

Supplementary Materials

Formation of an Isomeric Mixture of Dienynes Instead of a Diallene

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Figure S1: IR spectrum of (Z,Z)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2a**)

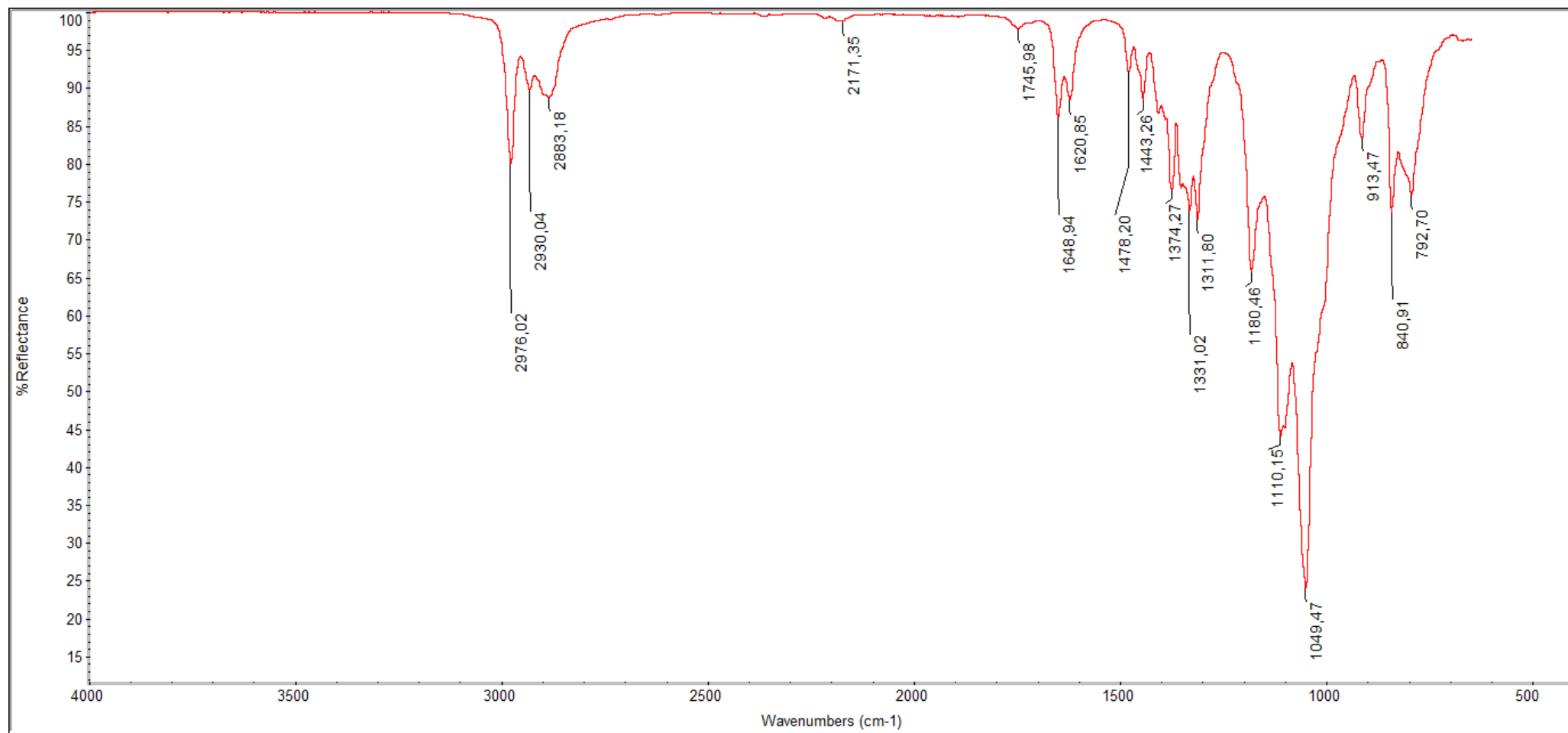


Figure S2: ^1H -NMR spectrum of (Z,Z)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2a**)

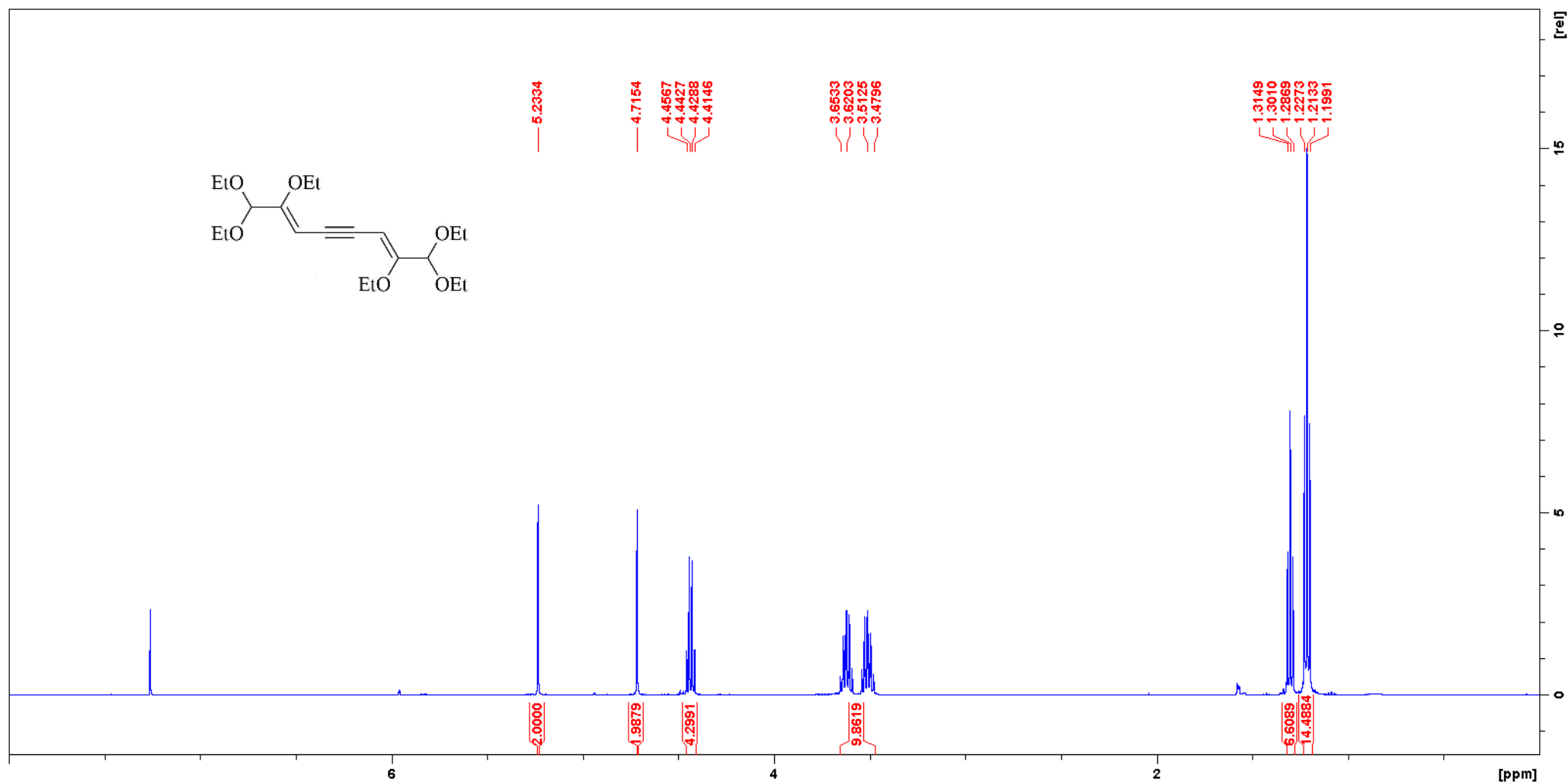


Figure S3: ^{13}C -NMR spectrum of (Z,Z)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2a**)

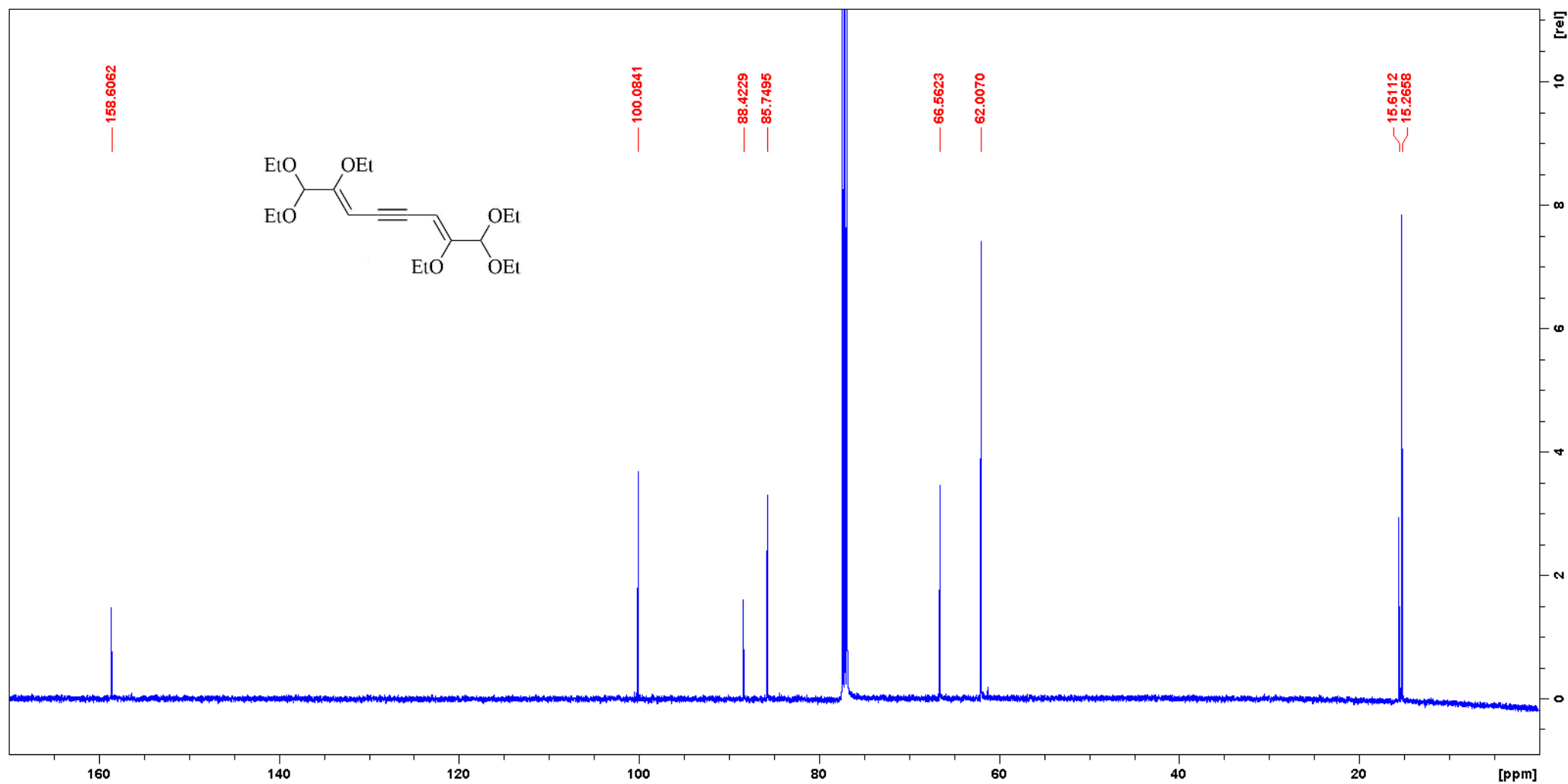


Figure S4: IR spectrum of *(E,Z)*-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2b**)

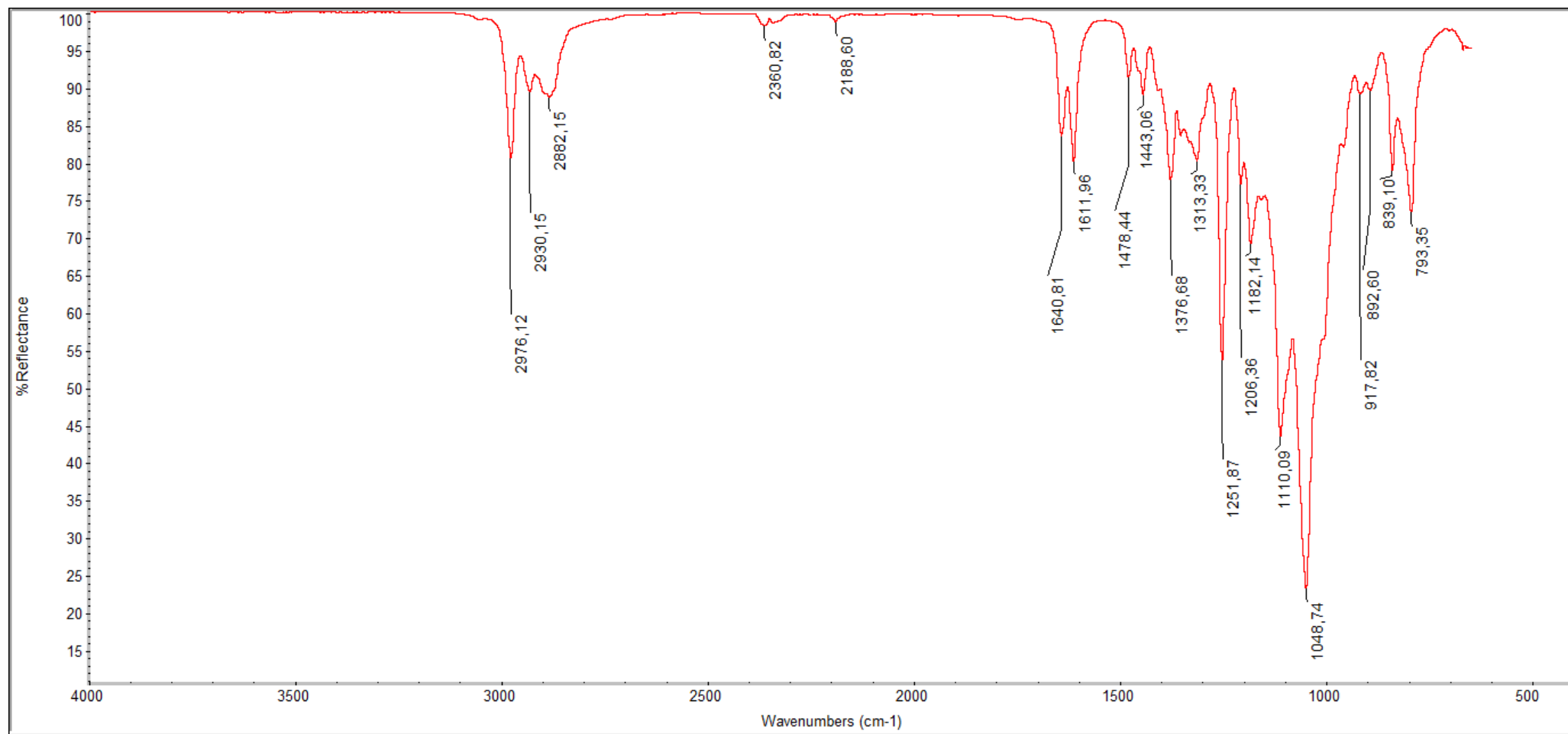


Figure S5: ^1H -NMR spectrum of (*E,Z*)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2b**)

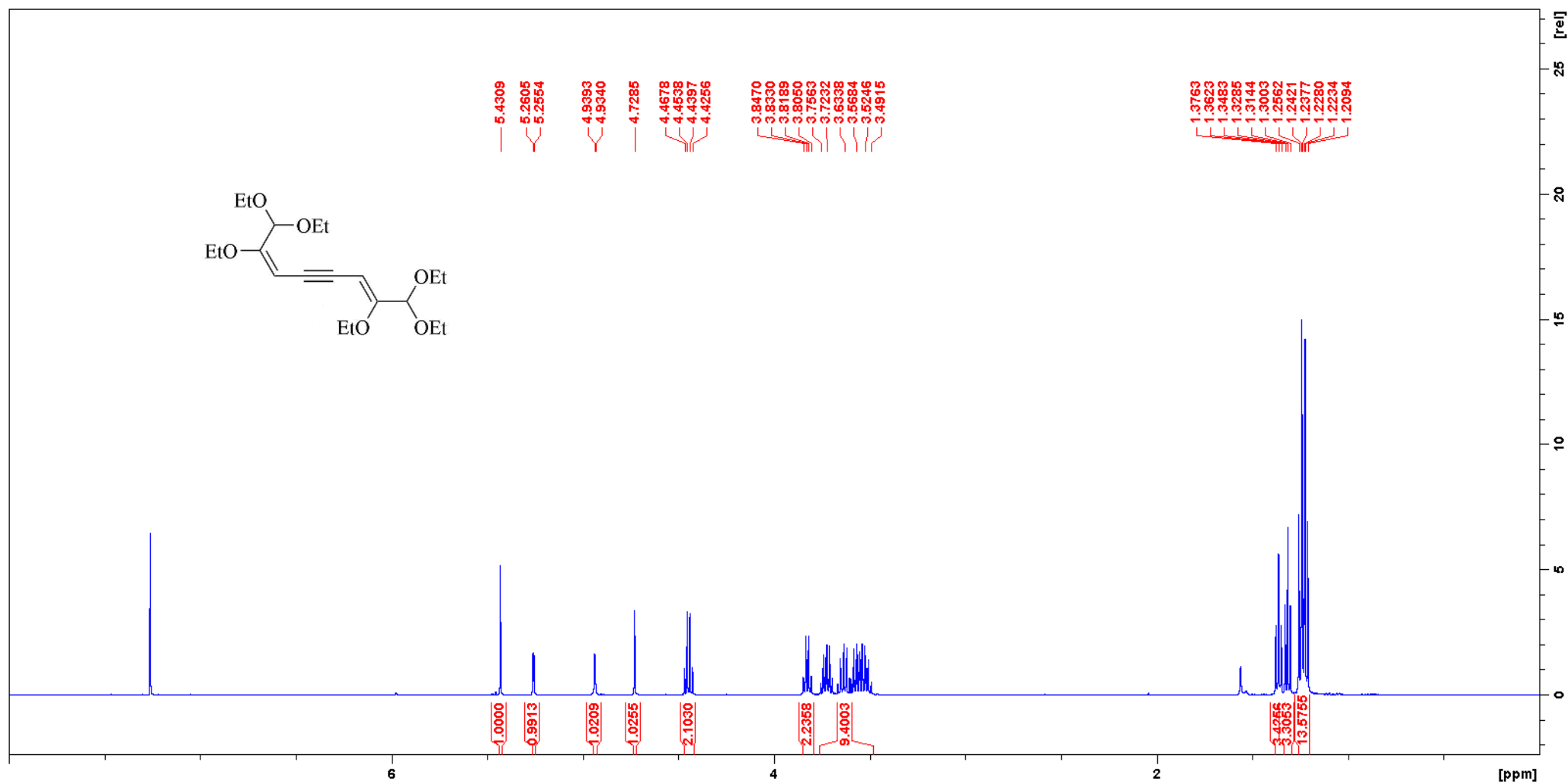


Figure S6: ^{13}C -NMR spectrum of *(E,Z)*-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2b**)

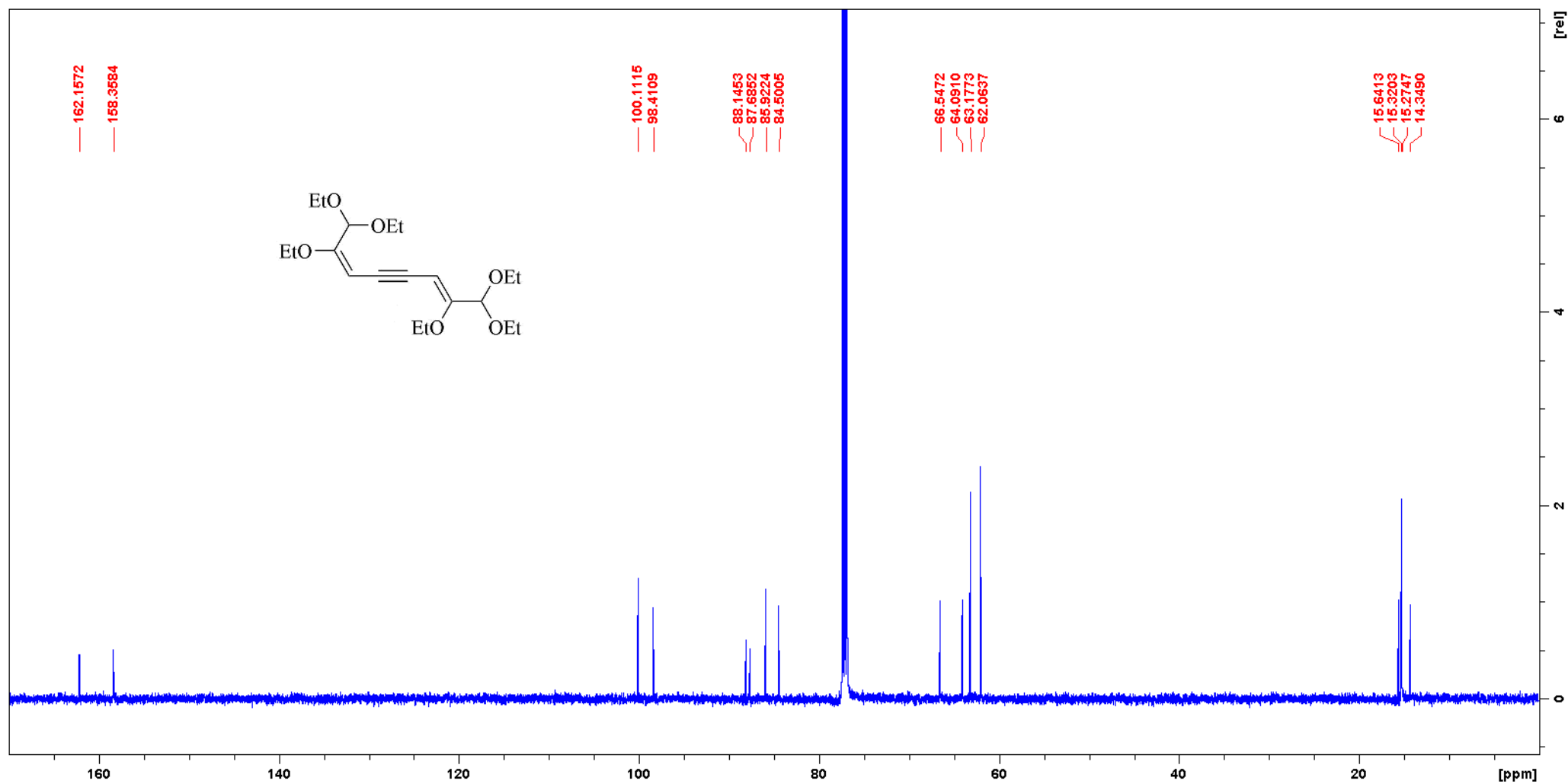


Figure S7: IR spectrum of *(E,E)*-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

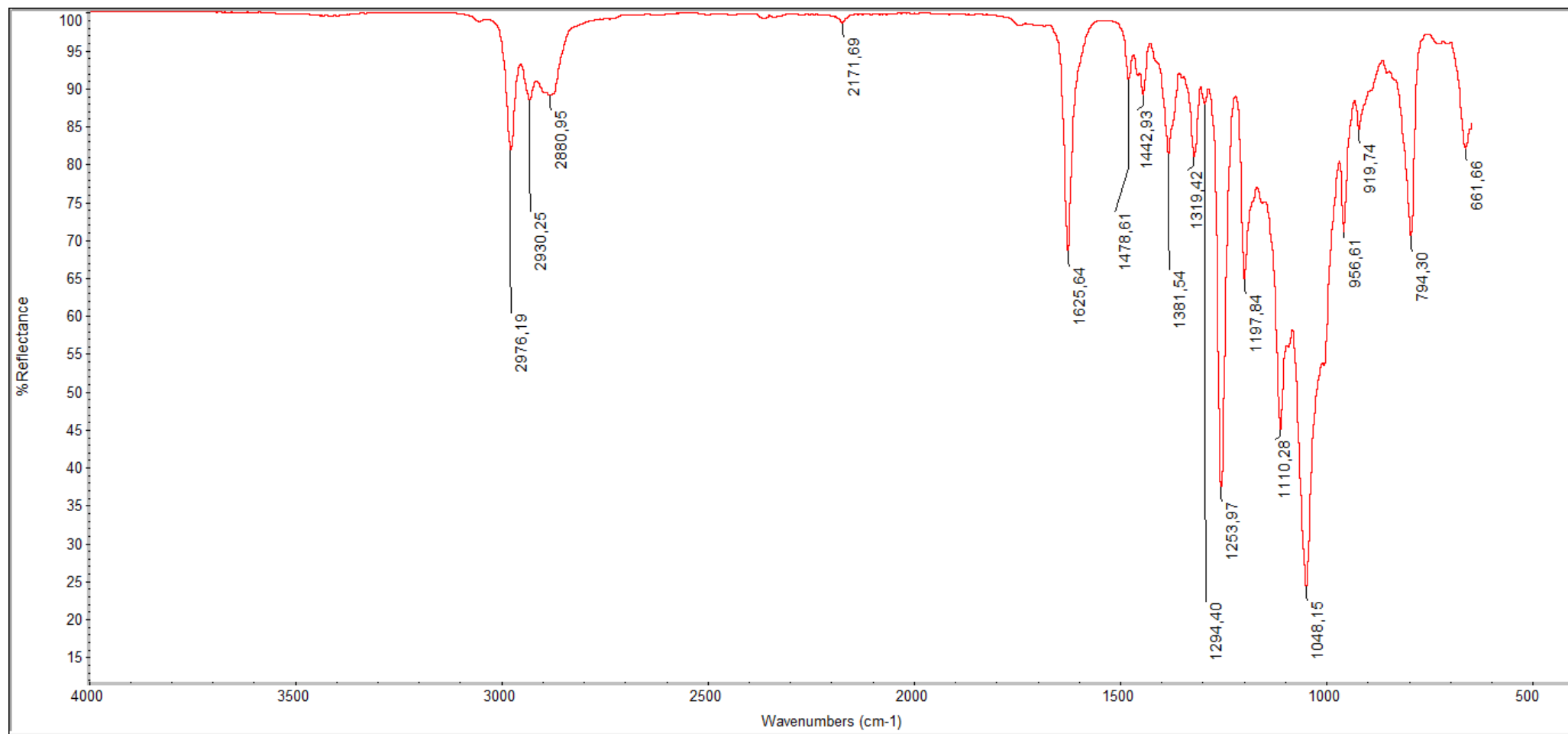


Figure S8: ^1H -NMR spectrum of *(E,E)*-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

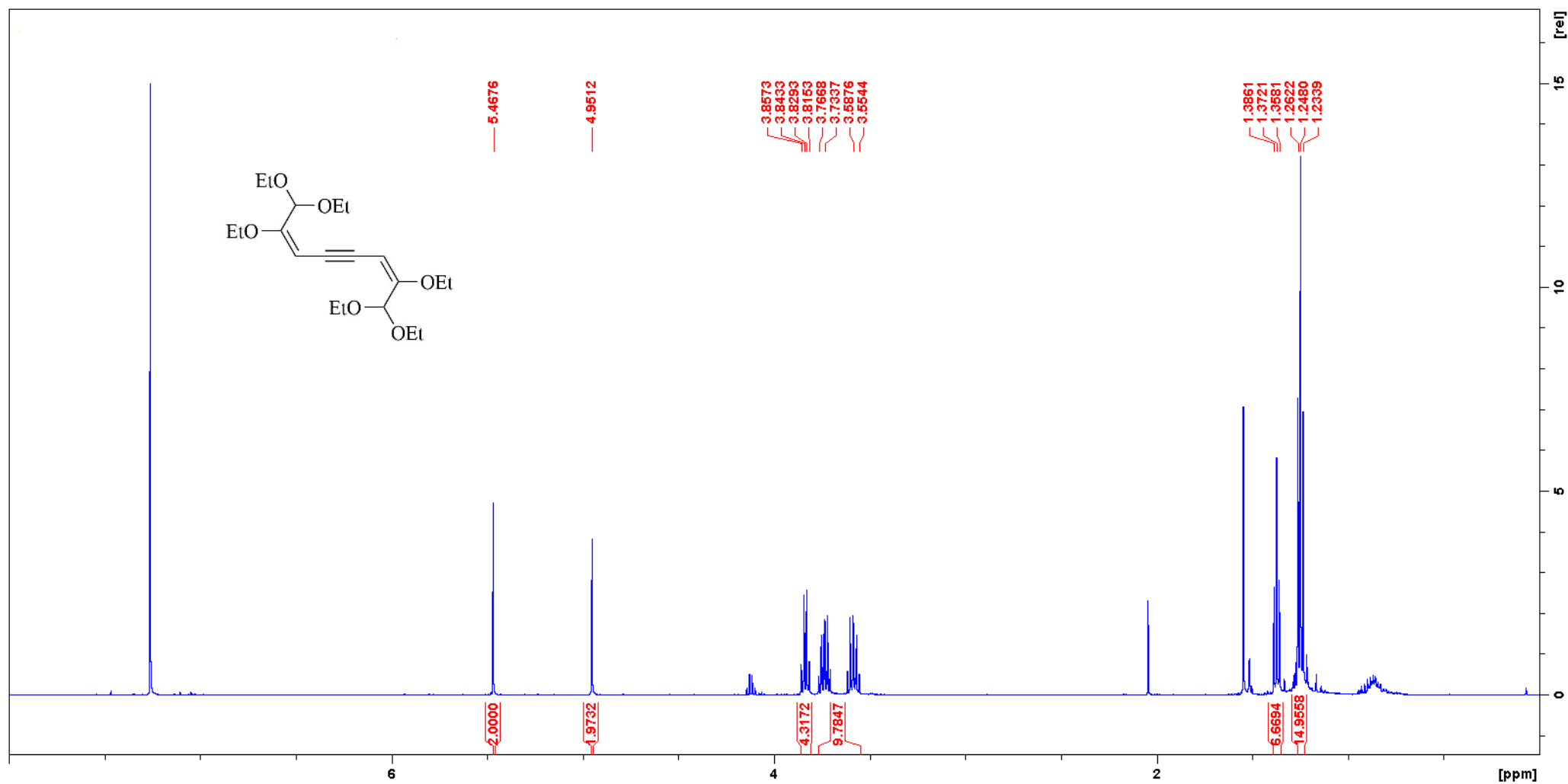


Figure S9: ^{13}C -NMR spectrum of (*E,E*)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

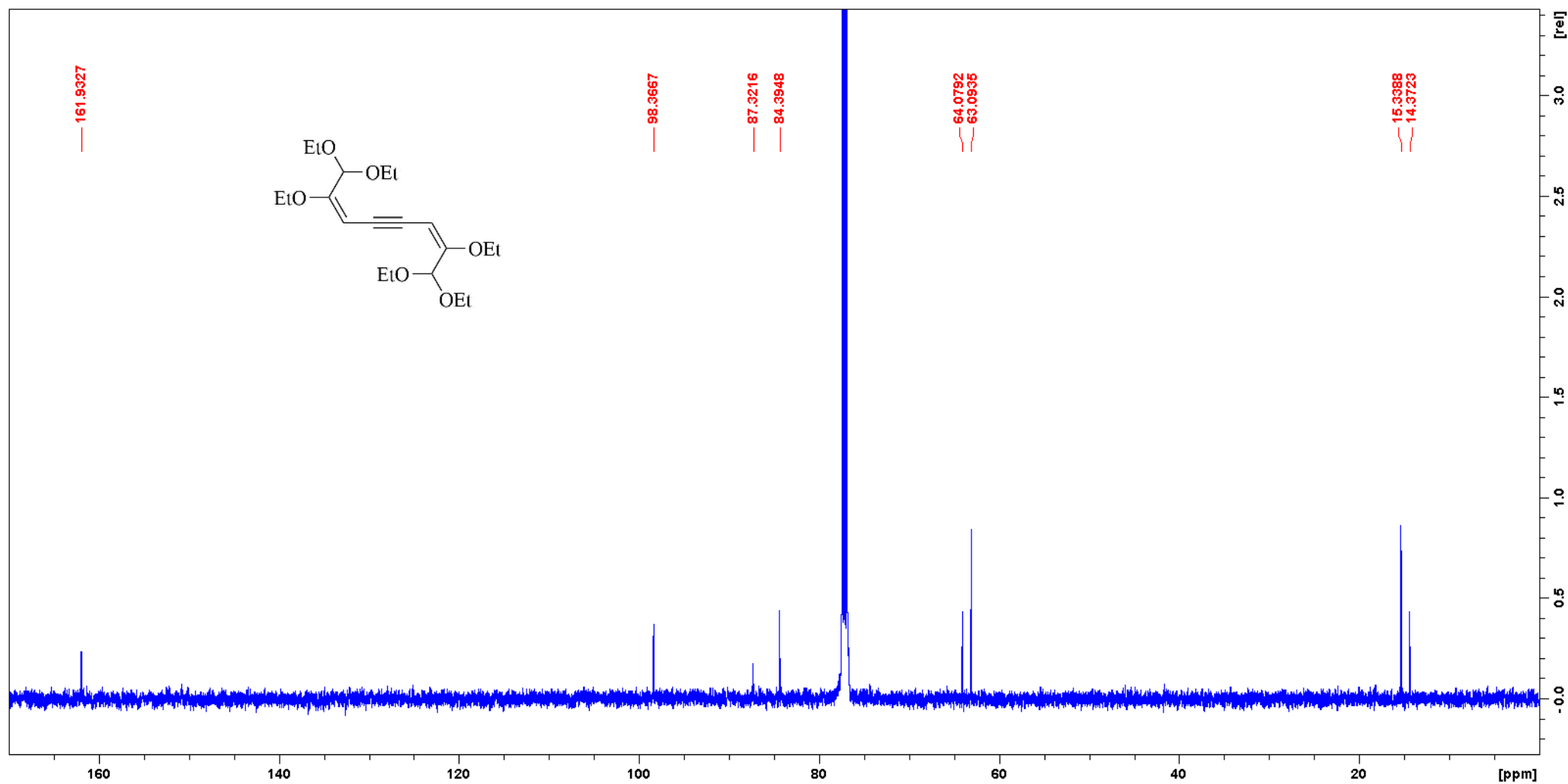


Figure S10: DEPT-90 spectrum of (*E,E*)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

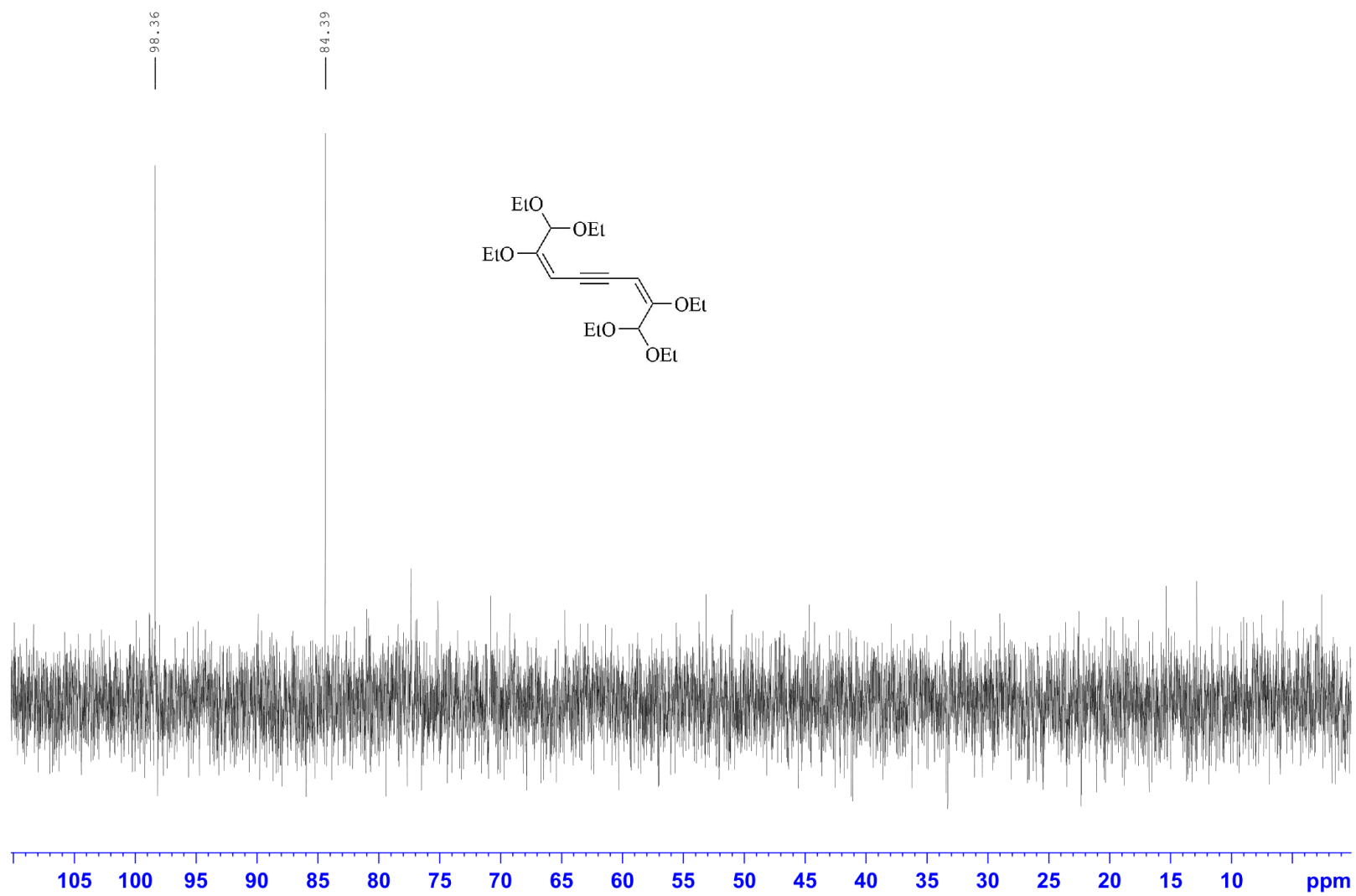


Figure S11: DEPT-135 spectrum of *(E,E)*-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

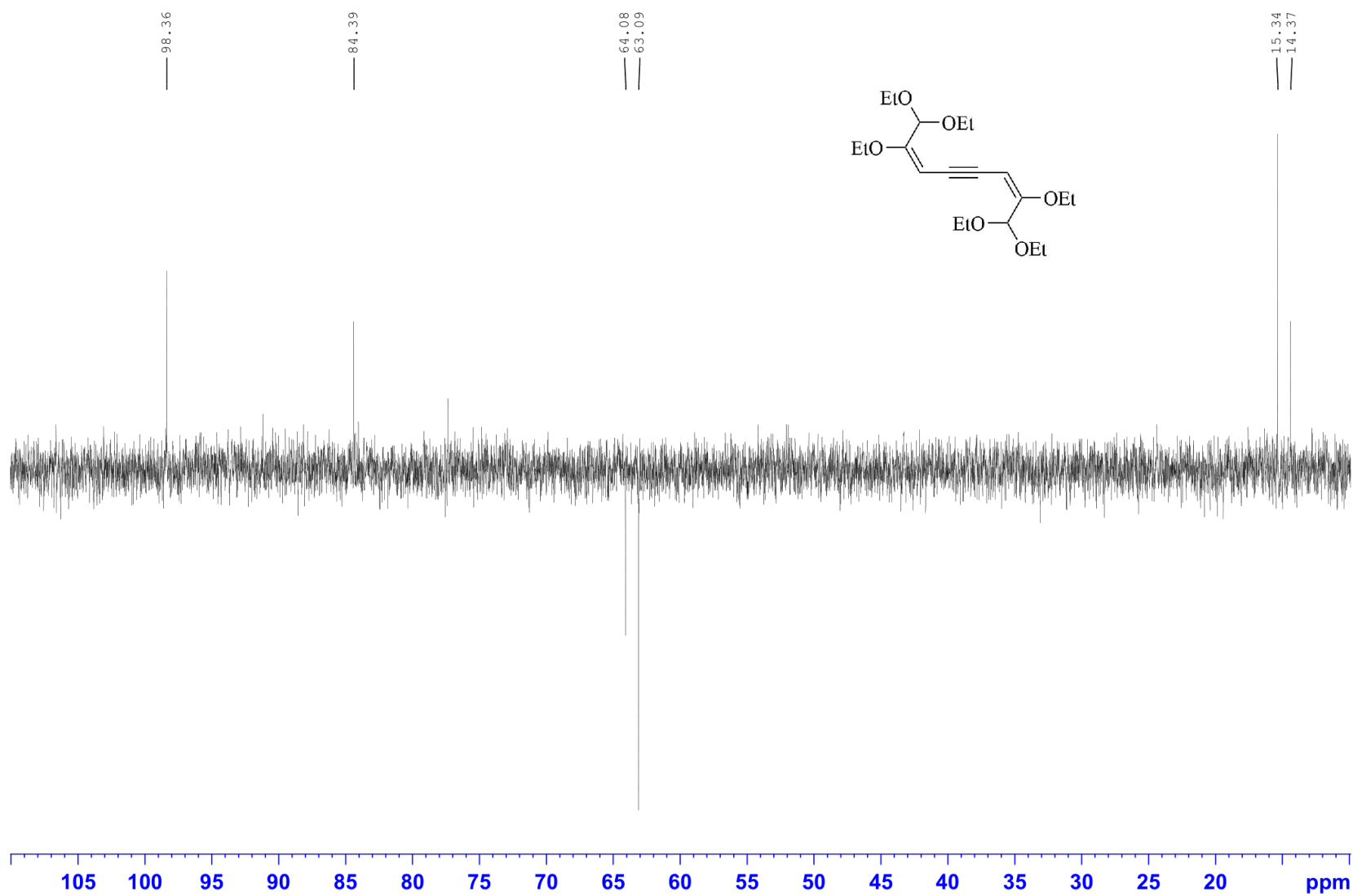


Figure S12: HSQC spectrum of (*E,E*)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

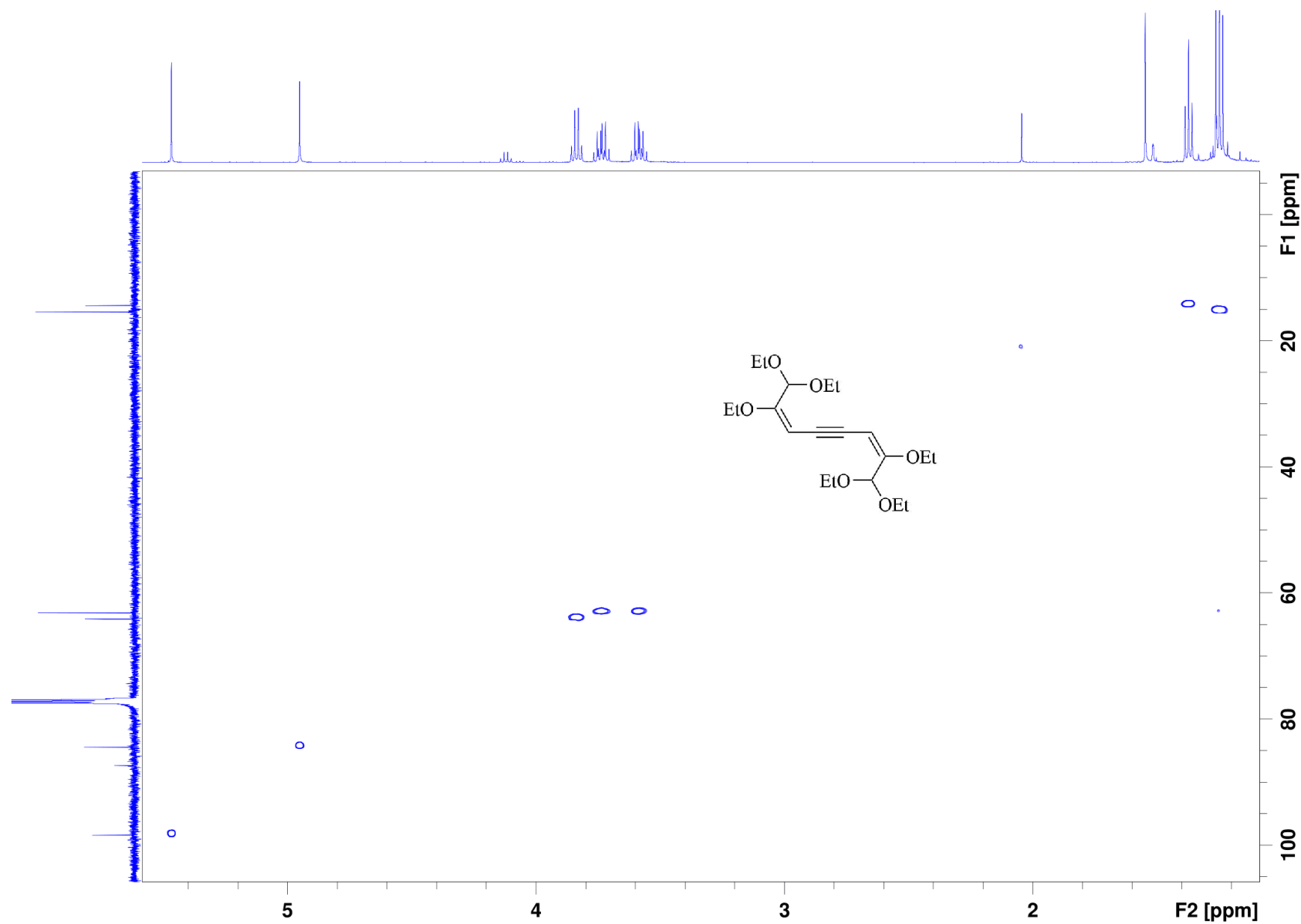


Figure S13: HMBC spectrum of (*E,E*)-1,1,2,7,8,8-Hexaethoxyocta-2,6-dien-4-yne (**2c**)

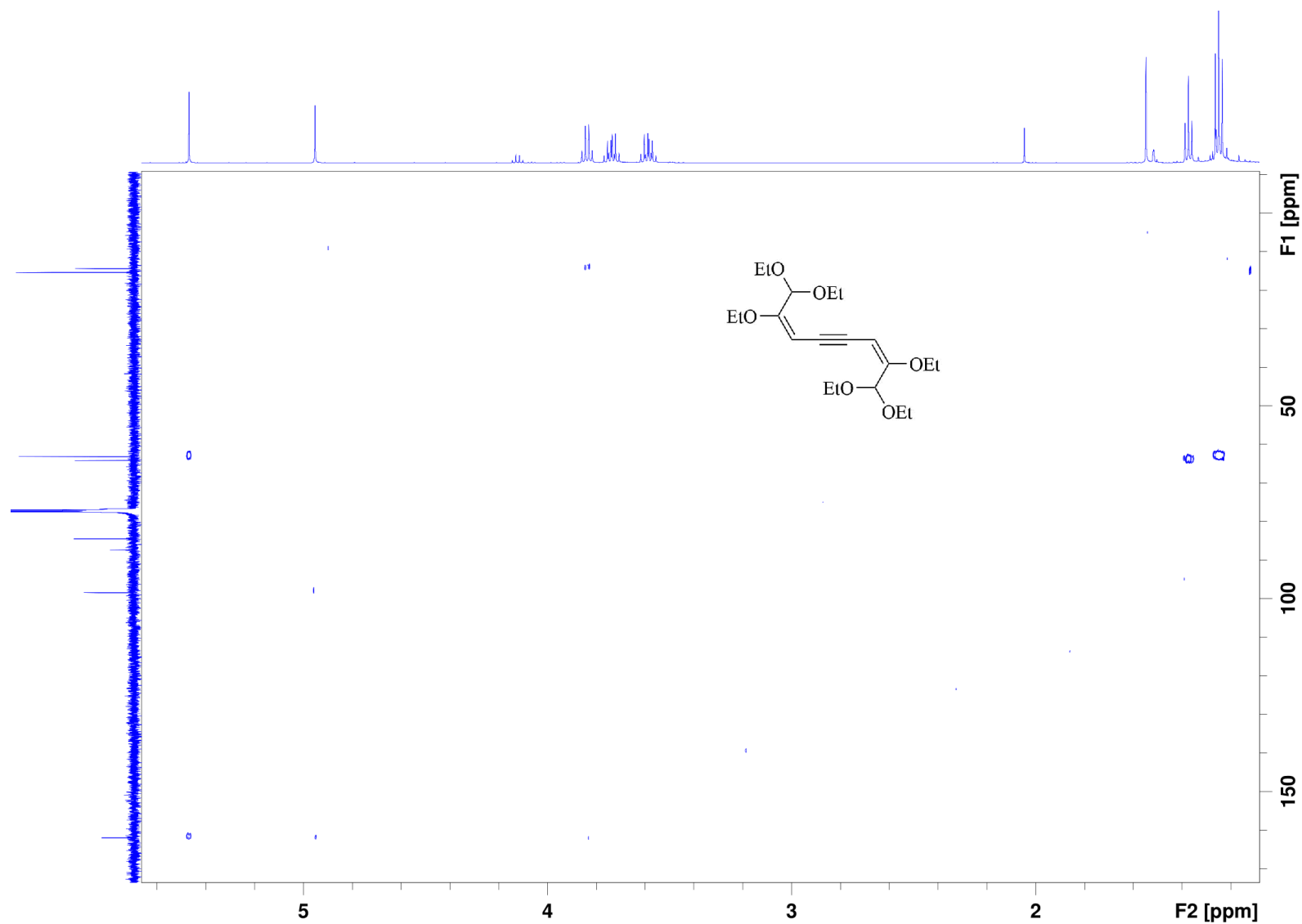


Figure S14: Raman spectrum of a mixture of **2a**, **2b**, and **2c**.

