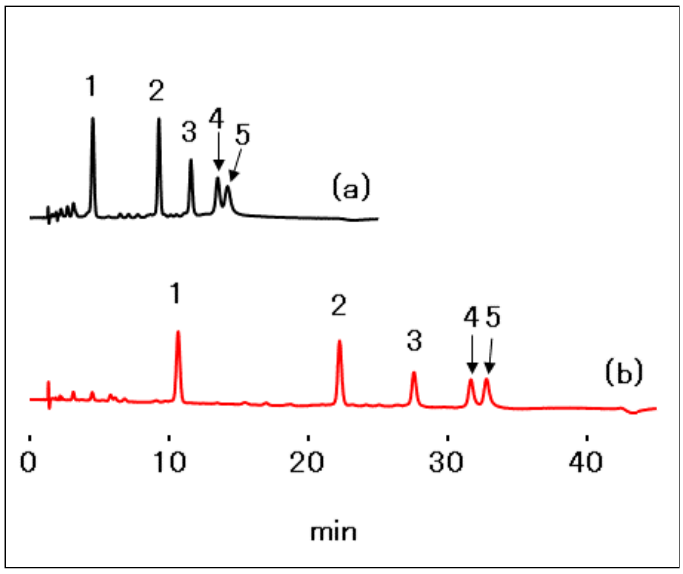
Analysis of 10 - 50mer Oligo-DNAs (VN-50 2D)

Synthetic oligo-DNAs of 10, 20, 30, 40, and 50mer were analyzed using HILICpak VN-50 2D. Under the given condition, the oligo-DNAs eluted in an order of shorter to longer-chains. Optimization of the gradient condition improved the separations of longer chain oligo-DNAs. A simple analytical condition used in this application does not require ion-pair reagents nor highly concentrated salts for the separation and analysis of oligo-DNAs.



Sample : 0.02 mg/mL each (in H_2O), 1 μL
1. Synthesized oligo-DNA 10mer(crude),
TTCTTCGGAA
2. Synthesized oligo-DNA 20mer(crude),
CTTCTCATGGTTCTTCGGAA
3. Synthesized oligo-DNA 30mer(crude),
TGTTGTCATACTTCTCATGGTTCTTCGGAA
4. Synthesized oligo-DNA 40mer(crude),
CCACACCGGCTGTTGTCATACTTCTCATGGTTCTTCGGAA
5. Synthesized oligo-DNA 50mer(crude),
GACAACAGCCCCACACCGGCTGTTGTCATACTTCTCATGGTTCTTCGGAA

Column	:	Shodex HILICpak VN-50 2D (2.0 mm I.D. x 150 mm)
Eluent	:	(A) 50 mM $HCOONH_4$ aq. (pH9.8) / (B) CH_3CN
		Linear gradient ;
		(a) 60 % B (0 min) to 50 % B (10 to 20 min) to 60 % B (20.01 to 25 min)
		(b) 65 % B (0 min) to 45 % B (10 to 20 min) to 65 % B (20.01 to 25 min)
Flow rate	:	0.2 mL/min
Detector	:	UV (260 nm) (small cell volume)
Column temp.	:	40 °C