

CN (aka CYANO or NITRILE) HPLC Phases

Alternative to Silica

In normal phase (NP) mode, CN is a bonded phase alternative to silica. These columns have the advantage of faster equilibration and more uniform surface activity than bare silica. To extend column life, continued switching back and forth between normal and reversed phase (RP) solvents should be avoided.

Most Polar Reversed Phase Column

In reversed phase mode, CN columns are the most polar and least retentive of all RP packings. Extremely hydrophobic compounds which do not elute on standard C18 and C8 packings with typical RP eluents can be separated using CN columns. In addition, the unique nitrile chemistry provides different selectivity from both phenyl and standard aliphatic (C18, C8 and C4) RP packing.

Switching between NP and RP mode

The shipping solvent of CN columns is normally HEPTANE / ETHYL ACETATE - this is immiscible with water. Before using the column with aqueous eluent you should first completely remove ALL trace of shipping solvent by the following flushing protocol:

- * min. 10 column volumes of ETHYL ACETATE
- * min. 20 column volumes of METHANOL
- * min. 10 column volumes of ORGANIC / WATER mixture (e.g. 50/50 MeOH/water if using the eluent below)
- * min. 10 column volumes of RP eluent (e.g. 50/50 MeOH/aqueous buffer); this step can be omitted if no buffered eluent is used but only ORGANIC/water.

1 column volume @ 100 x 1.0mm ID: 0.06mL
1 column volume @ 100 x 2.1mm ID: 0.24mL
1 column volume @ 100 x 4.6mm ID: 1.16mL
1 column volume @ 150 x 4.6mm ID: 1.75mL
1 column volume @ 250 x 4.6mm ID: 2.90mL

