phase, flash or prep.

- Small Organic molecules ★★★★★
- Impurities Identification ★★★★★
- Natural Products ★★★★★
- Peptides, Oligonucleotides ★★★★★☆
- Proteins, Bio-drugs ★★★★★☆
- Metabolites Isolation ★★★★★
- Traces Enrichment ★★★★★

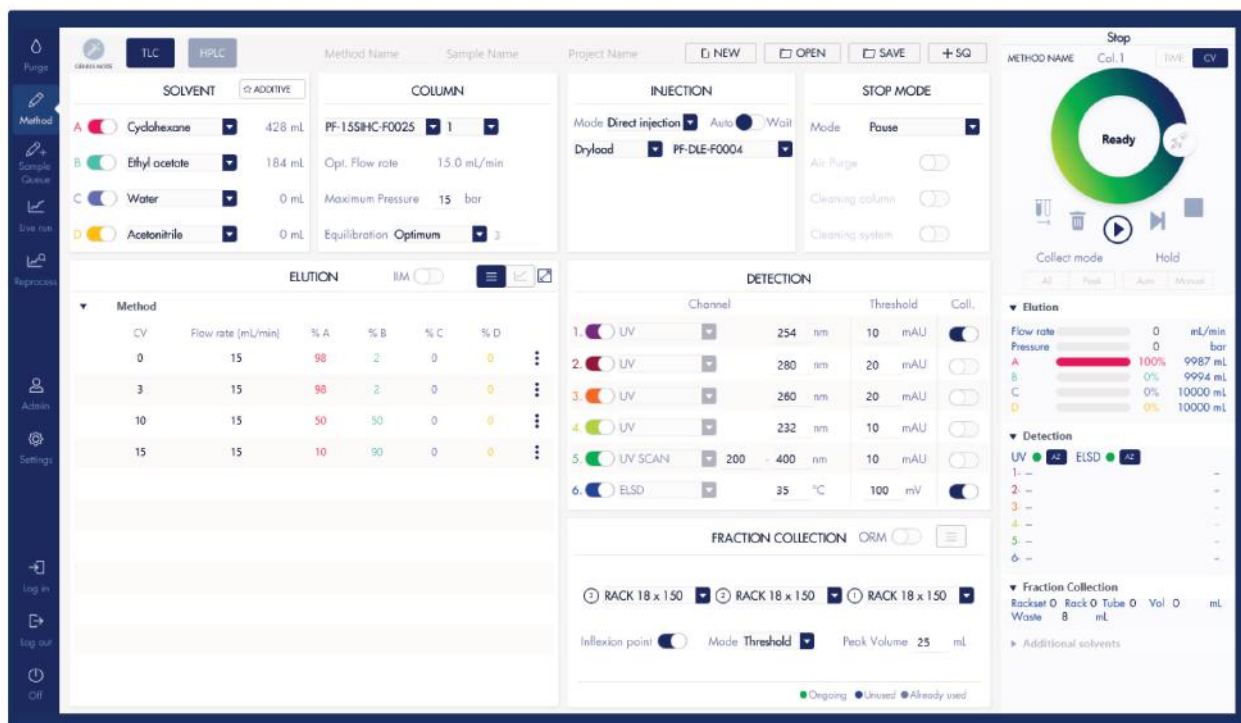


Get more information or configure yours now

P/N: PFG5E0



## Intersoft® X



- . Accessibility of multi-profile users with minimum training
- . Best-in-class design that makes the chemist's life easier.
- . Challenge Genius, your Personal Artificial Intelligence, to develop the purification method, or do it yourself
- . "Push the boundaries" with the intuitive Flash&Go, Load&go and Boost&Go technologies

## Genius

Whatever your sample, from any of NP-TLC, NP-LC, NP-LC screening, RP-LC, RP-LC screening experiments, Genius, your Personal Artificial Intelligence embedded in InterSoft® X, generates the best possible purification method in current knowledge. Safely run the method and get your products pure!

Discover more about our technologies on our dedicated website

## Keeps Intelligence Simple, Smart



Flash&Go:

Flash your TLC plate using our mobile app., send the data automatically to InterSoft® X "Genius". You are set to run the purification.



Load&Go

Load your sample liquid or solid through multi-way electrical valve. InterSoft® X "Genius" will manage column equilibration for you, sample manage column equilibration for you, sample loading and system cleaning.



Boost&Go

Intelligent management of the flow rate increase to safely speed up the purification.



Flash & Prep columns, dry-loads, racks, loops identification & data implementation into Genius.





## « TLC to Flash & Prep Chromatography »

Revolutionize your TLC using our App

### Augmented reality for a greatly improved daily routine.

In our capacity as experts for purification, we aim to offer maximum working comfort as well as the highest efficiency in your laboratory.

Thanks to the app that we have developed, we can share your future vision by constantly providing new technology solutions. It takes a digital form here, virtual but already real on the screen of your mobile or tablet.

### A unique technology that slides through your fingers with one single click.

Our idea is to support you and to save you time day by day. Therefore our App allows for:

- Our goal is to support you and to save you time day by day. Therefore, our app allows for:
- Automatic detection of your compounds and calculation of your  $R_f$  and  $\Delta CV (= \Delta K)$  values
- Direct (and secure) information transfer to puriFlash® and the "Genius" software, which suggests the best method for a successful purification
- Data archiving, if desired.



### Flash & Go: « New TLC »

The application is extremely intuitively and user-friendly:



Take a picture of the TLC with your smartphone or download it from your library.



Your compounds will be detected automatically. Select the ones of interest with a tap.



The application calculates  $R_f$  and  $\Delta CV (= \Delta K)$ . It indicates if the  $R_f$  are placed in the comfort zone to carry out your purification.



From the smallest  $\Delta CV$  obtained on your TLC plate, the application gives you the level of difficulty of the separation.



Indicate the solvents, their proportions and your comments in the dedicated areas.



Save your TLC plate information. Send them to the email address of your choice or directly to your puriFlash® by bluetooth or wifi: the "Genius" software will recommend the best method for a successful purification.





## « MYTLC » for the retention of data

All information of your previous TLC plates are archived in a single location. In case you would like to reuse the parameters of the plate for a new separation, simply send them to any puriFlash® with a single click.



## « SETTINGS » to personalize your experience

Connect your smartphone and Tablet with your puriFlash® via bluetooth or Wifi.  
 Configure your application according to your preferences.  
 Quickly and directly access our internet sites.

## You need a tablet or smartphone to benefit from our application in your laboratory?

Nothing more simple: Select your choice from the accessories offered for all our purification systems in the configurator.

Download the app now by clicking here



“TLC to Flash & Prep Chromatography” is a free application. Our wish was to enable everybody to use it freely. You can even use it if you do not possess a puriFlash® purification system. Nevertheless, your experience as an user may be reduced since our systems are equipped with a unique technology that allows for data exchange only within these systems. Therefore you cannot equally benefit from the “Genius” proposals with regard to the best methods for your purification. However, it is never too late to opt for excellence and discover our purification systems.

# Peripheral detection & production devices

## *puriVap-6™*

Compact Evaporator Simple & Smart - 6 positions

- 6 channels to run up to 6 samples (independent or simultaneous)
- Sample volumes from 2mL up to 60mL
- PID temperature control with digital display up to 100°C
- Temperature increases quickly in the first minutes (up to 4°C/min)
- Dedicated nitrogen flow regulator control for each sample
- Nitrogen blow in combination of heating concentration mode
- Possibility to choose the best position of nitrogen needle to ensure the most efficient evaporation



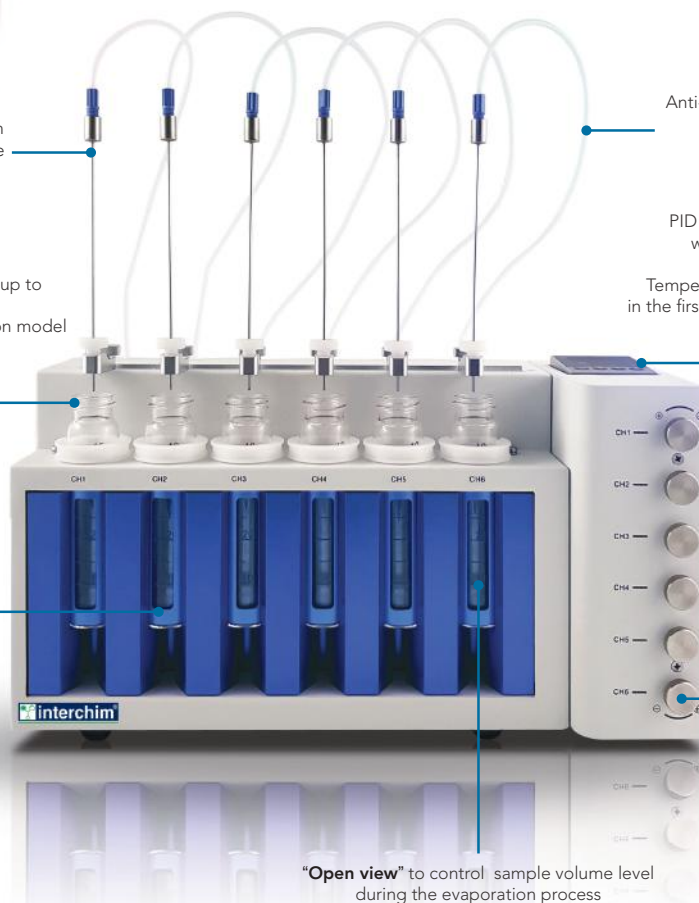
**Nitrogen blow** in combination of heating concentration mode  
Possibility to choose the best position of nitrogen needle to ensure the most efficient evaporation

Possibility to run up to **6 samples**  
Parallel concentration model

Dry aluminium block heating mode to avoid potential water vapor interference  
Small temperature difference between channels (RSD: 0.11%)

Anti-corrosive material (PTFE)

PID temperature control with digital display  
**Up to 100°C**  
Temperature increases quickly in the first minutes (up to 4°C/min)



**6 channels**  
(independent or simultaneous)  
Dedicated nitrogen flow regulator control for each sample

"Open view" to control sample volume level during the evaporation process

Get more information or configure yours now

# puriFlash® MS

Mass triggered fraction collection for NP & RP Flash Purification & prep-LC

## Unique Interchim® design Dynamic split & dilution:

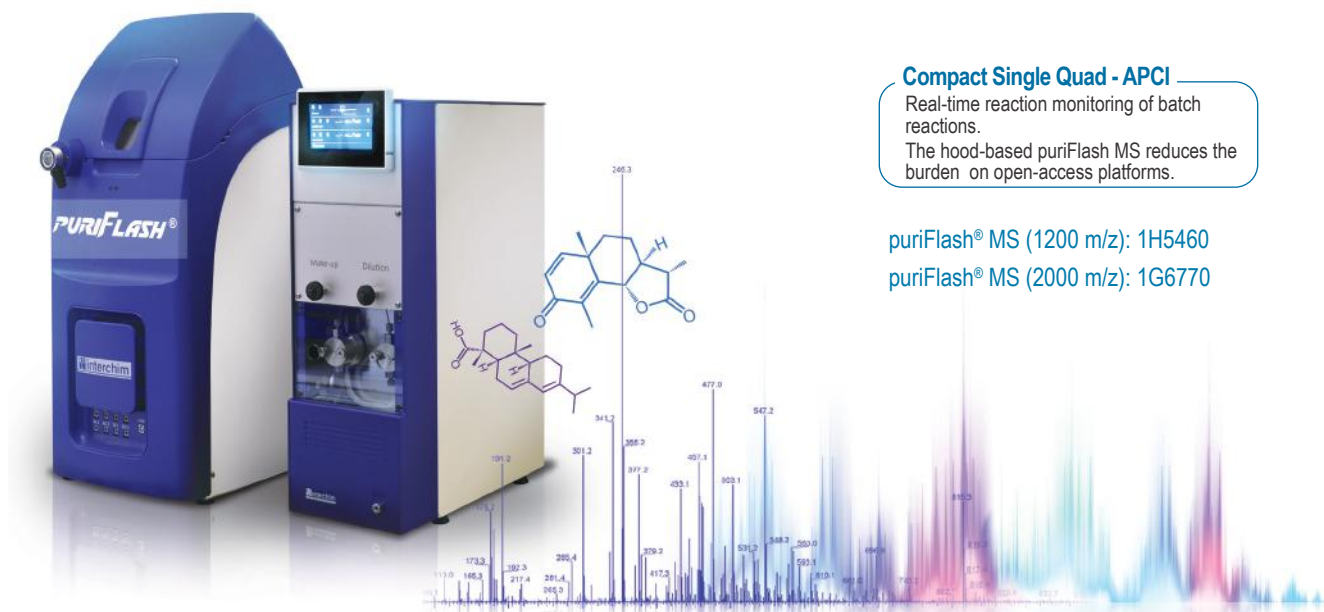
- High-speed work with all columns sizes without generating backpressure
- Integrated post-split dilution to adjust the concentrations used in the MS source (no concentration limit - no signal saturation)
- Normal & Reverse Phase
- Intelligent Pilot of the puriFlash® system
- Normalized Scale signals MS, UV, ELSD (6 acquisition signals)

### Compact Single Quad - APCI

Real-time reaction monitoring of batch reactions.  
The hood-based puriFlash MS reduces the burden on open-access platforms.

puriFlash® MS (1200 m/z): 1H5460

puriFlash® MS (2000 m/z): 1G6770



|   | <b>puriFlash® MS</b><br>for small molecule, synthetic organic chemists.<br>Upgraded specs for pos/neg switching, faster scanning & higher flow rate | <b>puriFlash® MS-HMW</b><br>for large molecules - peptide synthesis, polymer chemistry & natural products |
|---|---|---|
| Sources :   | APCI - (ESI option)   | APCI or ESI   |
| Patented API:   | orthogonal ion sampling from heated capillary allows for small single turbo pump.   | orthogonal ion sampling from heated capillary allows for small single turbo pump.                         |
| Positive/Negative Ionization  | Simultaneous Analysis   | Simultaneous Analysis   |
| Flow rate range ESI   | 10µL/min - 1mL/min  | 10µL/min - 1mL/min  |
| Flow rate range APCI  | 10µL/min - 2mL/min  | 10µL/min - 2mL/min  |
| mass range (m/z)  | 10 to 1200  | 10 to 2000  |
| Scan rate (m/z-units per second)  | 10000   | 10000   |
| Resolution (m/z-unites FWHM)  | 0.5 - 0.7   | 0.5 - 0.7   |
| Sensitivity (SIM - S/N de 10 pg Reserpine, FIA 5µl injection à 100µl/min) | 100:1   | 100:1   |
| Accuracy (m/z)  | 0.1   | 0.1   |
| Stability (m/z-units per 24 hour period: 18 - 24 °C)                      | 0.1   | 0.1   |

Get more information or configure yours now



## Advion

## expression CMS

The industry's widest range of sample introduction techniques



### plate express

Thin-layer chromatography (TLC) is a routine, reliable method used in most chemistry laboratories, but traditional visualization techniques give no structural information on the TLC

spots. Mass Spectrometry is a powerful technique for identifying spots, but traditional, manual steps involving scraping spots from the plate, extraction in suitable solvents and finally reconstitution in solvent appropriate for injection into the mass spectrometer (MS), make obtaining spectra difficult and time consuming. The Plate Express is a device that provides a simple, automated means of obtaining mass spectra directly from TLC plates.

With the Advion Plate Express you can:

- Identify spots in <1 minute
- Avoid the risk of overloading the mass spectrometer
- TLC spots contain the ideal amount of sample for mass spectrometry
- Simplify the process of obtaining spectra
- Ideal for multi-user labs
- Software controlled - spectra obtained within a few mouse clicks
- No scraping TLC spots

### Discover the plate express in video

#### ASAP Atmospheric Solids Analysis Probe

The direct atmospheric solids analysis probe, otherwise known as ASAP, permits chemists fast and reliable sample analysis of liquid and solid samples such as reaction mixtures, food samples, natural products and tablets.

The Advion ASAP probe offers:

- No sample preparation
- No chromatography
- Fast and affordable sample analysis
- Solvent-free APCI
- Green practices without the need to buy and dispose of solvent
- Ionizes a wider range of compounds

#### iASAP Inert ASAP Probe

The inert ASAP (iASAP) is a modification of the ASAP technique, allowing easy sampling of air-sensitive compounds, such as metal catalysts and organometallics, from reactions that are carried out in a glove box or Schlenk line to prevent oxidation.





### OPSI Open Port Sampling Interface

The Touch Express Open Port Sampling Interface (OPSI), is designed for simple sampling of solids, liquids and sample preparation tips and fibers. Any soluble sample touching the port is analyzed by the mass spectrometer in mere seconds.

The OPSI source is a unique, prep-free sample technique that offers:

- Compound ID and impurity detection from almost any surface
- Direct assays from sample preparation tips and SPME fibers
- Easy screening applications for drug research, food safety, environmental, forensics
- Large molecule applications including proteins, peptides, oligonucleotides and polymers

### Discover the OPSI in video



### vAPCI Volatile APCI Source

vAPCI combined with the **expression** CMS is a fast and easy method to quickly and confidently analyze compounds in air, breath, headspace and other gas samples without the need for additional sample preparation. vAPCI provides a sample inlet linked by a heated transfer line to the APCI ion source of the CMS, where the sample is ionized by chemical reaction by a corona discharge.

vAPCI enables chemists to:

- Analyze samples directly in the gas phase
- Solvent-free APCI allows a greater range of compounds to be ionized compared to traditional APCI ion sources.



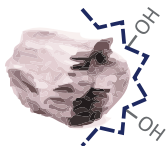
### Direct Injection & FIA Flow Injection Analysis

Simple, direct injection valve offers users the ability to quickly and easily analyze reaction mixtures by direct injection/flow injection analysis. Both the APCI and ESI sources can receive samples for flow injection analysis.

# Columns & Dry-Load

## The Essential Stationary Phases for Purification

### Normal Phase



#### puriFlash® IR-SI

60Å - 450m<sup>2</sup>/g  
20 & 40/63µm  
pH stability: 1.5 to 6.5  
Economical



#### puriFlash® SI-HP

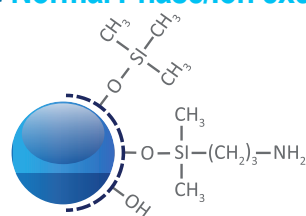
60Å - 500m<sup>2</sup>/g  
5, 10, 15, 30 & 50µm  
pH stability: 1.5 to 6.5  
High efficiency



#### puriFlash® SI-HC

60Å - 680m<sup>2</sup>/g  
15, 25 & 50µm  
pH stability: 1.5 to 6.5  
Greater loading capacity & productivity  
Low back pressure

### Normal Phase/Ion exchange



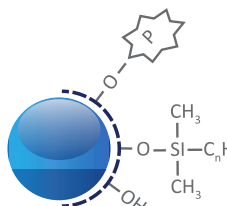
#### puriFlash® NH2

100Å - 300m<sup>2</sup>/g  
5, 10, 15, 30 & 50 µm  
Amino  
%C: 4

End-capping: One-step  
pH stability: 2 to 6.5

Can be both a weak anion exchanger for strong acids or a polar phase that can interact with the OH, NH, SH... functions.

### Reverse

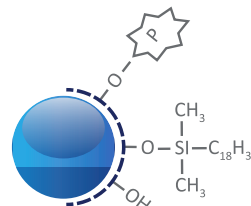


#### puriFlash® RP-AQ

60Å - 500m<sup>2</sup>/g  
15 & 30µm  
RP-alkyl  
%C: 6

End-capping: Mixte  
pH stability: 2.0 to 7.5

The bonding chemistry makes it possible to start the gradient at a 100% water. Suitable for the separation and purification of strongly and moderately polar molecules. Compared to a C18, the peaks are eluted earlier from the beginning of the gradient.

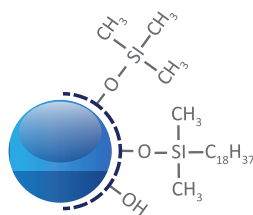


#### puriFlash® C18-AQ

100Å - 300m<sup>2</sup>/g  
5, 10, 15 & 30µm  
C18 Mono-functional  
%C: 14

End-capping: Mixte  
pH stability: 2.0 to 7.5

The bonding chemistry makes it possible to start the gradient at a 100% water. Suitable for the separation and purification of moderately polar and non-polar molecules.

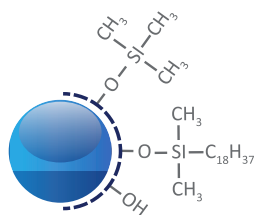


#### puriFlash® C18-HP

100Å - 300m<sup>2</sup>/g  
5, 10, 15, 30 & 50µm  
C18 Mono-functional  
%C: 16,5

End-capping: One-step  
pH stability: 1.5 to 7.5

Suitable for multiple pharmaceutical applications. This is an excellent choice for routine reverse phase purifications.

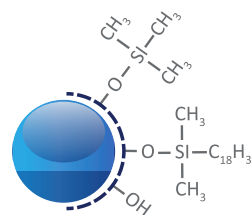


#### Uptisphere® Strategy™ C18-HQ

100Å - 425m<sup>2</sup>/g  
1.7, 2.2, 3, 5, 10, 15µm  
C18 Mono-functional  
%C: 19

End-capping: Multi-step  
pH stability: 1.0 to 10.0

Suitable for many pharmaceutical applications and routine methods. Its specific surface area of 425m<sup>2</sup>/g gives it a high loading capacity.



#### puriFlash® C18-XS

100Å - 300m<sup>2</sup>/g  
5, 10, 15 & 30µm  
C18 Mono-functional  
%C: 17

End-capping: Multi-step  
pH stability: 1 to 10.0

The proprietary end-capping multi-step technology ensures stability under high pH conditions, up to 10. It is an excellent phase for the complete separation of basic molecules.

Find all the references available in our main catalog "ULTRA PERFORMANCE"

Spherical silica and irregular silica: what differences? Read our article

# puriFlash® Dry-Load

## Solid Sample

Dry injection



Allow to large sample amounts



Dry-load columns for solid deposits allow the injection of a raw sample insoluble (or soluble) in the mobile phase. Compared to liquid injection, the solid deposit avoids the diffusion of raw sample in the purification column. It improves resolution, efficiency and purity of the products collected. The solid deposit can be made with silica, C18 or Celite. Unlike open cartridges, it does not require the use of a piston or specific adapters. The max. pressure is 2x the standard solid deposit cartridges. They are compatible with the use of Interchim® 15µm puriFlash® columns.

- Compatible with all purification systems

## puriFlash® Dry-Load

| Nature              | Type              | Format                                | P/N                | Qty |
|---------------------|-------------------|---------------------------------------|--------------------|-----|
| puriFlash® Dry-Load | Empty             | F0004                                 | PF-DLE-F0004       | 20u |
|                     |                   | F0012                                 | PF-DLE-F0012       | 20u |
|                     |                   | F0025                                 | PF-DLE-F0025       | 20u |
|                     |                   | F0040                                 | PF-DLE-F0040       | 20u |
|                     |                   | F0060                                 | PF-DLE-F0060       | 10u |
|                     |                   | F0080                                 | PF-DLE-F0080       | 5u  |
|                     |                   | F0100                                 | PF-DLE-F0100       | 5u  |
|                     |                   | F0120                                 | PF-DLE-F0120       | 5u  |
|                     |                   | F0220                                 | PF-DLE-F0220       | 5u  |
|                     |                   | F0330                                 | PF-DLE-F0330       | 5u  |
|                     |                   | puriFlash® Dry-Load - Tightening tool |                    |     |
| puriFlash® Dry-Load | SILICA<br>HC 80%  | F0004                                 | PF-DLSIHC08-F0004  | 20u |
|                     |                   | F0012                                 | PF-DLSIHC08-F0012  | 20u |
|                     |                   | F0025                                 | PF-DLSIHC08-F0025  | 20u |
|                     |                   | F0040                                 | PF-DLSIHC08-F0040  | 20u |
| puriFlash® Dry-Load | SILICA<br>HC 50%  | F0004                                 | PF-DLSIHC05-F0004  | 20u |
|                     |                   | F0012                                 | PF-DLSIHC05-F0012  | 20u |
|                     |                   | F0025                                 | PF-DLSIHC05-F0025  | 20u |
|                     |                   | F0040                                 | PF-DLSIHC05-F0040  | 20u |
| puriFlash® Dry-Load | CELITE<br>80%     | F0004                                 | PF-DLCET08-F0004   | 20u |
|                     |                   | F0012                                 | PF-DLCET08-F0012   | 20u |
|                     |                   | F0025                                 | PF-DLCET08-F0025   | 20u |
|                     |                   | F0040                                 | PF-DLCET08-F0040   | 20u |
| puriFlash® Dry-Load | C18<br>STD<br>80% | F0004                                 | PF-DLIRC1808-F0004 | 5u  |
|                     |                   | F0012                                 | PF-DLIRC1808-F0012 | 5u  |
|                     |                   | F0025                                 | PF-DLIRC1808-F0025 | 5u  |
|                     |                   | F0040                                 | PF-DLIRC1808-F0040 | 5u  |
| puriFlash® Dry-Load | C18<br>STD<br>50% | F0004                                 | PF-DLIRC1805-F0004 | 5u  |
|                     |                   | F0012                                 | PF-DLIRC1805-F0012 | 5u  |
|                     |                   | F0025                                 | PF-DLIRC1805-F0025 | 5u  |
|                     |                   | F0040                                 | PF-DLIRC1805-F0040 | 5u  |

## High-Pressure Dry-Load

| Nature                                | Type  | Size         | P/N    | Qty |
|---------------------------------------|-------|--------------|--------|-----|
| puriFlash® HP Dry-Load                | Empty | 50 x 21.2mm  | OA0320 | 1u  |
|                                       |       | 75 x 21.2mm  | OA0330 | 1u  |
|                                       |       | 100 x 21.2mm | 7A1870 | 1u  |
|                                       |       | 50 x 30mm    | OA0340 | 1u  |
|                                       |       | 75 x 30mm    | OA0350 | 1u  |
|                                       |       | 100 x 30mm   | 7A1880 | 1u  |
| puriFlash® Dry-Load - Tightening tool |       |              |        |     |
| Spanner wrench for 21.2mm ID          |       |              | 7A1590 | 1u  |
| Spanner wrench for 30mm ID            |       |              | 7A1610 | 1u  |
| Replacement frit                      |       |              |        |     |
| Replacement frit for 21.2mm ID        |       |              | 0A2100 | 1u  |
| Replacement frit for 30mm ID          |       |              | 0A2110 | 1u  |



Find all the Dry-Load available online here

How to make a solid deposit? Watch our tutorial

# Interchim puriFlash® Columns

Interchim® offers more than 35 selectivities for the purification of small & bio-molecules.

## Key features:

- . Our Ultra Pure Spherical Silica combined with our chemistry establishes optimized sample recovery and makes easier transfer from analytical to purification.
- . Interchim® Genius allows an easy transfer from any TLC or analytical data from any columns to “ready-to-go” and safe
- . Gradient Purification Method
- . RFID Traceability

## Selectivity / Purity → Capacity → Productivity



| Code                        | F0001  | F0004  | F0012   | F0025   | F0040   | F0080   | F0120    | F0220    | F0330    | F0800     | F1600     |
|-----------------------------|--------|--------|---------|---------|---------|---------|----------|----------|----------|-----------|-----------|
| Ø int. (mm)                 | 9      | 12     | 21      | 21      | 27      | 31      | 36       | 60       | 60       | 78        | 104       |
| L (mm)                      | 26     | 68     | 84      | 133     | 135     | 205     | 224      | 153      | 226      | 341       | 385       |
| CV <sub>0</sub> (mL)        | 1.2    | 5      | 19      | 32      | 48      | 102     | 153      | 269      | 405      | 1 078     | 2 170     |
| Flowrate - Typical (mL/min) | 2.5    | 5      | 15      | 15      | 26      | 34      | 46       | 127      | 127      | 216       | 383       |
| Flowrate - Range (mL/min)   | 1 - 10 | 5 - 20 | 15 - 50 | 15 - 50 | 20 - 70 | 30 -100 | 40 - 150 | 80 - 300 | 80 - 300 | 150 - 300 | 200 - 500 |

Find all the references and their specifications available in our main catalog « ULTRA PERFORMANCE FLASH PURIFICATION »



# Interchim® LC Preparative Columns

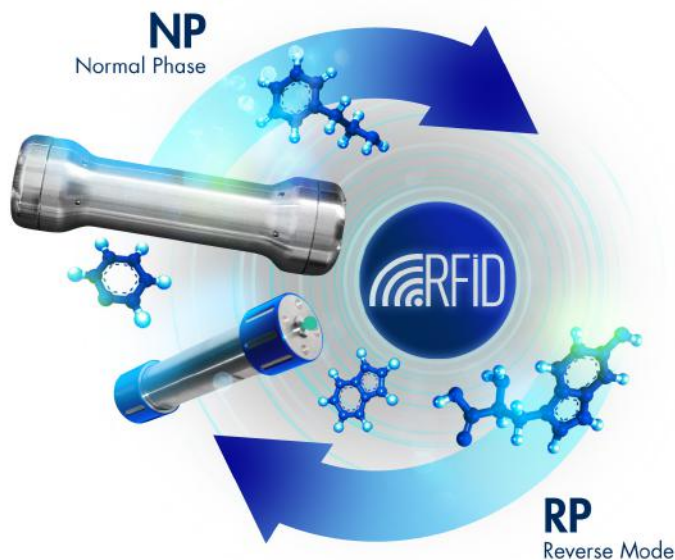
Interchim® Preparative columns range from 10.0 to 50.8mm i.d and are for the purification of samples ranging from 0.5mg to 1 gram.

## Column tubing & column packing

The tube polishing value (Ra) has a fundamental importance in preparative chromatography. A primary reason for broad peaks and low efficiency is the utilization of poor quality tubing. Molecules in the center of the mobile phase stream can move more rapidly than molecules closer to the side due to friction against the tubing surface. The lower the Ra value, the smoother the surface is, and the less 'drag' the tubing will place upon a given separation. Modulo-cart preparative columns pay particular attention to this potential negative phenomenon. All columns have extremely smooth internal surfaces (typically 8µ inch of Ra) to considerably reduce issues of drag and maintain column efficiency. Efficiency is also managed through Interchim®'s state-of-the art proprietary packing processes - Modulo-cart Prep can withstand packing pressures up to 550 bar contributing strongly to a good bed stability and column life.

## Sample dispersion

The loading of sample onto a preparative column requires stringent management to establish quality separations. Column overloading results in a poor retention of pure fraction and therefore particular attention needs to be placed upon selecting the appropriate column dimension and the properties of the stationary phase. In addition, careful sample introduction control to the column is necessary to establish a homogeneous sample dispersion through the sorbent bead head. Sample typically enters a preparative column through a 1/16" fitting; poor sample loading will lead to overloading certain areas of the stationary phase whilst other areas will be underloaded. E.g. For a 50mm i.d column with a 500µm i.d capillary fitting - sample introduced to the column (without any sample distributor) will only interact with 0.01% of the surface column head. In addition to a dramatic loss in capacity there will also be a high potential for the column head to prematurely clog, rapidly reducing column life. To prevent this problem, Interchim®'s Modulo-cart Preparative columns are outfitted with a sample distributor. The sample distributor design maximizes the efficiency of sample volume dispersion and the sample mass introduced to the surface of the column head extending column life.



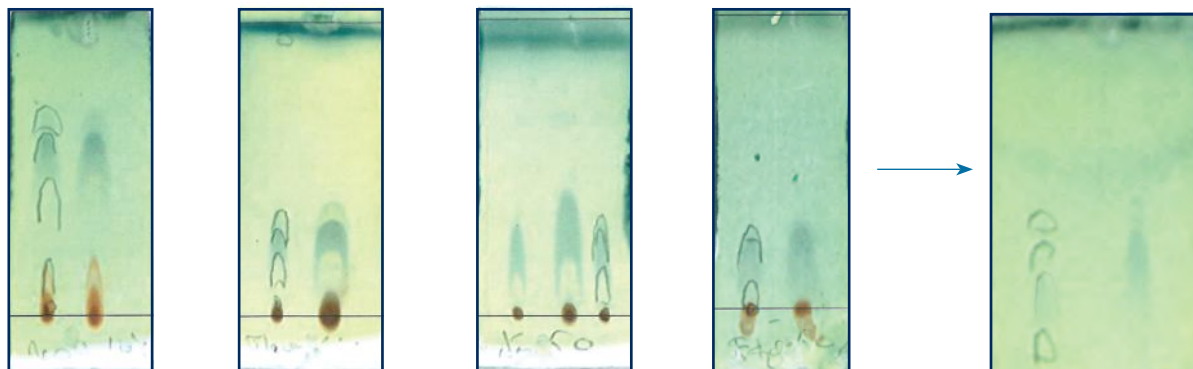
Find all the references and their specifications  
available in our main catalog  
« ULTRA PERFORMANCE FLASH PURIFICATION »

Or directly on our main website [interchim.com](http://interchim.com)

# Application notes (example)

## Purification of mixture using PF-15SIHP-F0025

### 1. TLC method development

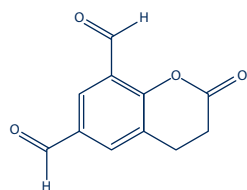
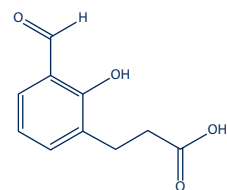


Mobile phase:  
90% Dichloromethane /  
Methanol 10%

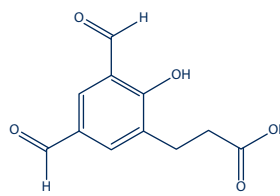
Mobile phase:  
95% Dichloromethane /  
Methanol 5%

Mobile phase:  
50% Petroleum Ether /  
Ethyl Acetate 50%

Mobile phase:  
50% Petroleum Ether /  
Diethyl Ether 50%



Close side products



Compound of interest

Mobile phase:  
90% Dichloromethane /  
Methanol 10%

Compound of interest:  
compound 3

### 2. Choice of the column according to the $\Delta CV$ & crude sample mass

Crude sample: 47mg

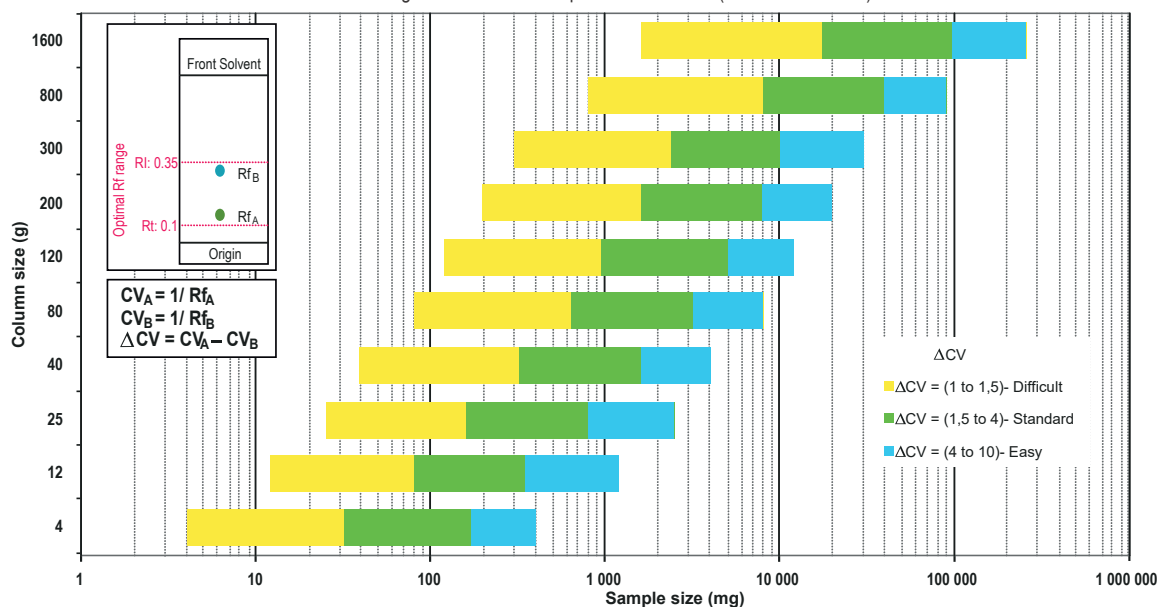
Column: PF-15SIHP-F0025

Loading capacity: 0.25%

| Compound | Rf   | CV   |
|----------|------|------|
| 1        | 0.49 | 2.04 |
| 2        | 0.43 | 2.33 |
| 3        | 0.34 | 2.94 |
| 4        | 0.22 | 4.54 |

$\Delta CV_{3-2} = 0.61$

Loading Selection Guide for puriFlash® IR-50SI (Edition 2008-2017)



Customer has chosen to use a PF-15SIHP-F0025 column to obtain a better separation (efficiency & purity) than with a IR-50SI-F0025 column.

### 3. Flash conditions

Device: puriFlash® XS 420Plus (or now puriFlash® XS 520Plus)

Solvents: A: Dichloromethane

B: Methanol

Column: PF-15SIHP-F0025

Flow rate: 15mL/min

Injection mode: Liquid injection

Crude sample: 47mg

Detection: UV 254nm (black), UV Scan 230-400nm (orange)

Mode: Automatic Gradient Optimization

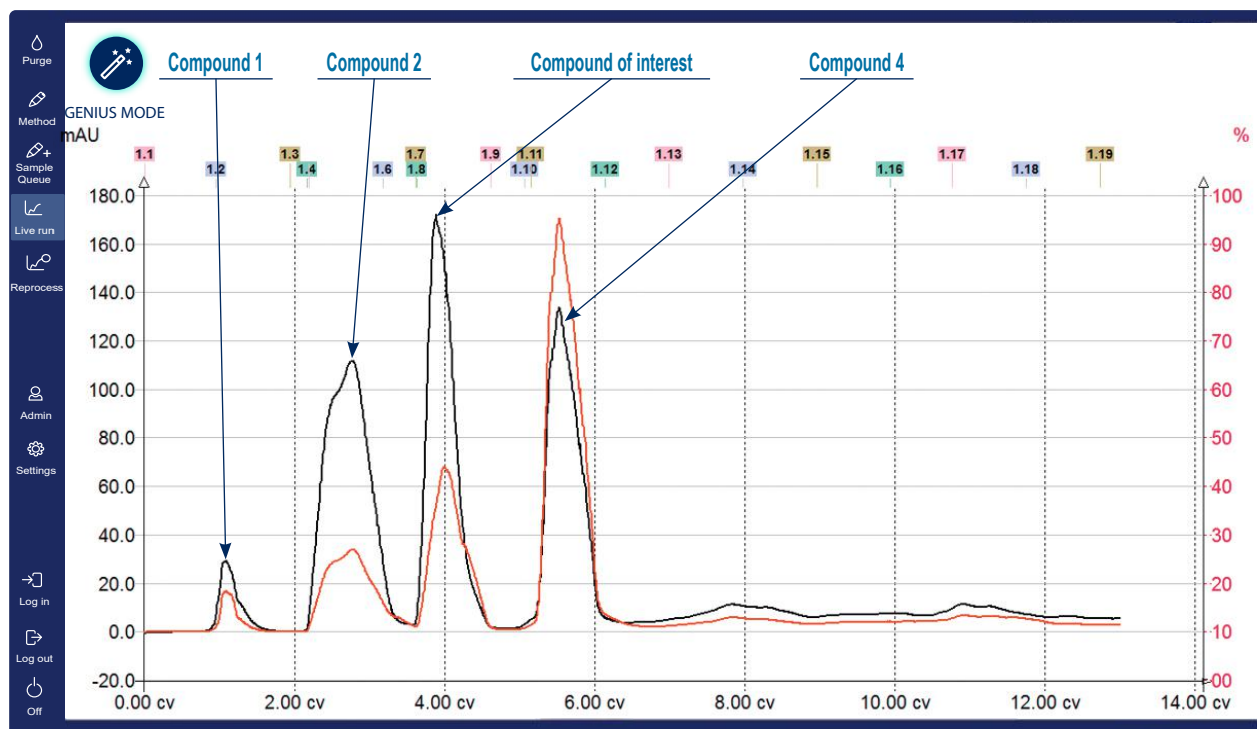
Pressure: 1bar

Elution conditions:

| CV | A (%) | B (%) |
|----|-------|-------|
| 0  | 98    | 2     |
| 1  | 98    | 2     |
| 11 | 90    | 10    |
| 13 | 90    | 10    |



**puriFlash® XS 520Plus**  
*Small, but Mighty*  
 300mL/min@up to 20bar



Access all our application notes by clicking here

## Ultra Performance Flash Purification



**puriFlash<sup>®</sup> XS 520Plus**  
Small, but Mighty  
300mL/min@up to 20bar



**puriFlash<sup>®</sup> 5.020**  
The Partner of Daily Challenges  
300mL/min@up to 20bar



**puriFlash<sup>®</sup> 5.050**  
Cross-over Flash /Prep  
250mL/min@up to 50bar

# puriFlash<sup>®</sup>



**puriFlash<sup>®</sup> 5.020-5X**  
Lab-Productivity  
300mL/min@up to 20bar



**puriFlash<sup>®</sup> 535-XL**  
Process-Kilo-Lab  
400mL/min@up to 35bar



**puriFlash<sup>®</sup> 5.015-XL**  
Process - Kilo-Lab  
825mL/min@up to 15bar

## Process Purification

# Ultra High Performance Purification



**puriFlash® 5.125**  
Complex Purifications with Confidence  
250mL/min@up to 125bar



**puriFlash® 5.250**  
Small, but Limitless  
250mL/min@up to 250bar



**puriFlash® 5.400**  
The Ultra-Purification  
125mL/min@up to 400bar



Accuracy



Flash  
& Go



Load  
& Go



Boost  
& Go



**puriFlash® 5.125P**  
The Peptides Specialist  
250mL/min@up to 125bar



**puriFlash® 5.250P**  
Purification of Complex  
Mixtures of Peptides  
125mL/min@up to 250bar



**puriFlash® UP<sup>3</sup>**  
Ultra Performance  
Proteins Purification  
100mL/min@up to 50bar

# Peptides & Proteins Purification



# ULTRA PERFORMANCE FLASH PURIFICATION

2018-20 edition



[www.interchim.com/UPFP-Gen5.php](http://www.interchim.com/UPFP-Gen5.php)

Sharing a customer-focused, workflow-enhancement vision, Interchim SAS, a global provider of research, industry and life science chromatography instruments and analytical consumables, and Advion Inc., a leader in life science high performance mass spectrometry, leverage nearly a decade of partnership and more than 50 years of business history. The combined companies' global presence offers a single source for sample prep, systems, novel media, and consumables solutions. Seamlessly integrated for unrivaled workflow improvements, the flash and preparative chromatography and mass analysis of small and large molecules ensures customers benefit from bespoke solutions and world class customer support. Together, Interchim X Advion continue to develop, manufacture and support novel solutions with nearly 250 employees on three continents and more than 100 distributors serving the world.

For more information, visit [advion.com](http://advion.com), [interchim.com](http://interchim.com) and [flash-chromatography.com](http://flash-chromatography.com).



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