

Supporting Information

Metal Free “Click and Click-Click” Conjugation of Ribonucleosides and 2'-OMe Oligoribonucleotides on the Solid Phase

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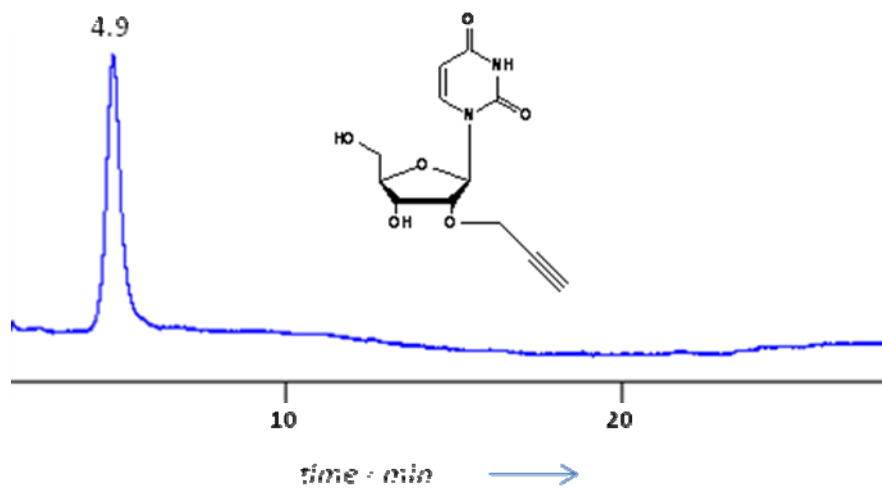


Figure 1. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) uridine-alkyne **2a**

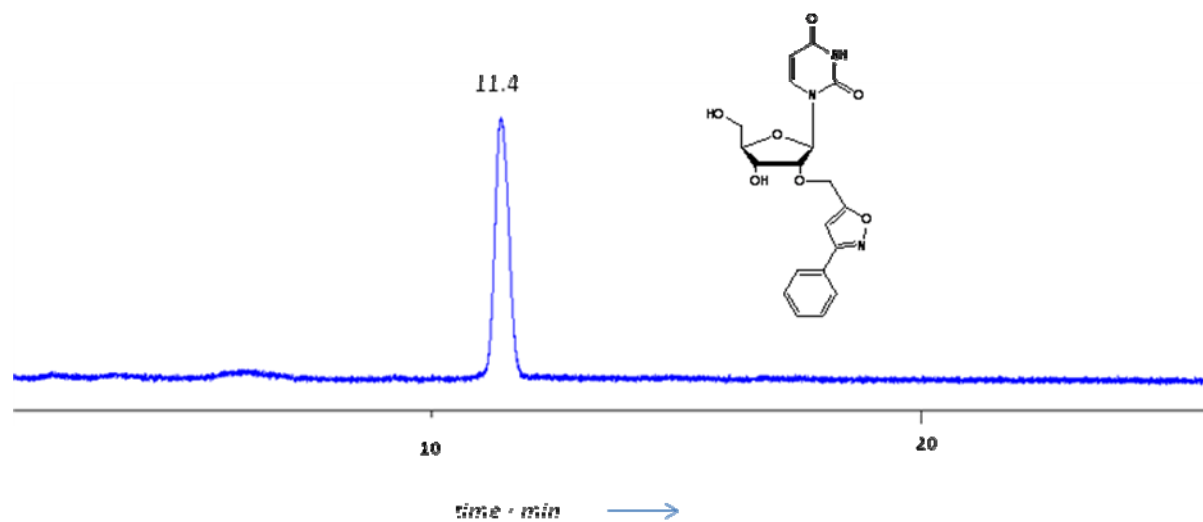


Figure 2. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) uridine-phenylisoxazole **3a**

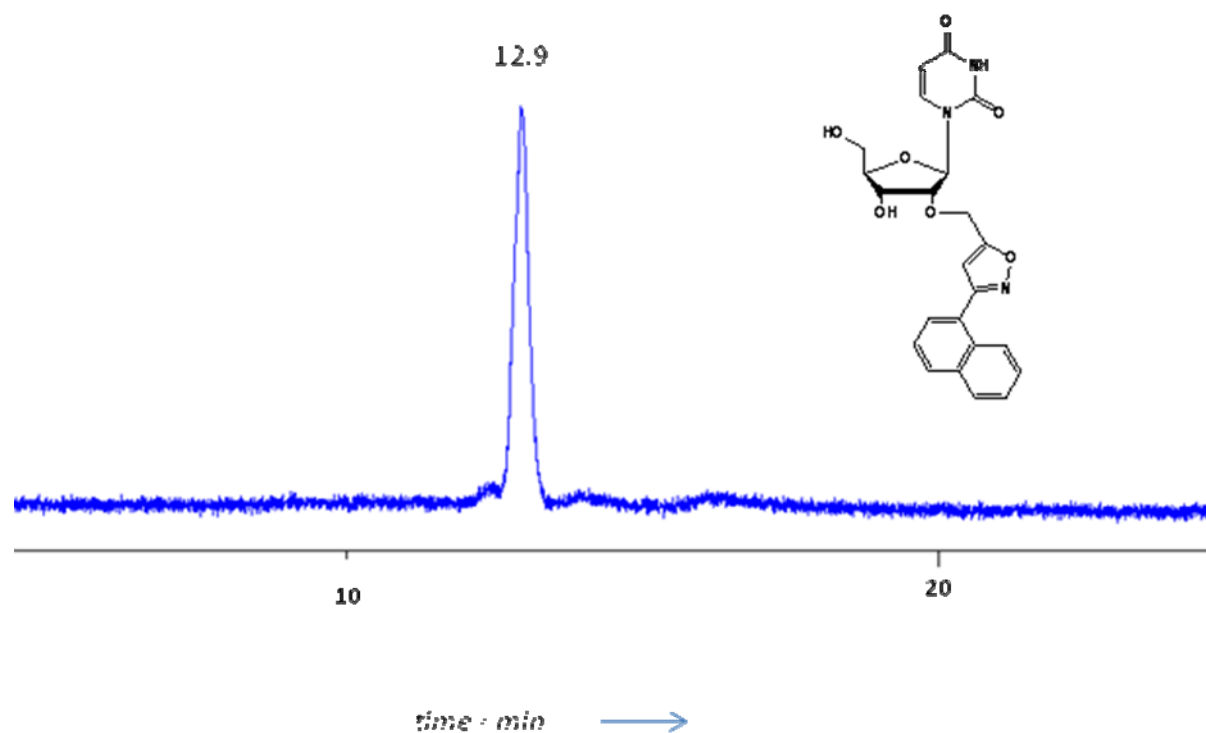


Figure 3. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) uridine-naphthylisoxazole **3b**

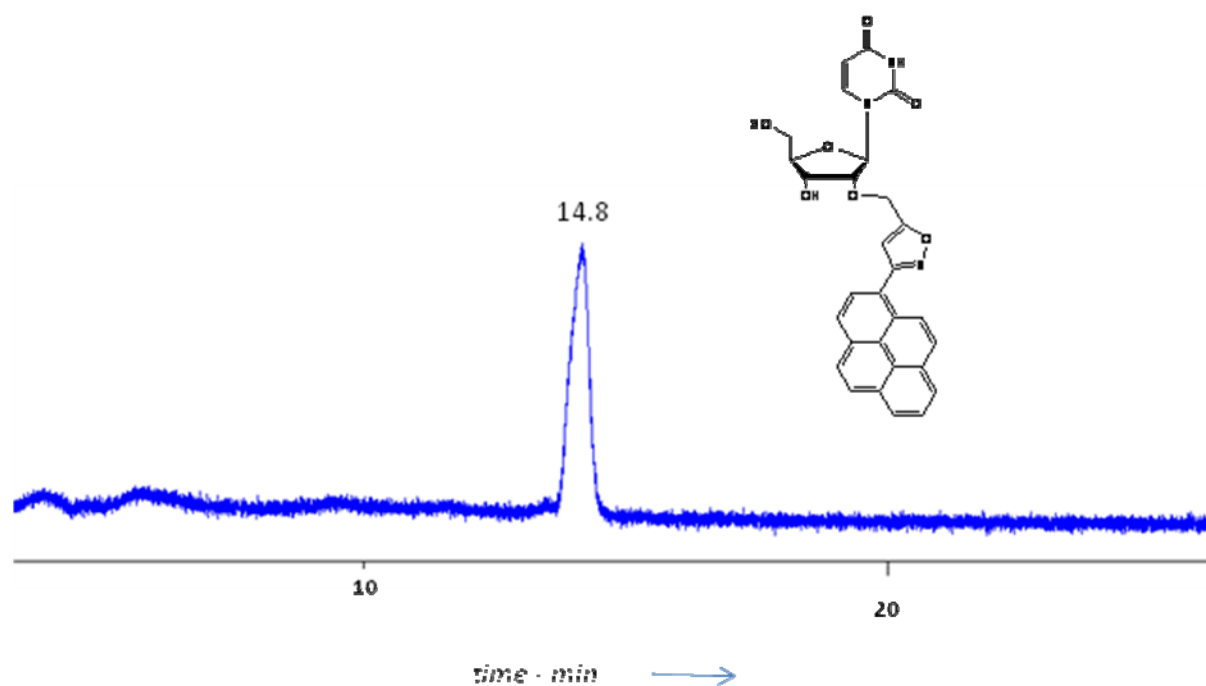


Figure 4. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) uridine-pyrenylisoxazole **3c**

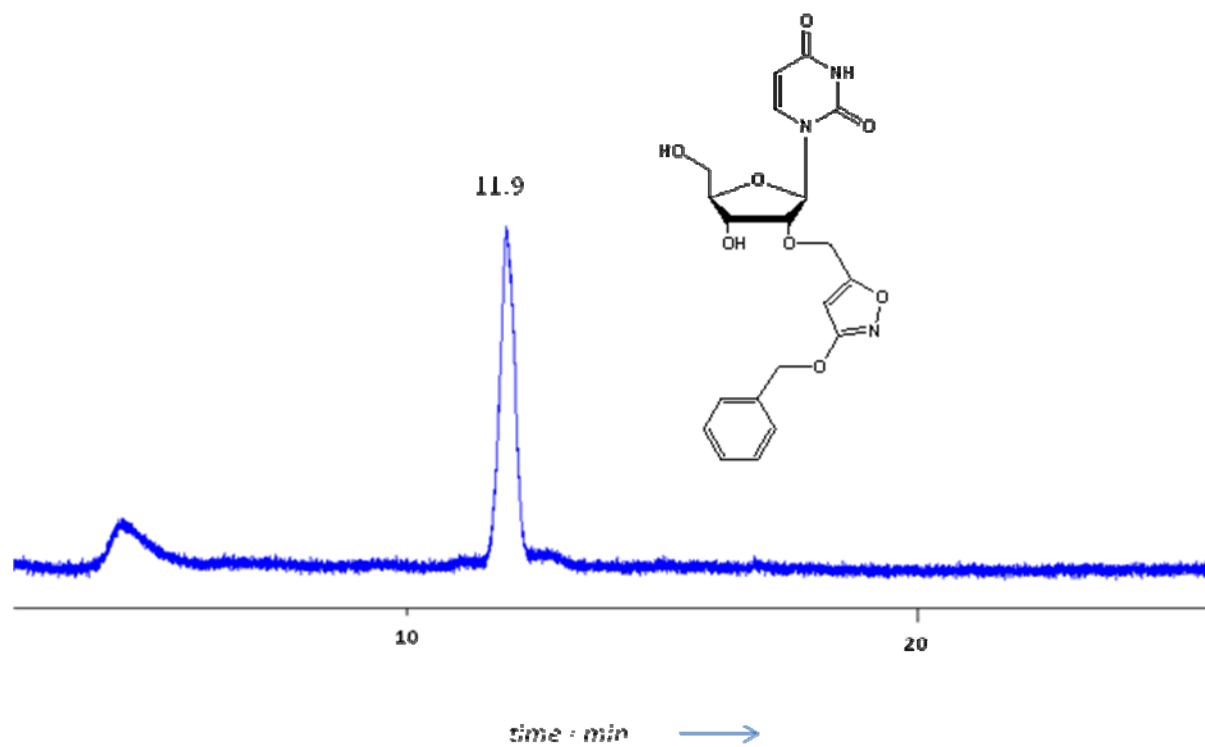


Figure 5. Reversed-phase HPLC analysis of crude reaction products [UV absorbance at 260 nm vs time] uridine-phenoxymethylisoxazole **3d**

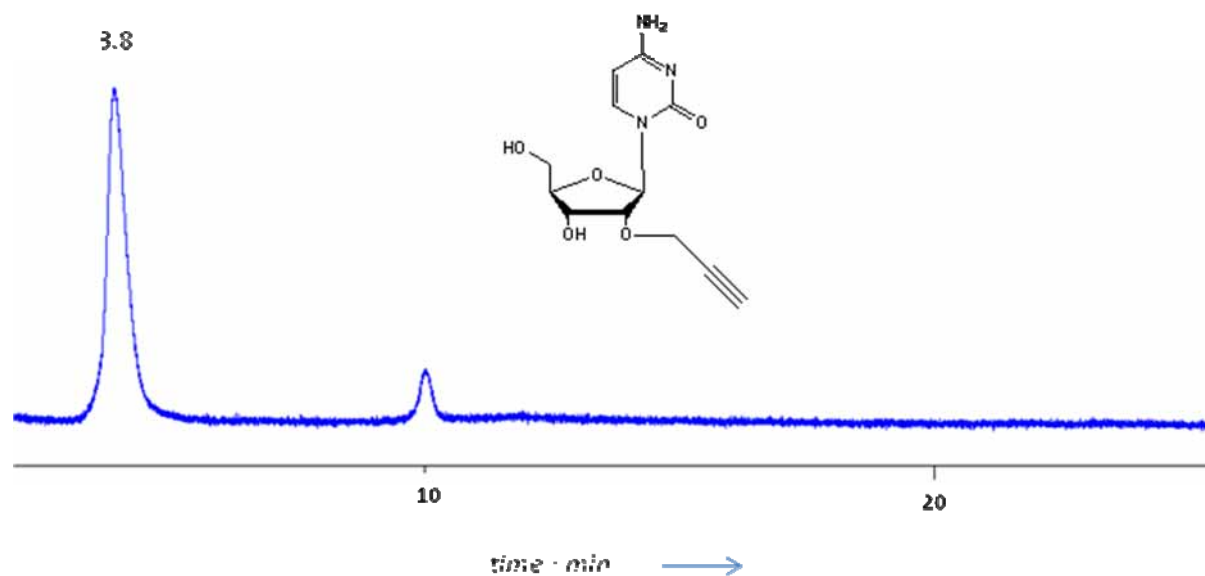


Figure 6. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) cytidine-alkyne, **2b**

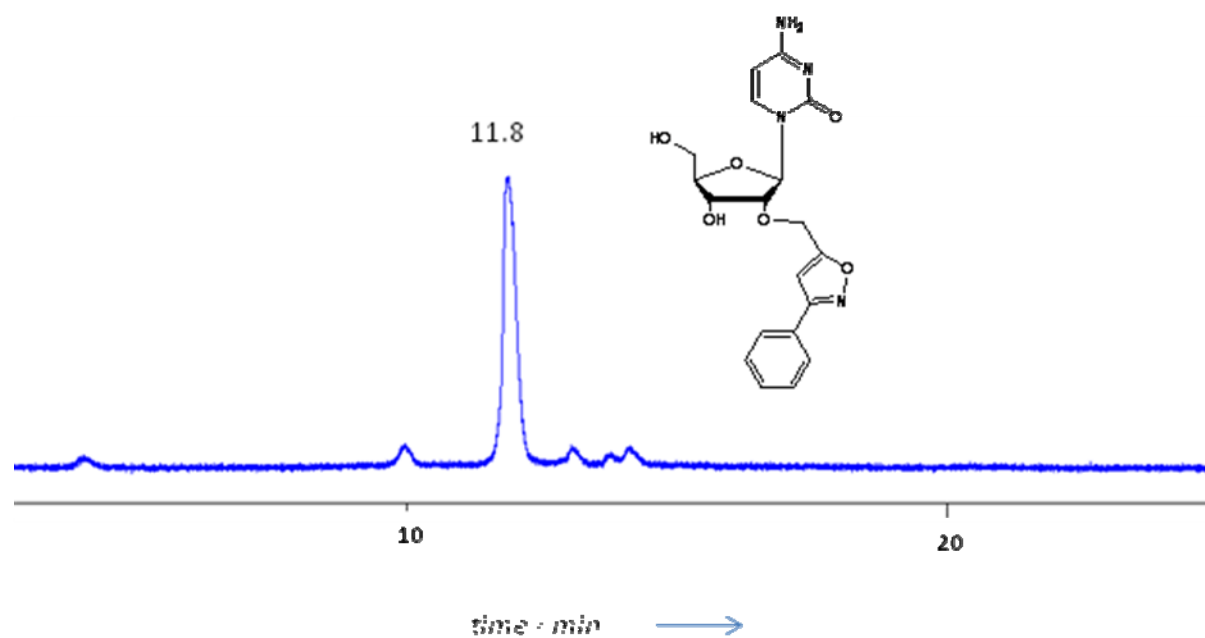


Figure 7. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) cytidinephenylisoxazole **5a**

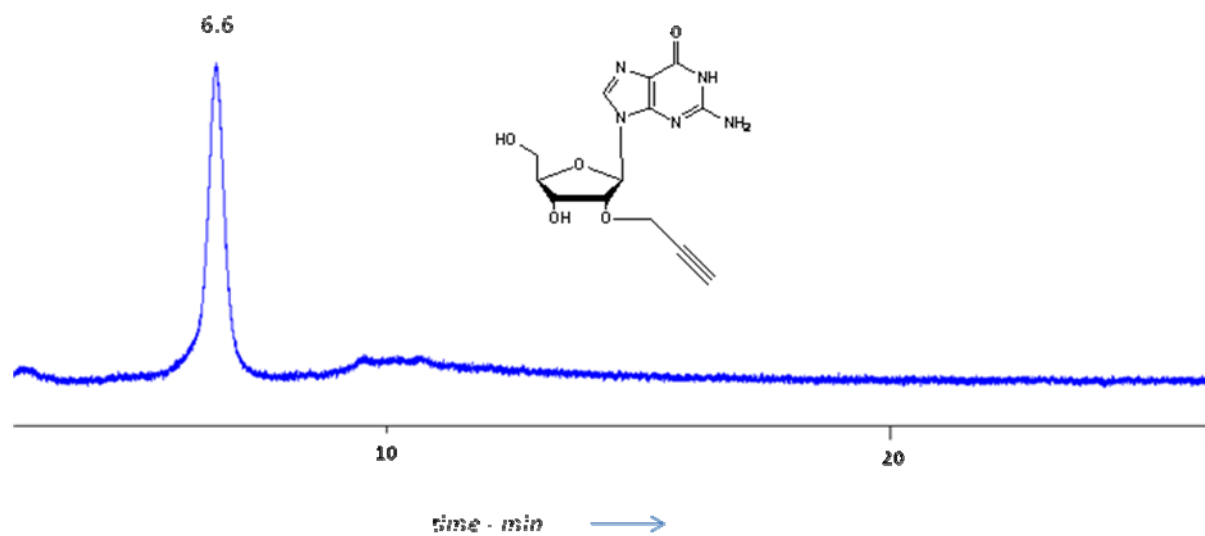


Figure 8. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) guanosine-all-yne, **2c**

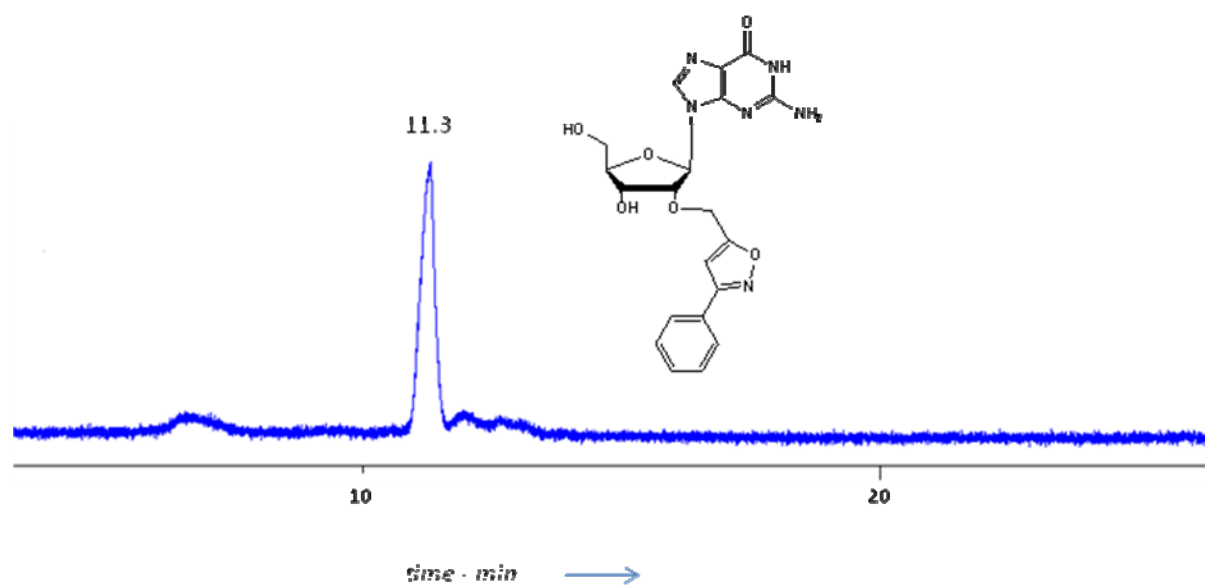


Figure 9. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) guanosinephenylisoxazole **5b**

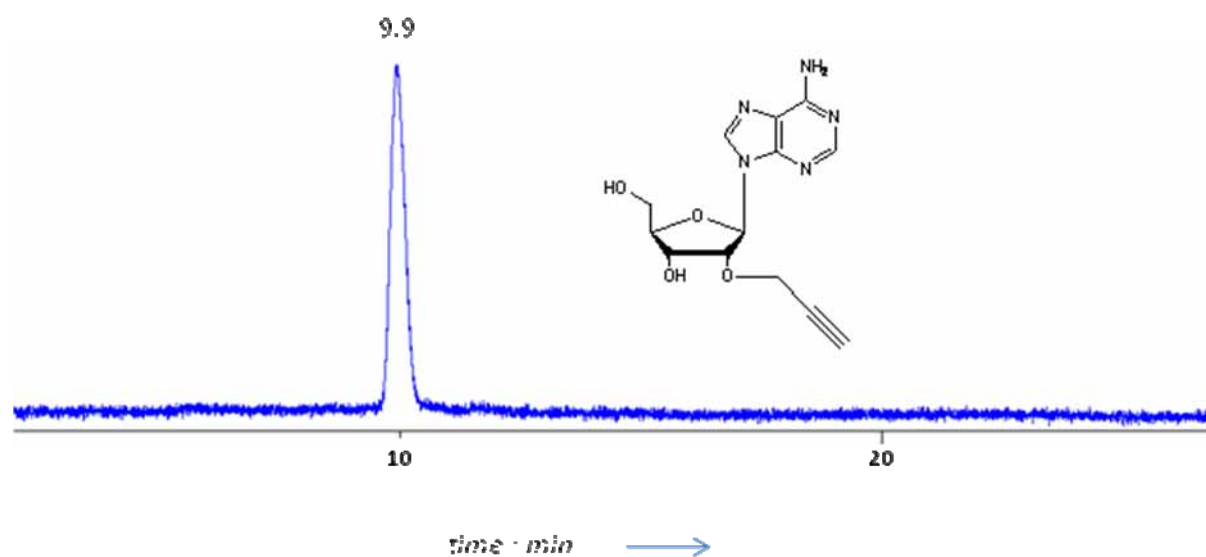


Figure 10. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) adenosine-alkyne **2d**

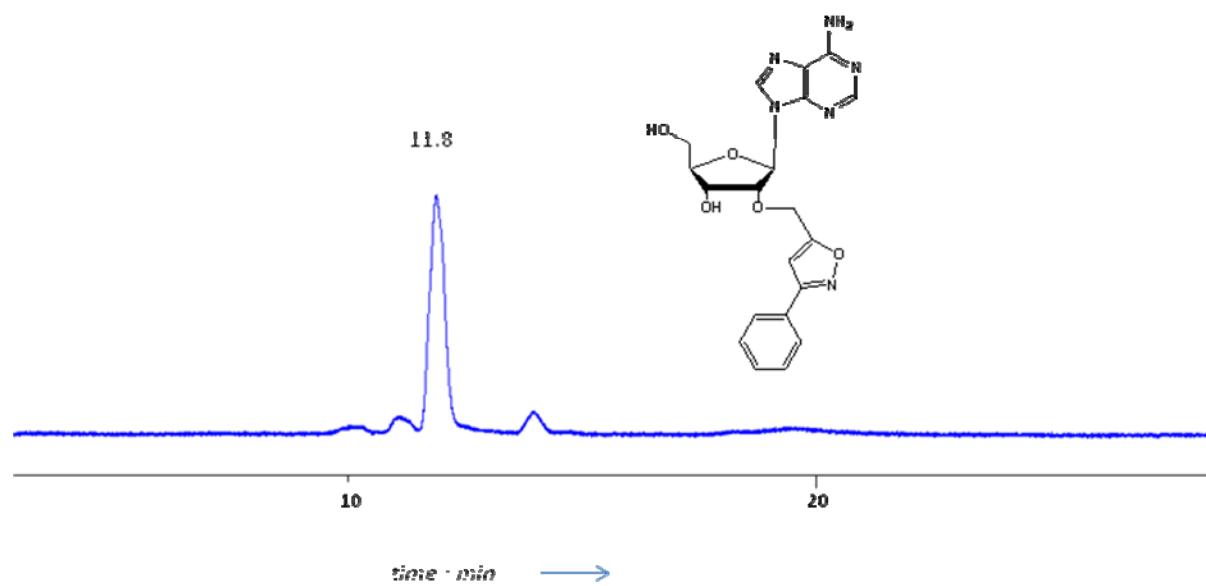


Figure 11. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) adenosinephenylisoxazole **5c**

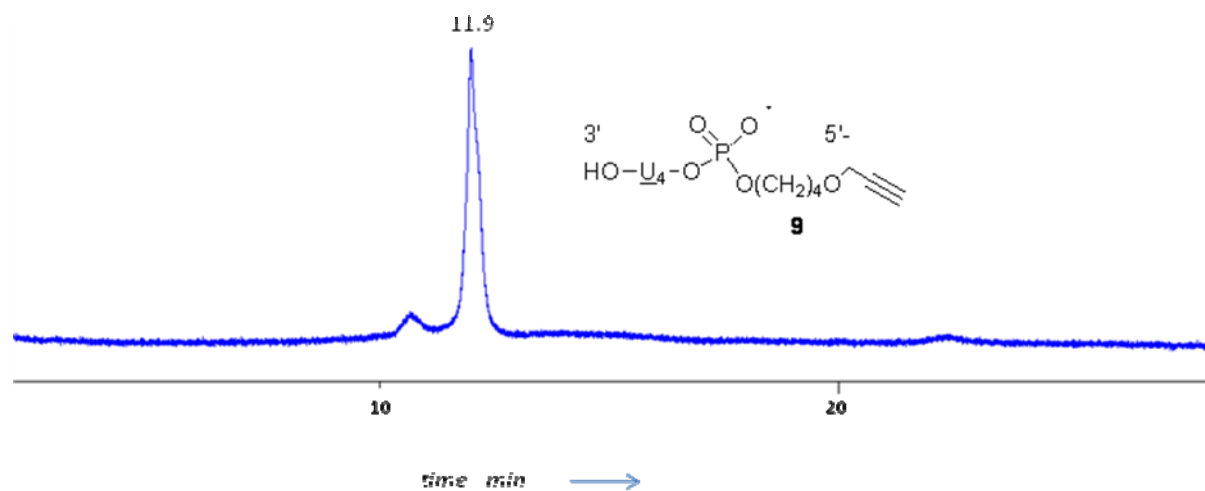


Figure 12. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) U₅-alkyne, **9** (U = 2'-methoxyuridine)

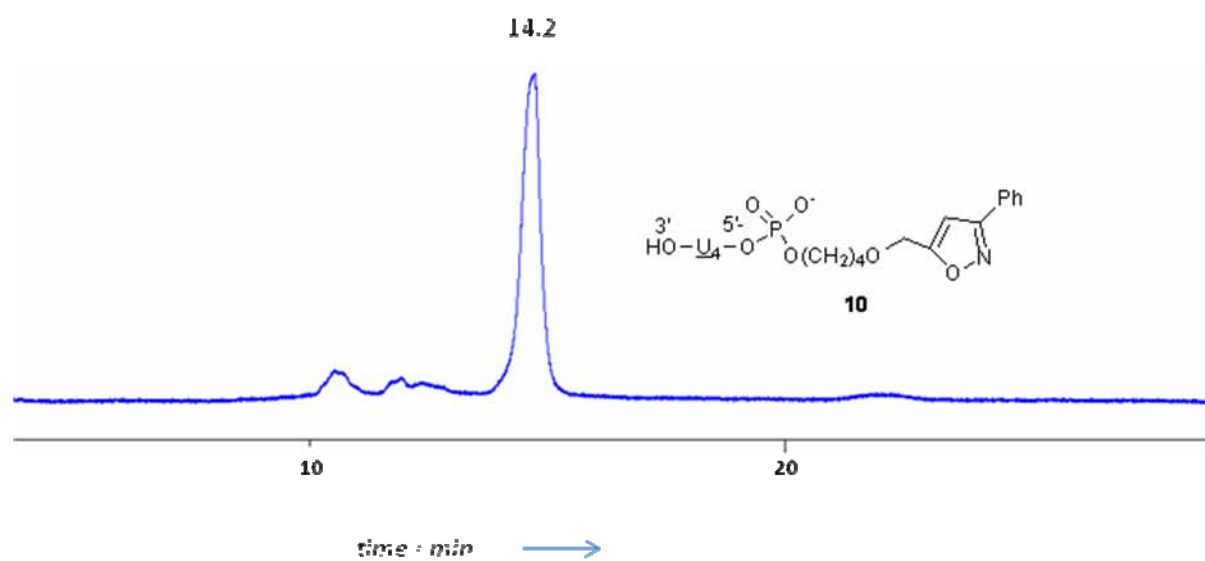


Figure 13. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) U₅-phenylisoxazole (U = 2'-methoxyuridine) **10**

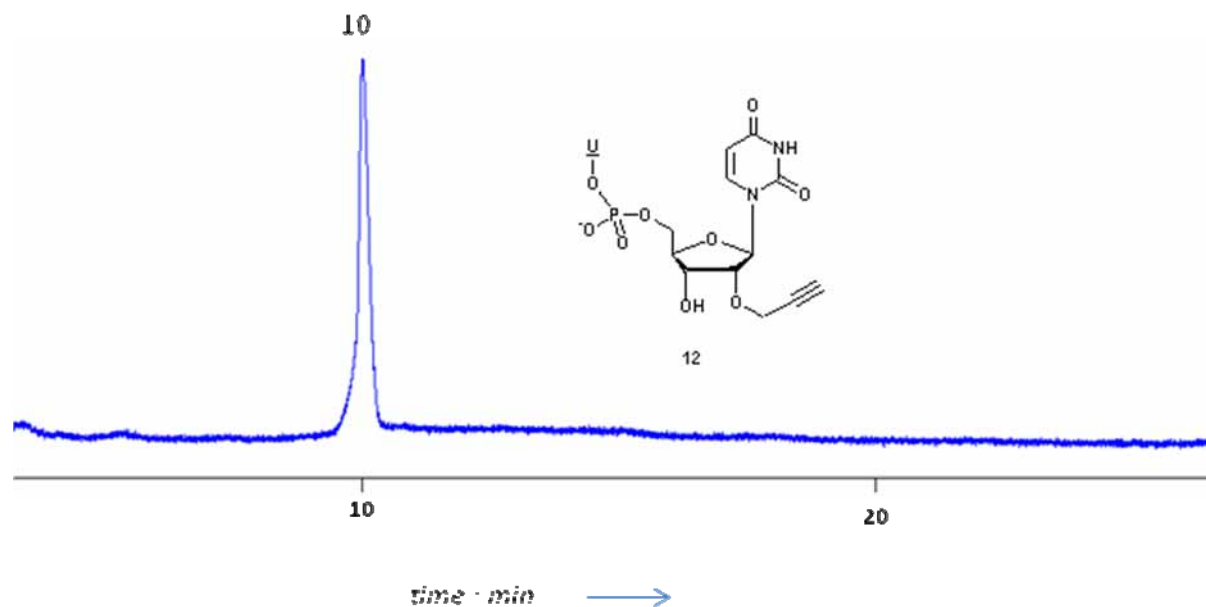


Figure 14. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) \underline{U}_2 -alk-yne, **12** (\underline{U} = 2'-methoxyuridine)

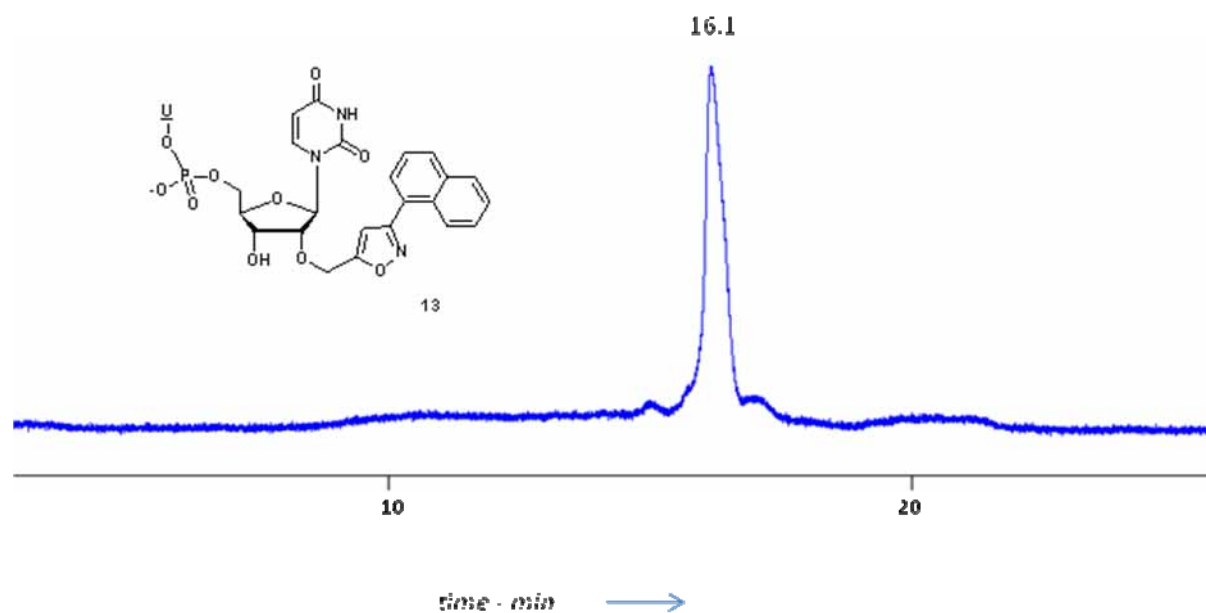


Figure 15. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) \underline{U}_2 -naphthylisoxazole (\underline{U} = 2'-methoxyuridine) **13**

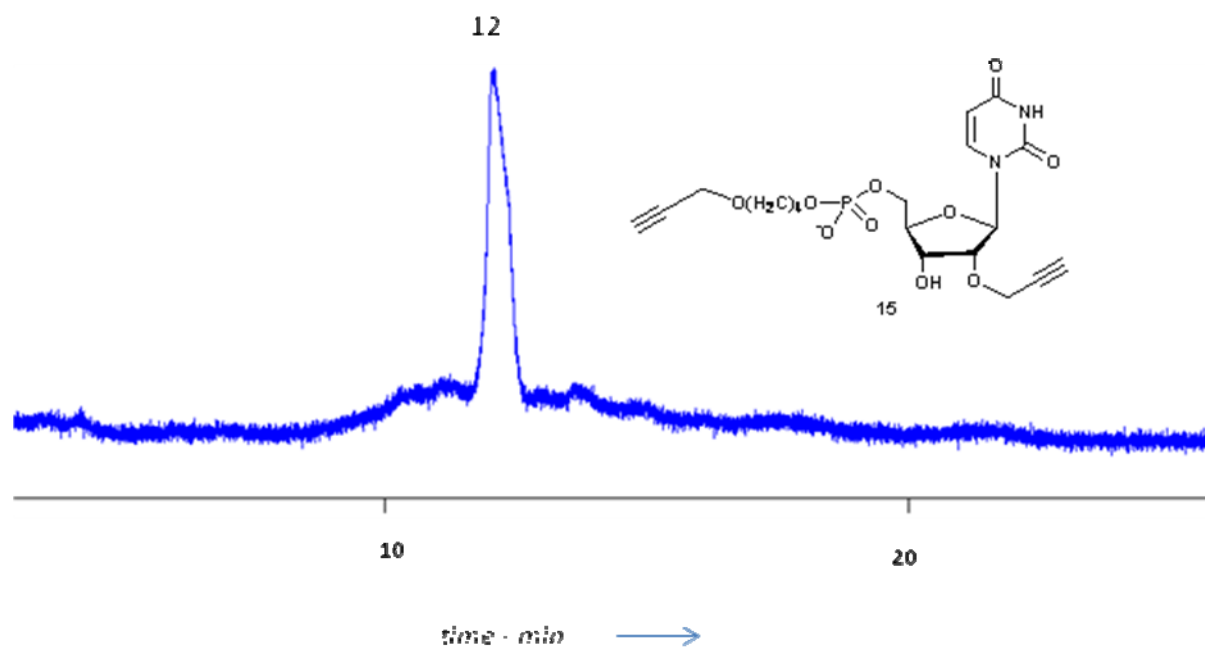


Figure 16. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) Bis-alkyne, **15**

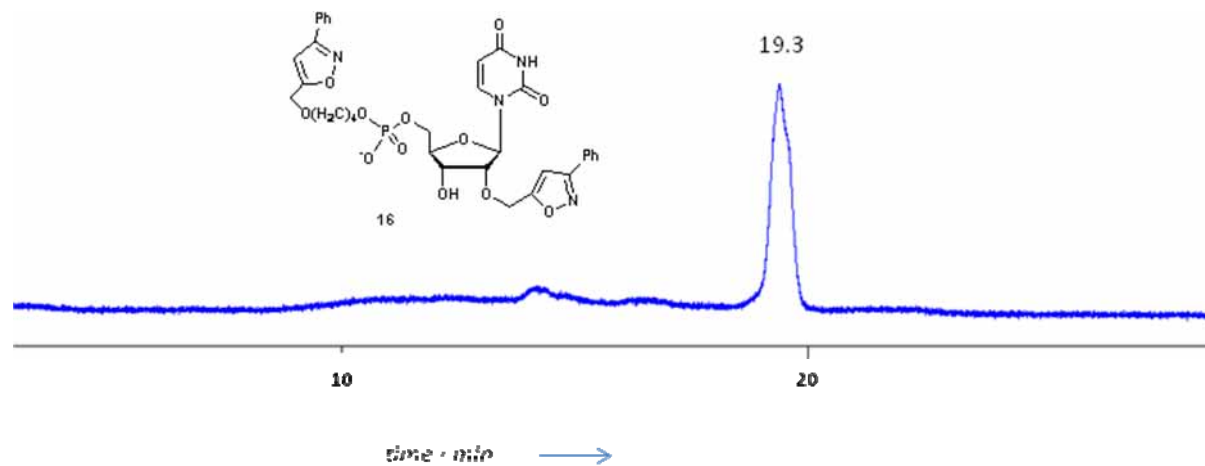


Figure 17. Reversed-phase HPLC analysis of crude reaction products (UV absorbance at 260 nm vs time) Clickl-Click conjugate **16**

MS Data

LCMS-TOF analysis of **3a** (C₁₉H₁₉N₃O₇, *m/z*: calcd. 402.1296 [M+H]⁺; found 402.1319).

LCMS-TOF analysis of **3b** (C₂₃H₂₁N₃O₇, *m/z*: calcd. 452.1452 [M+H]⁺; found 452.1485).

LCMS-TOF analysis of **3c** (C₂₉H₂₃N₃O₇, *m/z*: calcd. 526.1609 [M+H]⁺; found 526.1656).

LCMS-TOF analysis of **3d** (C₂₀H₂₁N₃O₈, *m/z*: calcd. 432.1401 [M+H]⁺; found 432.1417).

LCMS-TOF analysis of **5a** (C₁₉H₂₀N₄O₆, *m/z*: calcd. 401.1456 [M+H]⁺; found 401.1476).

LCMS-TOF analysis of **5b** (C₂₀H₂₀N₆O₆, *m/z*: calcd. 463.1337 [M+Na]⁺; found 463.1368).

LCMS-TOF analysis of **5c** (C₂₀H₂₀N₆O₅, *m/z*: calcd. 425.1568 [M+H]⁺; found 425.1601).

MALDI-TOF-MS analysis of **9** (*m/z*: 1427 [M+NH₄]⁺; found 1428).

MALDI-TOF-MS analysis of **10** (*m/z*: 1546 [M+NH₄]⁺; found 1549).

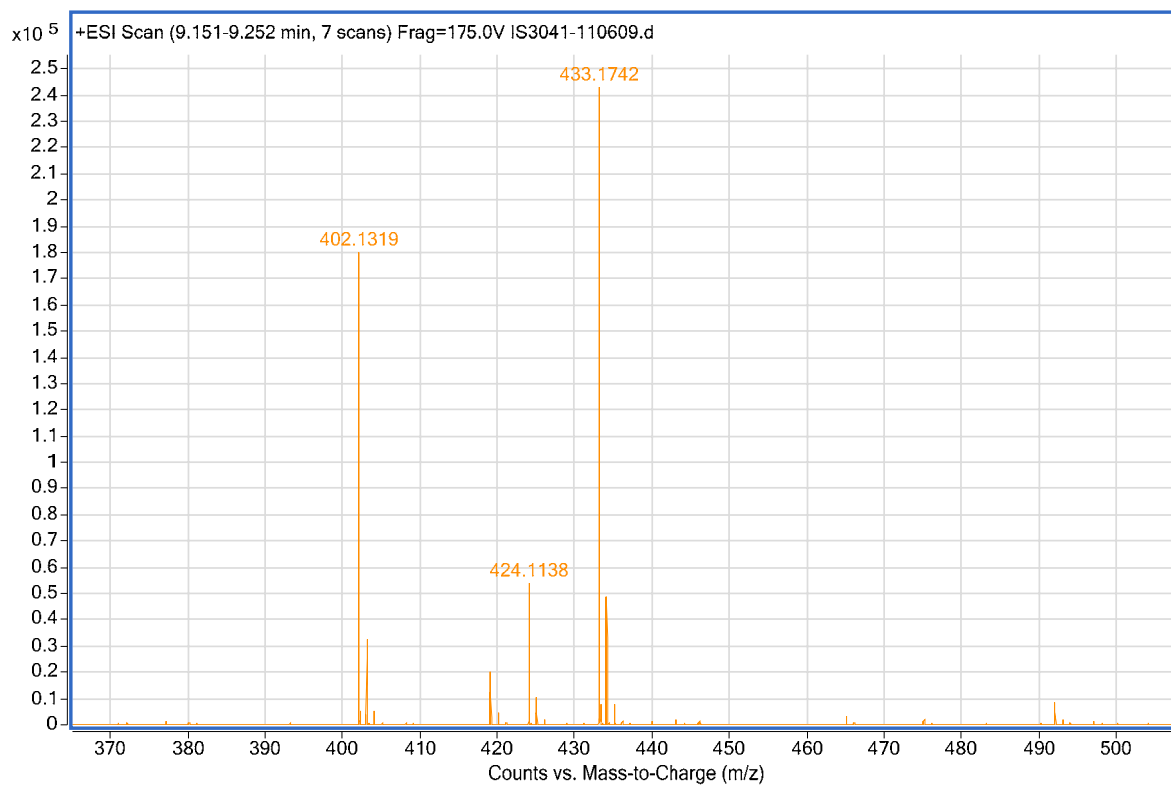
LCMS-TOF analysis of **12** (C₂₂H₂₆N₄O₁₄P, *m/z*: calcd. 601 [M-H]⁻; found 601).

LCMS-TOF analysis of **13** (C₂₉H₃₀N₅O₁₅P, *m/z*: calcd. 719 [M-H]⁻; found 719).

LCMS-TOF analysis of **15** (C₁₉H₂₄N₂O₁₀P, *m/z*: calcd. 471 [M-H]⁻; found 471).

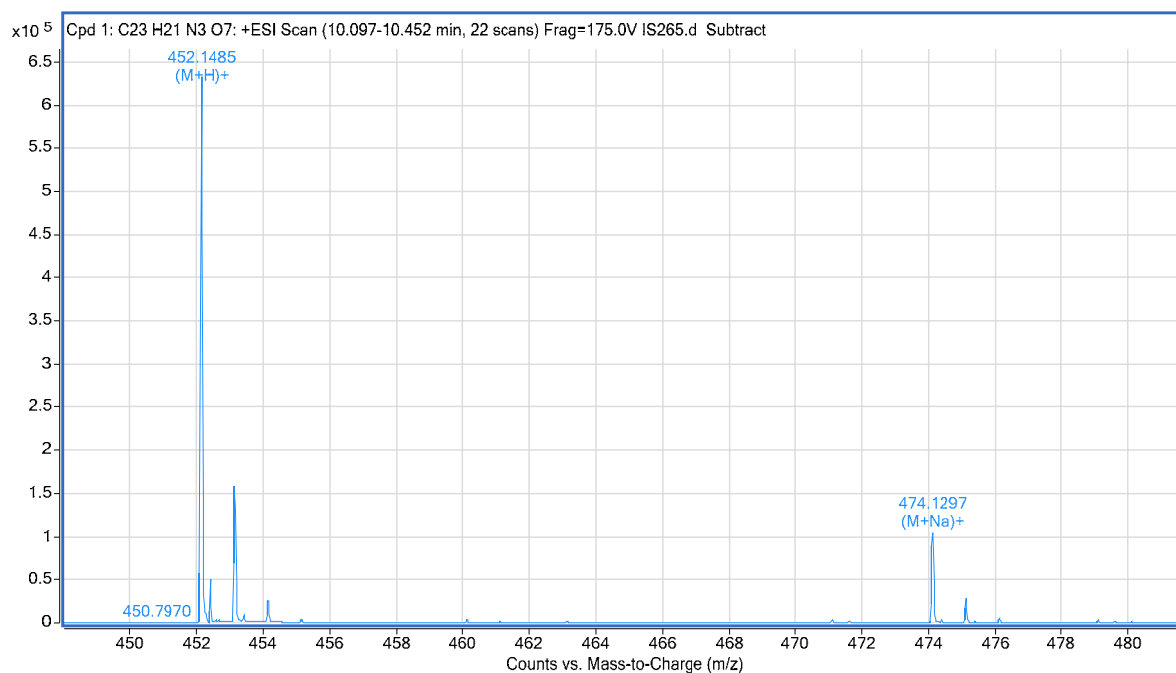
LCMS-TOF analysis of **16** (C₃₃H₃₄N₄O₁₂P, *m/z*: calcd. 709 [M-H]⁻; found 709).

LCMS-TOF analysis of **3a** ($C_{19}H_{19}N_3O_7$, m/z : calcd. 402.1296 $[M+H]^+$; found 402.1319)



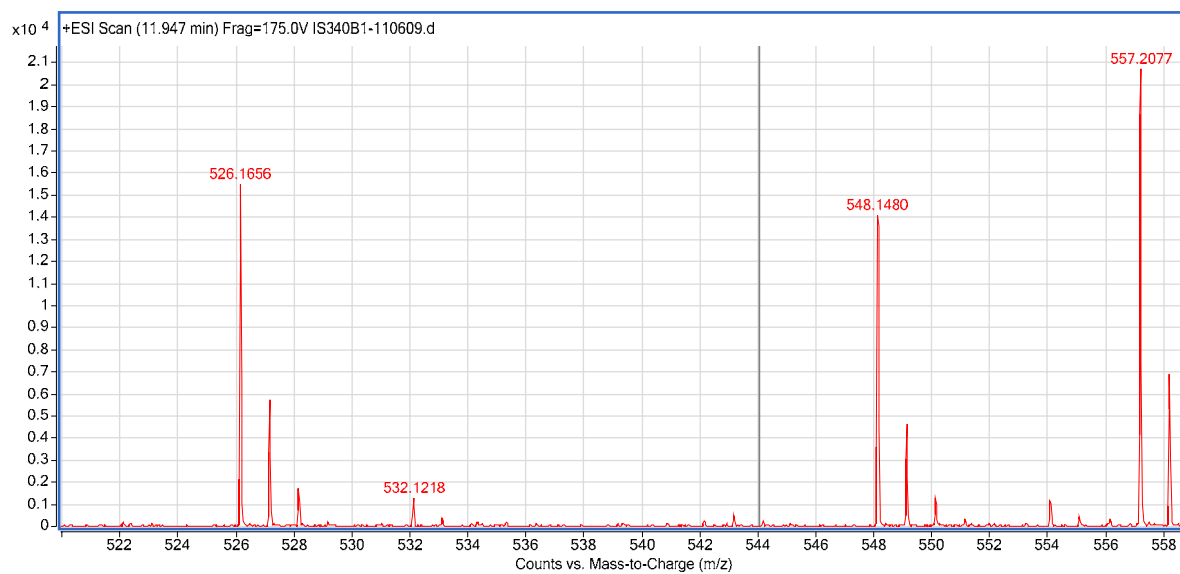
LCMS-TOF spectrum of **3a**

LCMS-TOF analysis of **3b** ($C_{23}H_{21}N_3O_7$, m/z : calcd. 452.1452 $[M+H]^+$; found 452.1485).



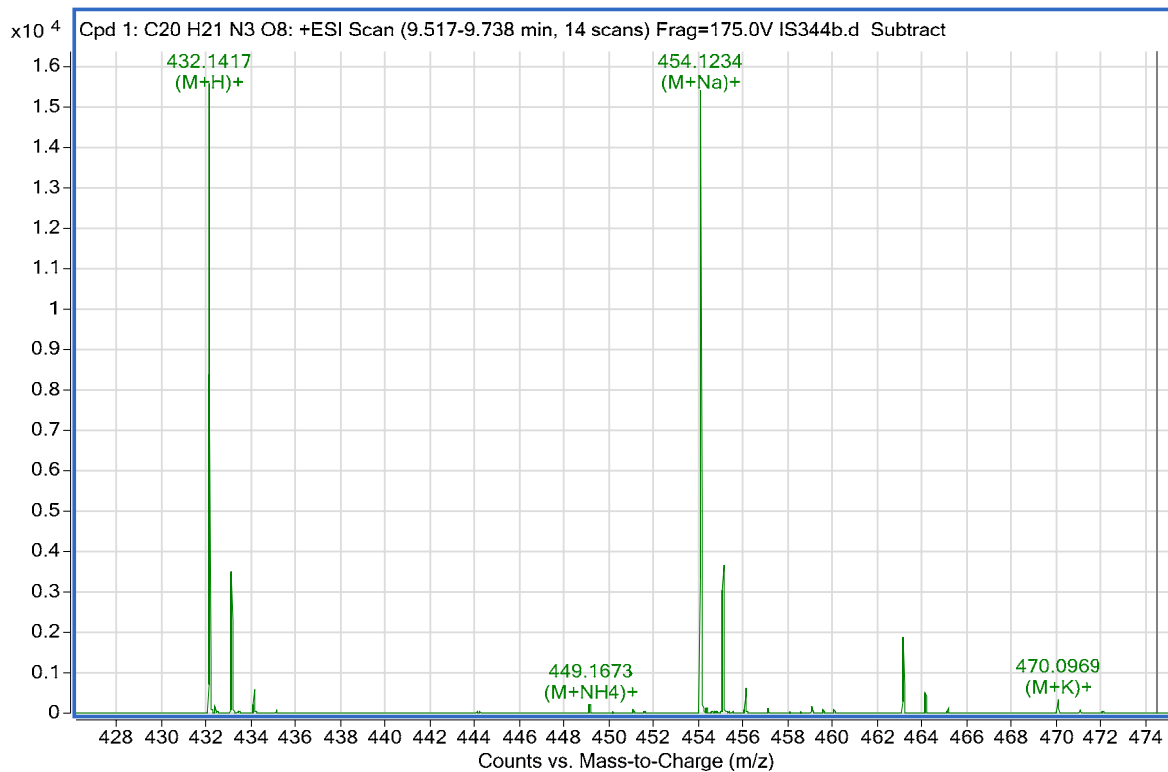
LCMS-TOF spectrum of **3b**

LCMS-TOF analysis of **3c** ($C_{29}H_{23}N_3O_7$, m/z : calcd. 526.1609 $[M+H]^+$; found 526.1656).



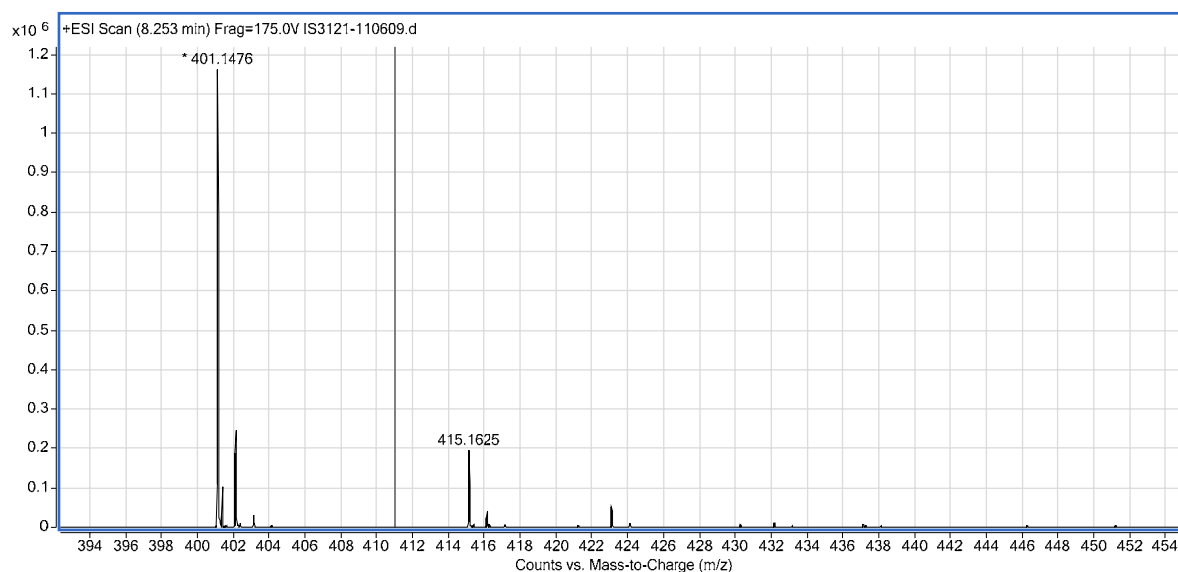
LCMS-TOF spectrum of **3c**

LCMS-TOF analysis of **3d** ($C_{20}H_{21}N_3O_8$, m/z : calcd. 432.1401 $[M+H]^+$; found 432.1417).



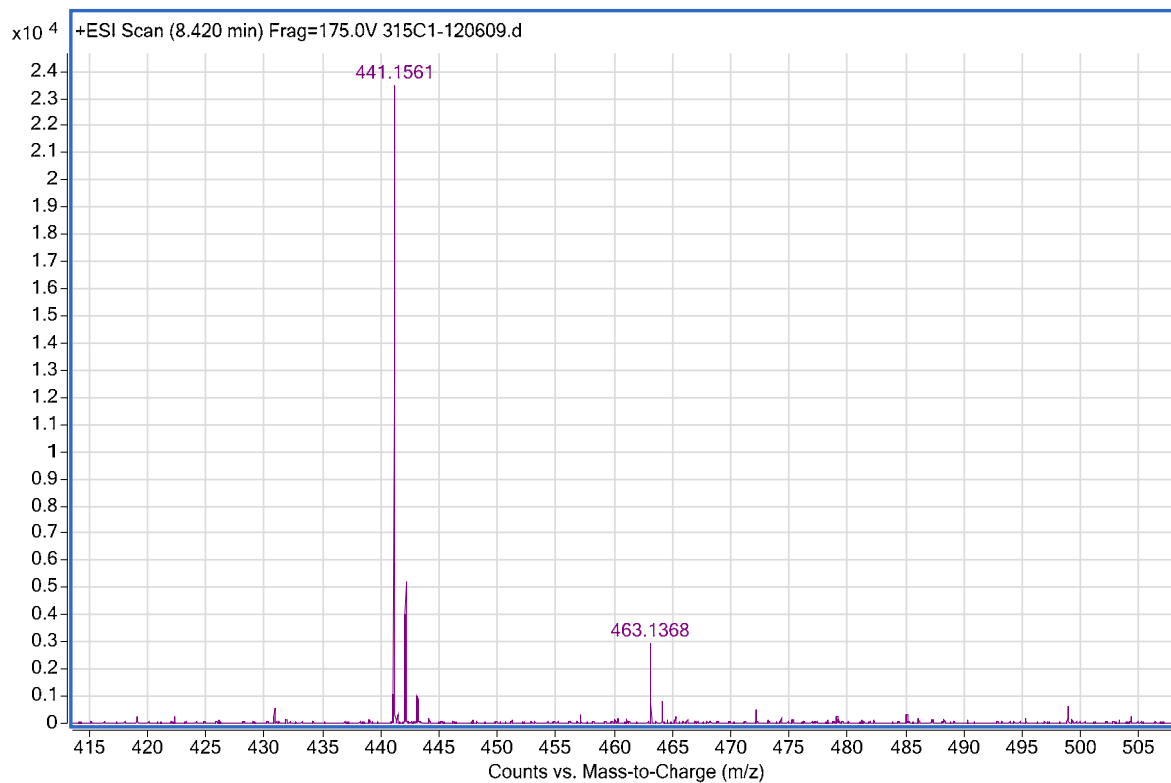
LCMS-TOF spectrum of **3c**

LCMS-TOF analysis of **5a** ($C_{19}H_{20}N_4O_6$, m/z : calcd. 401.1456 $[M+H]^+$; found 401.1476).



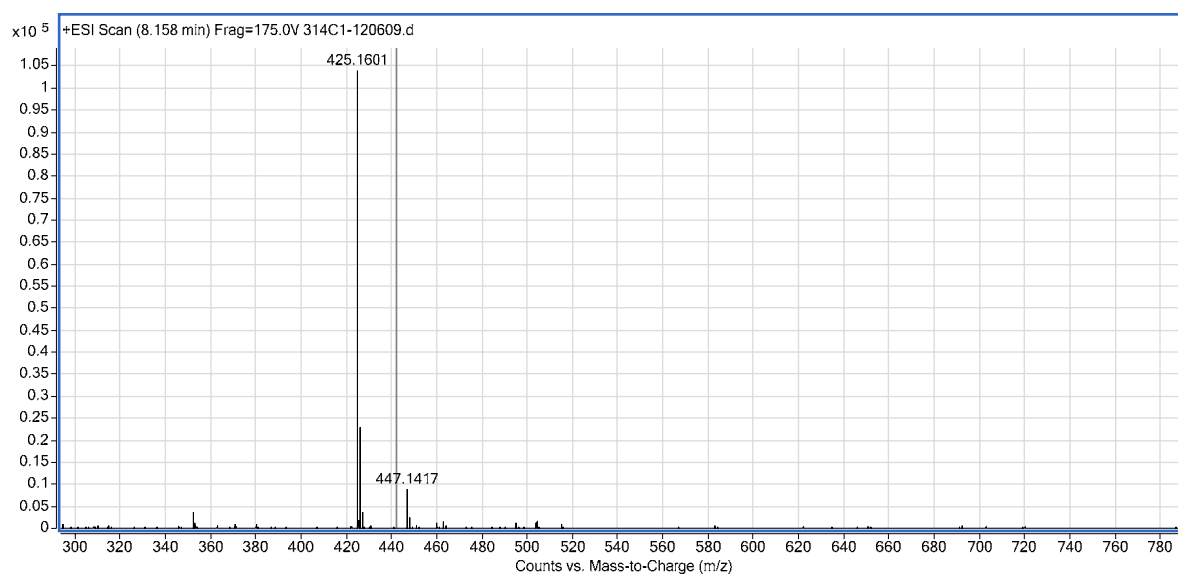
LCMS-TOF spectrum of **5a**

LCMS-TOF analysis of **5b** ($C_{20}H_{20}N_6O_6$, m/z : calcd. 463.1337 $[M+Na]^+$; found 463.1368).



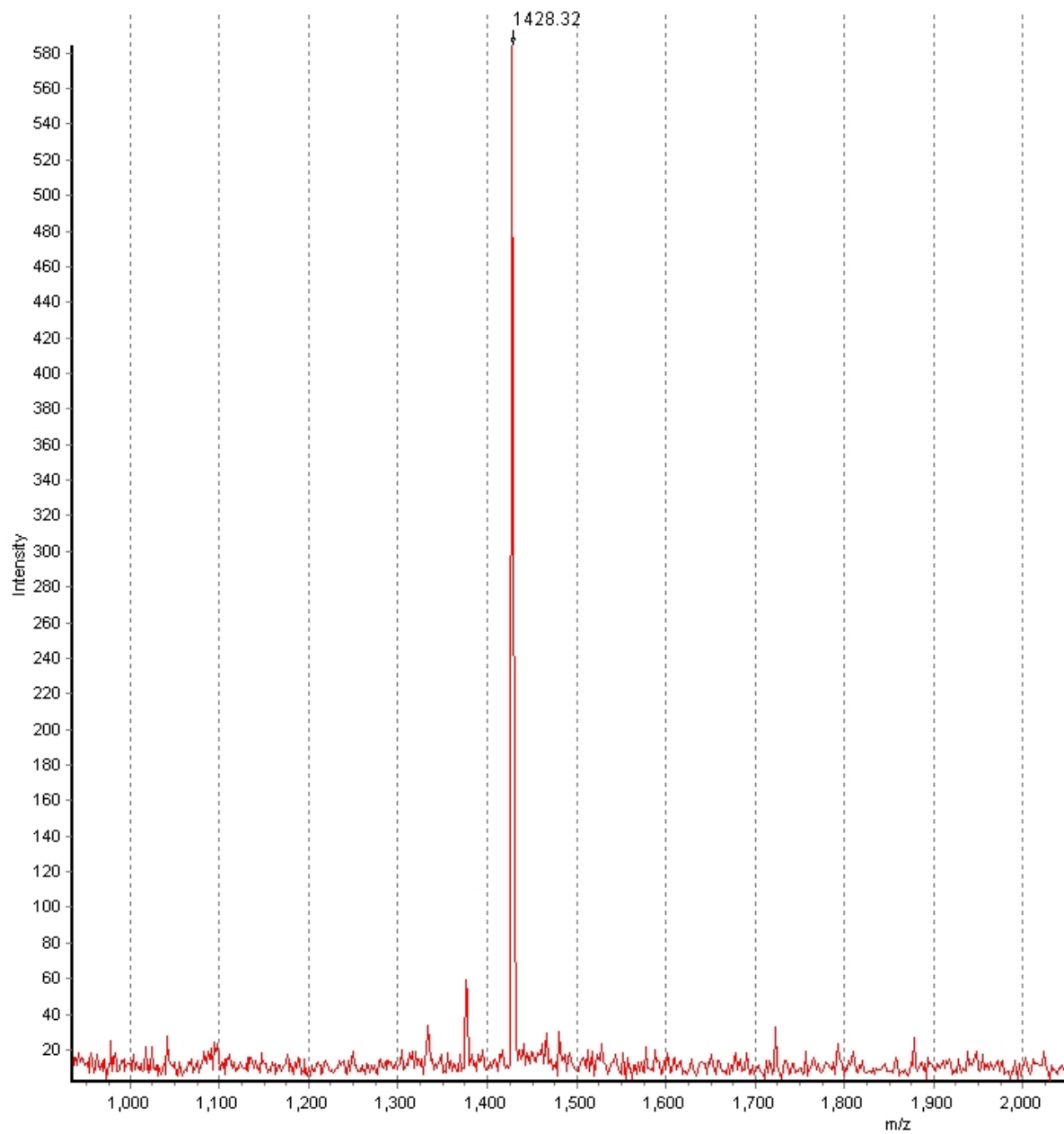
LCMS-TOF spectrum of **5b**

LCMS-TOF analysis of **5c** ($C_{20}H_{20}N_6O_5$, m/z : calcd. 425.1568 $[M+H]^+$; found 425.1601).



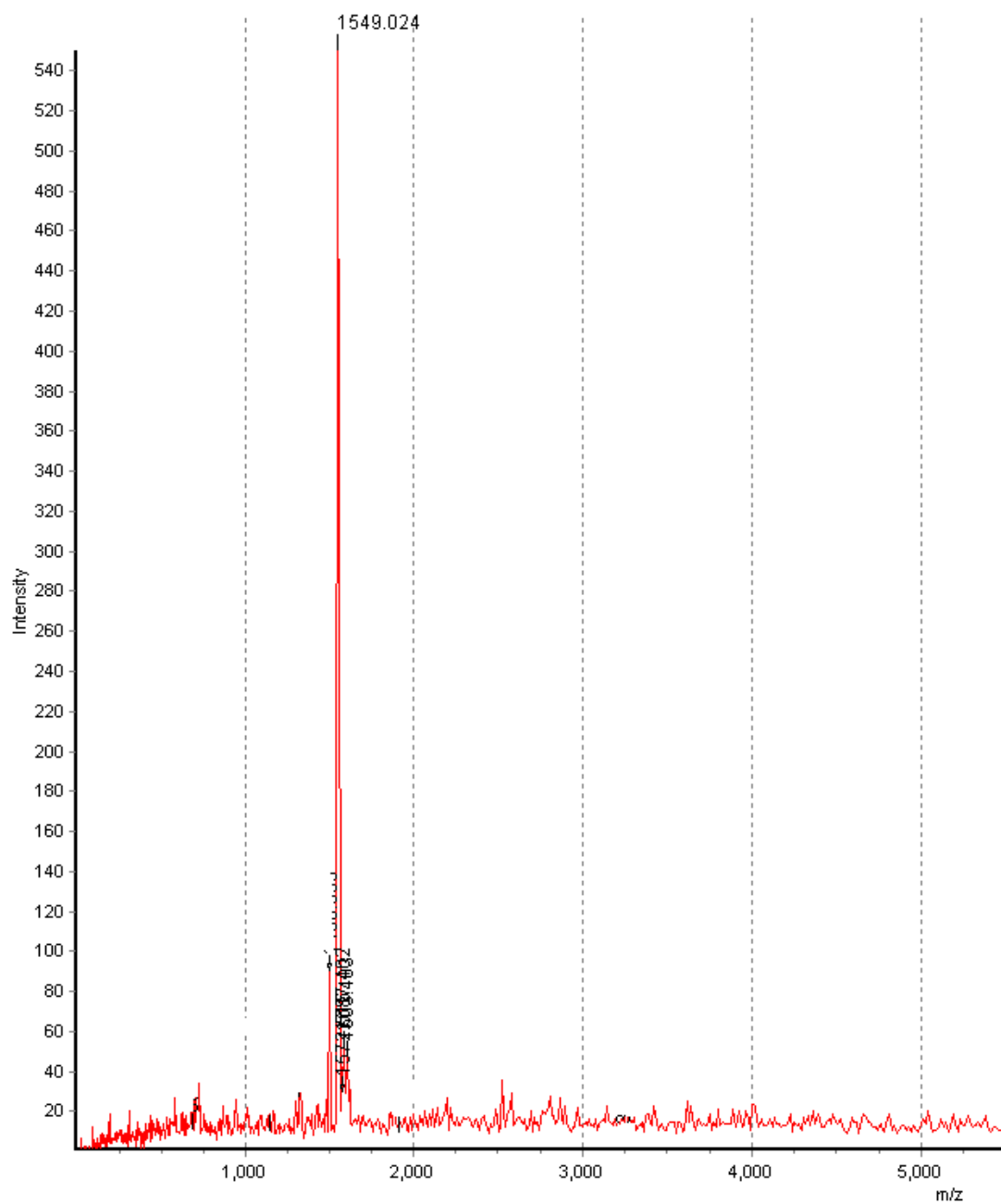
LCMS-TOF spectrum of **5c**

MALDI-TOF-MS analysis of **9** (m/z : 1427 $[M+NH_4]^+$; found 1428).



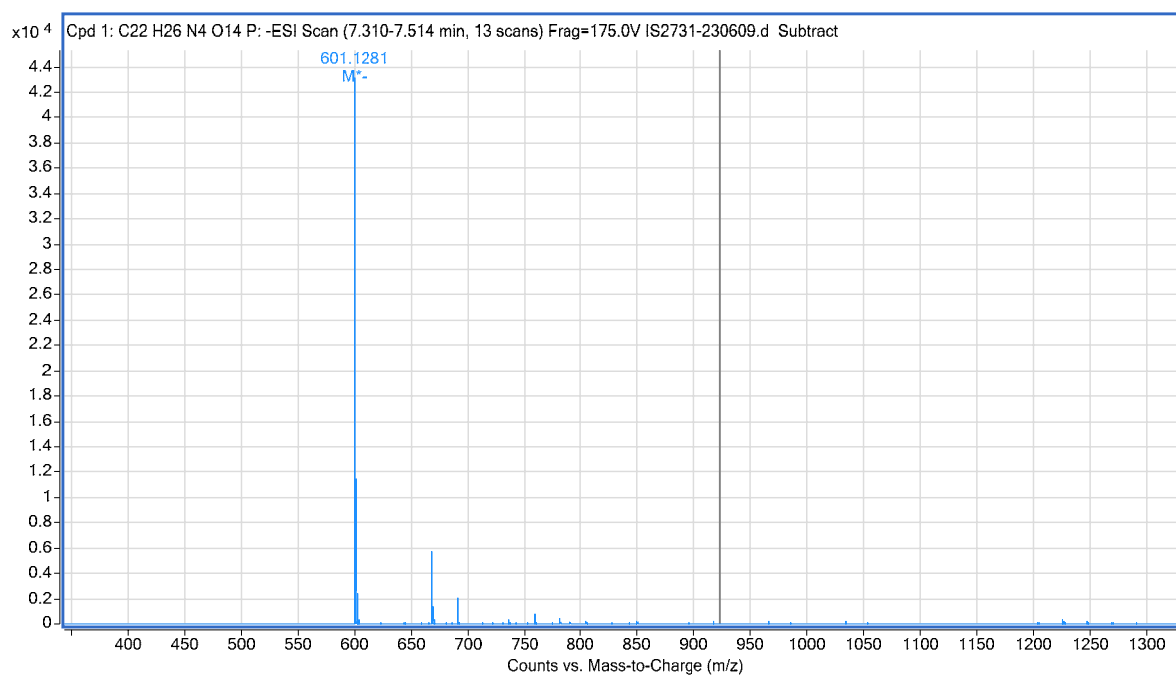
MALDI TOF MS of crude **9**

MALDI-TOF-MS analysis of **10** (m/z : 1546 $[M+NH_4]^+$; found 1549).



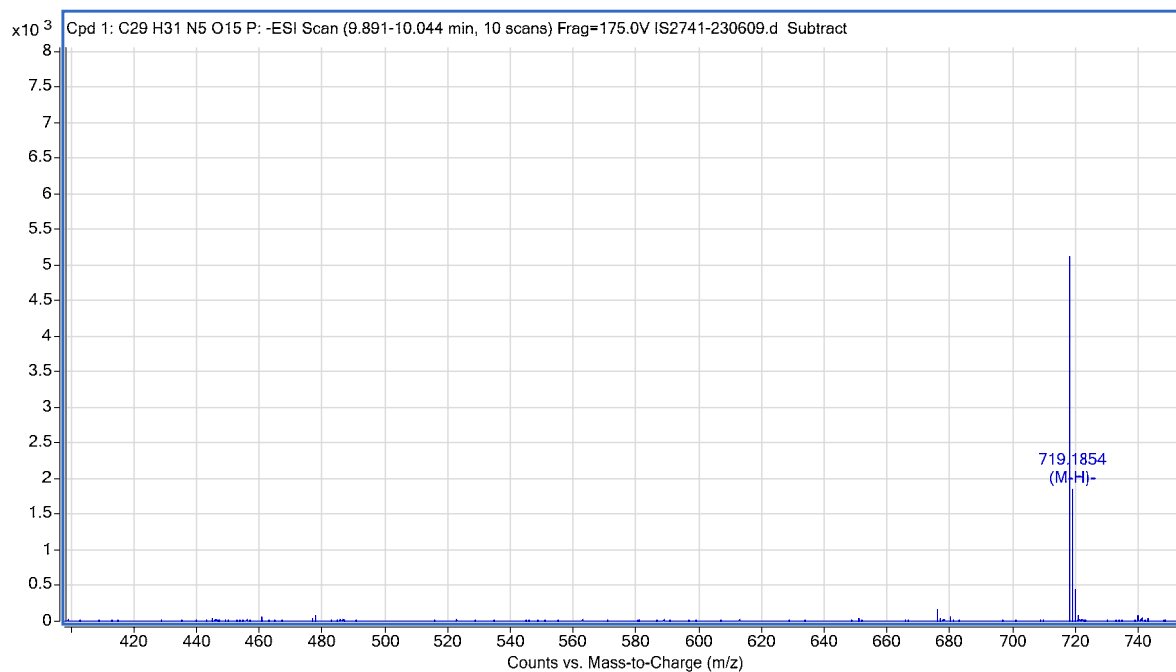
MALDI TOF MS of crude **10**

LCMS-TOF analysis of **12** ($C_{22}H_{26}N_4O_{14}P$, m/z : calcd. 601 [M^*]; found 601)



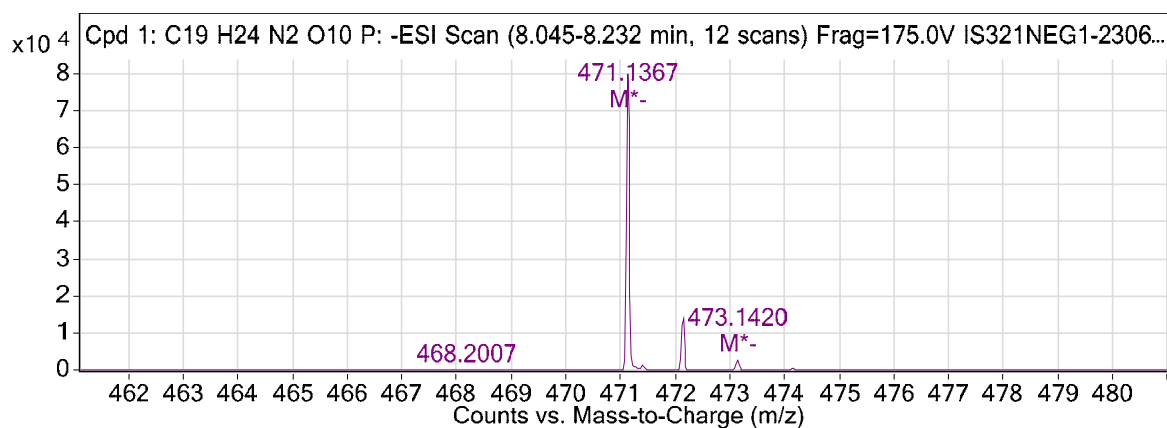
LCMS-TOF spectrum of **12**

LCMS-TOF analysis of **13** ($C_{29}H_{30}N_5O_{15}P$, m/z : calcd. 719 [$M-H$]; found 719).



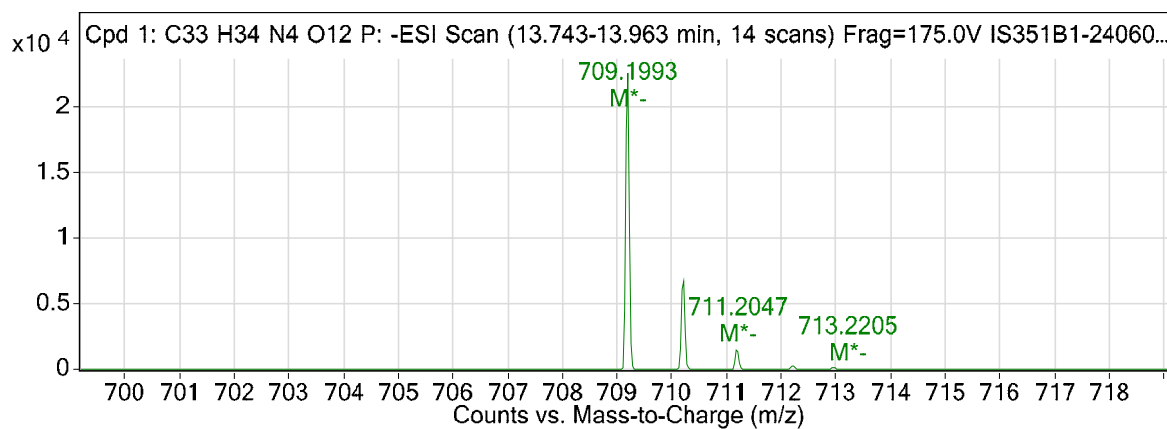
LCMS-TOF spectrum of **13**

LCMS-TOF analysis of **15** ($C_{19}H_{24}N_2O_{10}P$, m/z : calcd. 471 [M^{*-}]; found 471)



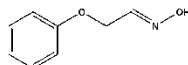
LCMS-TOF spectrum of **15**

LCMS-TOF analysis of **16** ($C_{33}H_{34}N_4O_{12}P$, m/z : calcd. 709 [M^{*-}]; found 709).

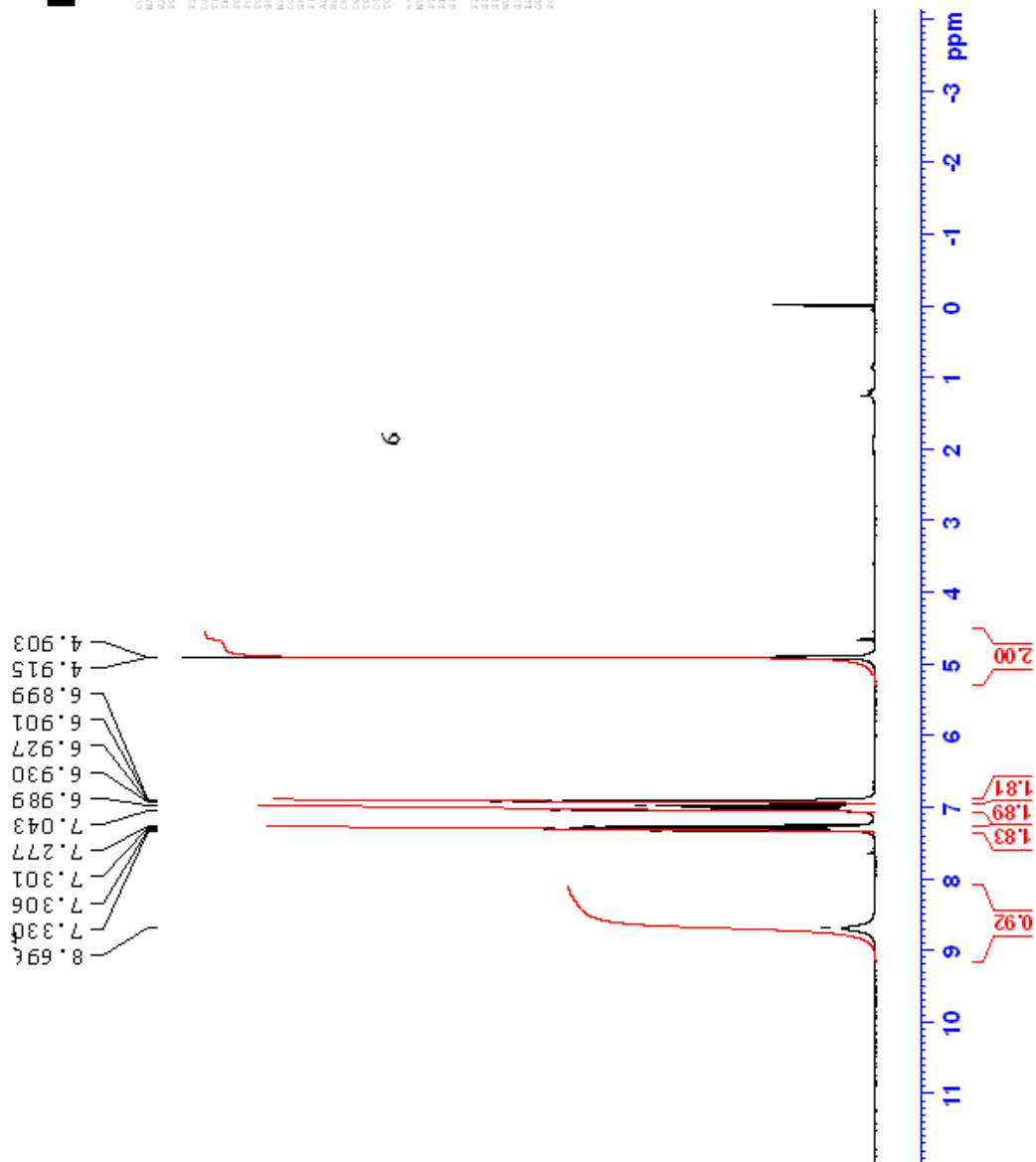


LCMS-TOF spectrum of **16**

NMR Spectra of compound 6

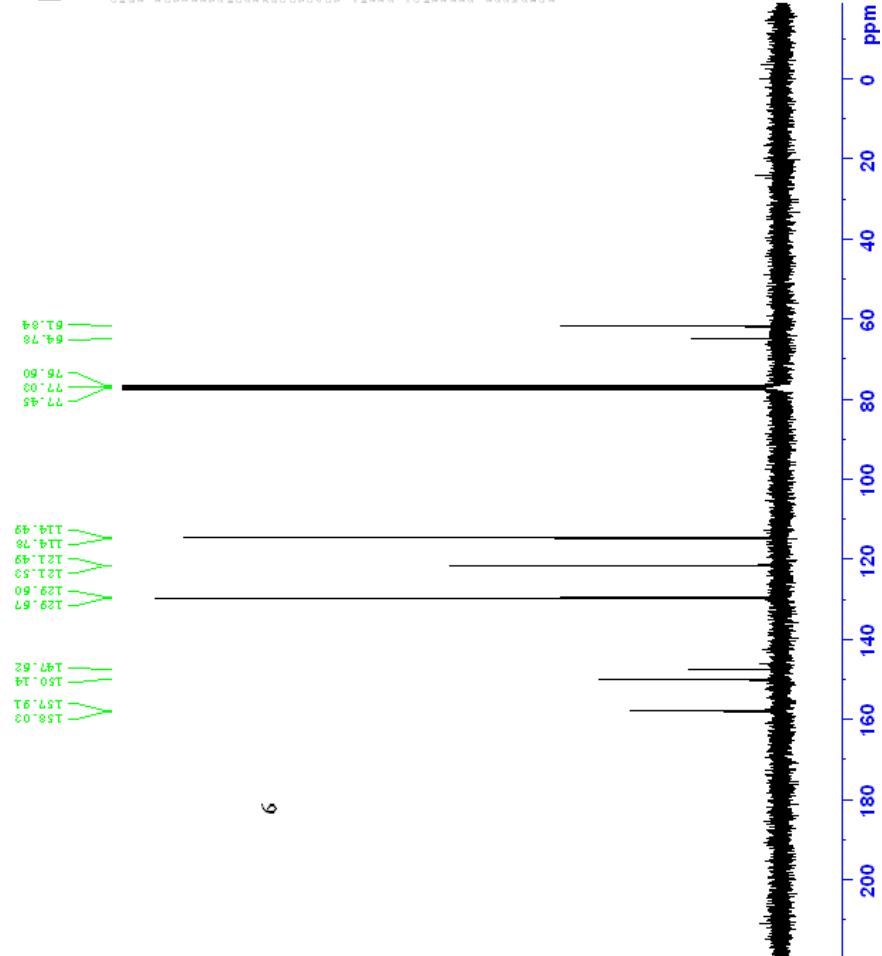


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