

Ultra Fast SFC

Quarter minute analysis

Aurora SFC-Fusion[™] A5

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There is a surprising scarcity of chromatograms collected using small diameter particles in SFC.

What few examples exist, concentrate on the application, such as high-speed screening, and do not emphasize the quality of the separations.

Here, Zorbax RX-Sil (bare silica) 1.8 μ m particles in a 4.6x50mm column (Agilent Technologies) are used to demonstrate high speed, intermediate efficiency with symmetrical peaks, using a test mix of small drug-like molecules.

The last 3 peaks exhibit over 9000 plates each, and 650-1000 plates/sec.



The chromatograph consisted of an Aurora SFC-Fusion A5 system configured with the following components:

- Agilent 1200 binary pump SL
- Agilent 1200 high performance autosampler SL
- Agilent 1200 column compartment
- Agilent 1100B diode array detector (20Hz <0.01min filter)
- Agilent G1322A 1100 vacuum degasser
- Aurora SFC 1.7 μ L flow cell
- Aurora SFC-Fusion A5

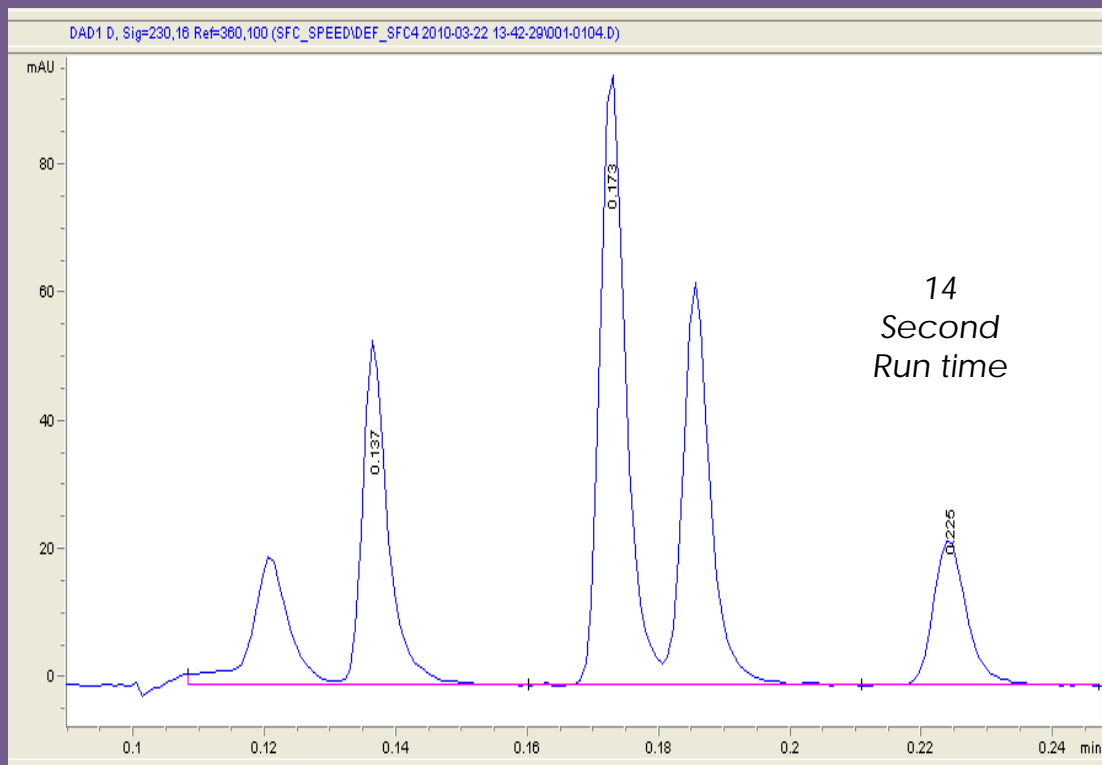
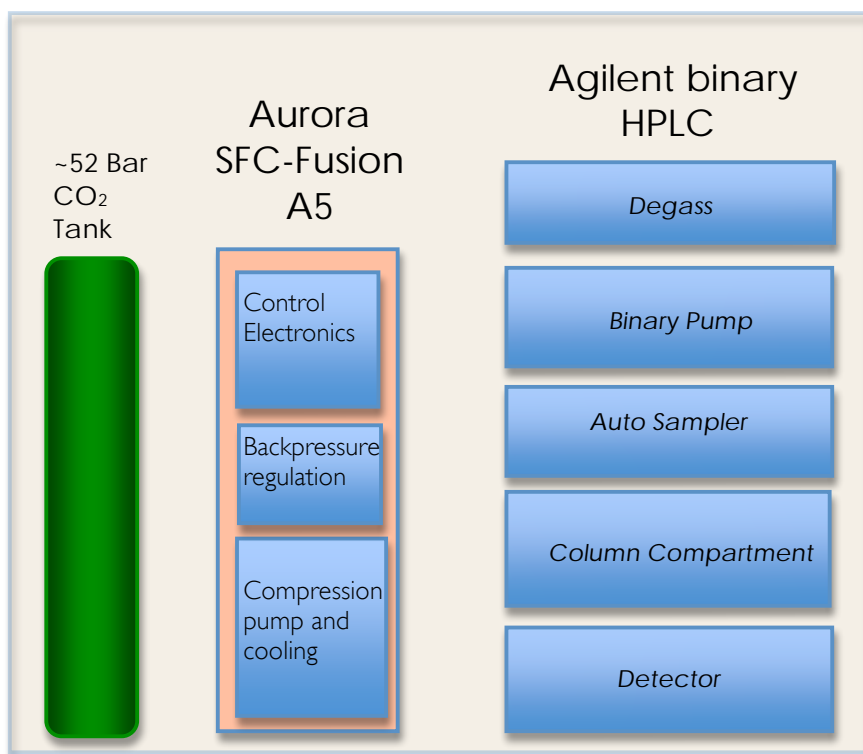
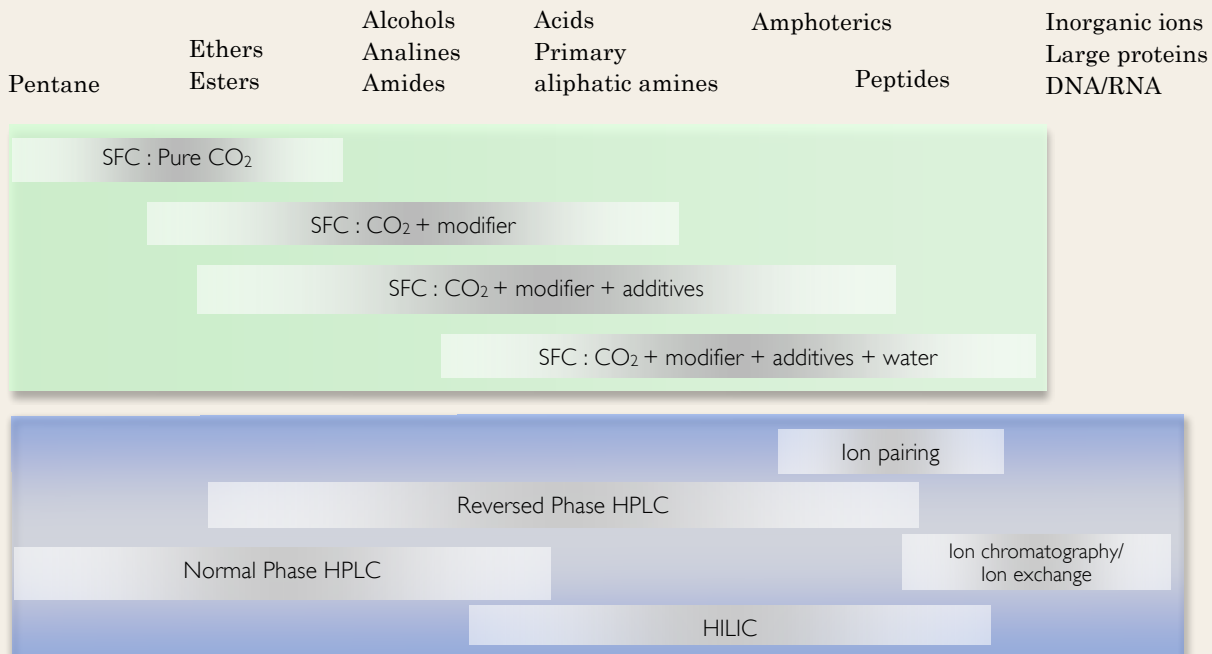


Figure 1:

Columns were 4.6mm ID Zorbax RX-Sil. Separations were at 50C, 150 Bar and 22.5% MeOH 2 μ L inj.

1. ibuprofen, 2. ketoprofen, 3. theophylline, 4. caffeine, 5. theobromine

Where SFC Fits In: from non-polar to highly-charged



Dr. Terry Berger, founder of Aurora SFC Systems, has been a pioneer of Supercritical Fluid Chromatography for more than twenty five years. His work has resulted in more than thirty patents and a host of journal publications. Since the mid-eighties he has systematically established fundamental research that expanded the theory and applicability of SFC.

Today, this passion for delivering better separation solutions has created the SFC-Fusion A5— an instrument as powerful as it is elegant in its concept. Modern SFC should be fast, sensitive, easy to use and as reliable as standard HPLC systems. Aurora SFC is committed to total customer satisfaction and pledges to deliver outstanding products backed by world-class applications expertise and customer service.

Aurora SFC challenges you to experience the advantages of SFC. Please contact us to learn how easy it is to get started with Aurora's "Simply Smarter SFC".

Data in this paper were obtained on an optimized system comprised of standard instrument components as described above. Results may be dependant upon specific system condition and configuration at time of separation.

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