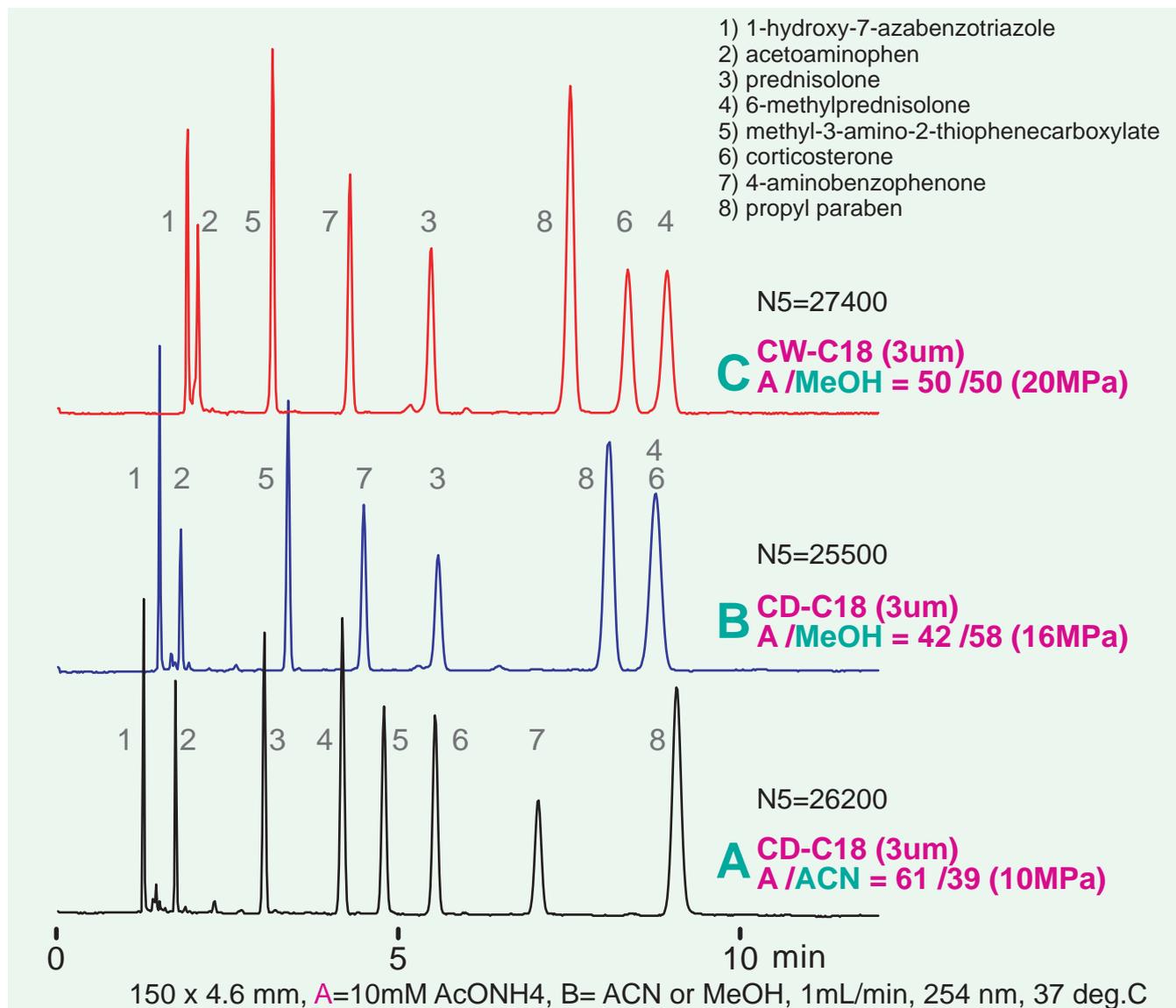


Cadenza CW-C18
Cadenza CD-C18

150 x 4.6 mm

Technical

Substitution of organic solvent for reversed-phase



Separation scientists need to be mindful of separation characteristics when acetonitrile is to be substituted with methanol as shown in figure (A) above.

1) To replace acetonitrile with methanol using the same column (Chromatogram A and B)

As shown in figures (A and B) above, the separation properties may change when acetonitrile is replaced with methanol. Even so, there is an opportunity for substitution with methanol if scientists are mindful of the different separation properties. The column pressure of Cadenza is also acceptable for conventional HPLC systems.

2) Optimization by Cadenza CW-C18 (3um, 30nm) and methanol (Chromatogram C)

There is a good way to use CW-C18 (30nm pore size) with methanol instead of acetonitrile. In figure (C) above, acceptable separation has been achieved by replacing acetonitrile with an optimized concentration of methanol. This results in separation of peaks, high efficiency, and same run time as CD-C18.

Separation of complex mixtures requires a long column (such as 150mm). Using methanol in the eluent with 2um columns may cause excessive back pressure. In contrast, 3um technology offers a practical solution for conventional HPLC systems.

Note: low dispersion systems (e.g. semi-micro LC) may be required if such high plate counts are required.