

Synthesis of “clickable” m₃G-CAP analogues.

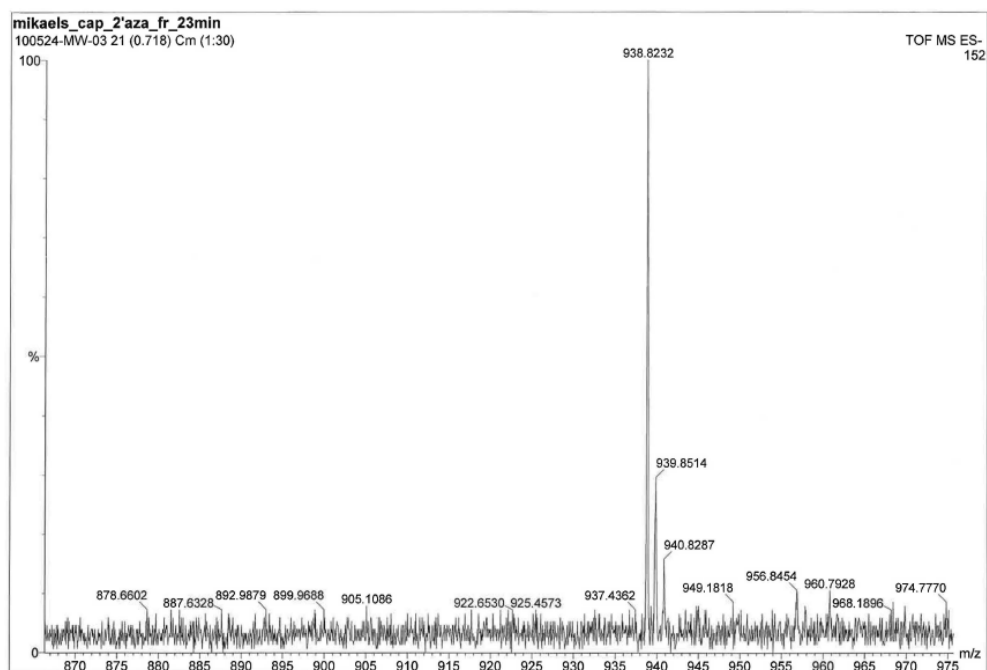
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Supplementary information

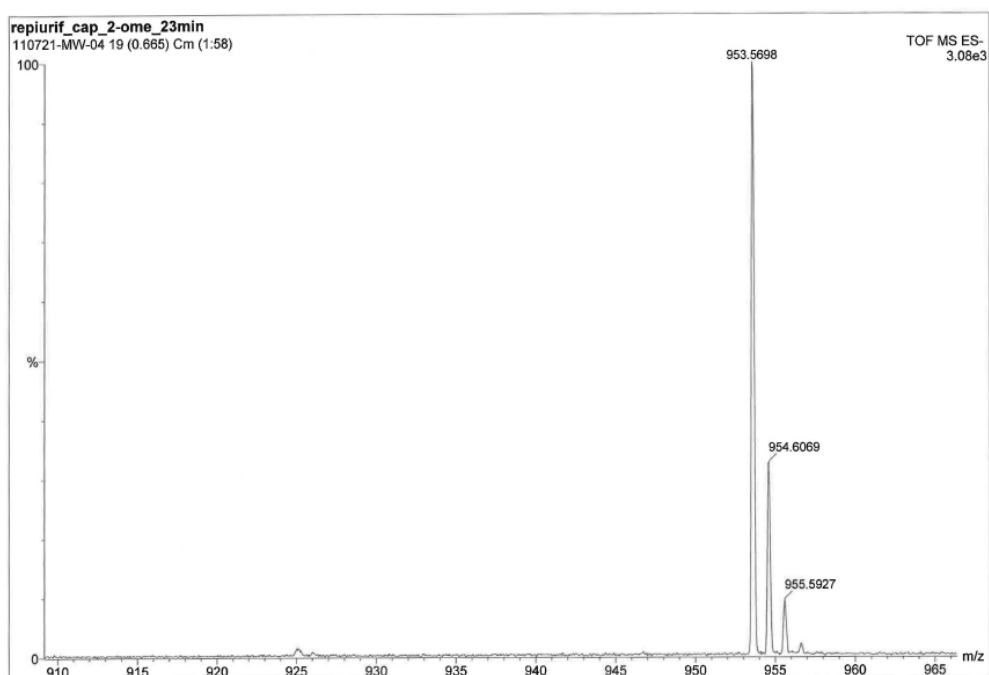
1. Mass spectra of m₃G-CAP constructs 1-4.
2. HPLC Chromatograms showing examples of crude reaction mixtures after capping of clickable mono and trinucleotides.
3. HPLC Chromatogram showing crude oligonucleotide (ON)-PATA conjugate.
4. Mass spectra of ON-PATA conjugate.
5. Additional HPLC Chromatograms showing examples of crude reaction mixtures after conjugation of the 18merRNA with the clickable m₃G-CAP's.
6. Mass spectra of 18merRNA-m₃G-CAP1-4 ON conjugates.
7. Mass spectra of 5'-phosphate-AUA(5)-ON conjugate.
8. Mass spectra of compounds 20 and 21.

1. Mass spectra of m₃G-CAP analogues 1-4.

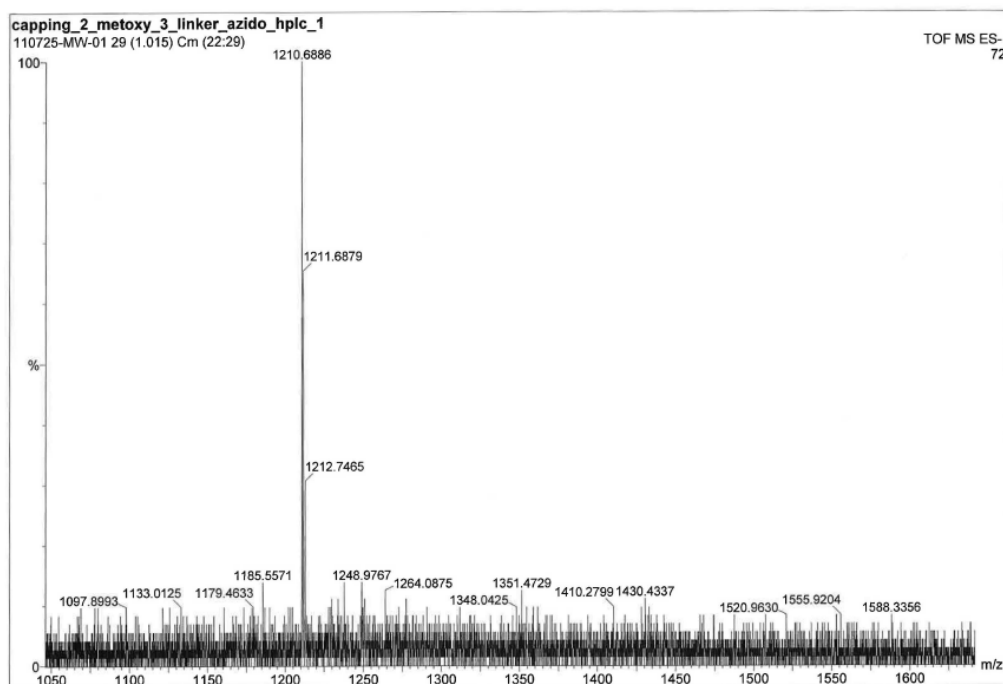
m₃G-CAP analogue 1: (MS(ES⁺TOF) m/z) [M]⁺ m/z calculated: 939.17, found: 938.82;



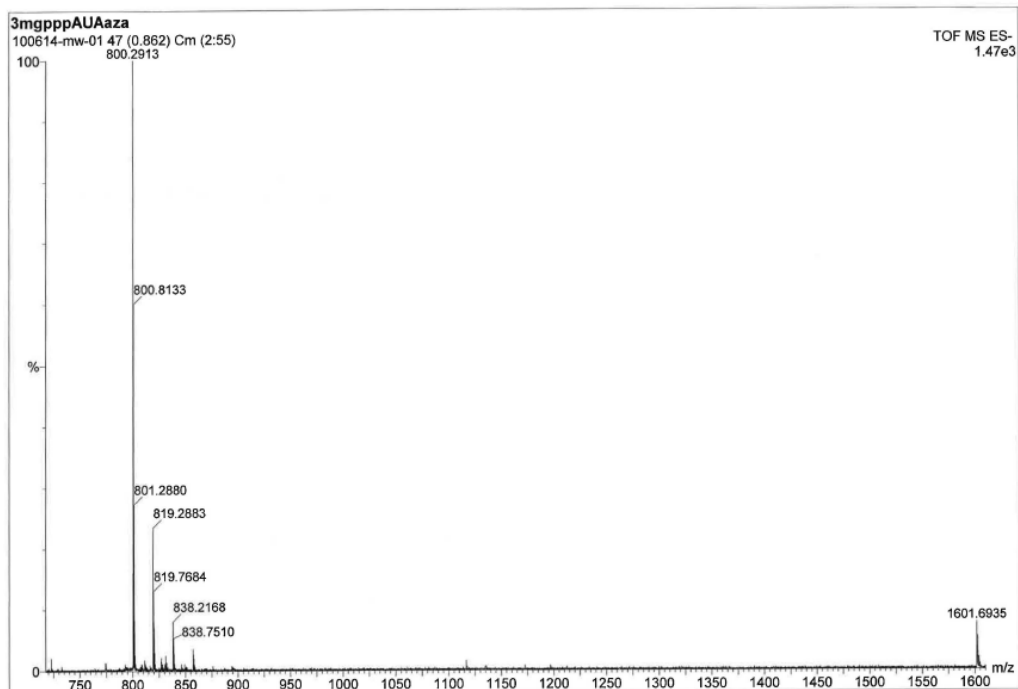
m₃G-CAP analogue 2: (MS(ES⁺TOF) m/z) [M]⁺ m/z calculated: 953.19, found: 953.56;



m₃G-CAP analogue 3: (MS(ES⁺TOF) m/z) [M]⁻¹ m/z calculated: 1210.27, found: 1210.68;



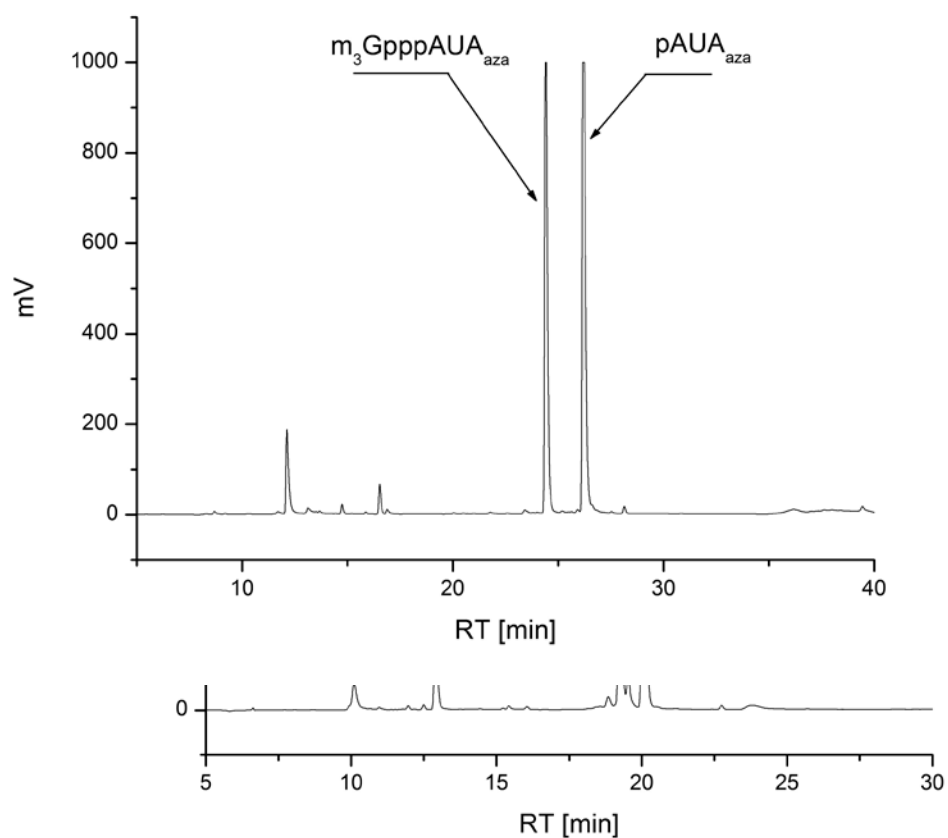
m₃G-CAP analogue 4: (MS(ES⁺TOF) m/z) [M]⁻¹ m/z calculated: 1602.28 found: 1601.69;



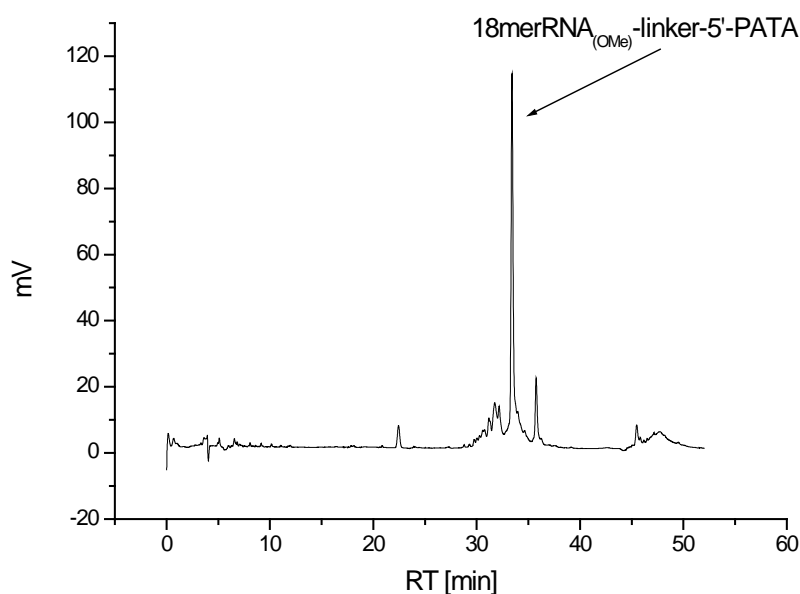
2. HPLC Chromatograms showing examples of crude reaction mixtures after capping of clickable mono and trinucleotides.

a) HPLC chromatogram of crude reaction mixture in synthesis of m3G-Cap construct 3.

a) HPLC chromatogram of crude reaction mixture in synthesis of m3G-Cap construct 4.

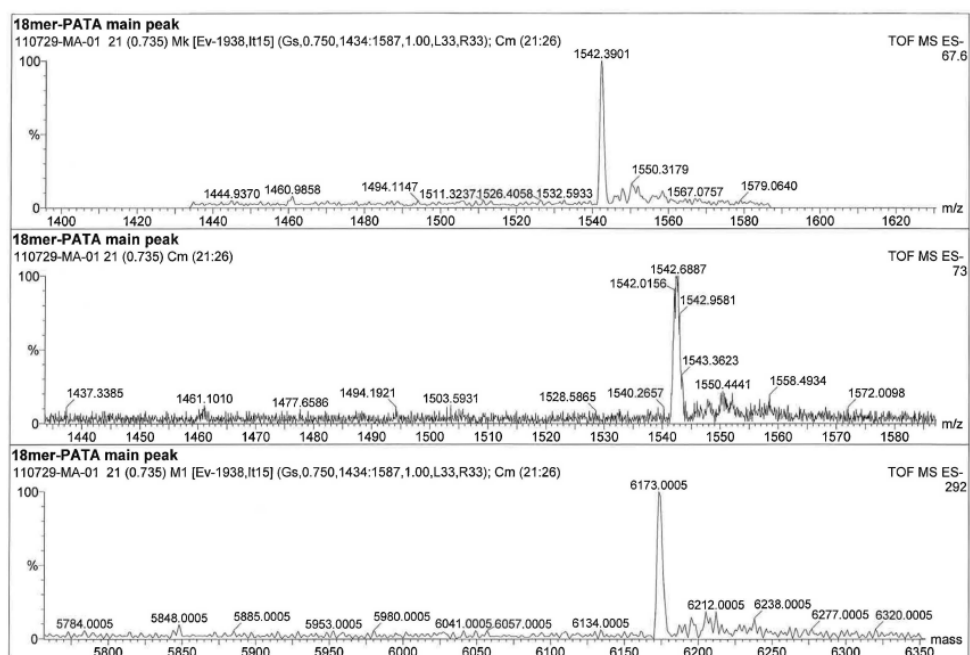


3. HPLC Chromatogram showing crude ON-PATA conjugate (after removal from solid support with methanolic ammonia).



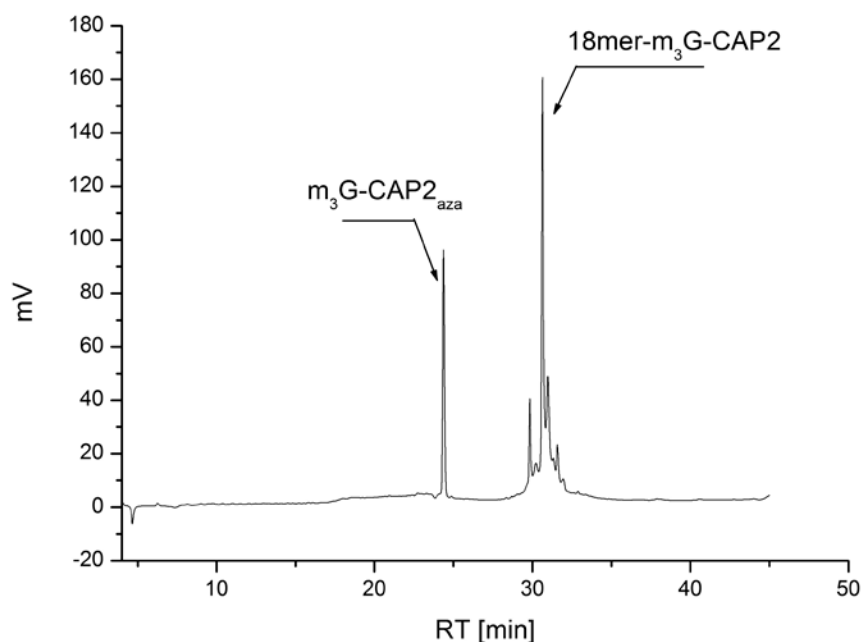
4. Mass spectra of ON-PATA conjugate. Molecular weights of the conjugates were reconstructed from the m/z values of the multiply charged ions using the mass deconvolution program (MAXENT)

ES-MS, calculated (M) 6175, found 6173

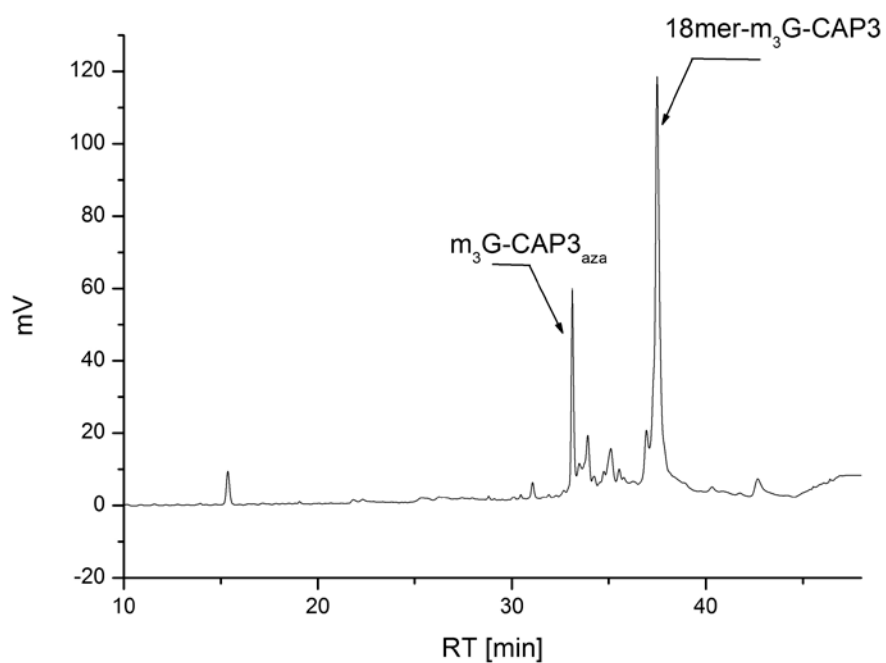


5. HPLC Chromatograms showing examples of crude reaction mixtures after conjugation of the 18merRNA with the clickable m_3G -CAP's.

a) HPLC Chromatogram of crude 18merRNA-CAP2

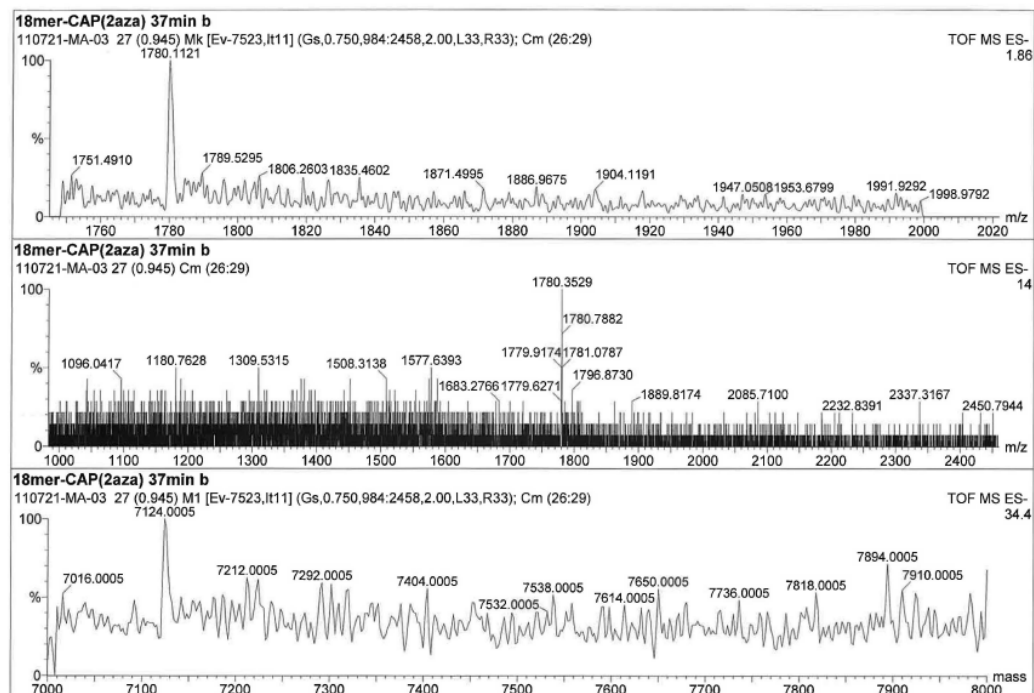


b) HPLC Chromatogram of crude 18merRNA-CAP3

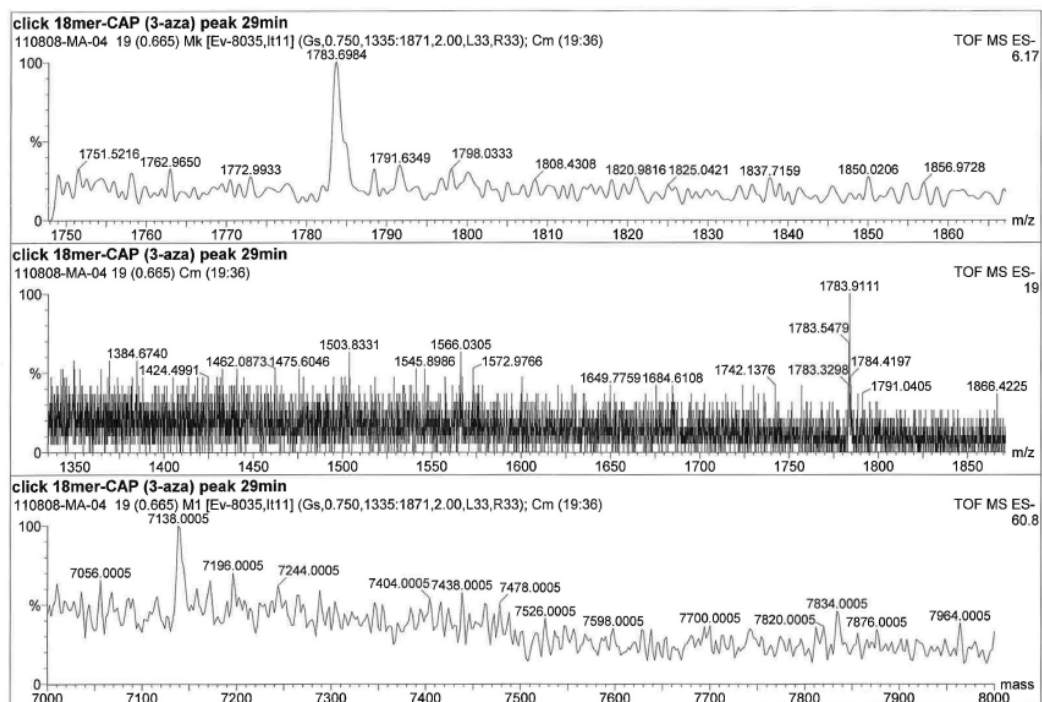


6. Mass spectra of m₃G-CAP(1-4)-ON conjugates.

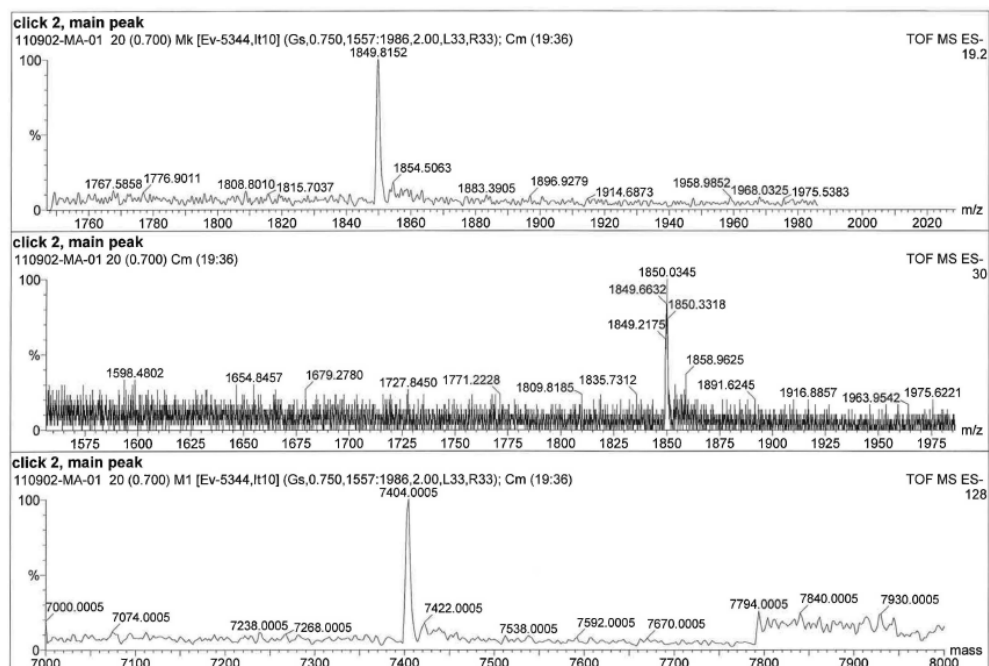
18mer-m₃G-CAP1: calculated (M) 7120, found 7124 (M).



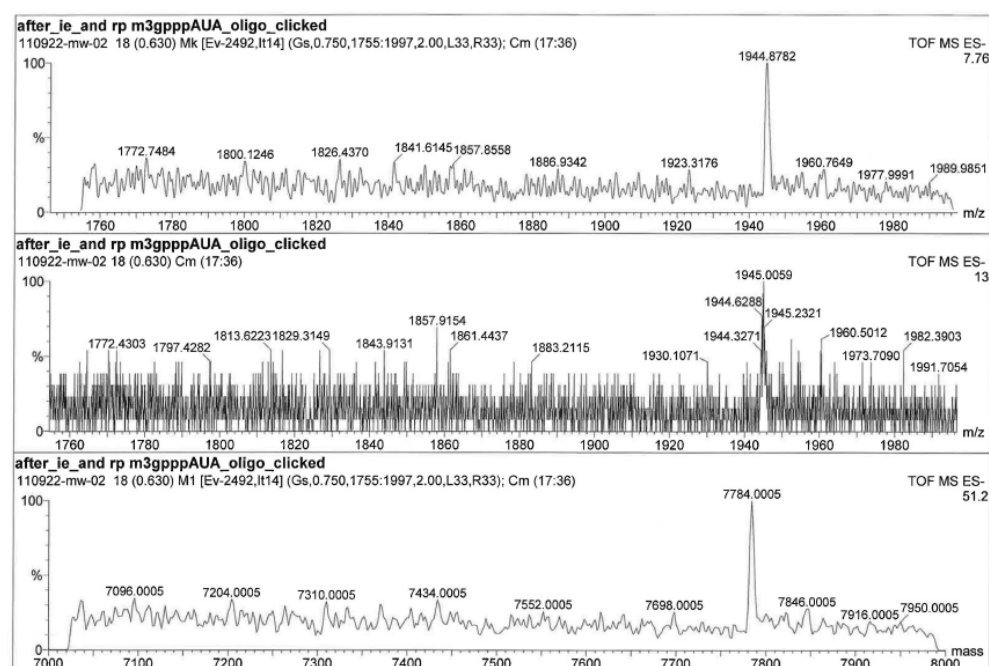
18mer-m₃G-CAP2: calculated (M) 7134, found 7138 (M),



18mer-m₃G-CAP3: calculated (M) 7405, found 7404 (M),

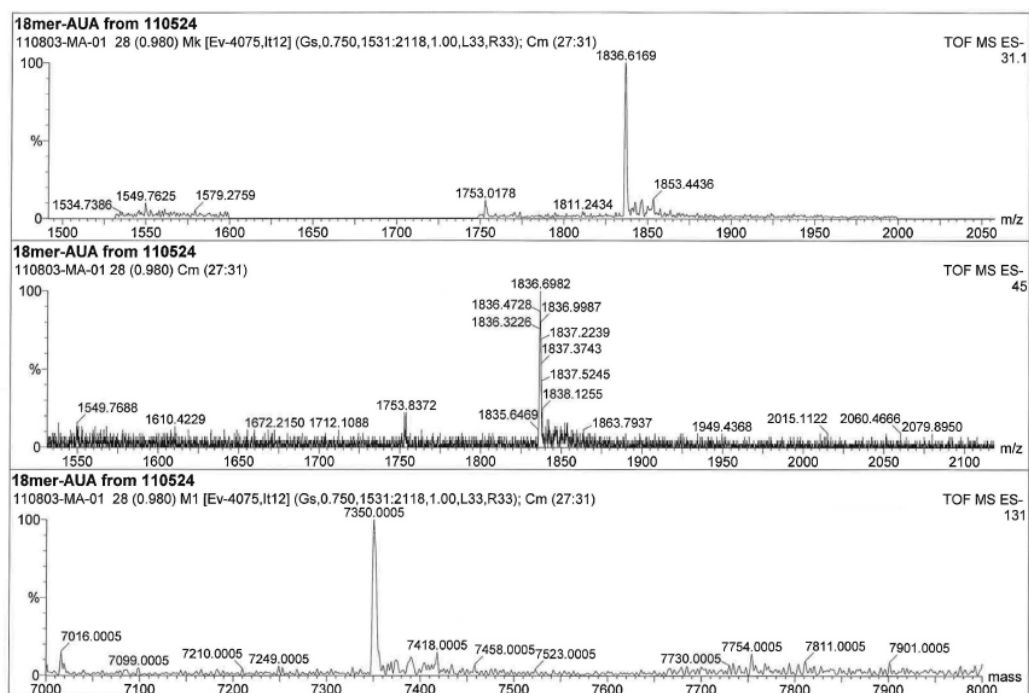


18mer-m₃G-CAP4: calculated (M) 7783, found 7784 (M).



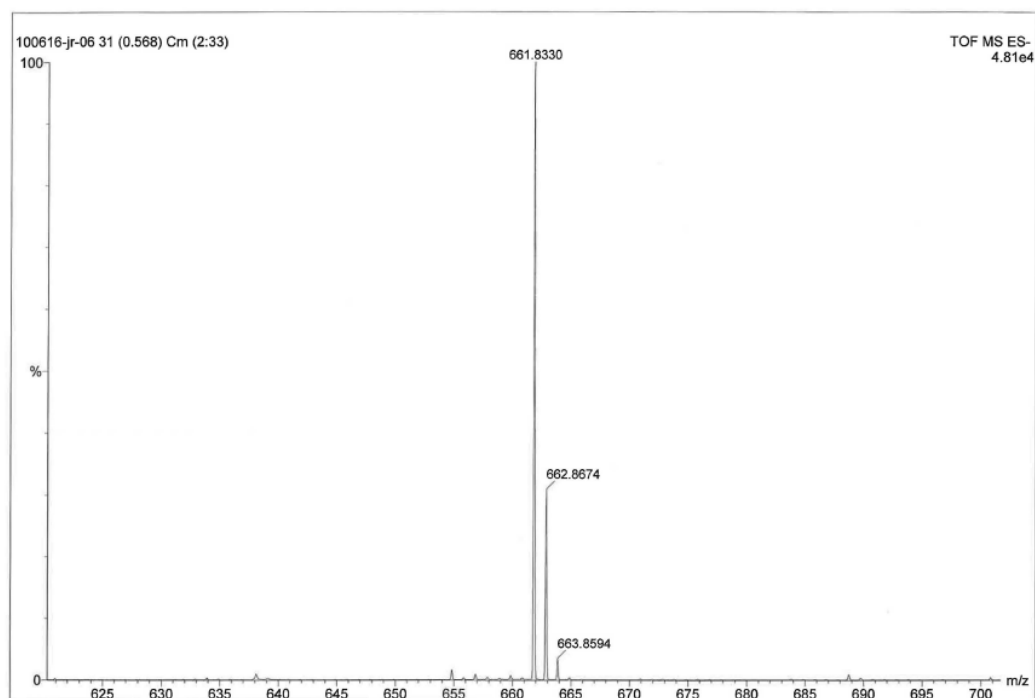
7. Mass spectra of 5'-phosphate-AUA(5)-ON conjugate.

ES-MS, calculated (M) 7315, found 7350 (M+K).



8. Mass spectra of compounds 20 and 21.

Compound 20: m/z calculated for $[M-]$: 662.23, observed mass: 661.83



Compound 21: m/z calculated for $[M-]$: 742.20, found: 742.03

