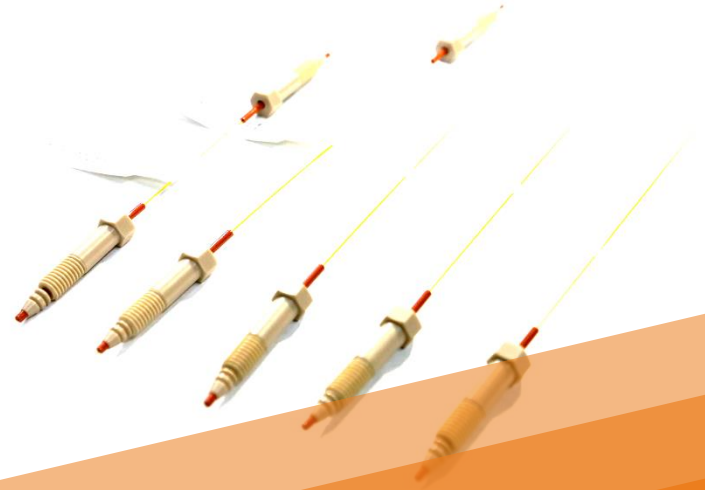
COLUMN SCIENTIFIC | 宜柱科技 纳流液相专家

Smartube® Benchmark of Nano-LC

For your best ever separation on any Nano-LC system



The state of the art of Nano-LC

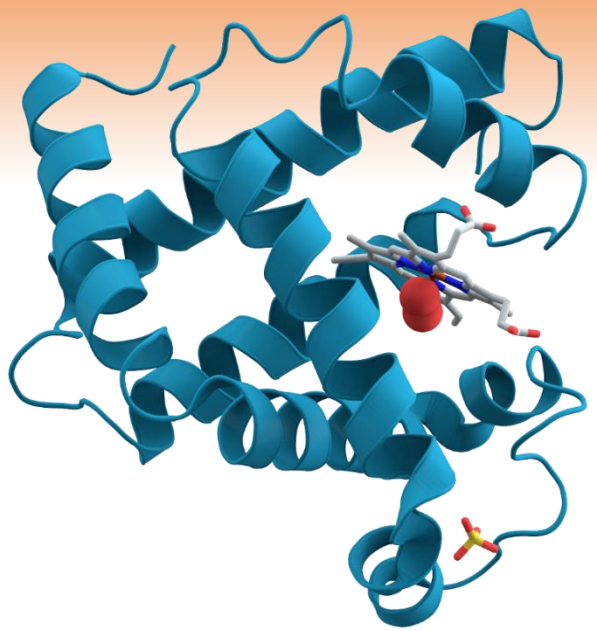
Smartube® is a high performance chromatographic column product line.

It is made for **high efficiency, high selectivity** microscale separations.

- **Compared with other columns, Smartube® columns provide better efficiency, resolution, selectivity, throughput and lifetime.**

- **The unprecedented separation experience comes from meter-long separation path, excellent column-to-column reproducibility and wide-ranging choice of stationary phase chemistry.**

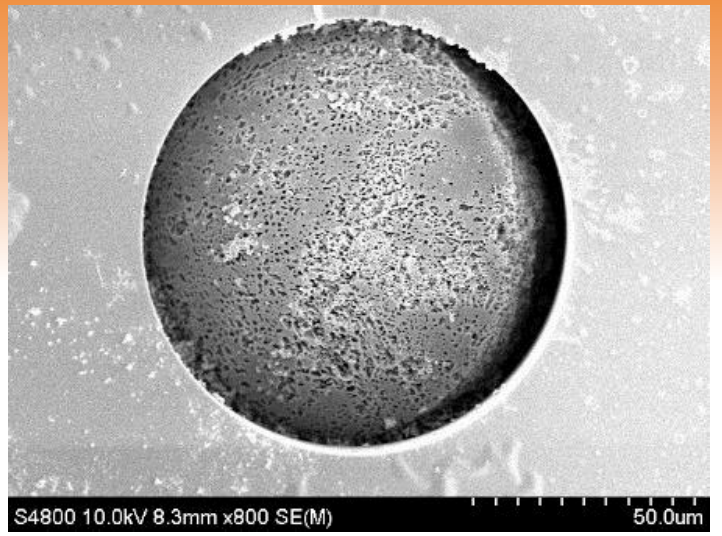
Contents



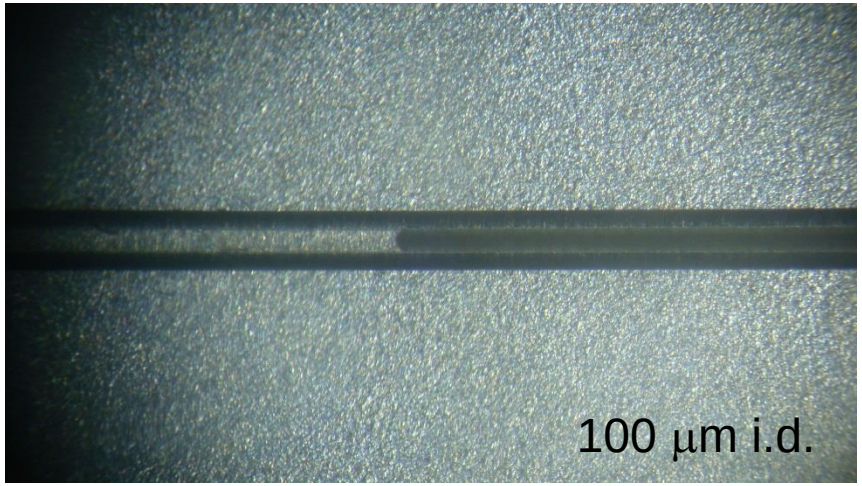
Secret of perfect column

High Pressure Microscale Layer-by-Layer Assembly Technology

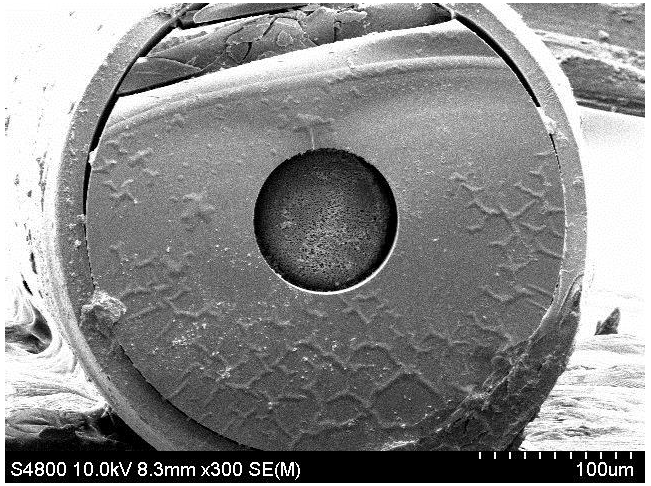
- Optimized slurry solvent to keep the dispersity of packing material
- Highly permeable end frits lead to 1-100 cm column bed
- Super short frit minimizes frit-induced resolution loss
- Layer-by-layer assembly builds up radial- and longitudinal- homogeneous packed bed



Permeable frit



Homogeneous packed bed



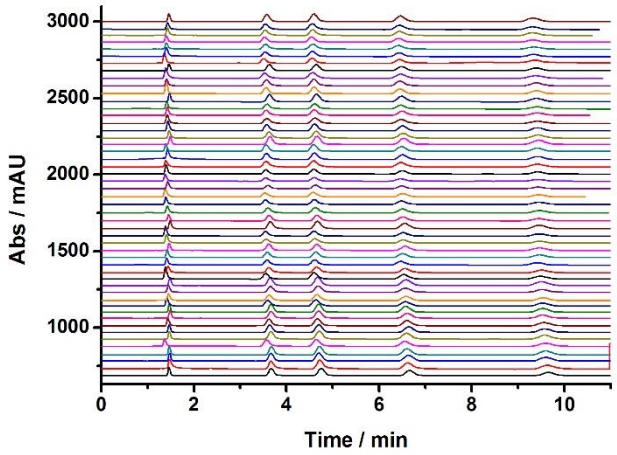
Micro size highly permeable frit

High Efficiency, High Stability, High Reproducibility, Long Lifetime

——Your best ever tool for Nano-LC method development and omics discovery

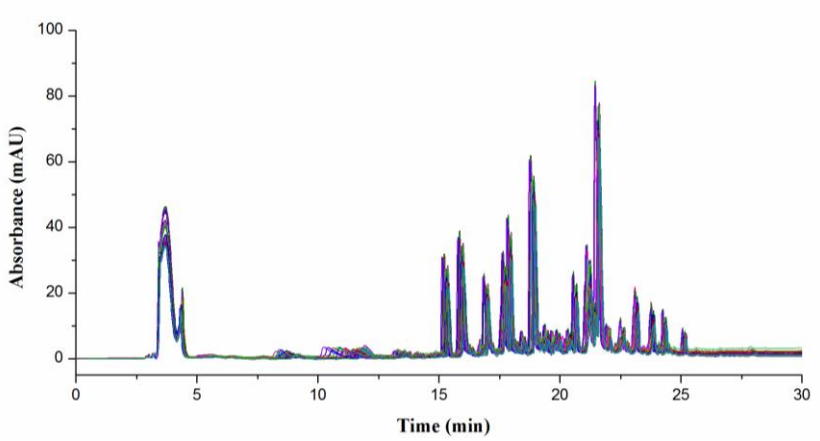
For general Nano-LC runs, Smartube® provides 0-50 cm columns for stable, reliable and reproducible separations

Inter-column reproducibility between 50 columns



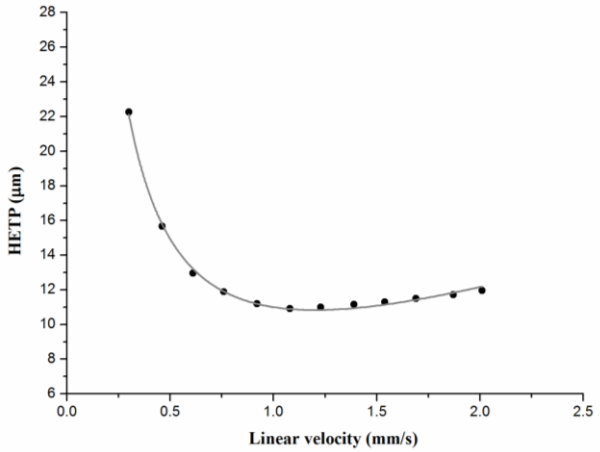
C18 5μm 300Å, 100 mm × 100 μm i.d. UV214 nm. Analytes: thiourea, methyl-, ethyl-, propyl-, and butylbenzenes. RSD<1%

Inter-run reproducibility for 35 injections in a week



C18 5 μm 300Å, 150 mm × 100 μm i.d. mobile phase. UV214 nm. Analytes: Tryptic digest of Cytochrome C

Excellent efficiency and van Deemter curve

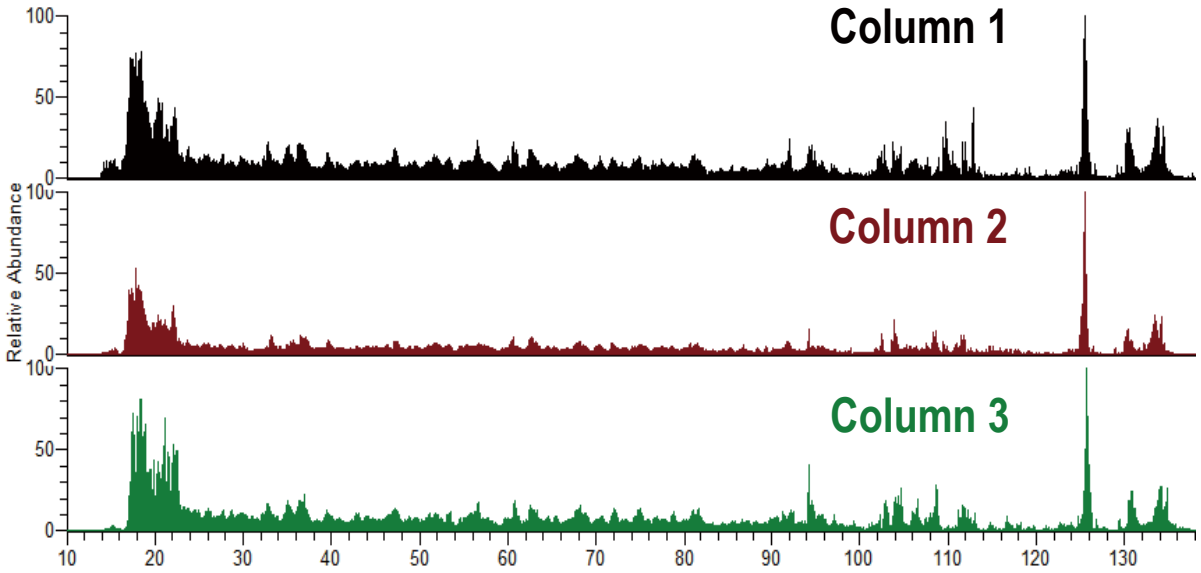


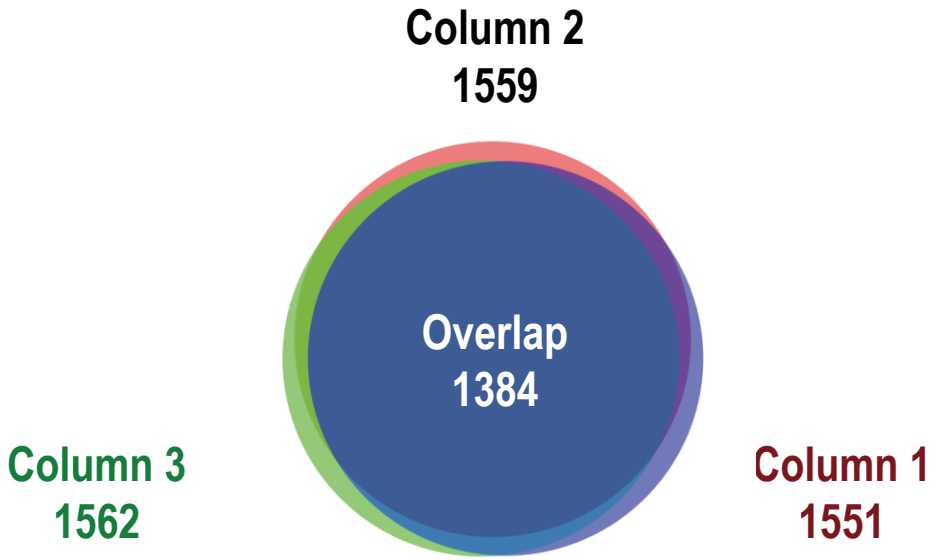
C18 5 μm 300 Å, 100 μm × 200 mm Vopt = 350 nL/min (1.1 mm/s) N = 92000/m H = 10.9 μm

High Efficiency, High Stability, High Reproducibility, Long Lifetime

——Your best ever tool for Nano-LC method development and omics discovery

Unlabeled identification of Hippocampal protein extracts using 3 different Smartube® columns



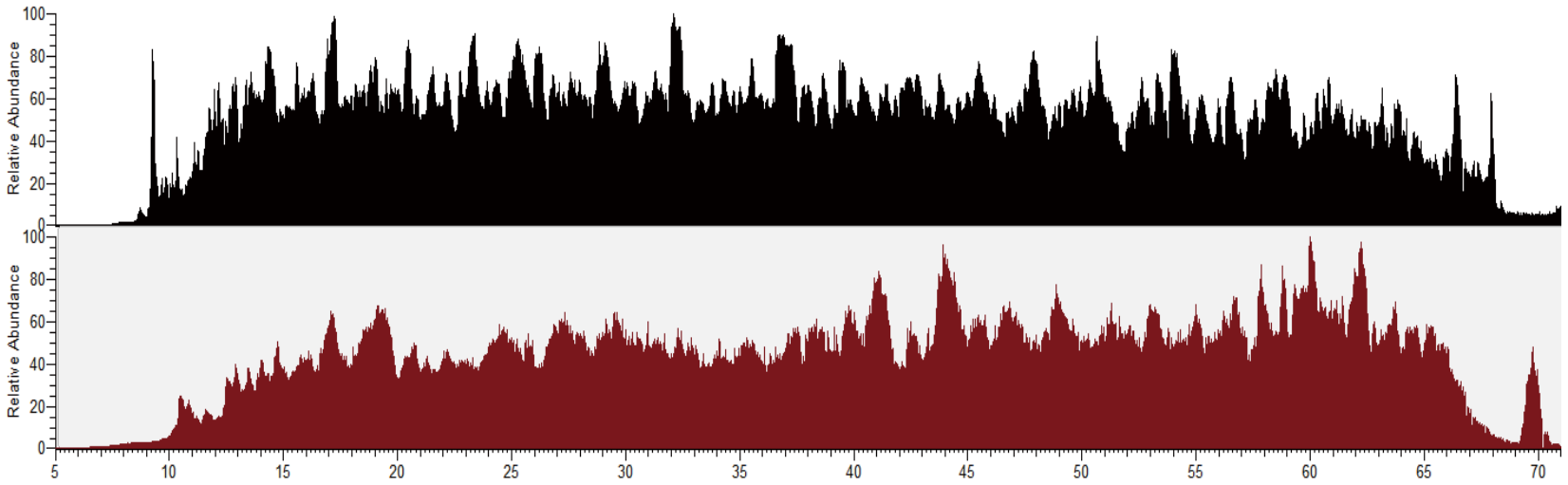


5 μm C18 100 μm * 50 cm gradient time: 140 min

Protein I.D. Coverage

Now you can see more

——Less Operation, More Details, Empower Your Discovery



Identified Proteins

2145

2796

Sample : 293T Cells extracts Column parameters: 1.9 μm C18 15 cm
Buffer A: 0.1% (v/v) formic acid (FA) in water ; Buffer B: 0.1% (v/v) FA in acetonitrile (ACN).
7%-22% buffer B for 50 min 22%-35% buffer B for 10 min.
The full mass scan was acquired from m/z 350 to 1550

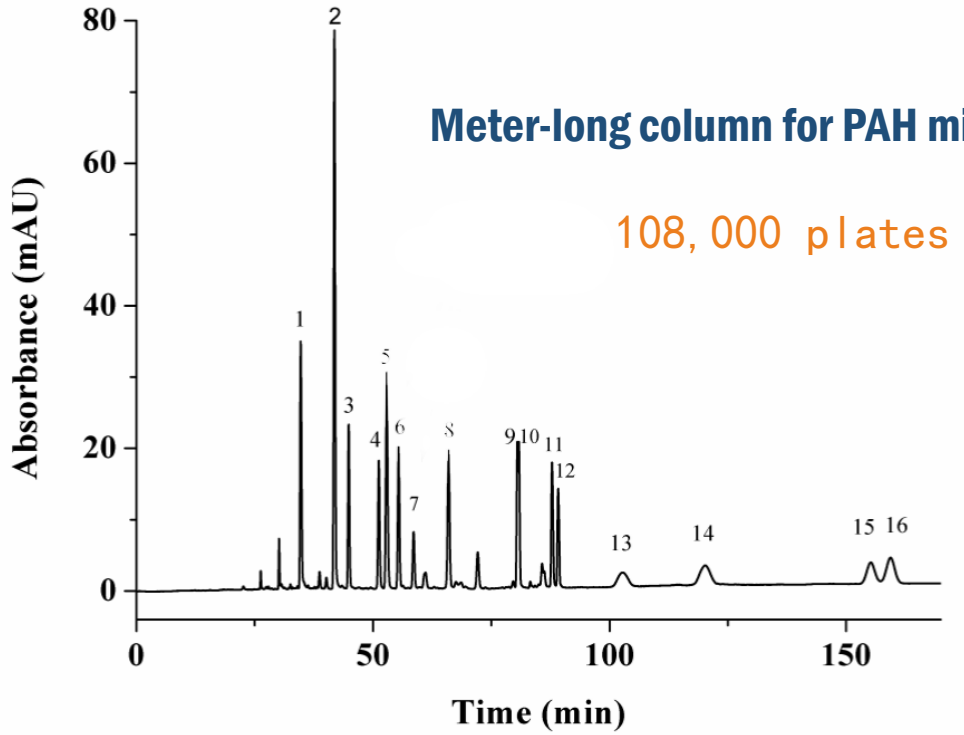
Vendor A

Smartube®

Separameter®: Meter-long Column
your best tool for super-high resolution separation

- **Limited Sample? High Complexity? Demand Extreme Resolution?**
- **Meter-long column Separameter® is your best choice**

One Meter is Enough



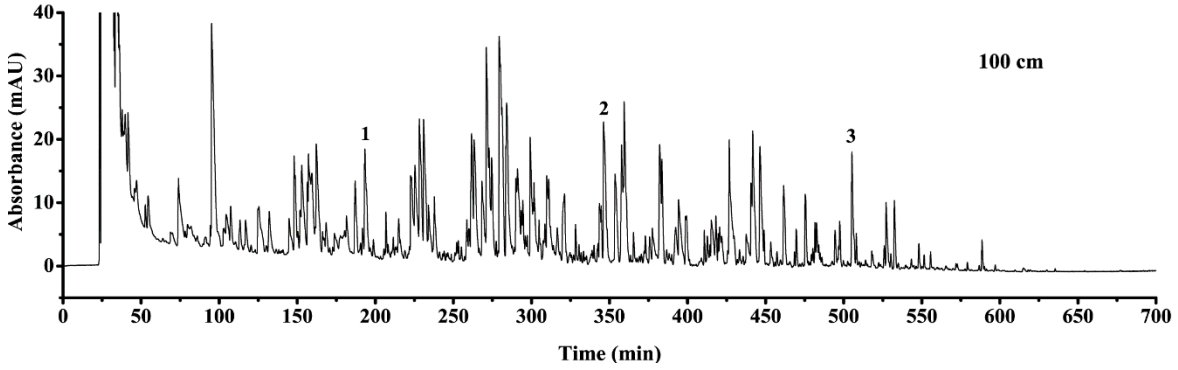
Meter-long column for PAH mixture

108,000 plates

C18 5 μm, 1000 mm × 100 μm i.d. UV214nm. Sample: 16 PAHs primary pollutants designated by the EPA. (1) Naphthalene, (2) acenaphthylene, (3) acenaphthene, (4) fluorene, (5) phenanthrene, (6) anthracene, (7) fluoranthene, (8) pyrene, (9) benz[a]anthracene, (10) chrysene, (11) benzo[b]fluoranthene, (12) benzo[k]fluoranthene, (13) benzo[a]pyrene, (14) dibenz[a,h]anthracene, (15) benzo[ghi]perylene, and (16) indeno[1,2,3-cd]pyrene.

Meter-long column for protein digest

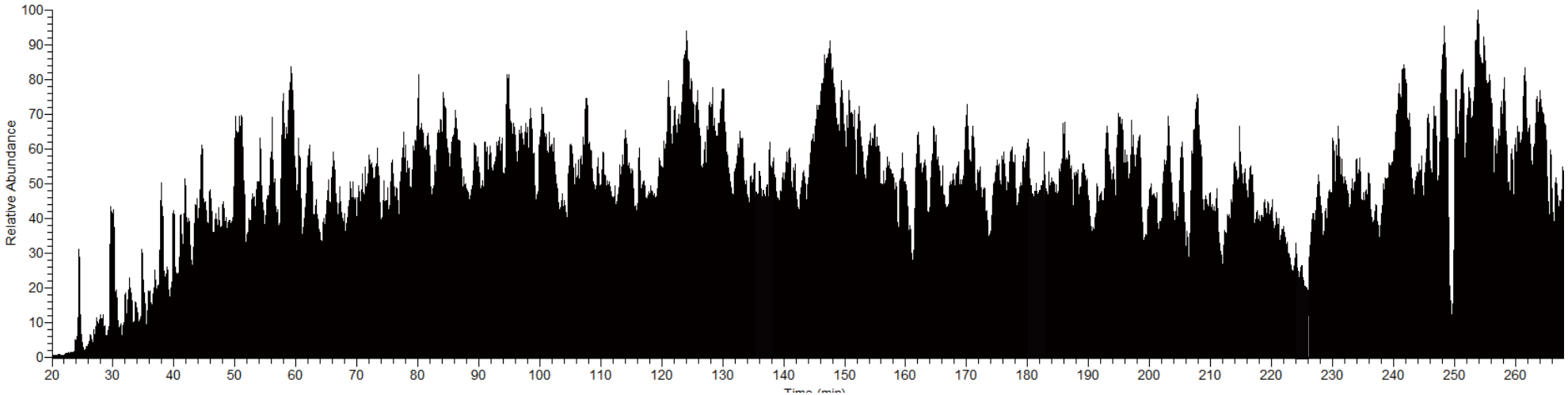
Peak Capacity 800



C18 5 μm, 1000 mm × 100 μm i.d. UV214nm. Flow Rate: 250nL/min. Mobile phase:A: H_2O (0.05%TFA), B: ACN (0.05%TFA); 5%B-50%B. Sample: Tryptic digest of BSA

Separameter®: Meter-long Column
your best tool for super-high resolution separation

Sample: 293T Cells extracts Column: Separameter® Gradient time: 240 min



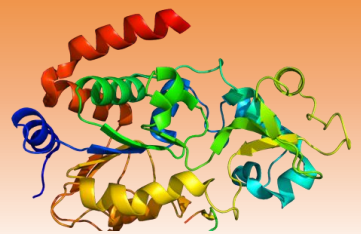
Identified Proteins:

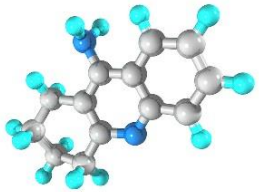
4415

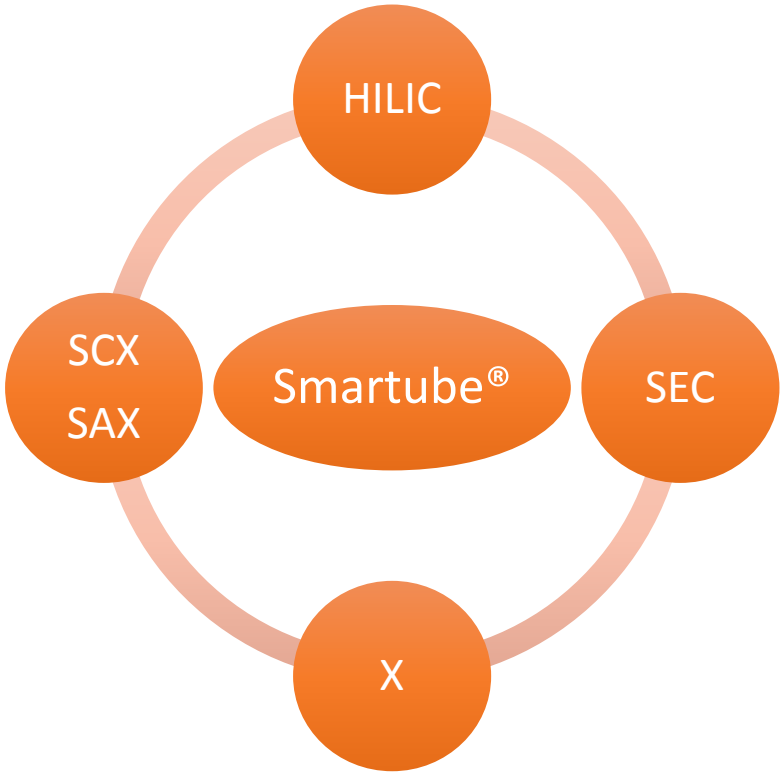
Database: Uniprot fasta Software: Proteome Discoverer (PD)
The precursor tolerance: 10 ppm Fragment mass tolerance: 0.02 Da
Cysteine carbamidomethylation was set as fixed modification,
FDR of PSMs was validated by the Percolator algorithm at 1% based on q-values.

Wide range choice of column selectivity, comprehensively satisfy your needs

Support your microscale separations of biomolecules, pharmaceuticals, environmental pollutants and more

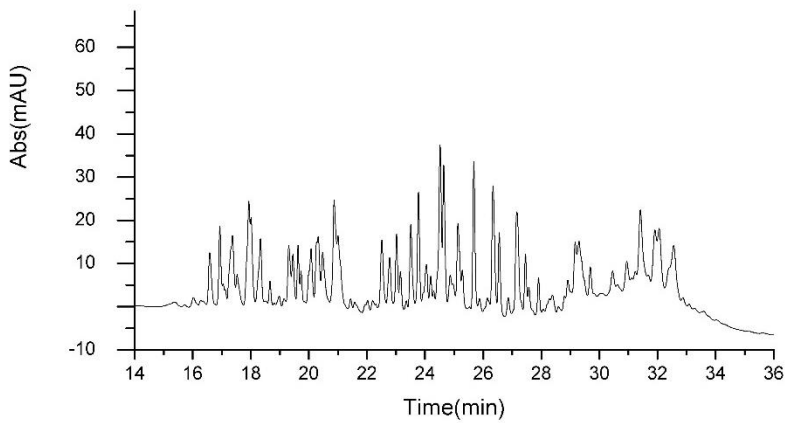






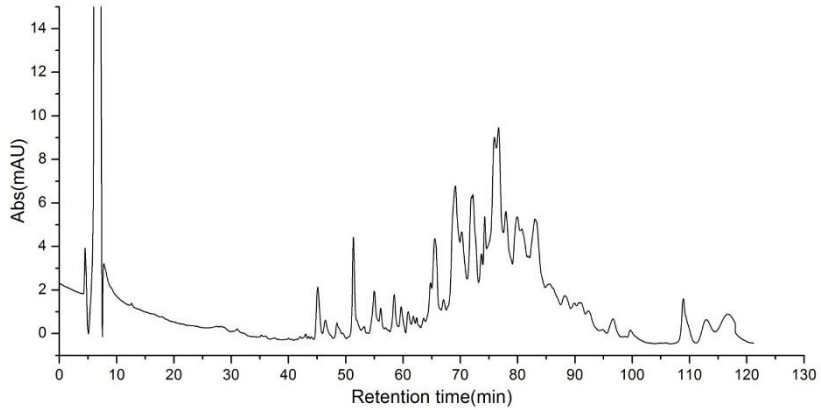
- SEC
- SCX/SAX
- HILIC
- X = Any phase you like）

Strong Cation Exchange



SCX 5 μm, 250 mm × 100 μm i.d. UV214nm. Sample: Tryptic digest of BSA

Perfusion Chromatography



POROS 10 μm, 150 mm × 100 μm i.d. UV214nm. Sample: Intact proteins from hepatoma cells

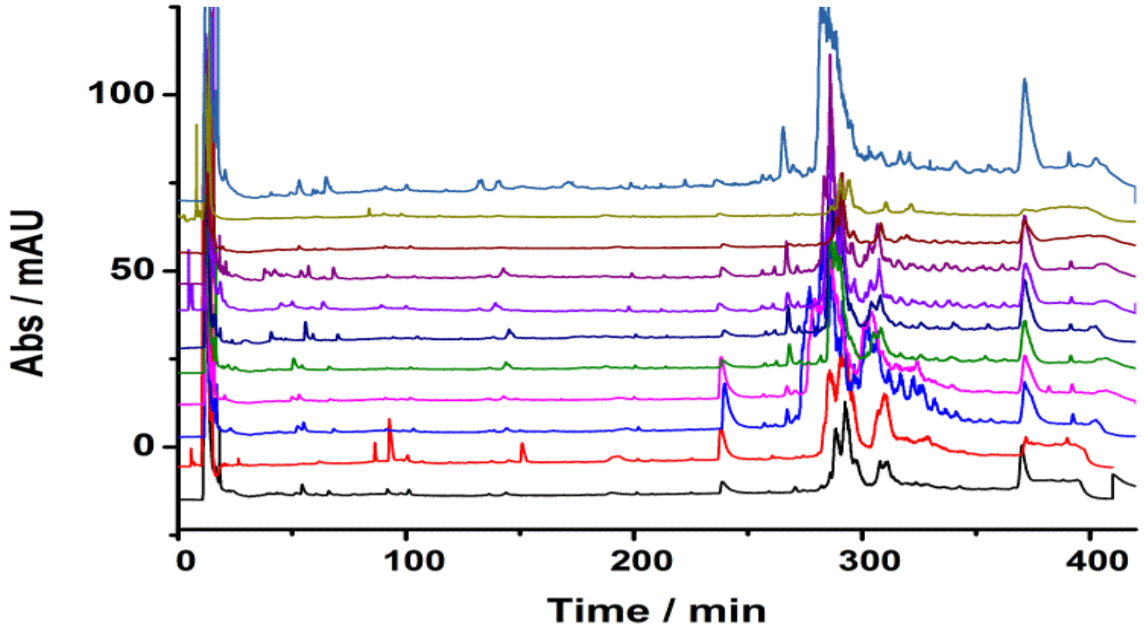
Custom make and total solution

- **Specifically made for your needs:**

Separation Tools, Purification Strategies, Total Solution

Case Study:

- ✓ **Client: Sika deer plant of north China**
- ✓ **Project: antler protein fingerprinting**



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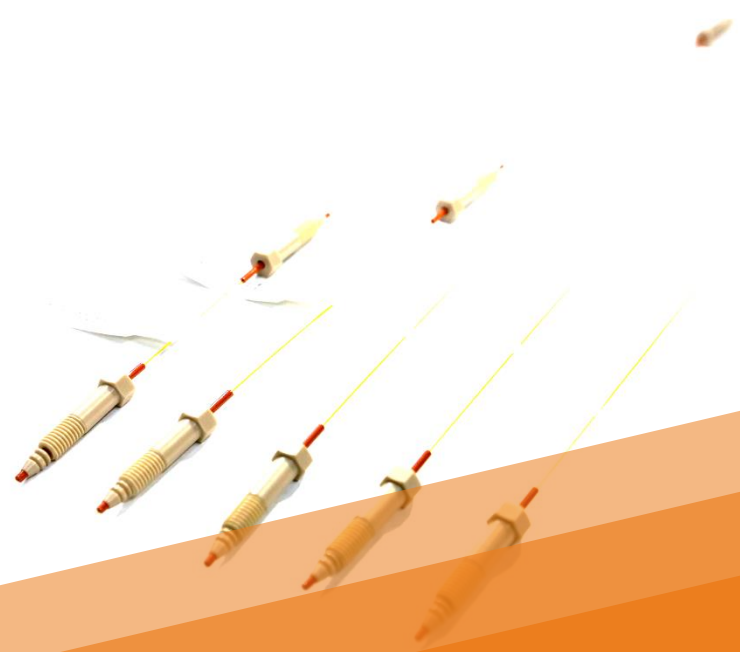
Efficient, Green, Healthy



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