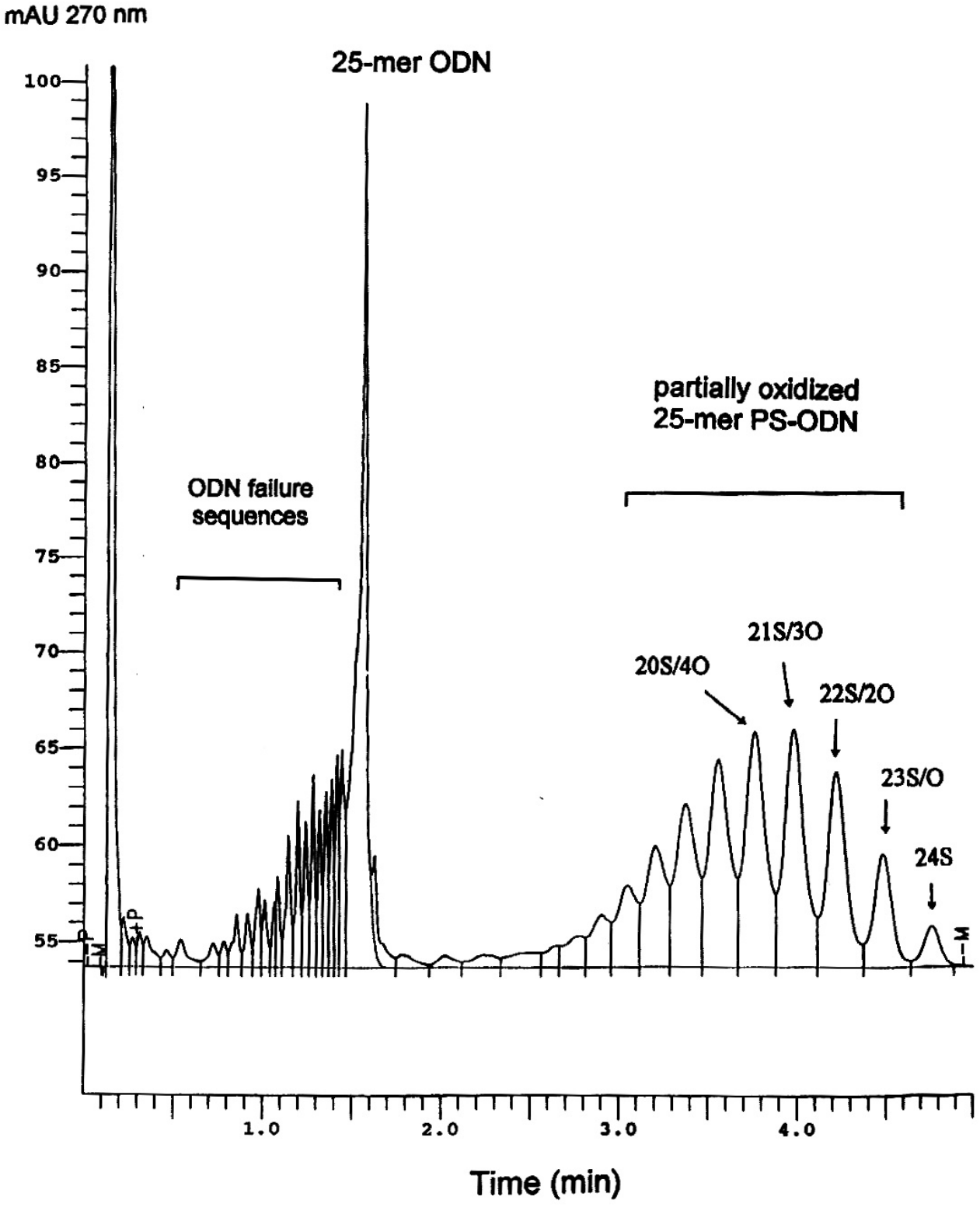
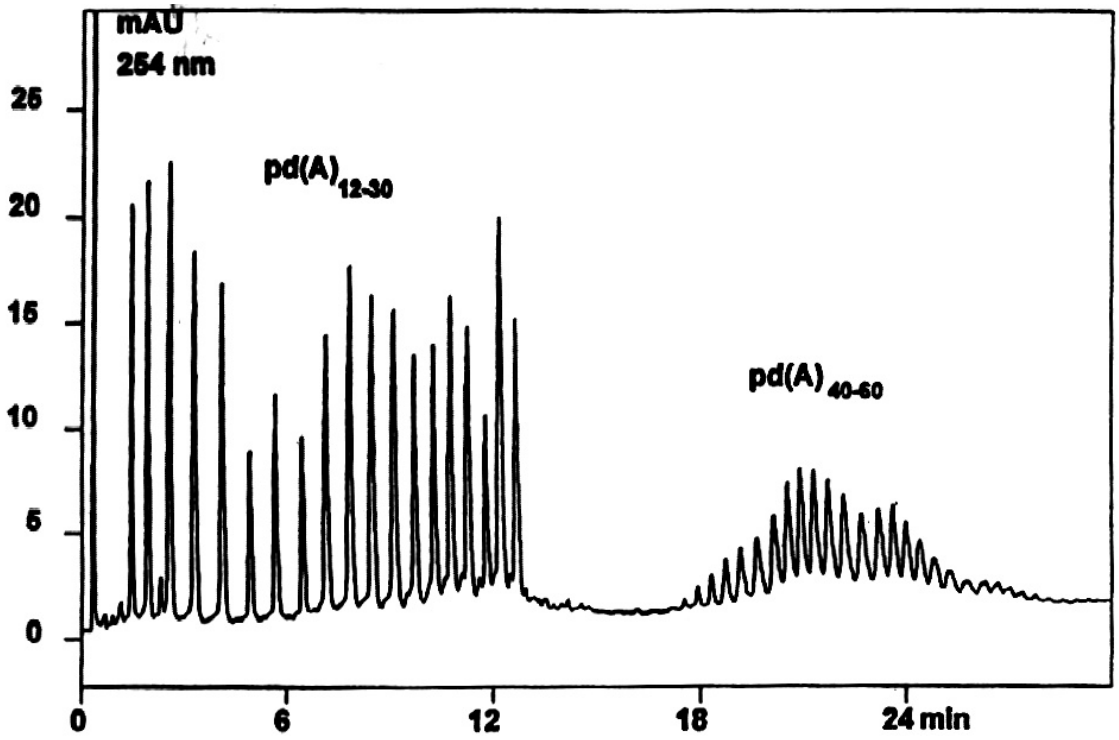
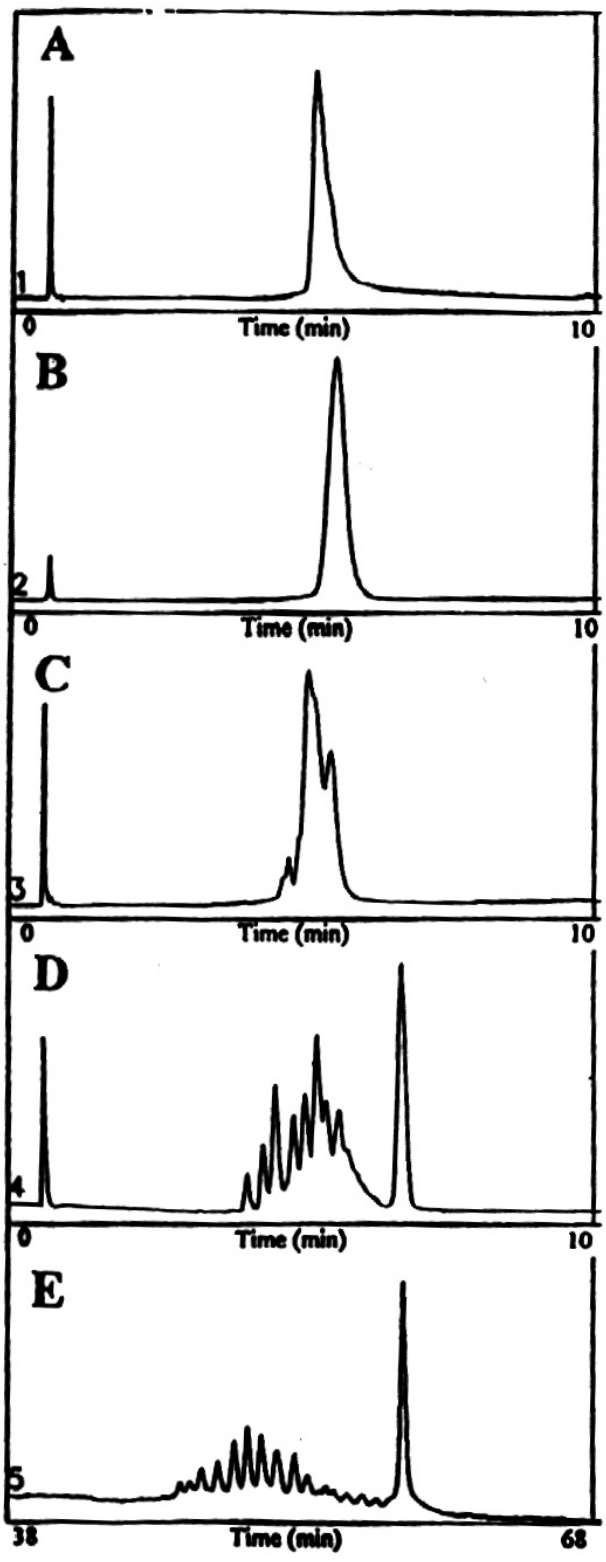


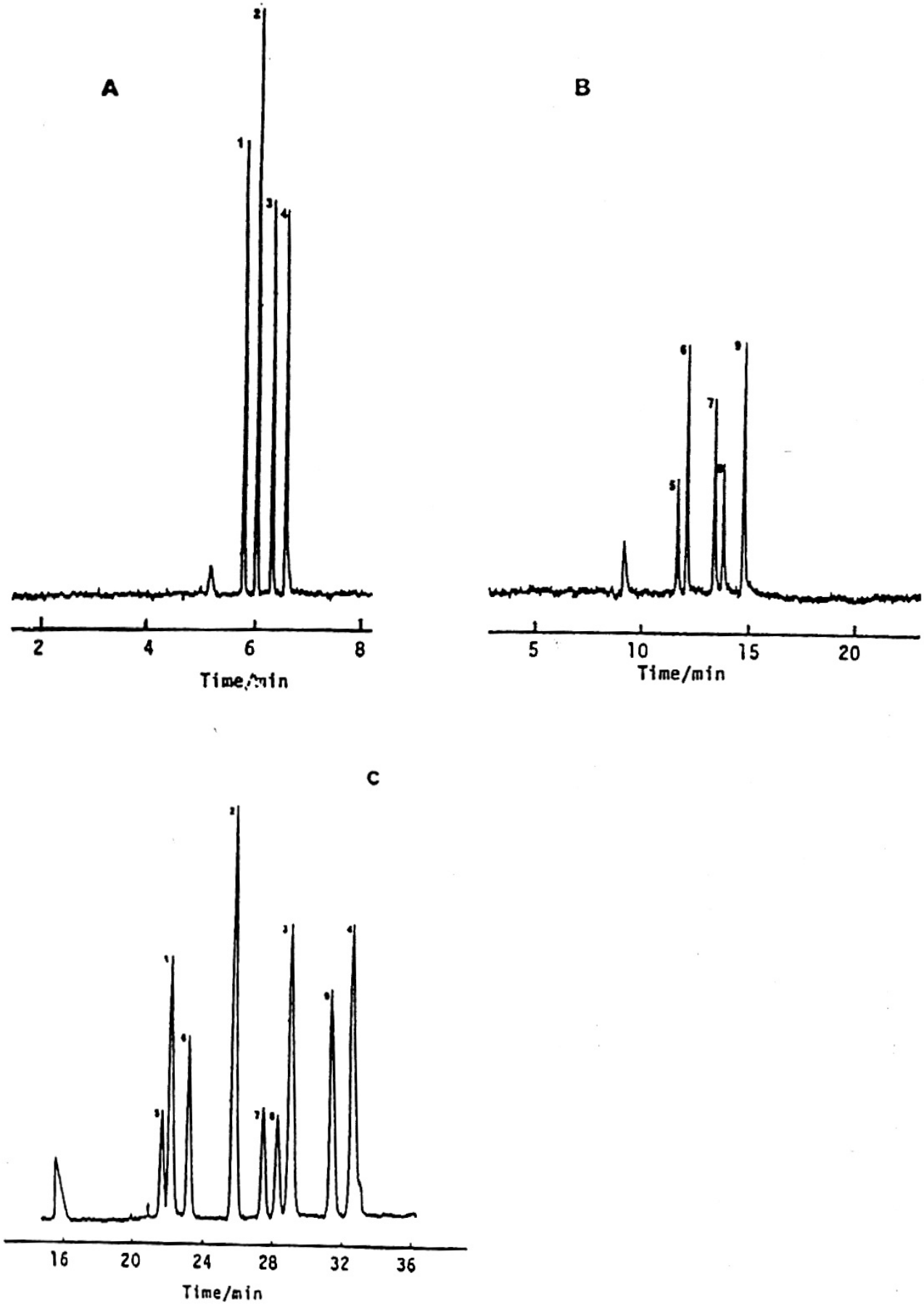
Strong anion exchange (Nucleopac PA 100, 50 × 4 mm, 12.5 m particles) HPLC separation of synthetic 25-mer ODN from failure sequences. The PS-ODN 25-mer with the identical sequence was oxidized by glycidol. The parent 25-mer PS ODN has 24 internucleotide phosphorothioate linkages. Single oxygen-to-sulfur substitution products were separated and collected, and the oligomer mass was confirmed by MALDI-TOF MS.



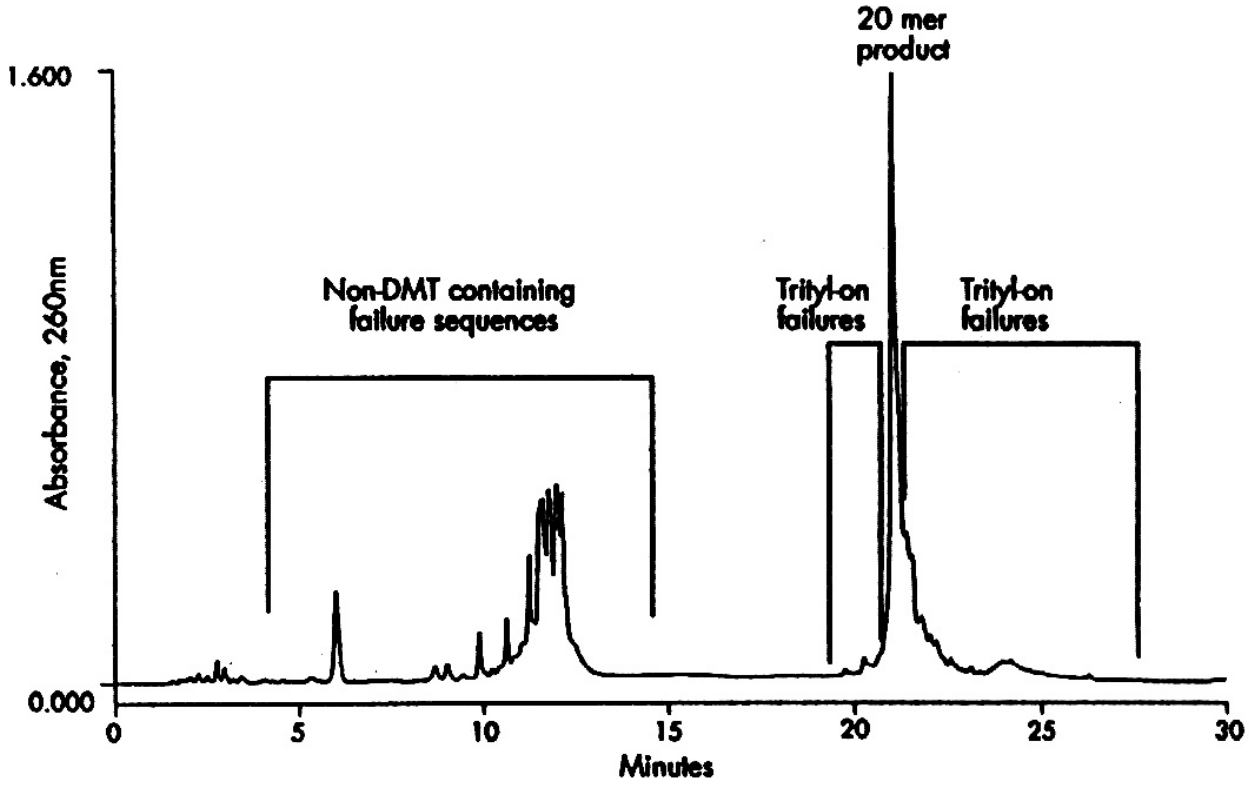
Separation of poly(dA)$_{12-30}$ and poly(dA)$_{40-60}$ on a reverse-phase HPLC column packed with non-porous (2.1 m) poly(styrene-divinylbenzene) sorbent.



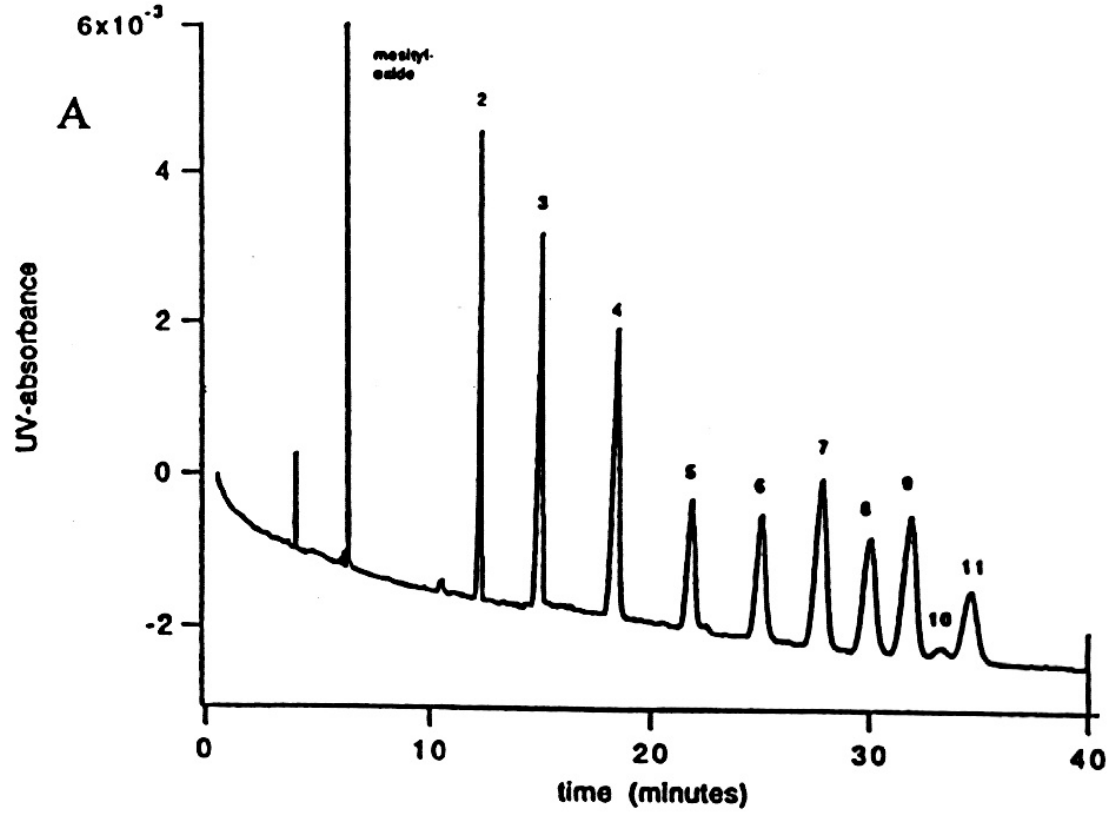
Resolution of phosphorothioate oligonucleotide failure sequences by different techniques. (A) reversed-phase HPLC at low pH, (B) reversed-phase HPLC at pH 6.5 (C) ion-pair HPLC, (D) ion-exchange HPLC, and (E) capillary gel electrophoresis.

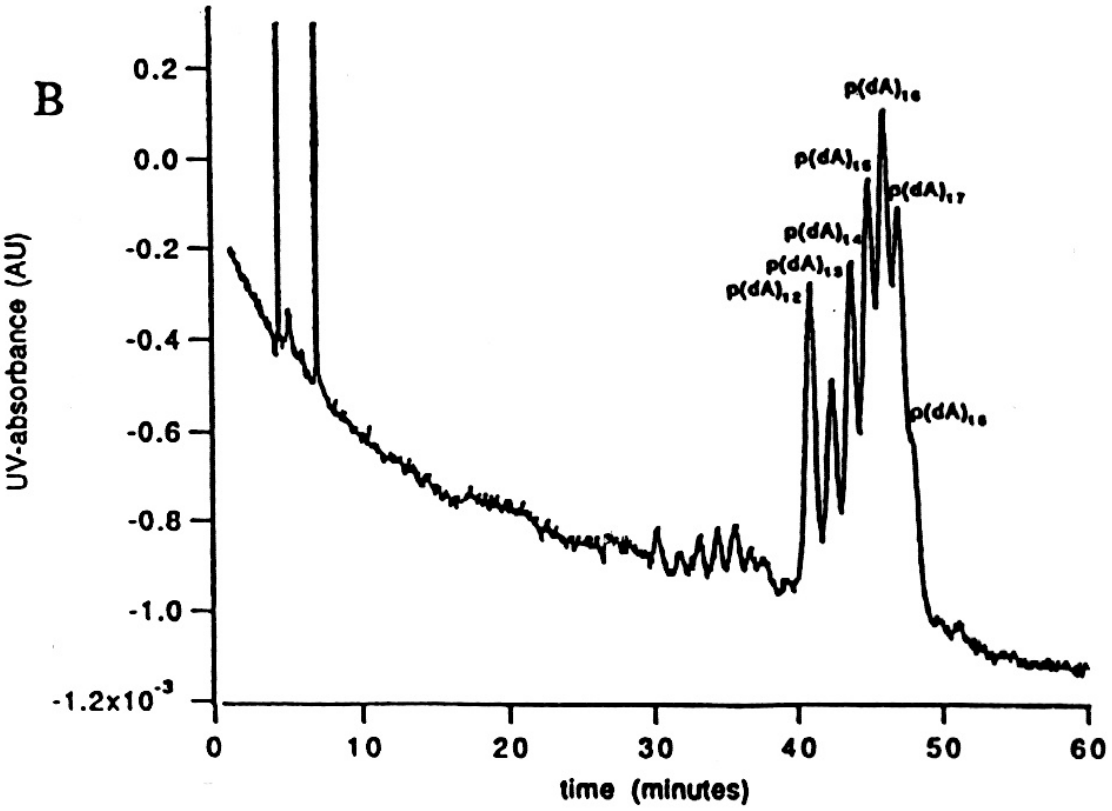


(A) Separation of bases: (1) U, (2) C, (3) T, (4) A; buffer, 0.025 M sodium tetraborate, 0.05 M sodium dihydrogen phosphate, 0.1 M SDS, pH 7; capillary, 650 mm × 0.5 mm i.d., effective length 500 mm; applied voltage, 14 kV, 50 μA; detection wavelength, 210 nm. The system was air controlled at 35°C. (B) Separation of nucleosides: (5) uridine, (6) cytidine, (7) dT, (8) guanosine (9) adenosine. Conditions as in part A except 0.2 M SDS and 9.5 kV applied voltage, 40 μA. (C) Separation of bases and nucleosides. Conditions are as given in part A except 0.3 M SDS and 5.9 kV applied voltage 30 μA.



Reverse-phase HPLC purification of a synthetic oligomer. DMT-on fragments elute later than DMT-off failure sequences.





Separation of short homo-oligodeoxynucleotides (A) $p(dT)_{2\text{-}11}$ and (B) $p(dA)_{12\text{-}18}$ by MECC using SDS as a micellar agent.