INSTRUCTION MANUAL FOR CROWNPAK® CR-I(+) and CROWNPAK® CR-I(-)

<Normal Phase>

Please read this instruction sheet completely before using these columns

These columns can also be used in reversed phase mode.
Please refer to the corresponding instruction sheet for details.

Switching Between RP and NP Mode

Shipping solvent of CROWNPAK CR-I(+)/CR-I(-) columns are H_2O/MeOH=95/5.

To switch from reversed phase mode to normal phase mode, and vice versa, column should be carefully flushed with miscible solvent (ethanol and 2-propanol).

Sufficient equilibration time is necessary for the stabilization of retention times when the column is switched from reversed phase mode to normal phase mode.

Operating Procedure / Normal Phase

A. Mobile phase

When developing methods, we would recommend reversed phase mode as a first choice. Normal phase mode is a second choice.

Primary solvent	Alkane❶/EtOH❷/TFA❸/H_2O❹
Typical starting conditions (v/v/v/v)	50 / 50 / 0.5 / 0.5
Advised optimisation range (v/v/v/v)	70 / 30 / 0.5 / 0.5 ~ 30 / 70 / 0.5 / 0.5

❶ Alkane = n-Hexane, iso-Hexane or n-Heptane. Some small selectivity differences may sometimes be found.
❷ The retention is generally quite shorter with Ethanol than with 2-Propanol.
❸ Use TFA at less than 1.0% to prolong column life time.
❹ By the addition of H_2O, the peak shapes can be improved. When additive amount of H_2O is so high, the mobile phase is not miscible. Maximum additive amount allowed of H_2O is depending on the kinds and proportion of alcohol. In the case of n-Hexane / EtOH = 50 / 50 (v/v), the additive amount of H_2O is up to 3.0%.

Column Care / Maintenance

- When washing is required, use the solvent which can dissolve the sample such as pure methanol or ethanol at 0.2 mL/min for about 2 hours (room temperature).
- The column should be immediately flushed with a mobile phase without the TFA and H_2O after the use.
- n-Hexane / ethanol = 50 / 50 can be used as a storage solvent when used continuously under normal phase.

Refer to instruction sheet for reverse phase and column care/maintenance.

Operating these columns in accordance with the guidelines outlined here will result in a long column life.

⇨ If you have any questions about the use of this column, or encounter a problem, contact:

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