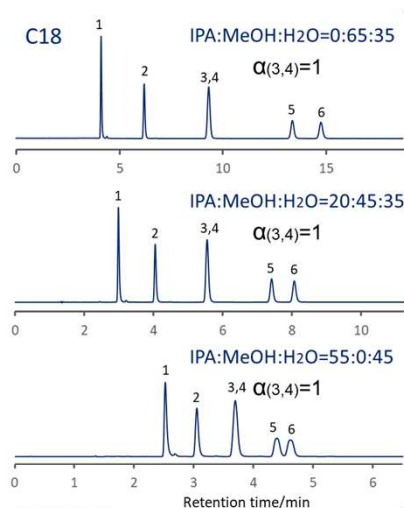


DNPHアルデヒドの分離 (2)

SunShell C18 2.6 μm, 150 x 4.6 mm i.d

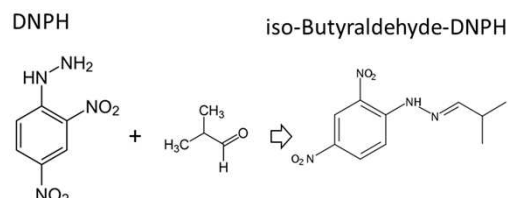
SunShell Biphenyl 2.6 μm, 150 x 4.6 mm i.d.

DNPH-aldehyde (2)

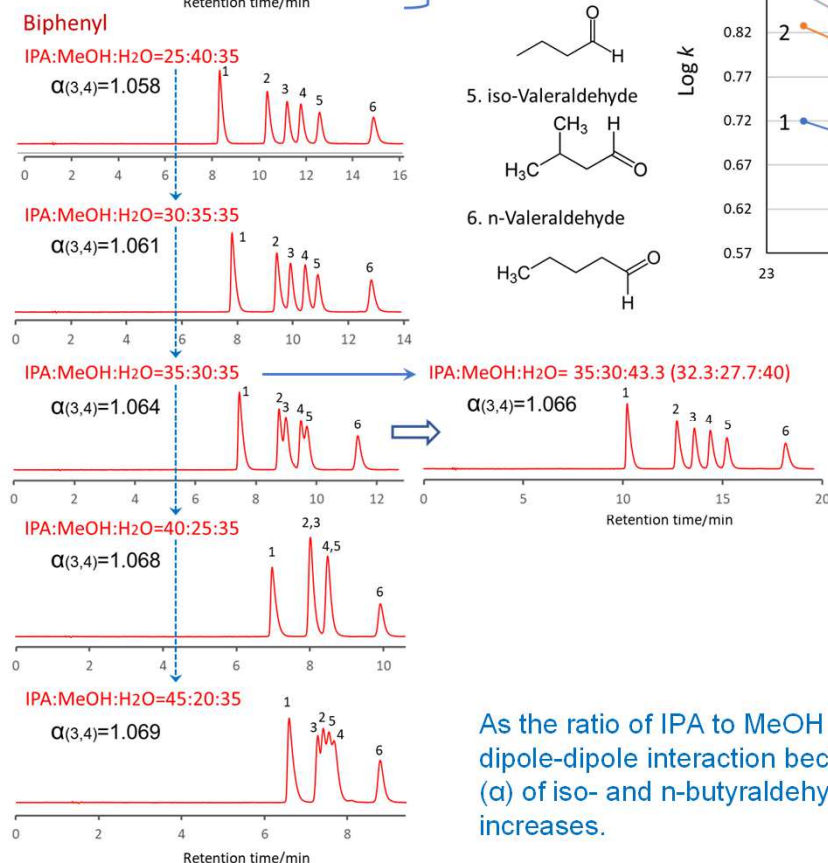
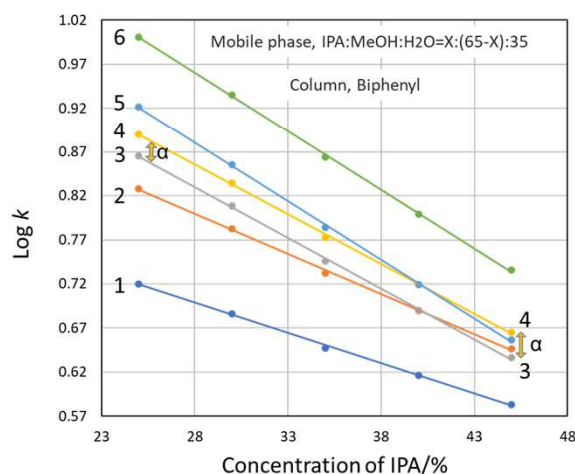


C18 can't separate iso- and n-Butyraldehyde-DNPH (3 and 4).

1. Acetaldehyde
CC=O
2. Propionaldehyde
CCC=O
3. iso-Butyraldehyde
CC(C)C=O
4. n-Butyraldehyde
CCCC=O
5. iso-Valeraldehyde
CC(C)CC=O
6. n-Valeraldehyde
CCCCC=O



Relationship between concentration of IPA and log k



As the ratio of IPA to MeOH in the mobile phase increases, the dipole-dipole interaction becomes stronger and separation factor (α) of iso- and n-butylaldehyde-DNPH increases as the IPA increases.

Column:
SunShell C18 2.6 μm, 150 x 4.6 mm
SunShell Biphenyl 2.6 μm, 150 x 4.6 mm
Mobile phase: shown in figures
Flow rate: 1.5 mL/min
Temperature: 40 °C
Detection: UV@360 nm

Sample: 1. Acetaldehyde-DNPH
2. Propionaldehyde-DNPH
3. iso-Butyraldehyde-DNPH
4. n-Butyraldehyde-DNPH
5. iso-Valeraldehyde-DNPH
6. n-Valeraldehyde-DNPH