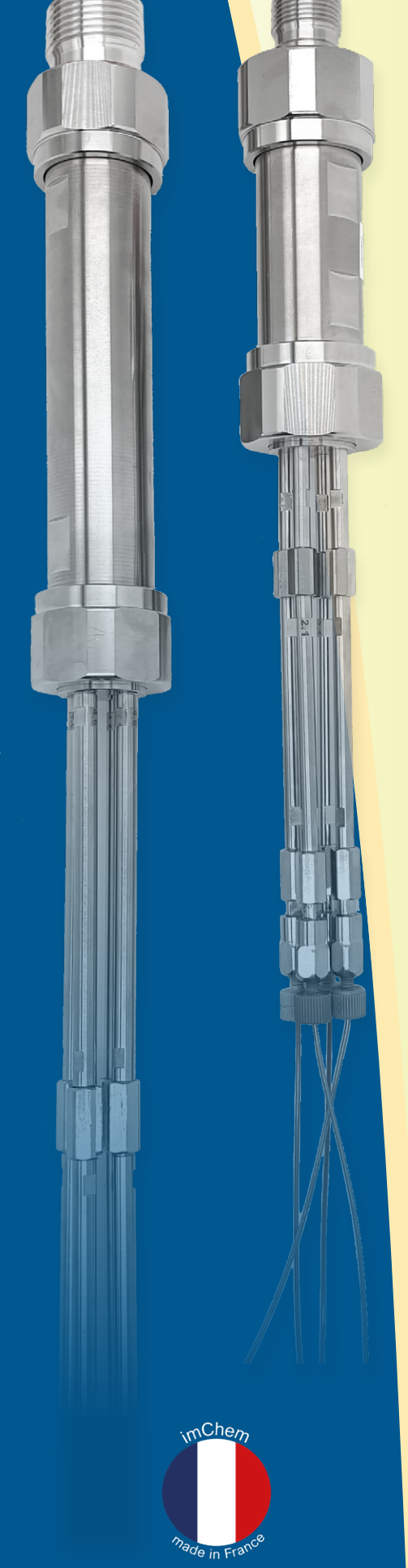

imChem

Your Chromatography specialist
Expert for HPLC / UHPLC columns

Surf 1.7 µm for UHPLC

imChem
20-year anniversary
Chromatography expertise

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imChem® Surf 100 Å - 1.7 µm

Ultra-High Performance Liquid Chromatography has become over the last years a standard LC platform for identification and quantification of molecules in most of R&D laboratories. It has definitely reduced the runtime of LC methods without compromising with critical pairs' resolution and therefore the numbers of analysis per day has increased. Keeping the level of resolution, there is a factor of 9 in runtime reduction between a 150 x 4.6 mm, 5 µm and a 50 x 2.1 mm, 1.7 µm.

This has also enabled the separation of complex mixtures, improve the characterization of the separated compounds, whether small organic molecules or peptides, polypeptides or proteins.

To achieve this level of performance, the consumable has also evolved in particular the column wich is the heart of the chromatography system. Sub 2 µm silicas and superficially porous material were keys in supporting this development.

ImChem has developed fully porous silicas & columns packing technologies that provide today long lifetime, efficient, reproducible and repeatable 1.7 µm packed columns.

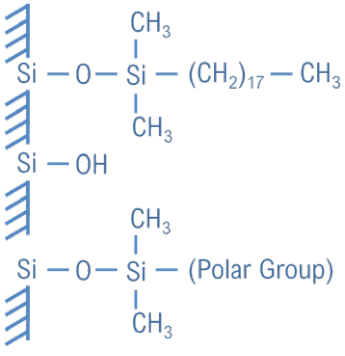
Our ultra-pure, perfectly spherical and inert silica technology guarantees the perfect continuity of the chromatographic behavior over the different particle size making easy the transfer of any classical method made on a 5 µm column to a 1.7 µm column.

Particle shape	Perfectly Spherical
Surface area	310 m2/g
Nominal pore diameter	100Å
Pore volume	0.8 ml/g
Particle sizes	1.7µm – (up to 10 µm)
Silica purity	> 99.99%
Na	< 1 ppm
Ca	< 1 ppm
Mg	< 1 ppm
Al	< 1 ppm
Fe	< 1 ppm
Zr	< 1 ppm
Ti	< 1 ppm

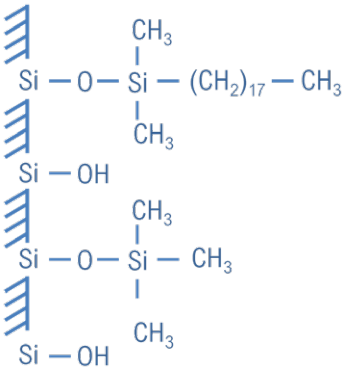
The ImChem Surf 100 Å - 1.7 µm columns are available under three different modifications that cover most of today's challenges:

imChem made in France

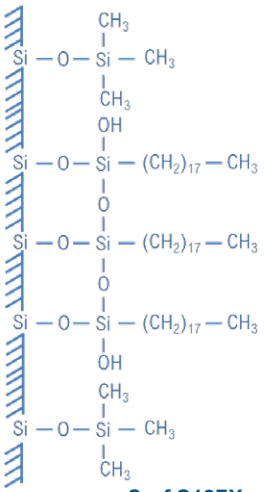
Bonding	Description	Applications
C18-AQ	Monofunctional bonding enhance by a liquid single step hydrophilic end-capping. pH stability : 1 - 6 Temperature up to 60°C	Mid polar to non-polar compounds 100% compatible with H2O
C18	Monofunctional bonding enhance by a liquid single step hydrophobic end-capping pH stability : 1 - 7 Temperature up to 60°C	Non-polar compounds Ideal for routine analysis of Pharmaceuticals, Bio-drugs…
C18 Extreme	Polyfunctional bonding enhance by 2 steps end-capping. 2nd step made under gas phase with anhydrous hydrophobic agent. pH stability : 1 - 10 Temperature up to 60°C	Non-polar compounds Separation of non-polar basic drugs at high pH



Surf C18AQ



Surf C18



Surf C18EX

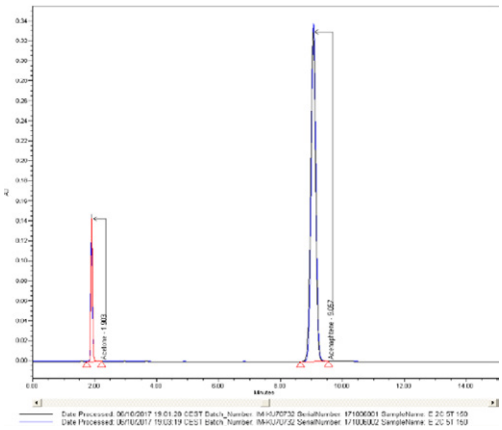
imChem through its strict manufacturing QA/QC achieves the highest level of quality expected by our customers.

1. ImChem packing reproducibility

Surf C18 Trif 100 A 5µm 150 x 4.6 mm – P/N: 5046-5-SU-C18T

2 columns, same batch IM-KU70732

H2O/ACN (30/70) - |1 ml/min - λ: 254 nm



	RT min	K'	USP tailing	USP Rs	USP plate/m
SN / 171006001					
Acetone	1.903	2.81	1.12		42708
Acenaphten	9.057	17.11	0.97	36.02	99632
SN / 171006002					
Acetone	1.898	2.8	1.04		40602
Acenaphten	9.066	17.13	1.02	36.99	108867

2. ImChem column repeatability

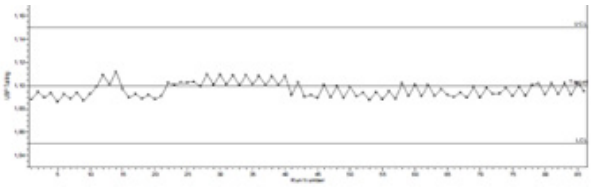
Surf C18 Extreme 100 A 5µm 33 x 4.6 mm

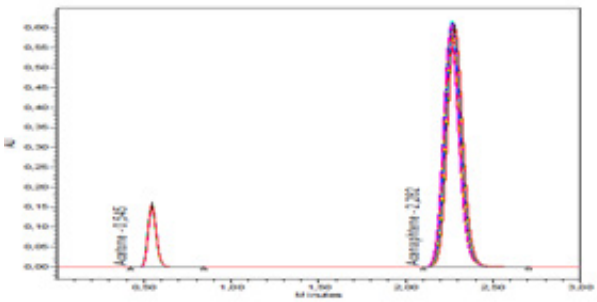
H2O/ACN (30/70) - 1 ml/min - λ: 254 nm

System Suitability Summary Results						
Name: Acenaphtene						
	Part_Number	Name	RT	K'	Resolution	USP Tailing
1	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,272	3.54	13.66	1,10
2	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,282	3.56	13.67	1,10
3	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,271	3,54	13.66	1,10
4	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2 272	3.54	13.66	1.09
s	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2 272	3,54	13,66	1,10
6	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,277	3,55	13.72	1.09
7	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,275	3,55	13,65	1,10
8	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2 278	3,56	13.70	1,09
...						
80	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,267	3,53	13,65	1,09
81	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,270	3,54	13,69	1,10
82	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,270	3,54	13,67	1,09
83	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,271	3,54	13,70	1,09
84	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,272	3,54	13,64	1,09
85	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,272	3,54	13,68	1,09
86	3346-5-SU-C18EX Surf C18 Extreme 100A 5µm 33x4.6mm	Acenaphtene	2,269	3,54	13,59	1,10
M ean				3,54	13,65	1,10
% RSD				0,30	0,29	0,59
Std. Dev.				0,01	0,04	0,01

3. ImChem control of tailing factor

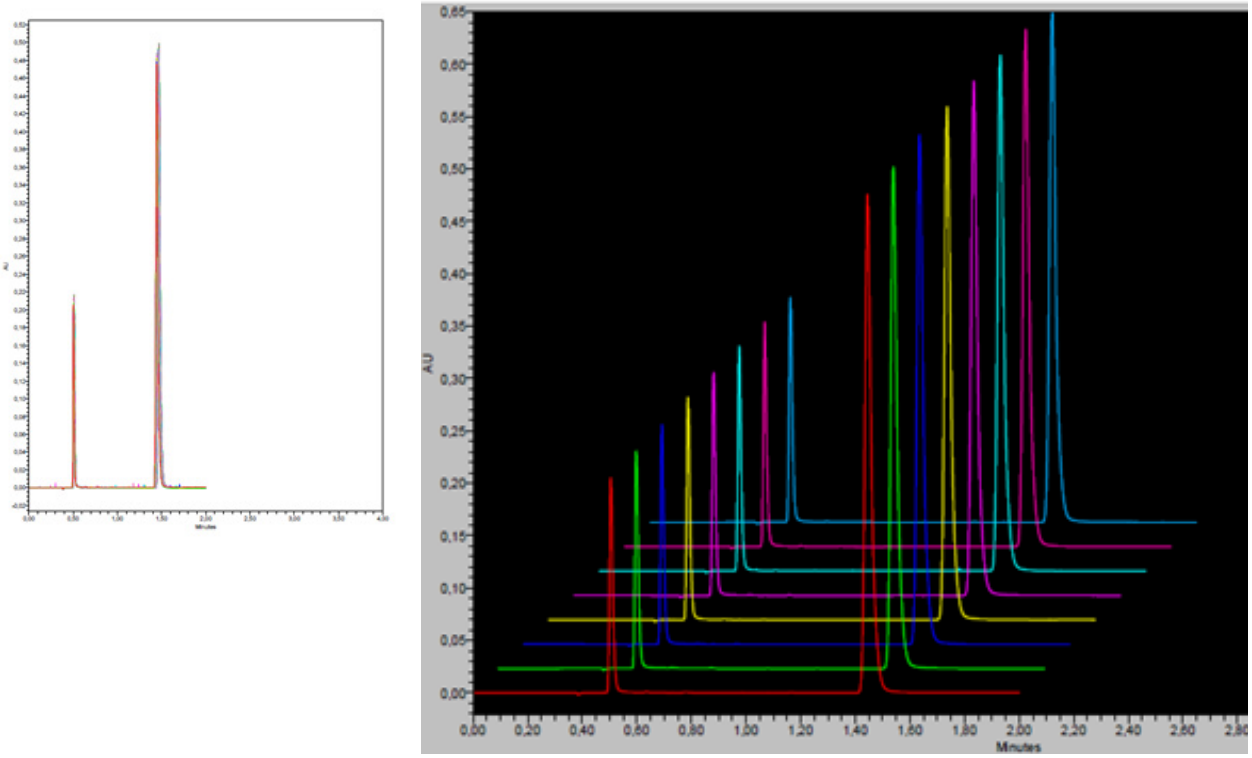
Measure of tailing factor of Acenaphten (n=86)
Surf C18 Extreme 100 A 5µm 33 x 4.6 mm
H2O / ACN (30 : 70) 1 ml/min - λ:254 nm





4. ImChem manufacture (U)HPLC columns that last longer

Surf C18 1,7 µm 100 x 2,1 mm / overlay of 360 consecutive injections

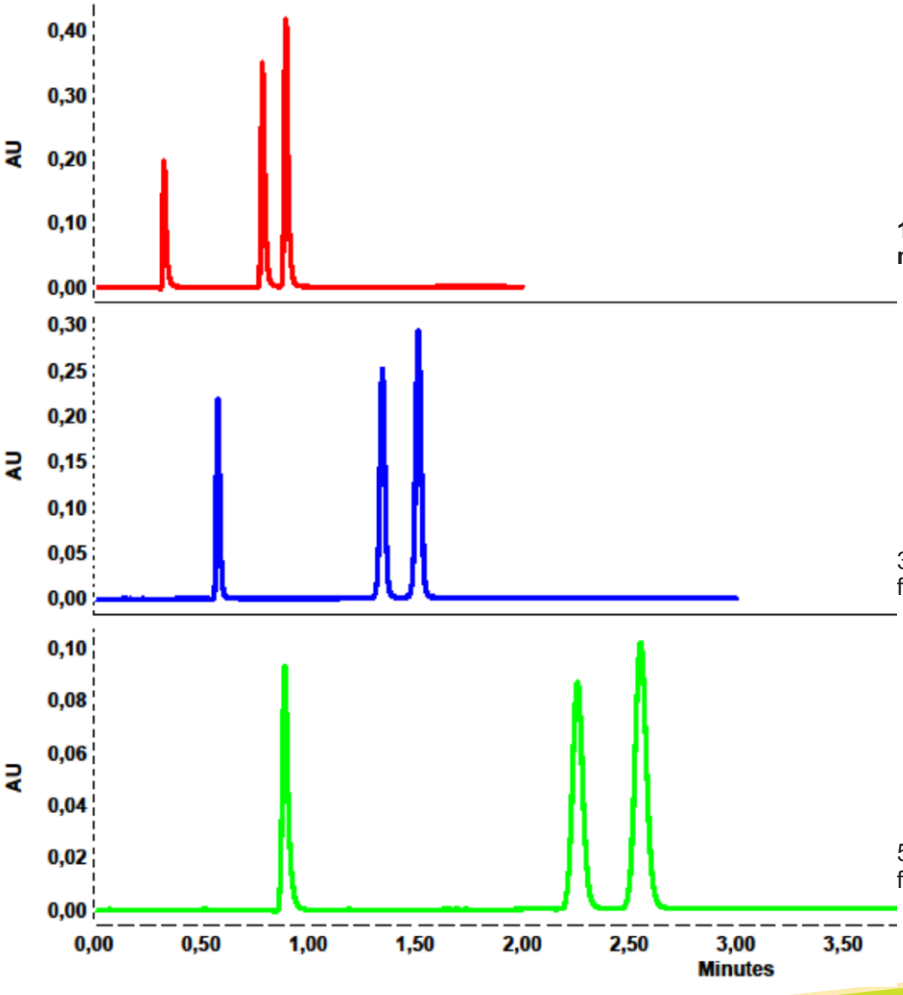


Mix 2C

20 % A : Water | 80 % B : ACN | Flow 0,5 ml/min | 50 °C | λ254 nm
Acetone 4 µg/ml – Acenaphtene 0,333 mg/ ml | 2 µl injected

1st injection done at 11:16 am: 201516 plates/m to last injection done at 00:30 pm = 212913 plates/m

5. Shorter runtime while keeping resolution, increase productivity with 1.7µm Surf column



1.7µm, 100 x 2.1 mm = 0.58 min for last peak

3.0µm, 100 x 3.0 mm = 1.51 min for last peak

5µm, 100 x 4.6 mm = 2.54 min for last peak

Product Ordering Information		
Media	Dimension	Part Number
1.7 µm Surf C18-AQ	50 x 2.1 mm	5021-1.7-SU-C18AQ
1.7 µm Surf C18-AQ	100 x 2.1 mm	10021-1.7-SU-C18AQ
1.7 µm Surf C18-AQ	150 x 2.1 mm	15021-1.7-SU-C18AQ
1.7 µm Surf C18-AQ	150 x 3.0 mm	15030-1.7-SU-C18AQ
1.7 µm Surf C18-AQ	50 x 4.6 mm	5046-1.7-SU-C18AQ
1.7 µm Surf C18-AQ	100 x 4.6 mm	10046-1.7-SU-C18AQ
1.7 µm Surf C18-AQ	150 x 4.6 mm	15046-1.7-SU-C18AQ
1.7 µm Surf C18	50 x 2.1 mm	5021-1.7-SU-C18
1.7 µm Surf C18	100 x 2.1 mm	10021-1.7-SU-C18
1.7 µm Surf C18	150 x 2.1 mm	15021-1.7-SU-C18
1.7 µm Surf C18	150 x 3.0 mm	15030-1.7-SU-C18
1.7 µm Surf C18	50 x 4.6 mm	5046-1.7-SU-C18
1.7 µm Surf C18	100 x 4.6 mm	10046-1.7-SU-C18
1.7 µm Surf C18	150 x 4.6 mm	15046-1.7-SU-C18
1.7 µm Surf C18 Extrem	50 x 2.1 mm	5021-1.7-SU-C18EX
1.7 µm Surf C18 Extrem	100 x 2.1 mm	10021-1.7-SU-C18EX
1.7 µm Surf C18 Extrem	150 x 2.1 mm	15021-1.7-SU-C18EX
1.7 µm Surf C18 Extrem	150 x 3.0 mm	15030-1.7-SU-C18EX
1.7 µm Surf C18 Extrem	50 x 4.6 mm	5046-1.7-SU-C18EX
1.7 µm Surf C18 Extrem	100 x 4.6 mm	10046-1.7-SU-C18EX
1.7 µm Surf C18 Extrem	150 x 4.6 mm	15046-1.7-SU-C18EX

Note : other configurations (dimensions, selectivities,...) are available upon request.

To consult your personalized prices, visit https://imchem.fr/catalogue-imchem/

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