

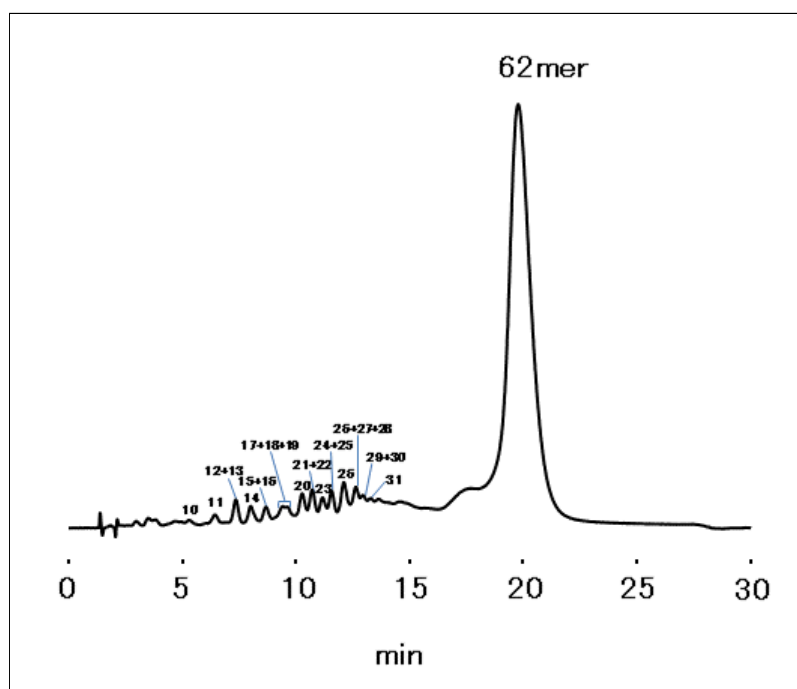


Analysis of Oligo-DNAs (VN-50 2D) Oligonucleic Acids Analysis of Oligo-DNAs (VN-50 2D)

In this application, we used a HILICpak VN-50 2D to analyze unrefined product of synthetic 62-mer oligo-DNA. Under the set condition, oligo-DNAs eluted in the order of smaller to larger degree of polymerization. Up to about 30-mer oligo-DNAs are separated by this method.

Ion-pair reversed phase and ion exchange modes are often used to analyze oligonucleotides. However, deposition of ion-pair reagent on the column can be a problem. Meanwhile, ion exchange mode requires to use an eluent with high salt concentration, which is not ideal for MS detection.

The VN-50 2D allows a simple analytical condition, without ion-pair reagent nor highly concentrated salt, to separate and analyze oligonucleotides.



Sample : 1 μ L

Synthesized oligo-DNA 62mer (crude) 2.8 mg/mL (in H₂O)

CATGAGAAGTATGACAACAGCCCCACACCGGCTGTTGTCATACTTCTCATGGTTCTTCGGAA

Column	: Shodex HILICpak VN-50 2D (2.0 mm I.D. x 150 mm)
Eluent	: (A); 50 mM HCOONH ₄ aq./ (B); CH ₃ CN Linear gradient ; (B %) 60 % (0 to 10min), 60 % to 50 % (10 to 25min), 60 % (25.01 to 30min)
Flow rate	: 0.2 mL/min
Detector	: UV (260 nm) (small cell volume)
Column temp.	: 40 °C

