

Stereoselective Synthesis and Structural Confirmation of the Specialized Pro-resolving Mediator Resolvin E4

*Amalie Føreid Reinertsen,^{†§} Karoline Gangestad Primdahl,^{†§} Ashley Elizabeth Shay,[‡] Charles
Nicholas Serhan,[‡] Trond Vidar Hansen,[†] and Marius Aursnes^{†§*}*

[†]Department of Pharmacy, Section for Pharmaceutical Chemistry, University of Oslo, P.O.
Box 1068, 0316 Oslo, Norway

[‡]Center for Experimental Therapeutics and Reperfusion Injury, Department of
Anesthesiology, Perioperative and Pain Medicine, Hale Building for Transformative
Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston,
Massachusetts, 02115

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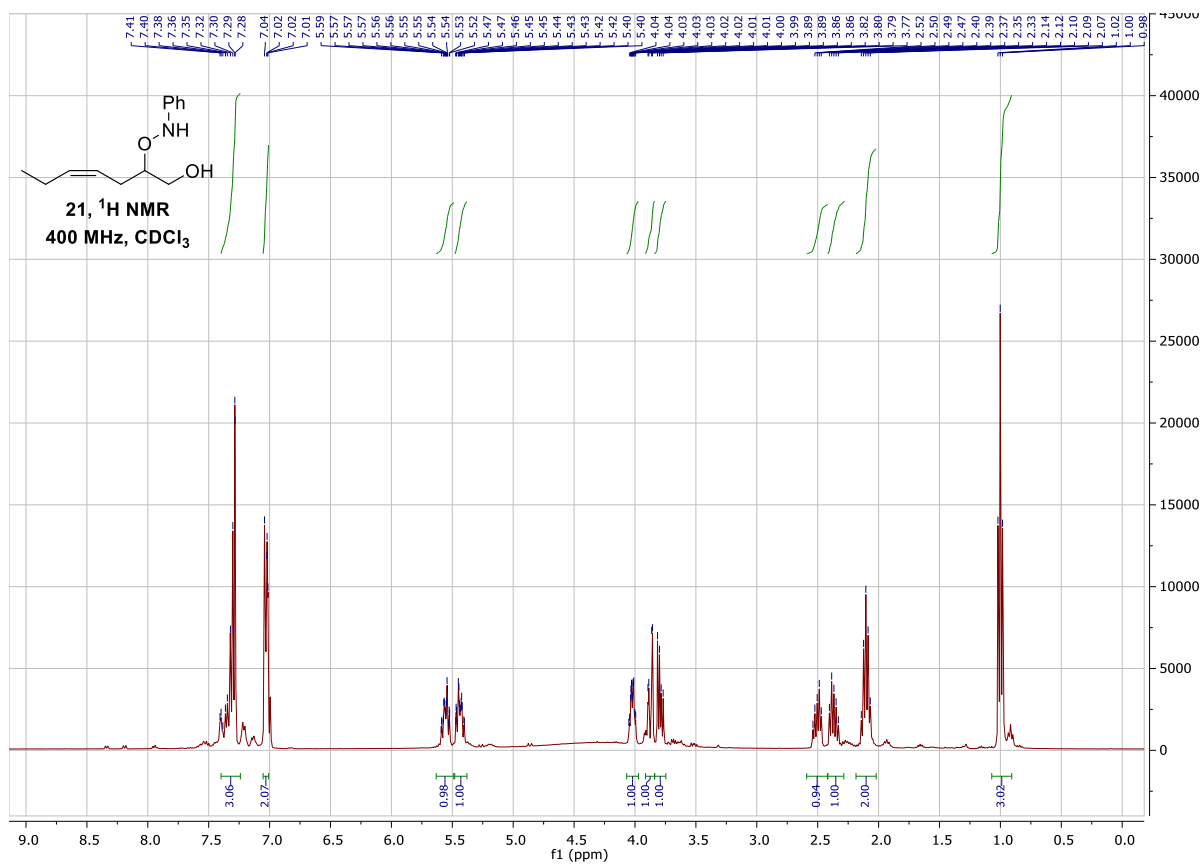


Figure S-1 ^1H -NMR spectrum of compound 21.

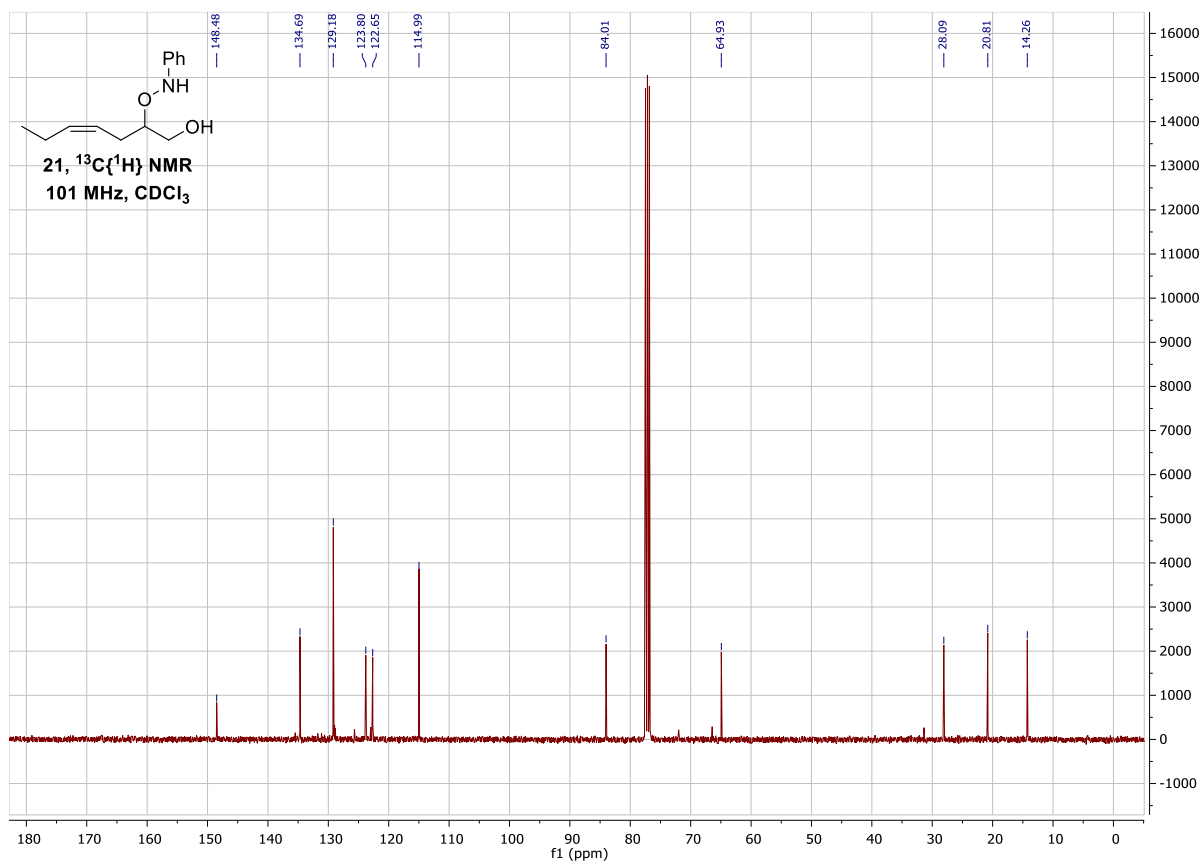


Figure S-2 ^{13}C -NMR spectrum of compound 21.

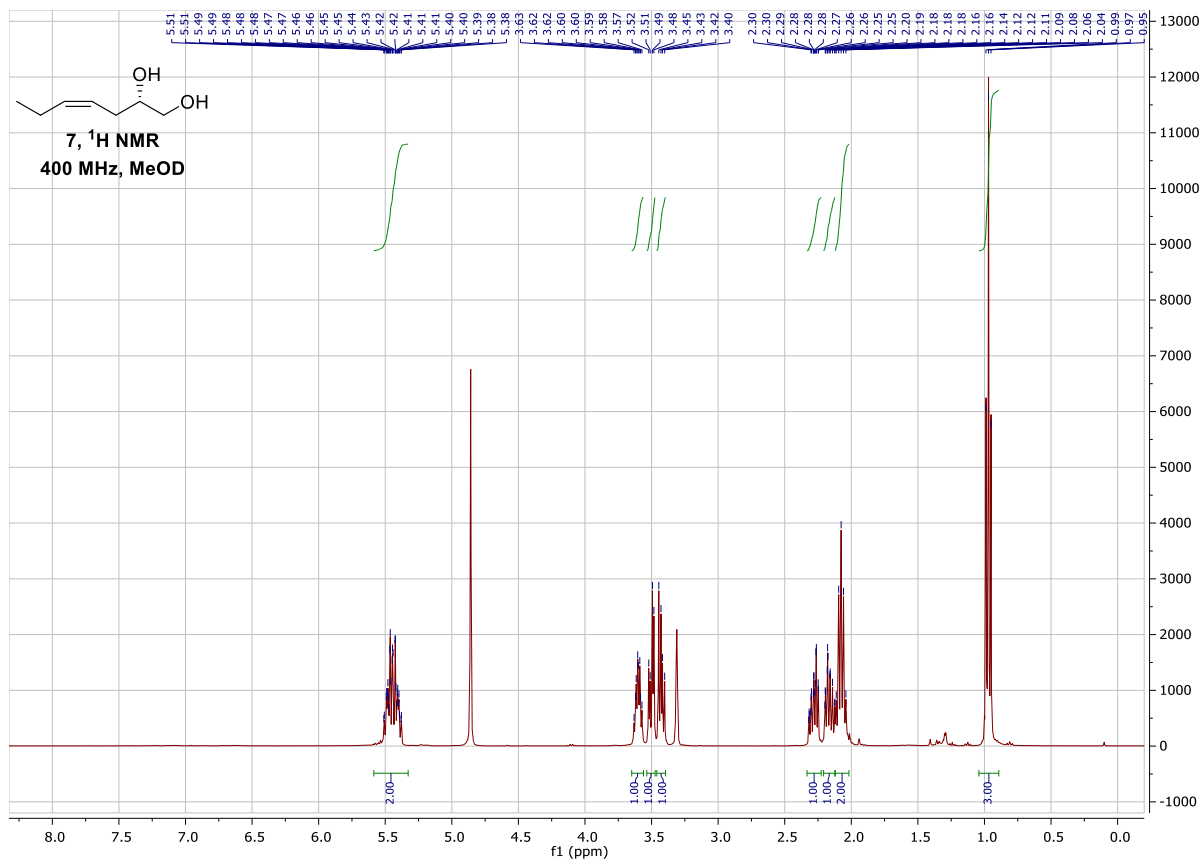


Figure S-3 ^1H -NMR spectrum of compound 7.

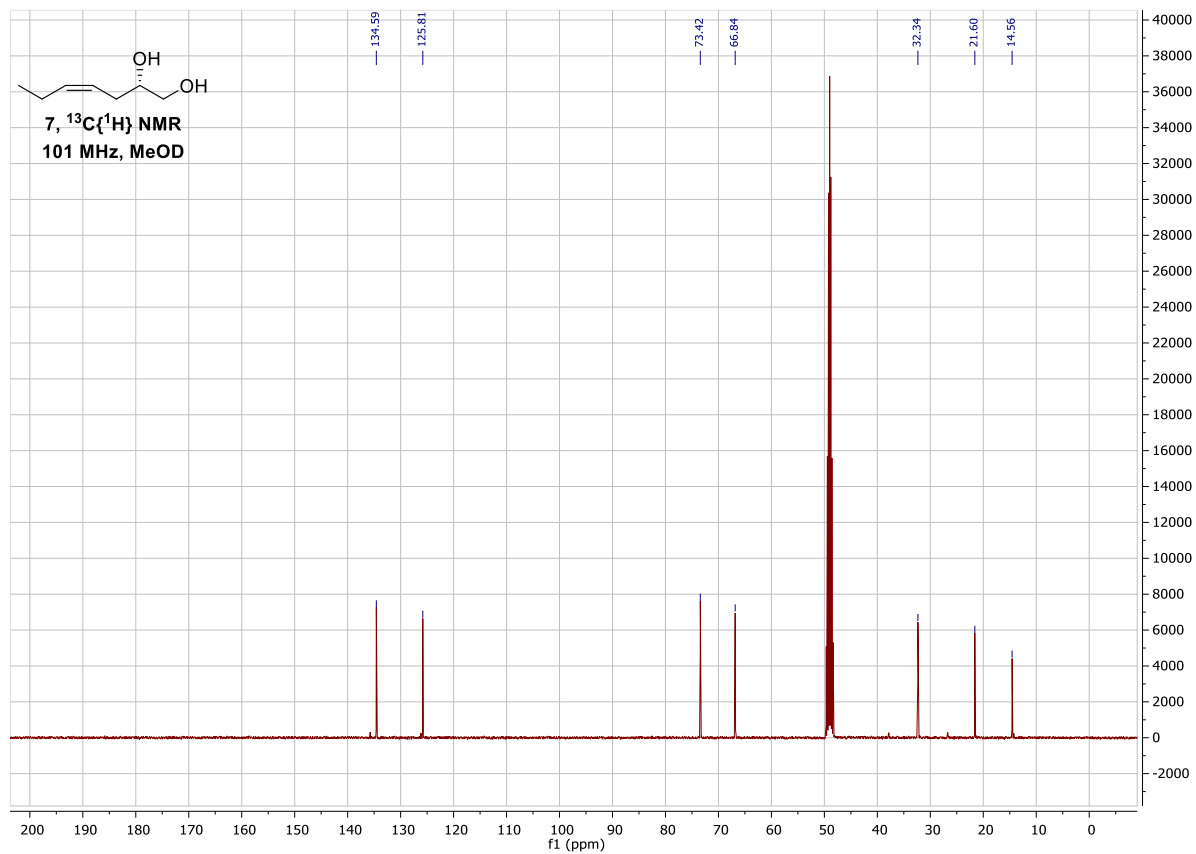


Figure S-4 ^{13}C -NMR spectrum of compound 7.

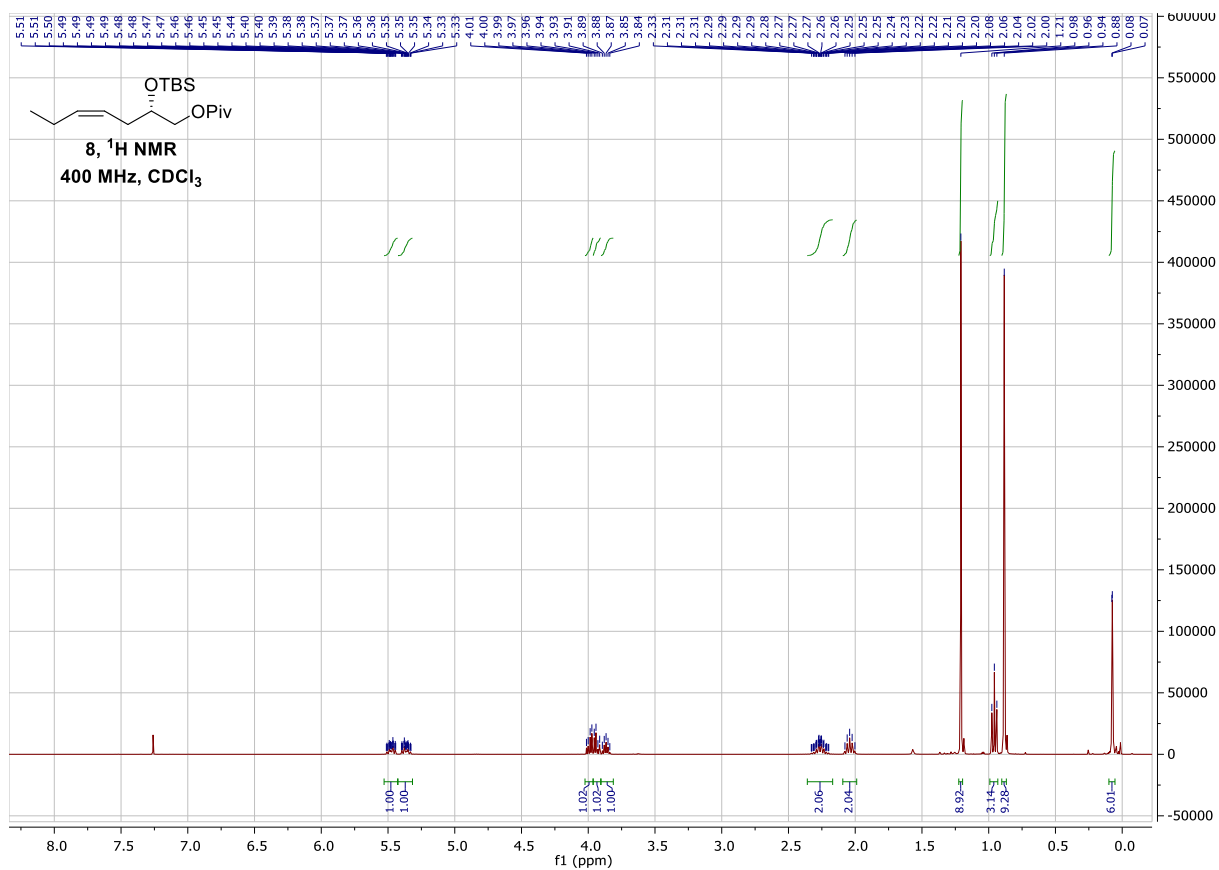


Figure S-5 ¹H-NMR spectrum of compound **8**.

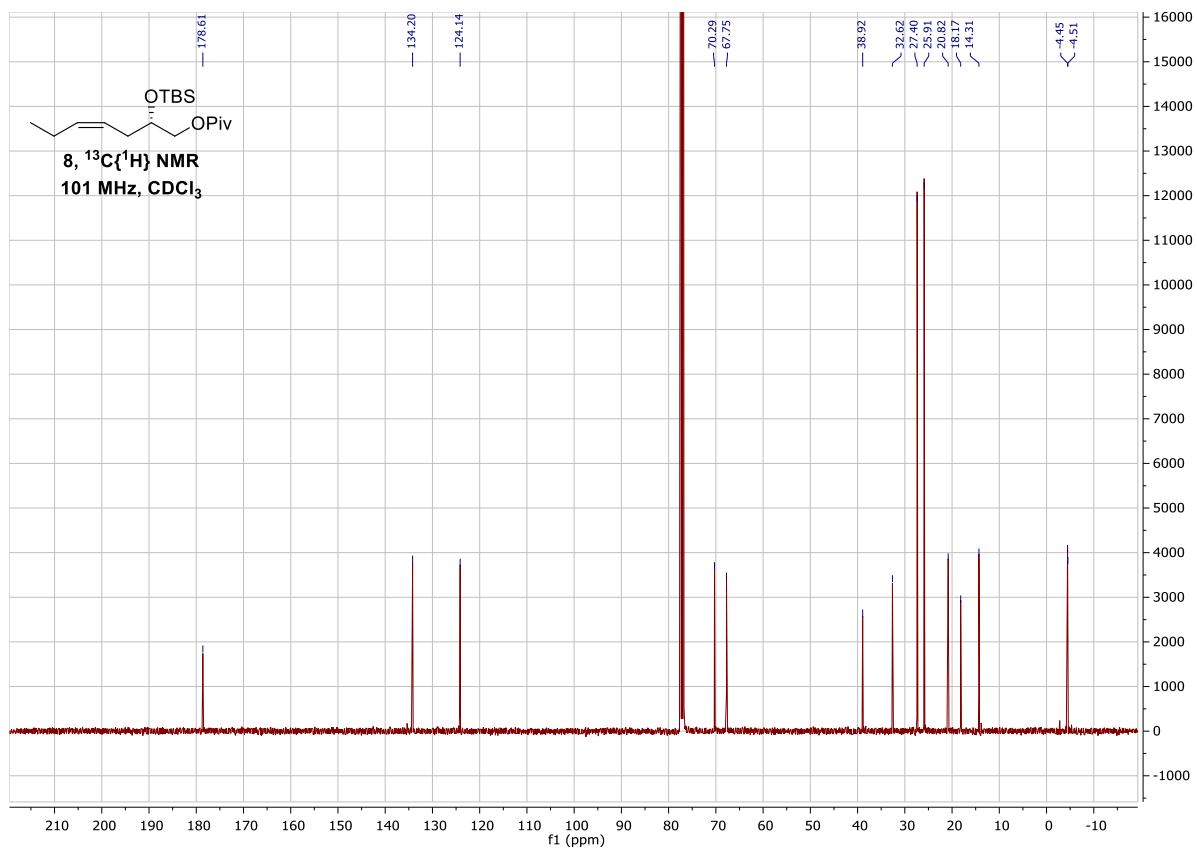


Figure S-6 ¹³C-NMR spectrum of compound **8**.

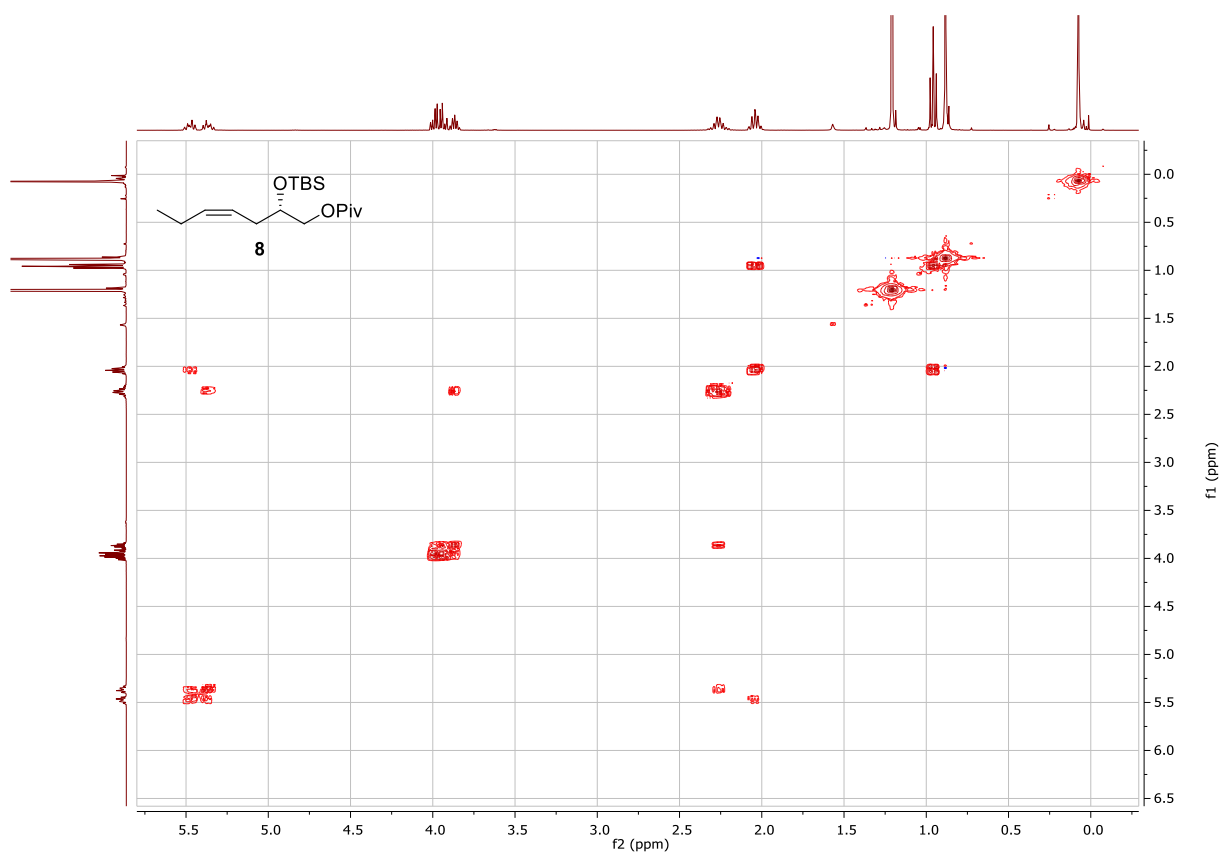


Figure S-7 COSY-spectrum of compound 8.

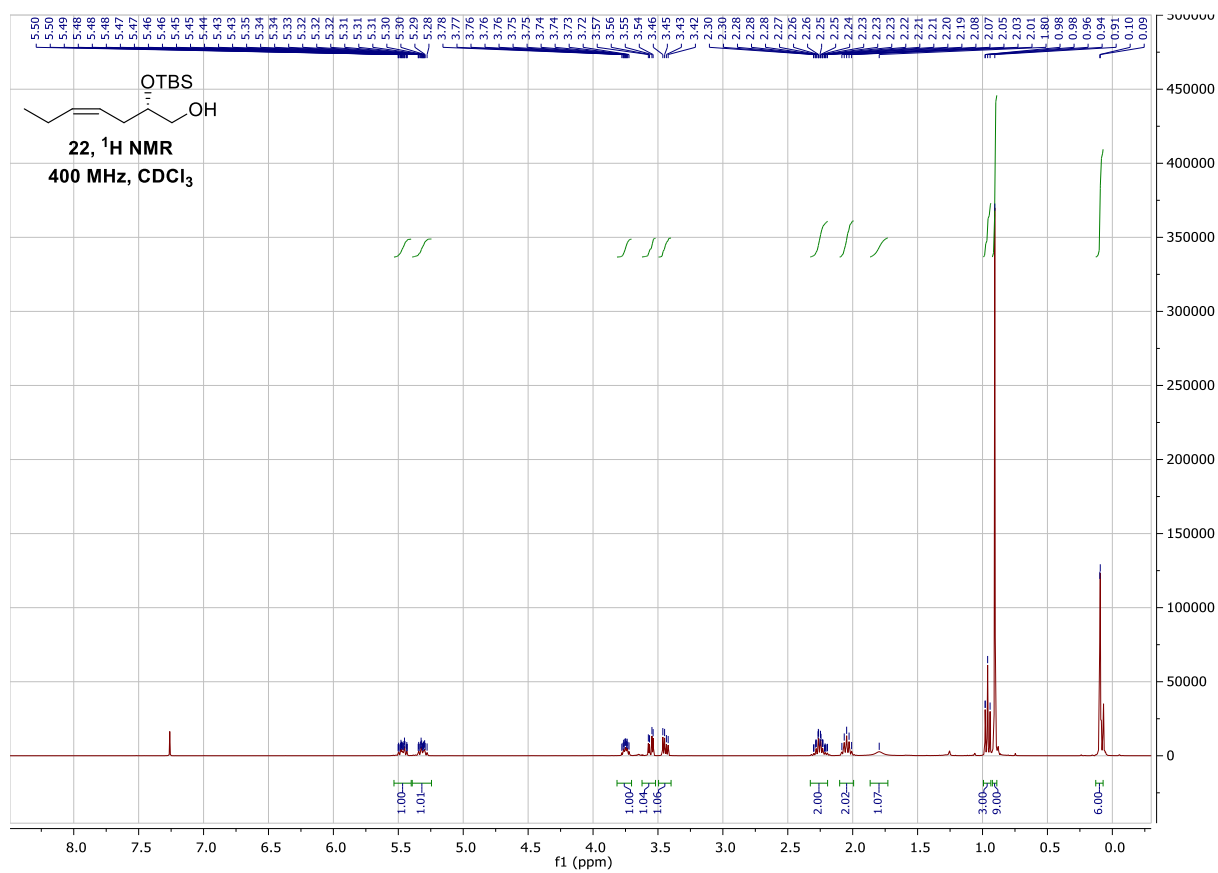


Figure S-8 ¹H-NMR spectrum of compound 22.

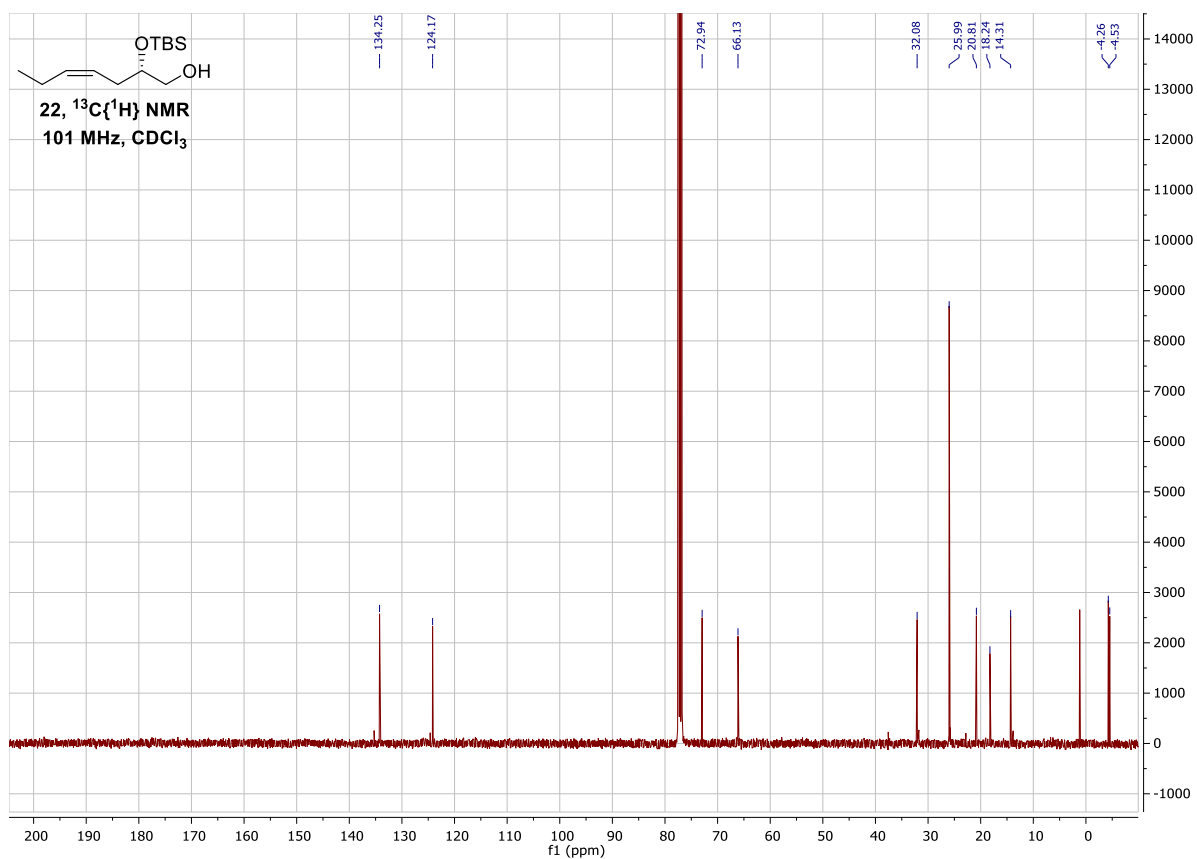


Figure S-9 ^{13}C -NMR spectrum of compound **22**.

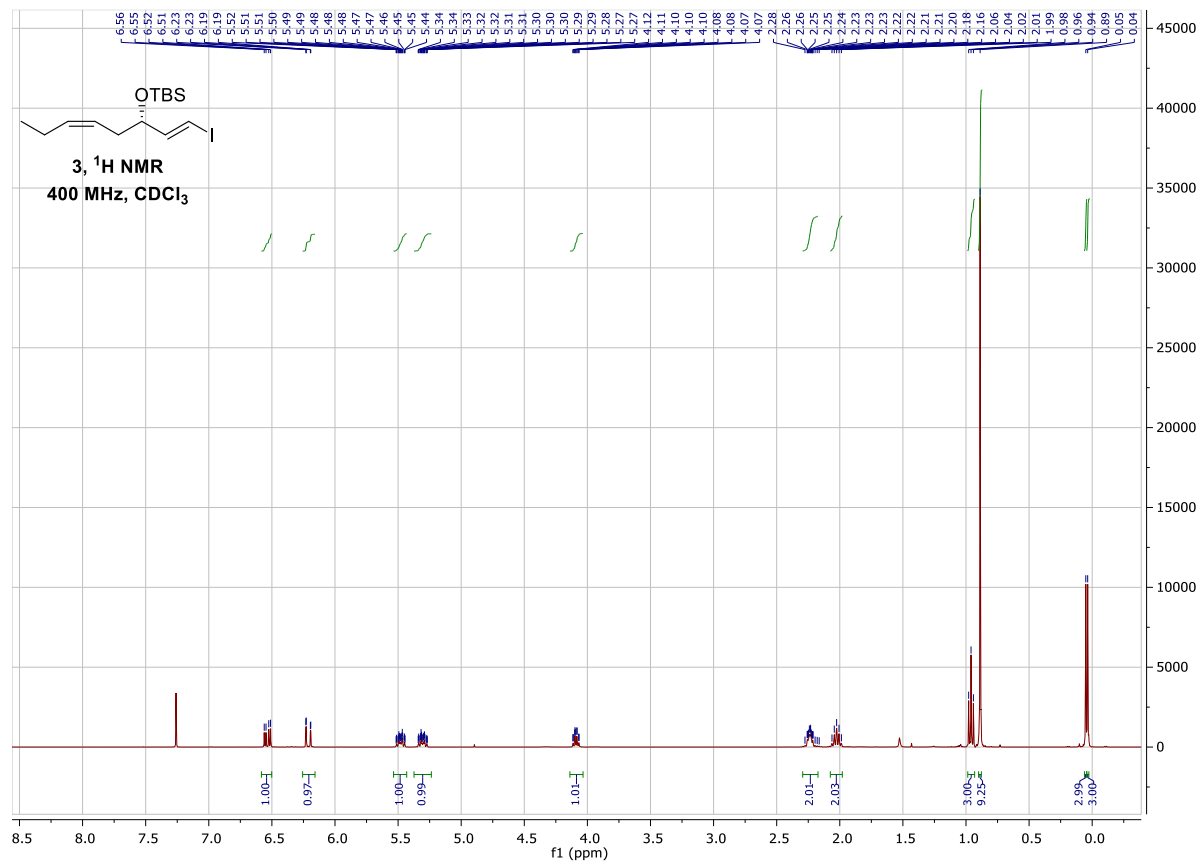


Figure S-10 ^1H -NMR spectrum of compound **3**.

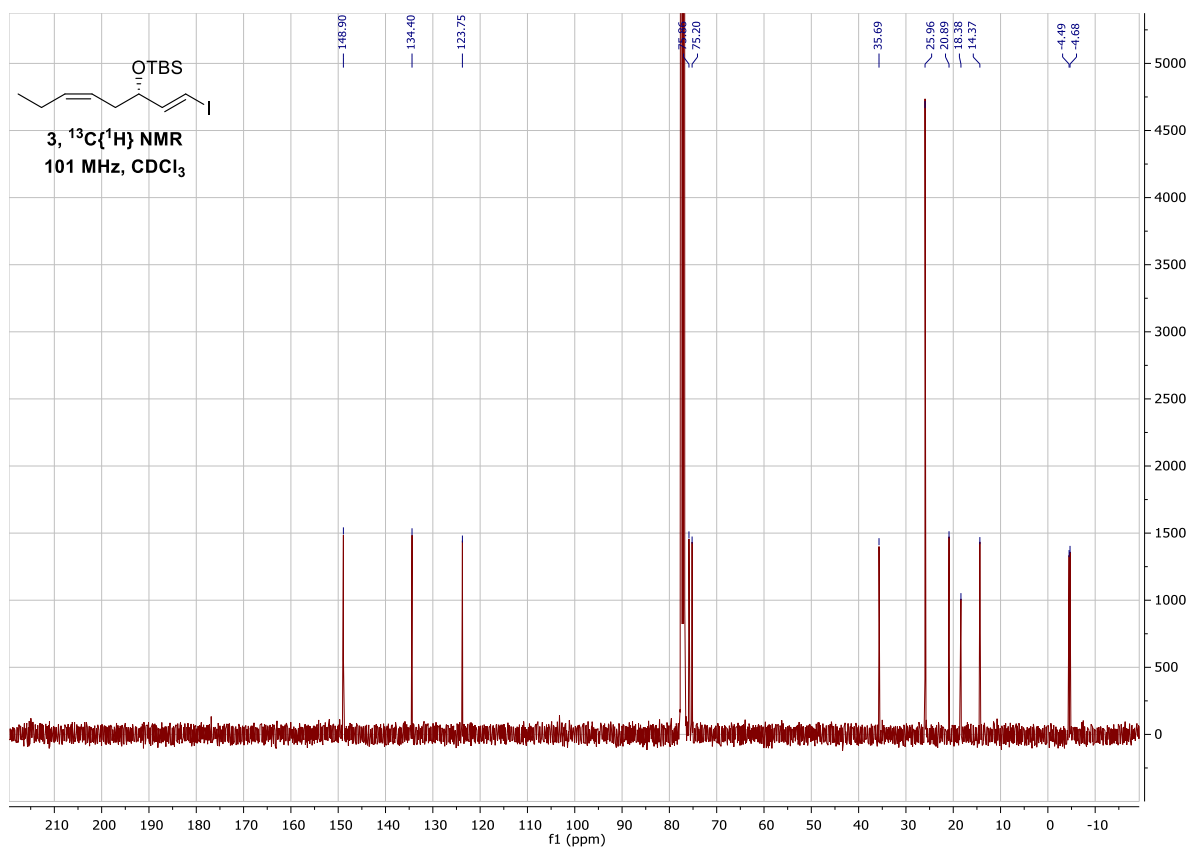


Figure S-11 ^{13}C -NMR spectrum of compound 3.

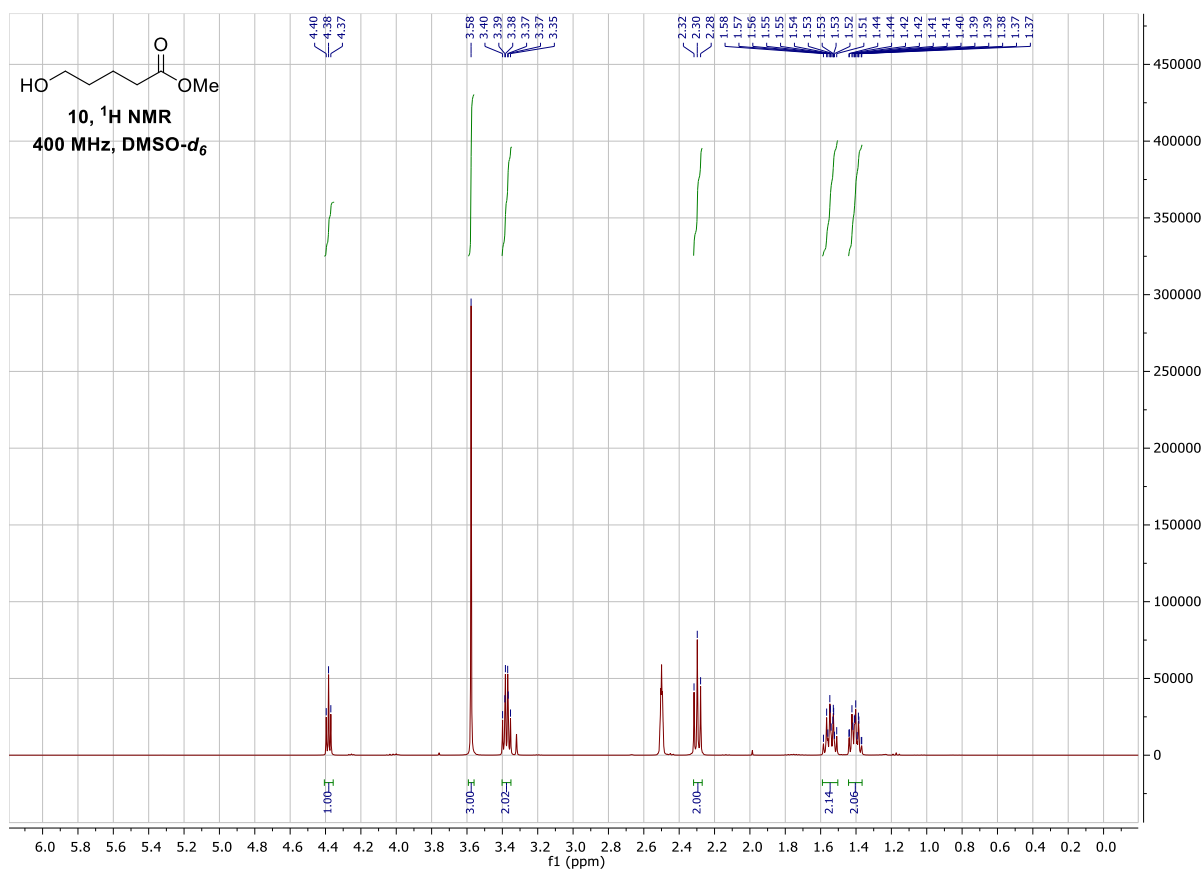


Figure S-12 ^1H -NMR spectrum of compound 10.

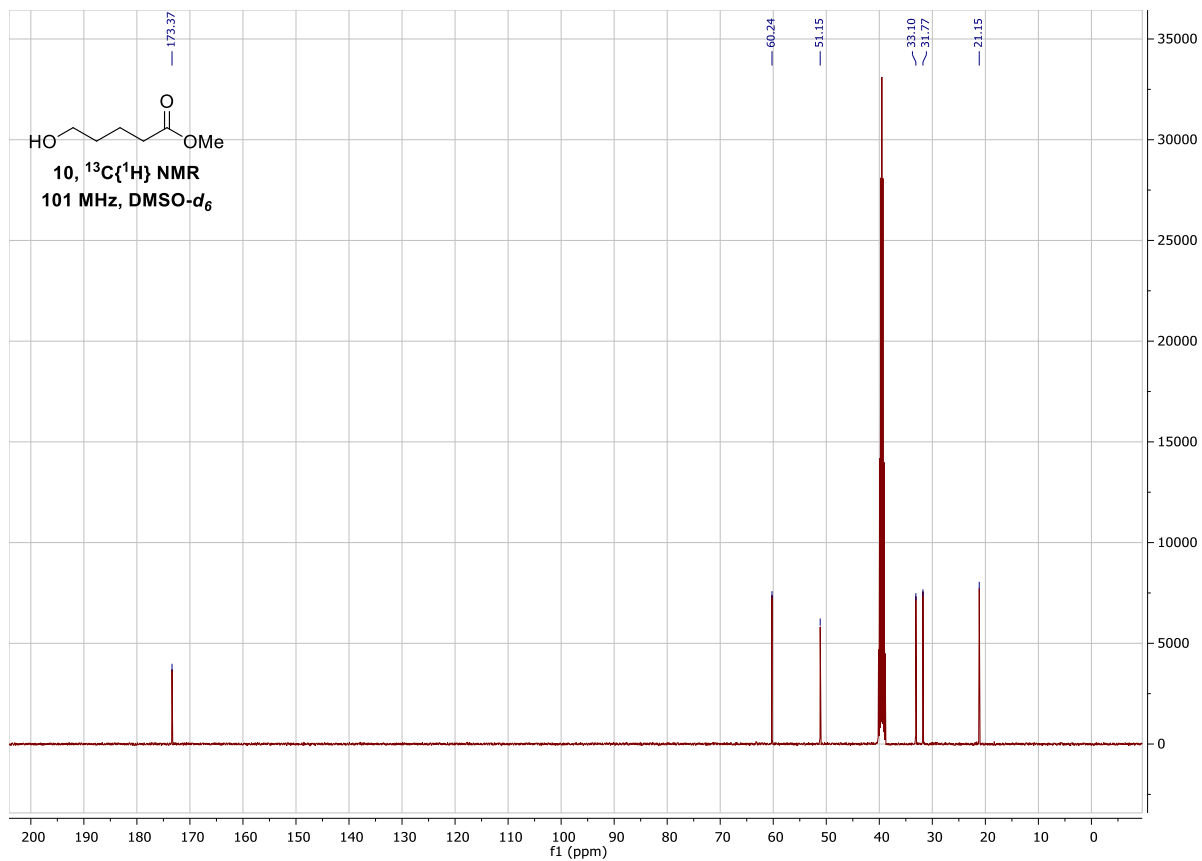


Figure S-13 ^{13}C -NMR spectrum of compound **10**.

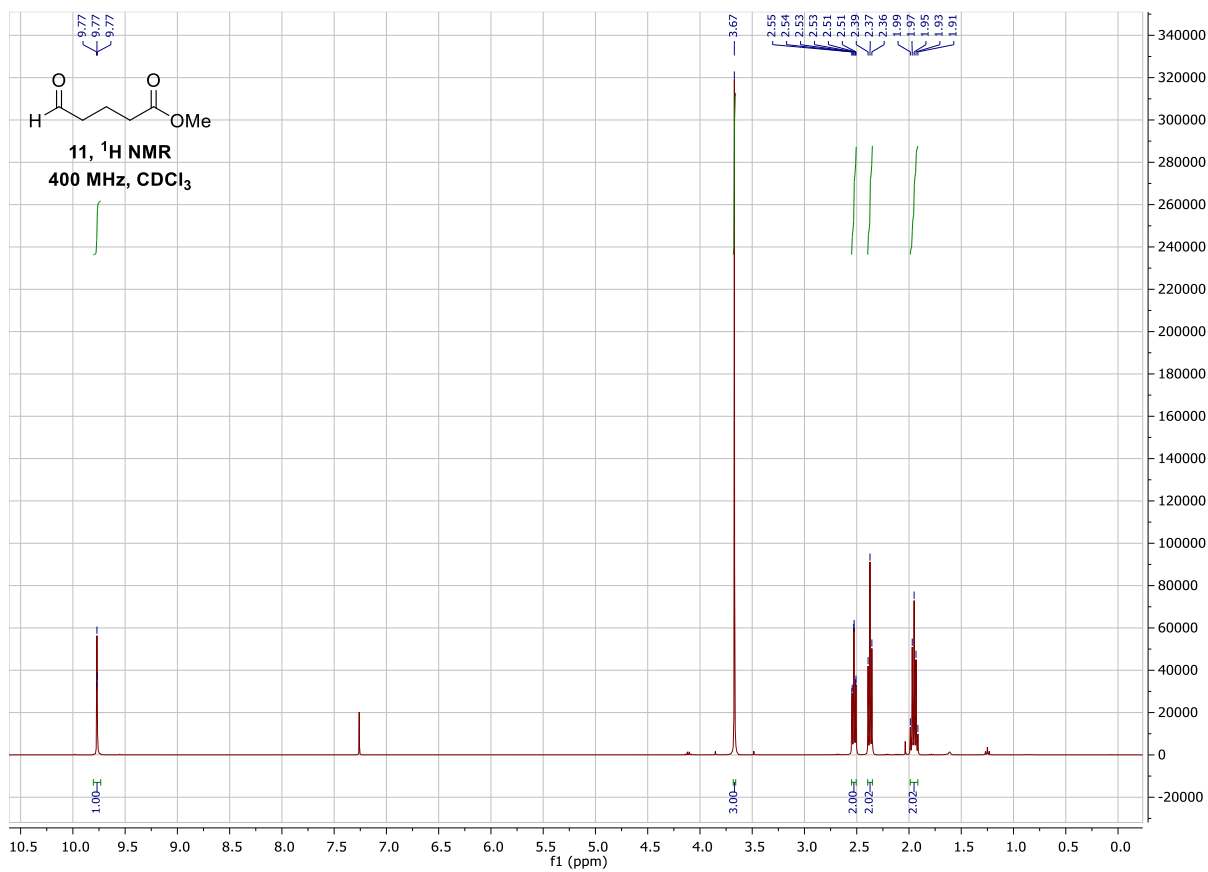


Figure S-14 ^1H -NMR spectrum of compound **11**.

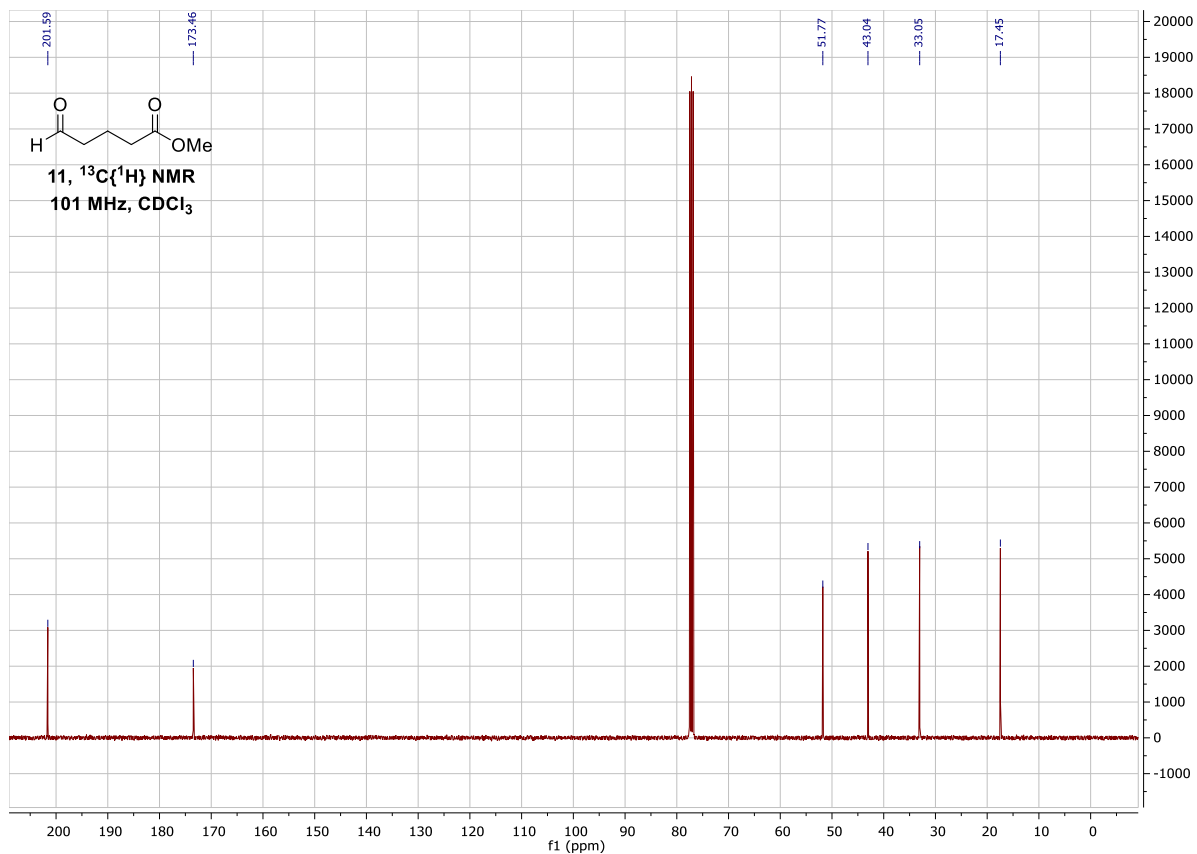


Figure S-15 ^{13}C -NMR spectrum of compound 11.

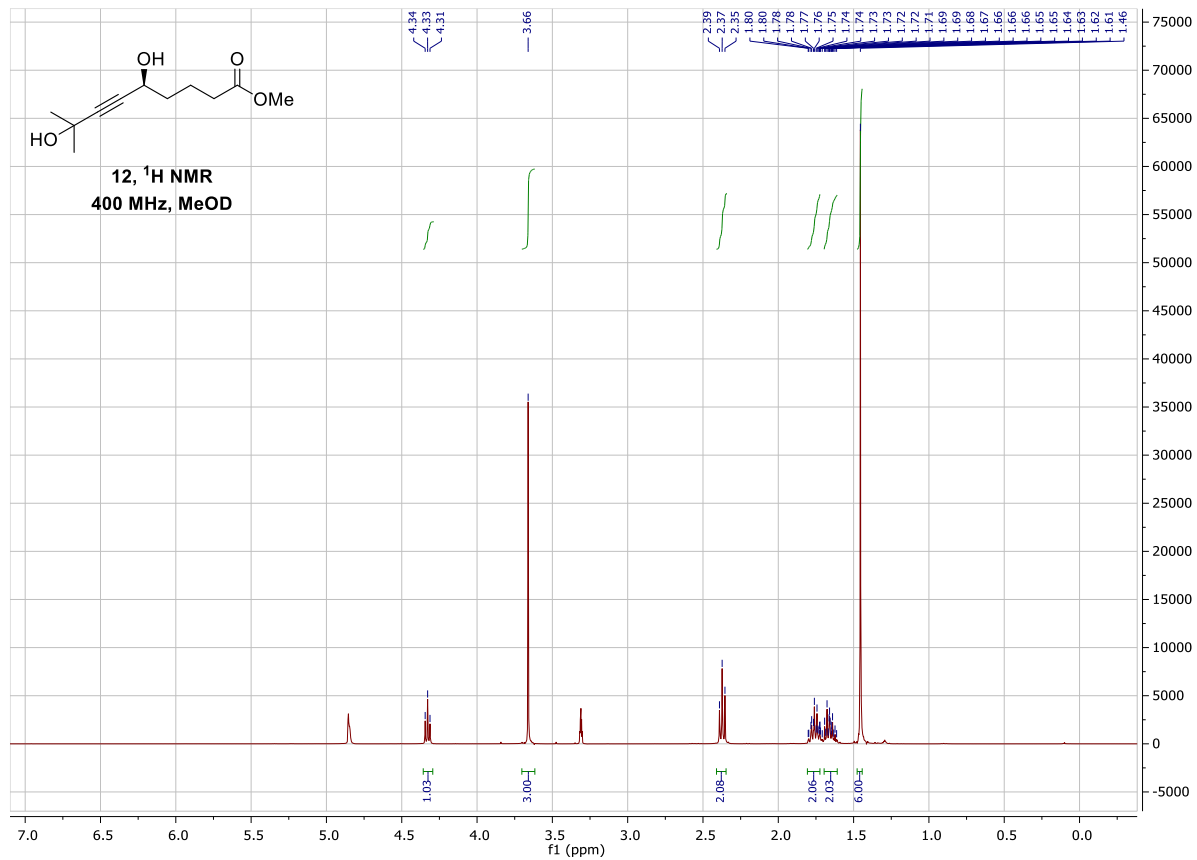


Figure S-16 ^1H -NMR spectrum of compound 12.

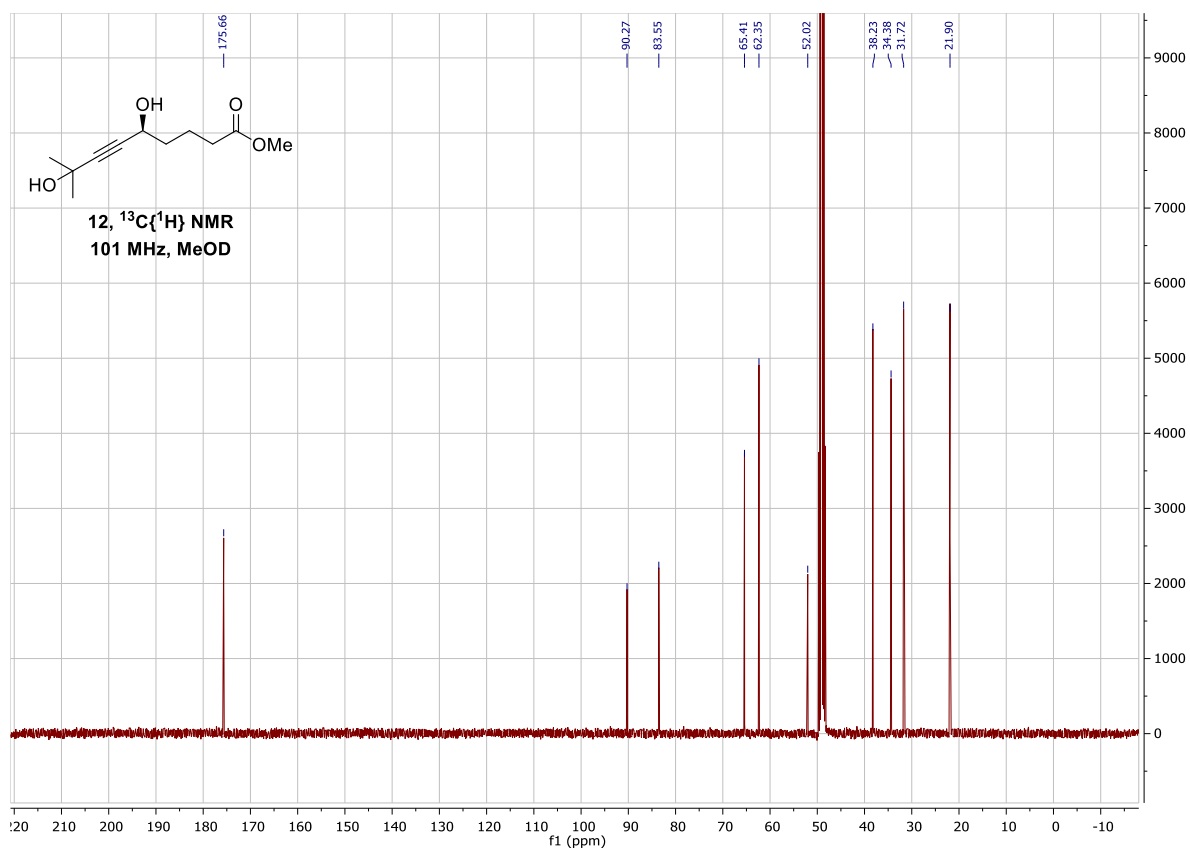


Figure S-17 ^{13}C -NMR spectrum of compound 12.

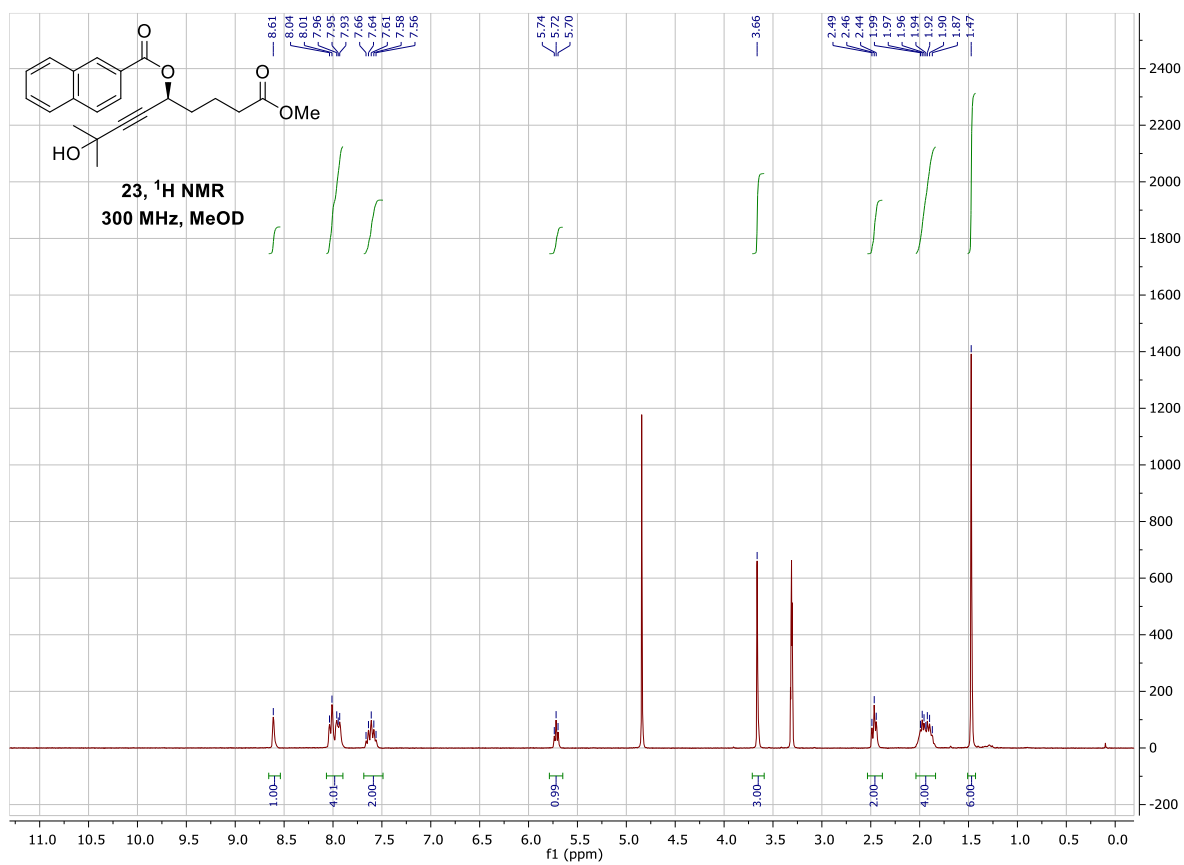


Figure S-18 ^1H -NMR spectrum of compound 23.

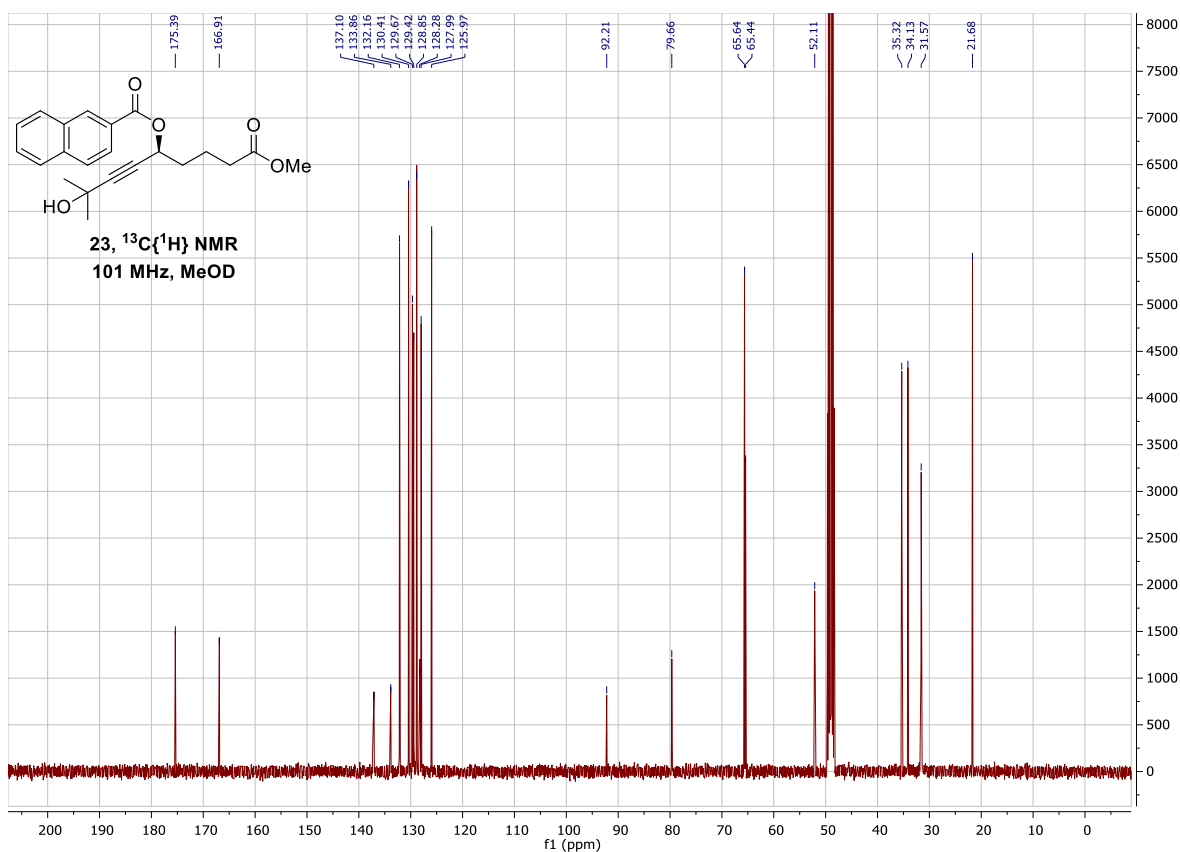


Figure S-19 ^{13}C -NMR spectrum of compound 23.

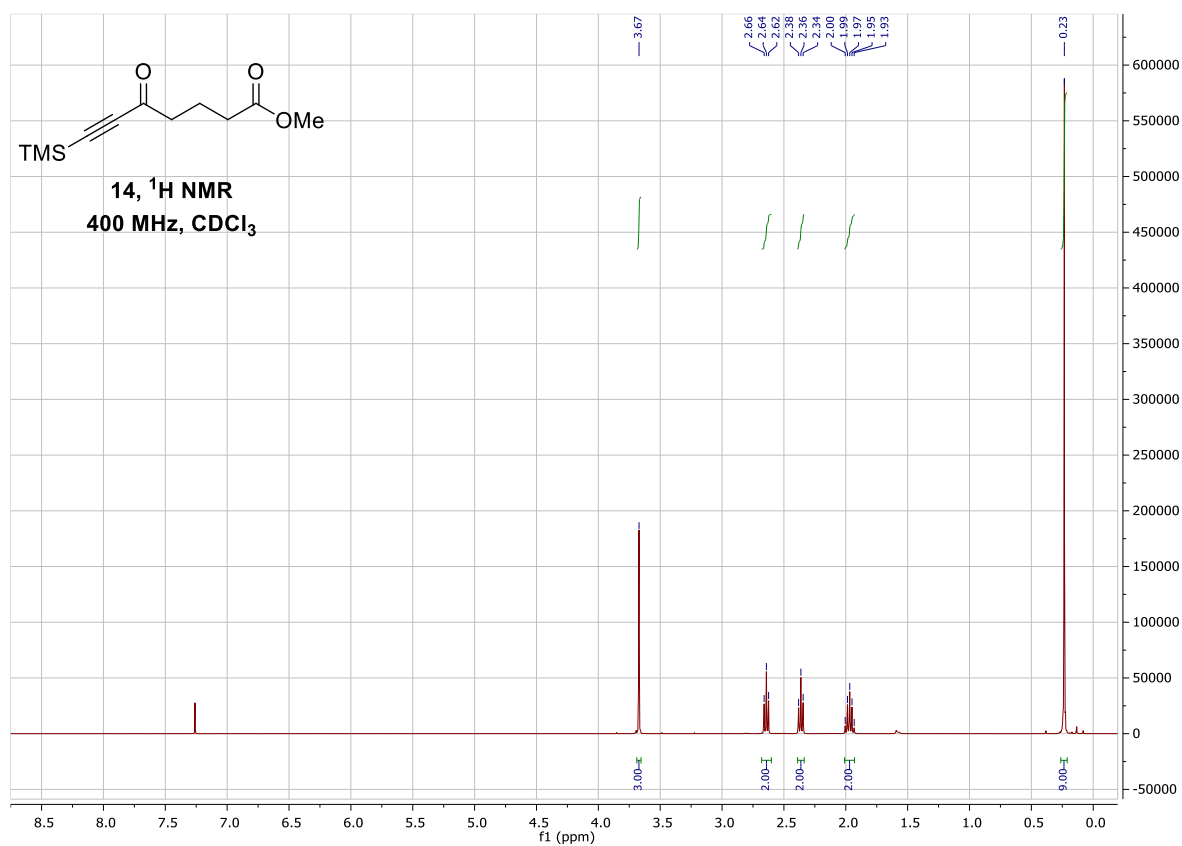


Figure S-20 ^1H -NMR spectrum of compound 14.

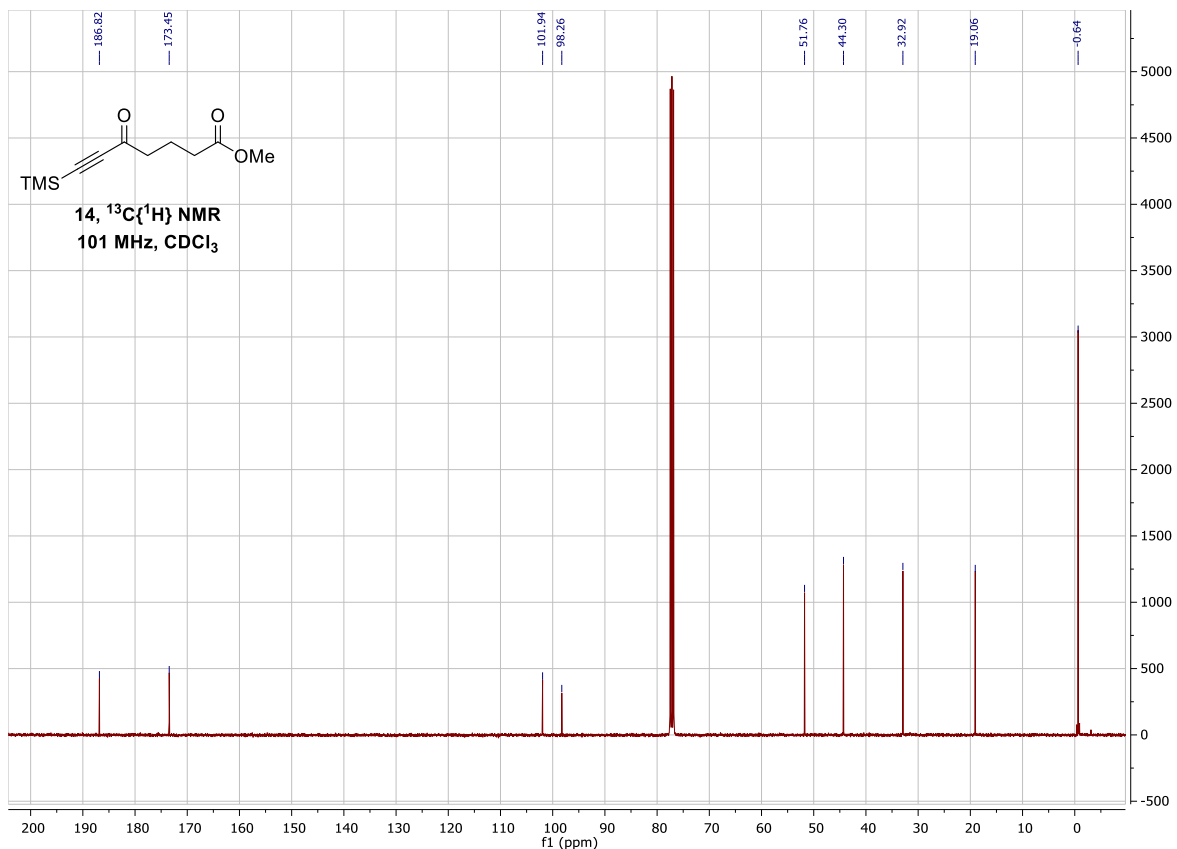


Figure S-21 ^{13}C -NMR spectrum of compound 14.

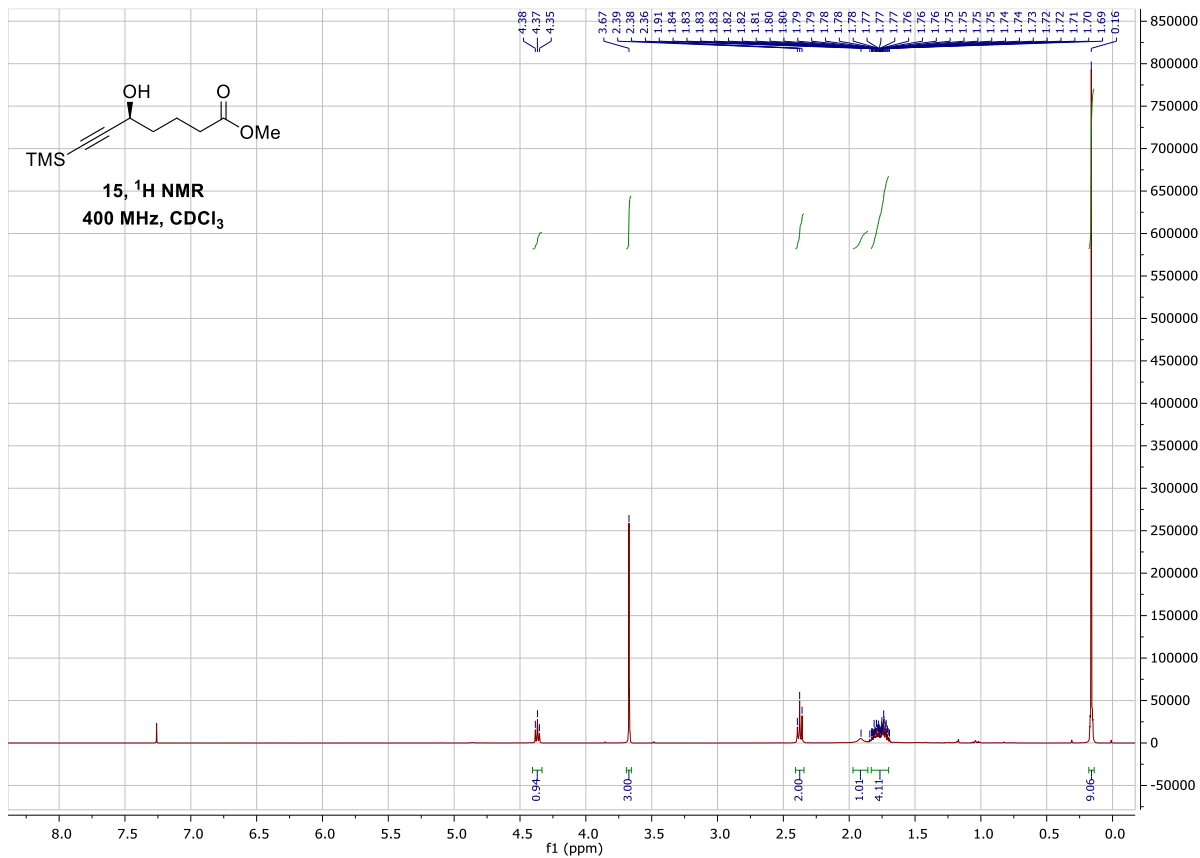


Figure S-22 ^1H -NMR spectrum of compound 15.

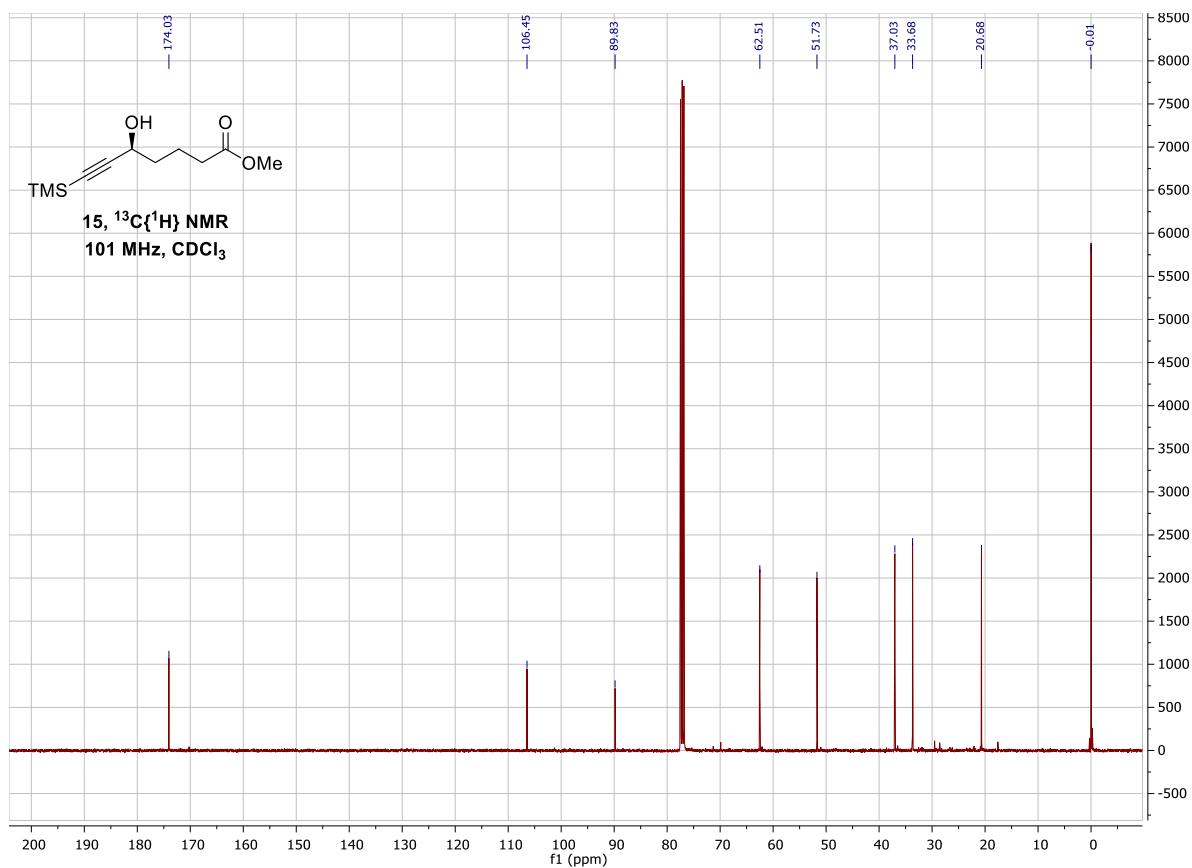


Figure S-23 ^{13}C -NMR spectrum of compound 15.

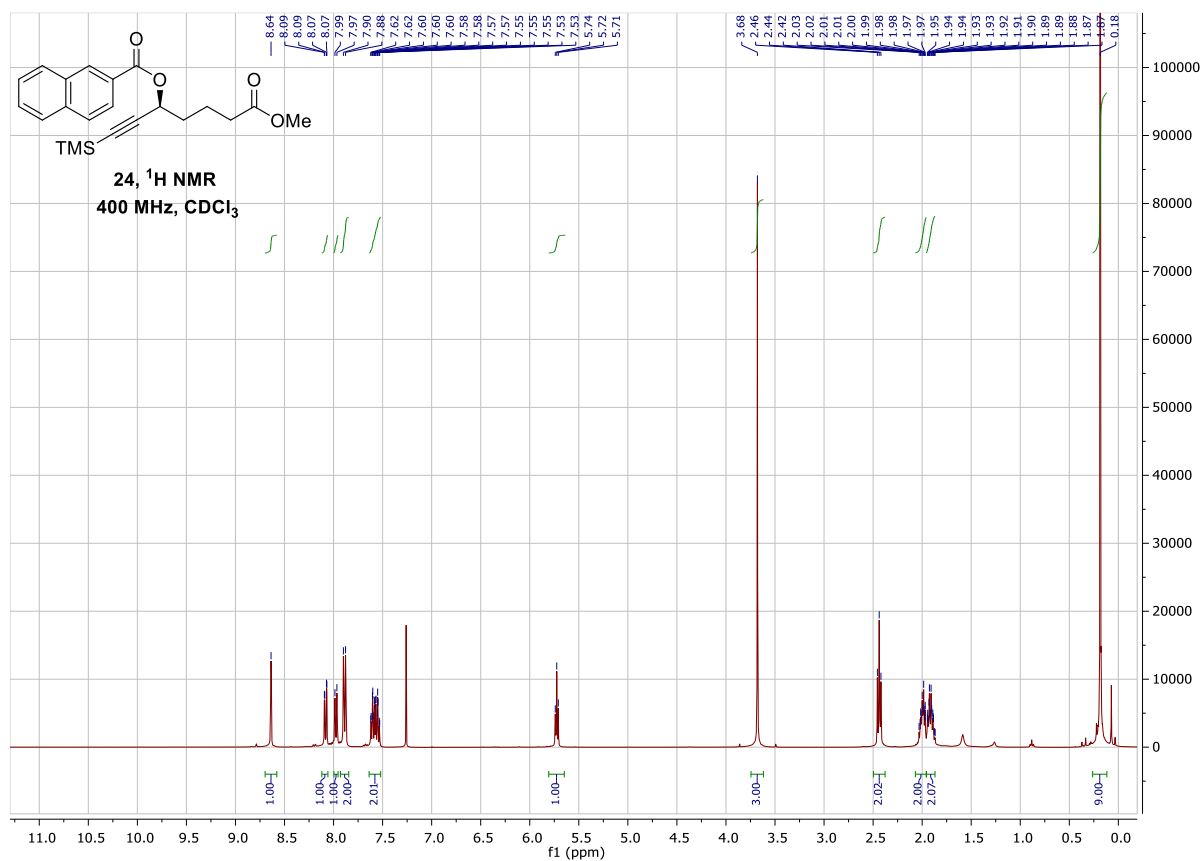


Figure S-24 ^1H -NMR spectrum of compound 24.

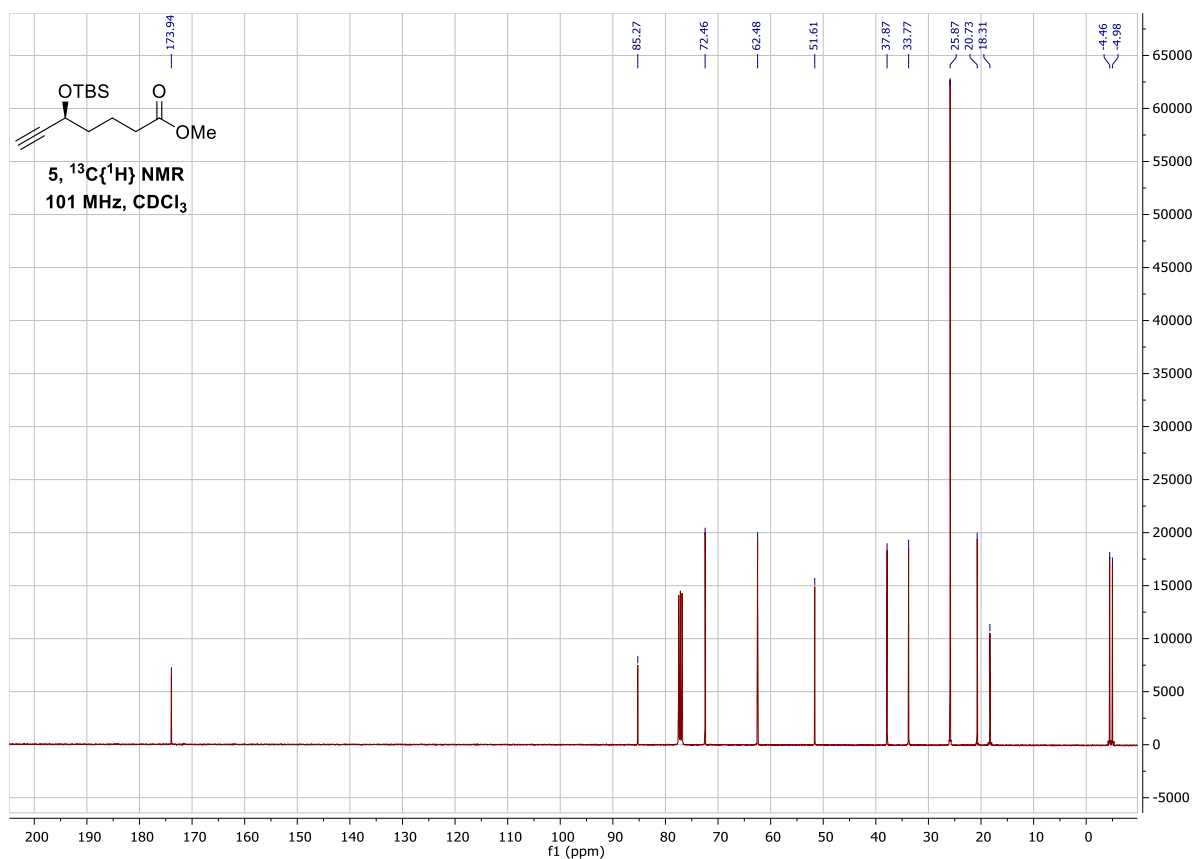


Figure S-27 ^{13}C -NMR spectrum of compound 5.

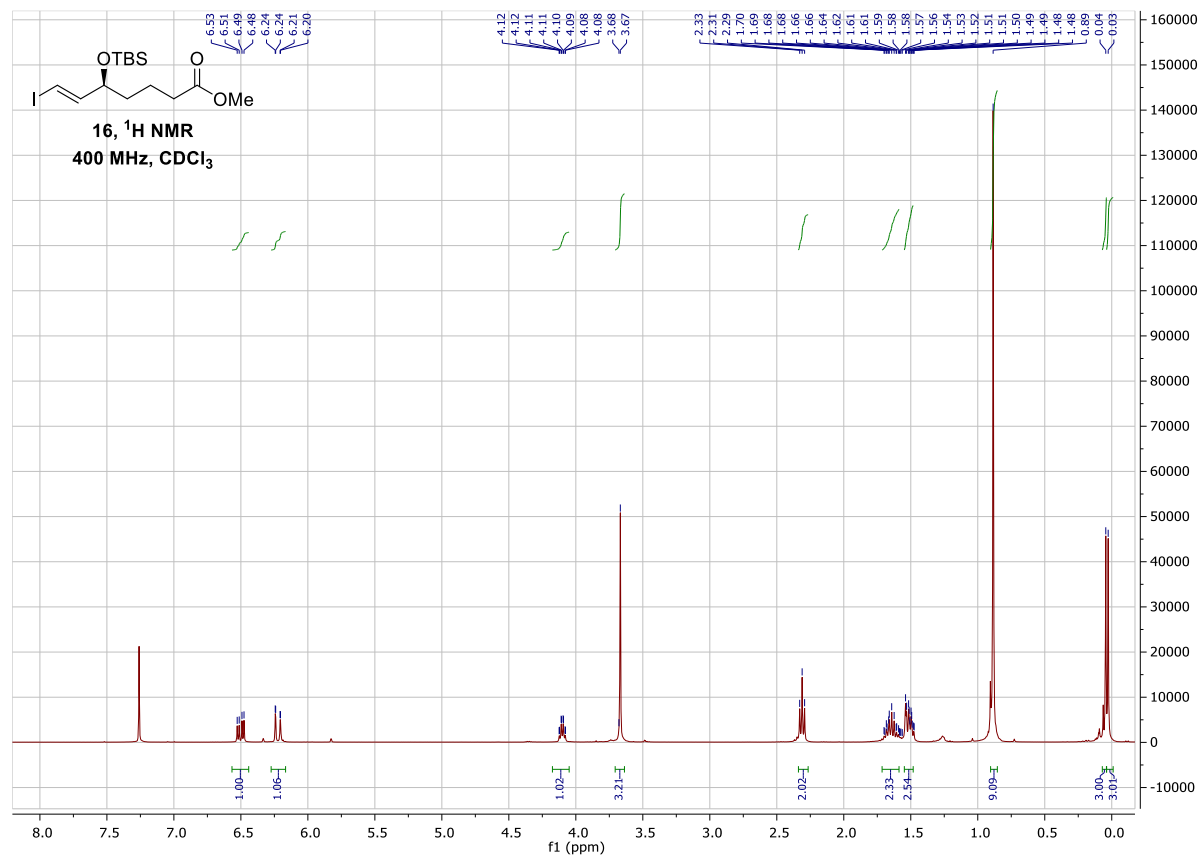


Figure S-28 ^1H -NMR spectrum of compound 16.

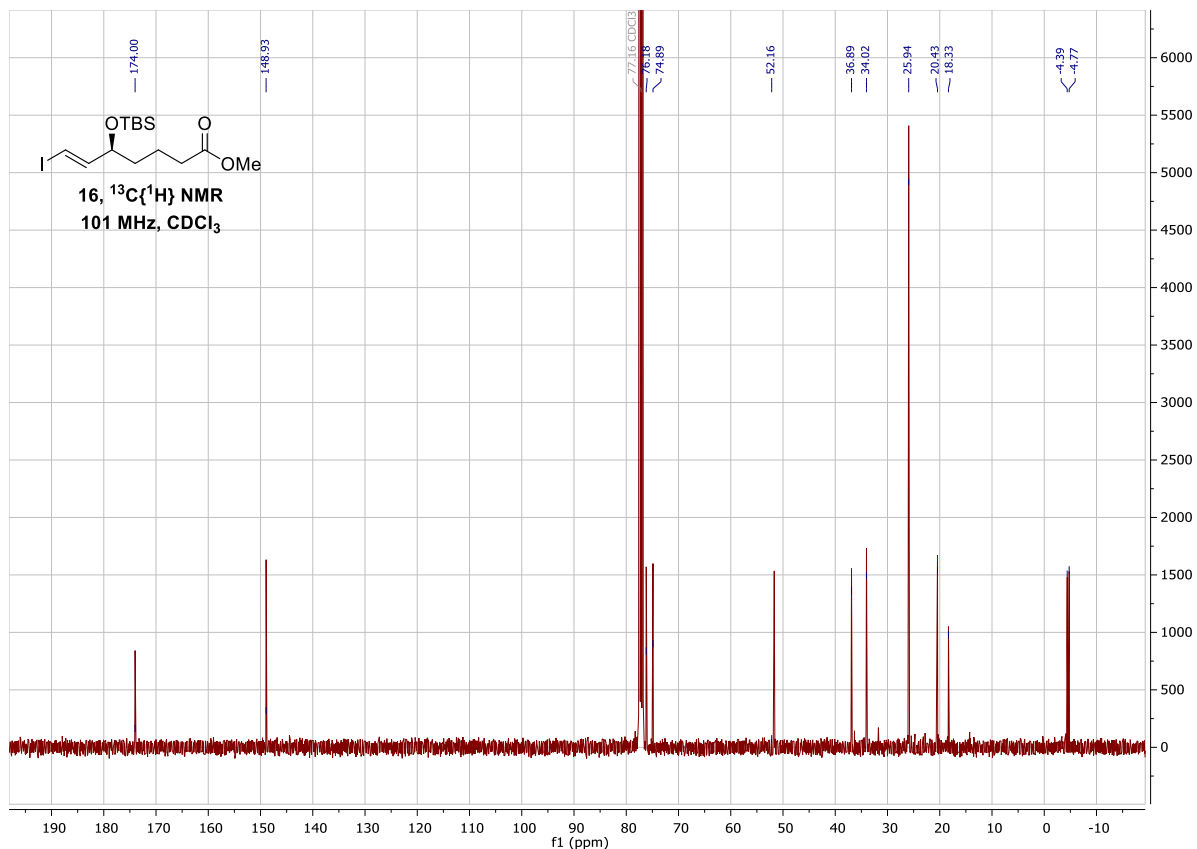


Figure S-29 ^{13}C -NMR spectrum of compound 16.

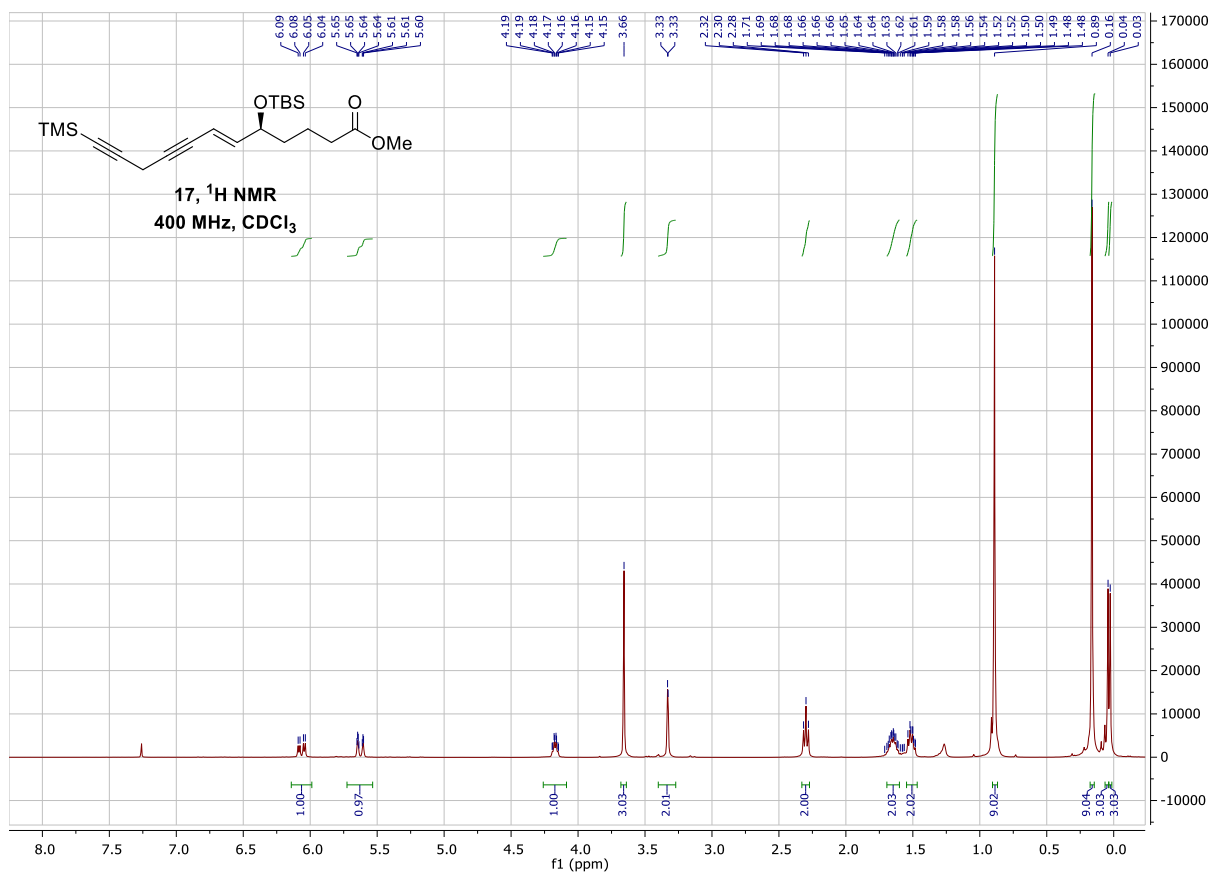


Figure S-30 ^1H -NMR spectrum of compound 17.

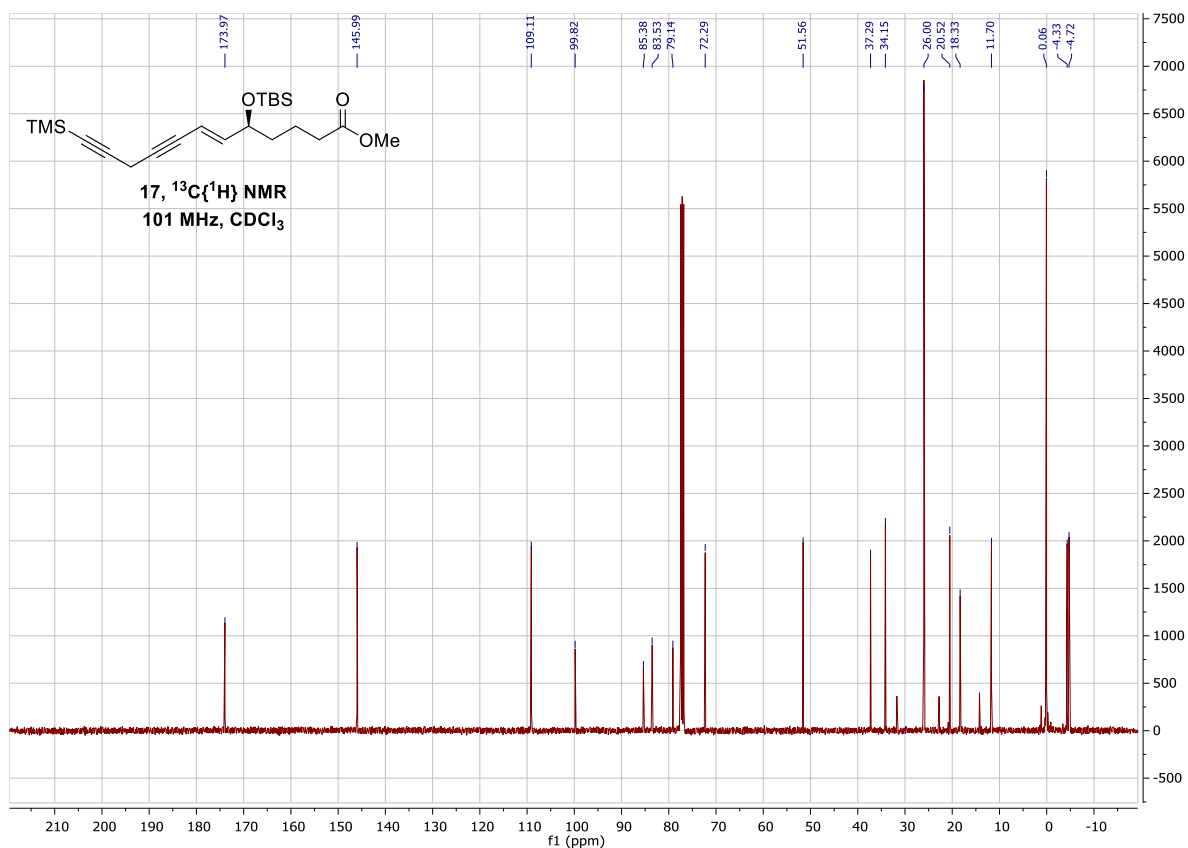


Figure S-31 ^{13}C -NMR spectrum of compound 17.

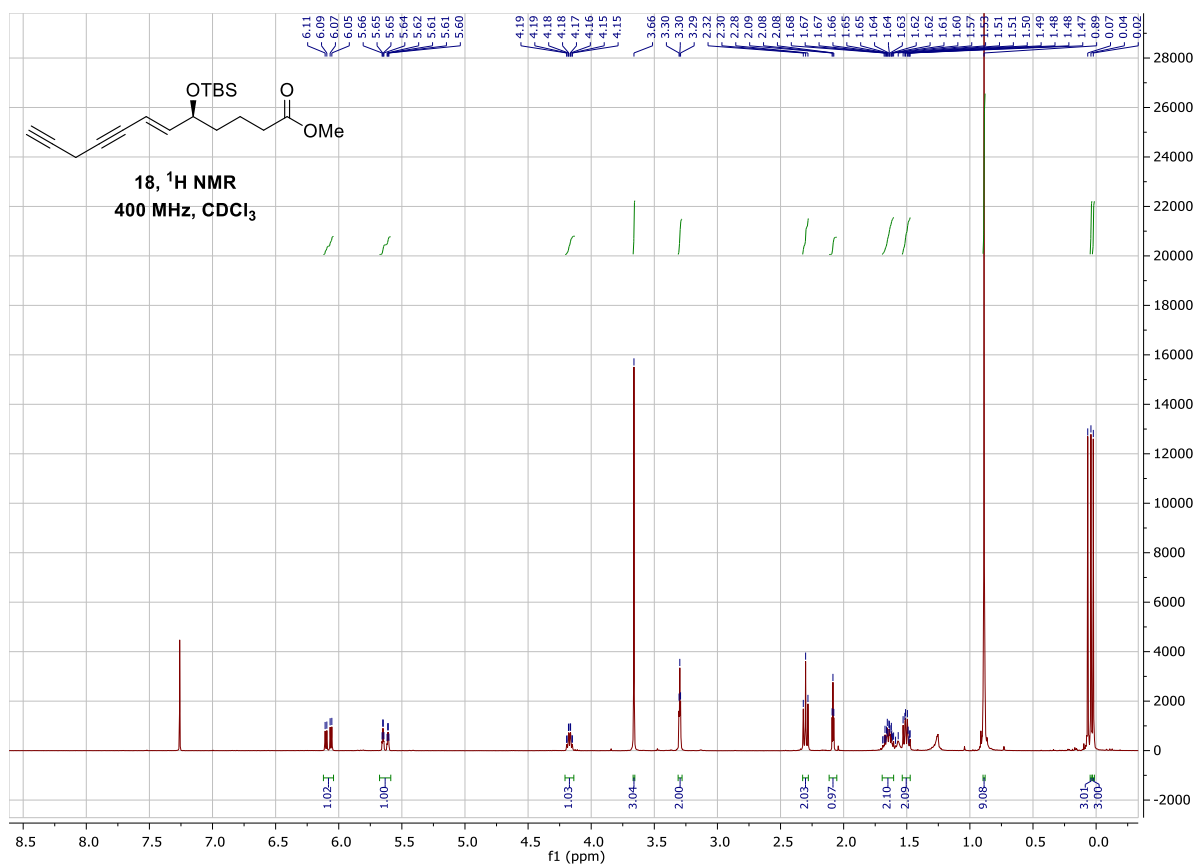


Figure S-32 ^1H -NMR spectrum of compound 18.

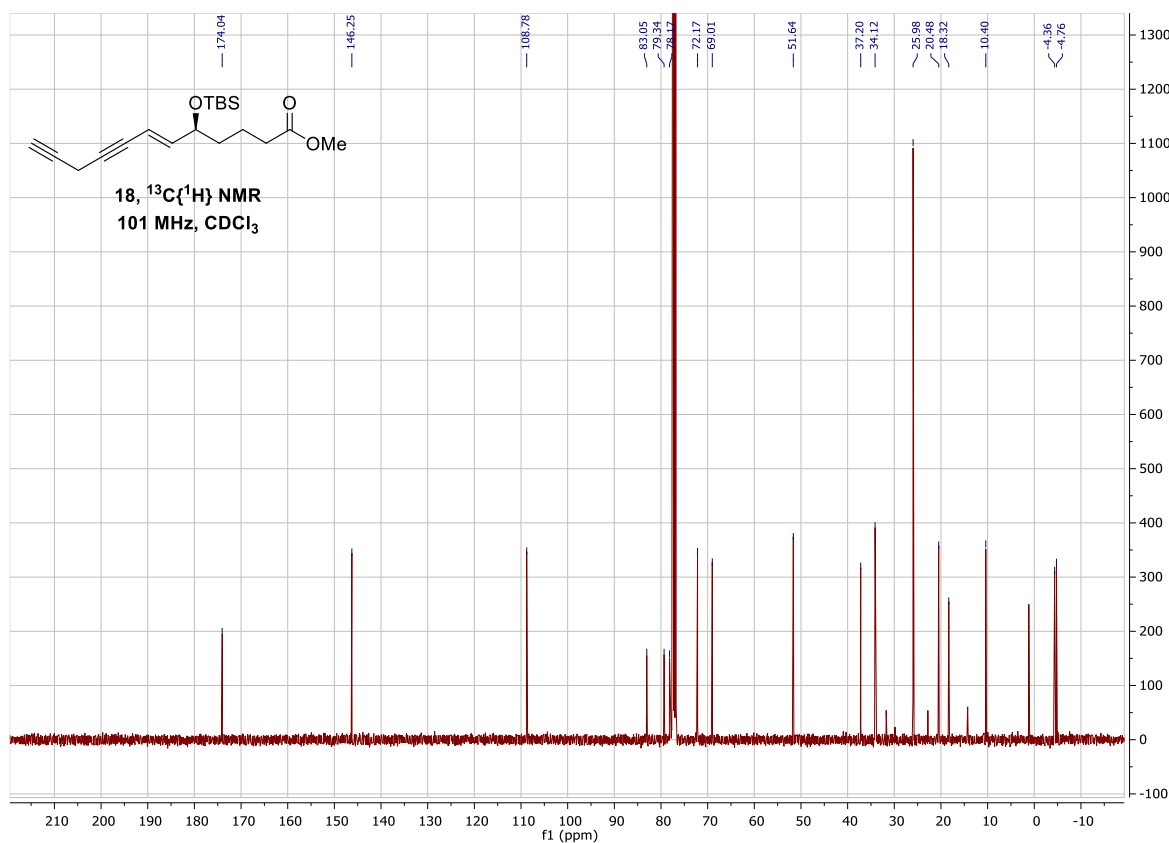


Figure S-33 ^{13}C -NMR spectrum of compound 18.

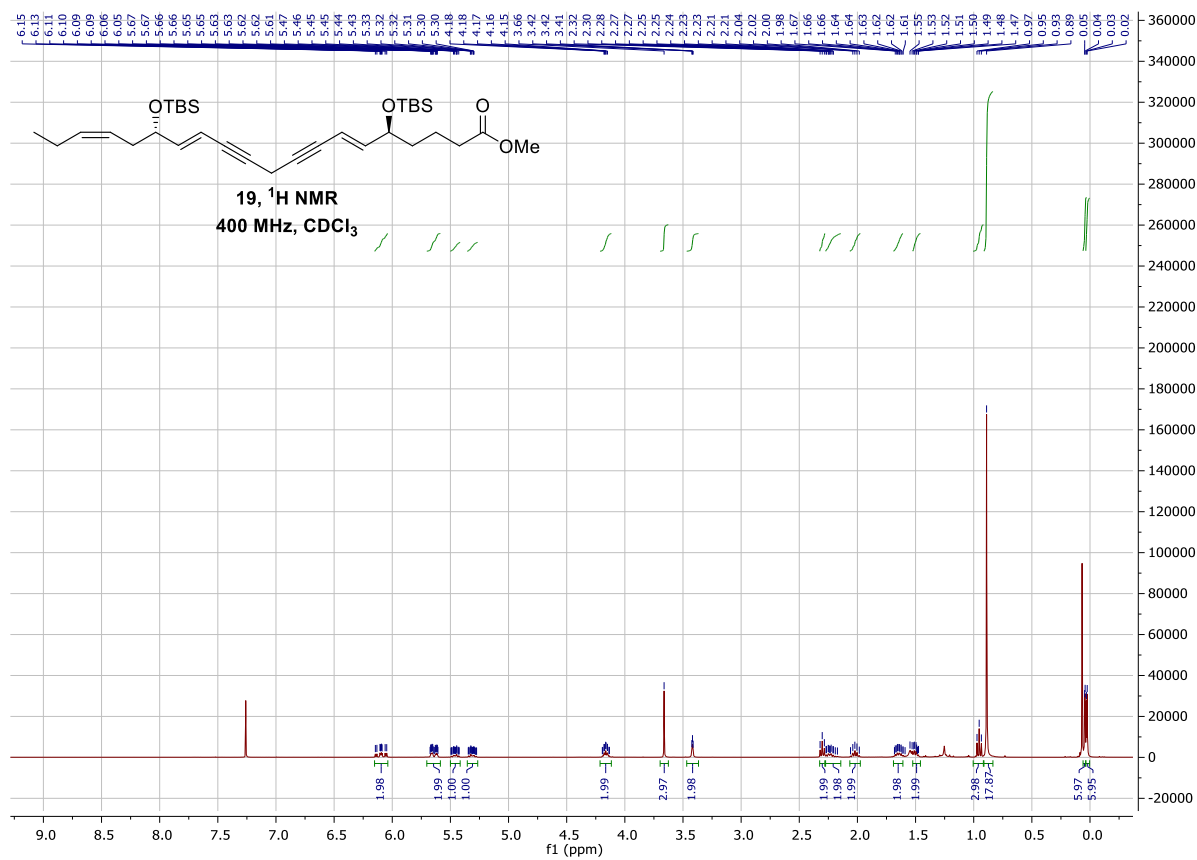


Figure S-34 ^1H -NMR spectrum of compound 19.

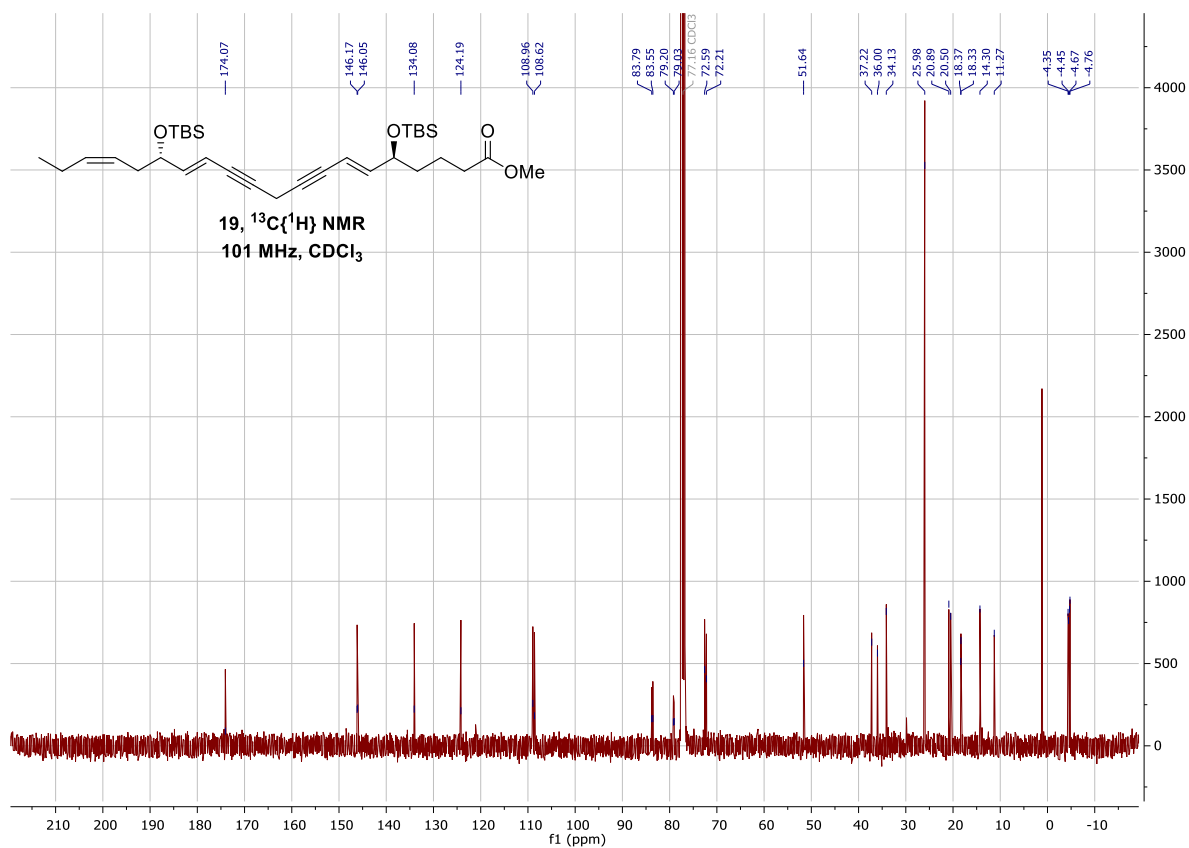


Figure S-35 ^{13}C -NMR spectrum of compound 19.

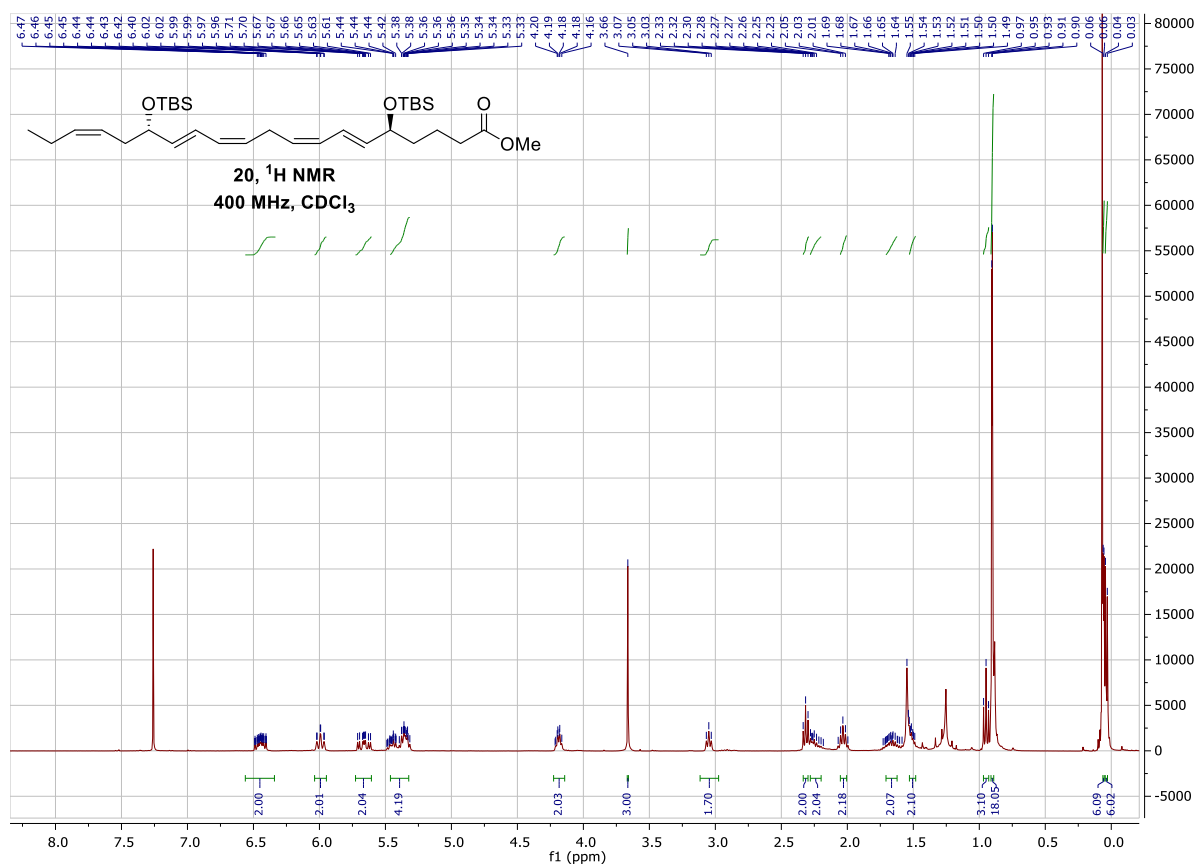


Figure S-36 ^1H -NMR spectrum of compound 20.

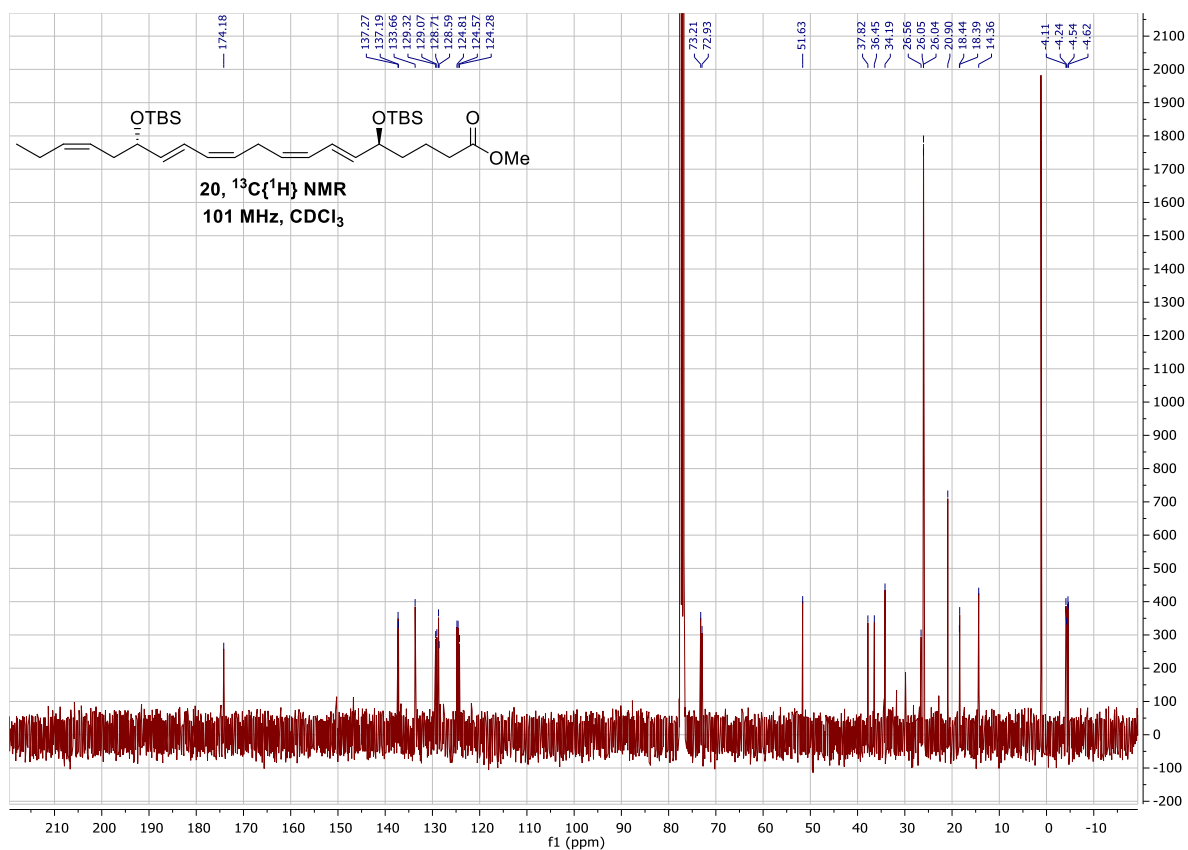


Figure S-37 ^{13}C -NMR spectrum of compound 20.

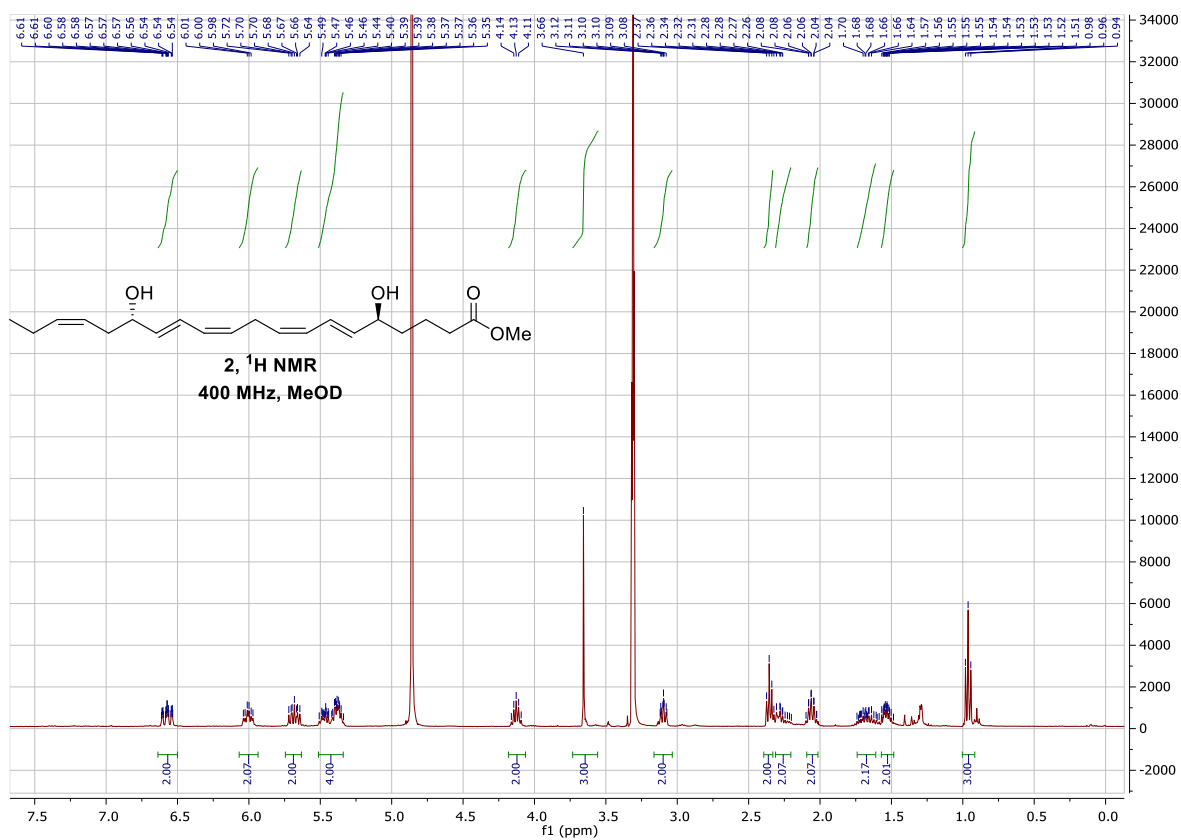


Figure S-38 ^1H -NMR of RvE4 methyl ester (2).

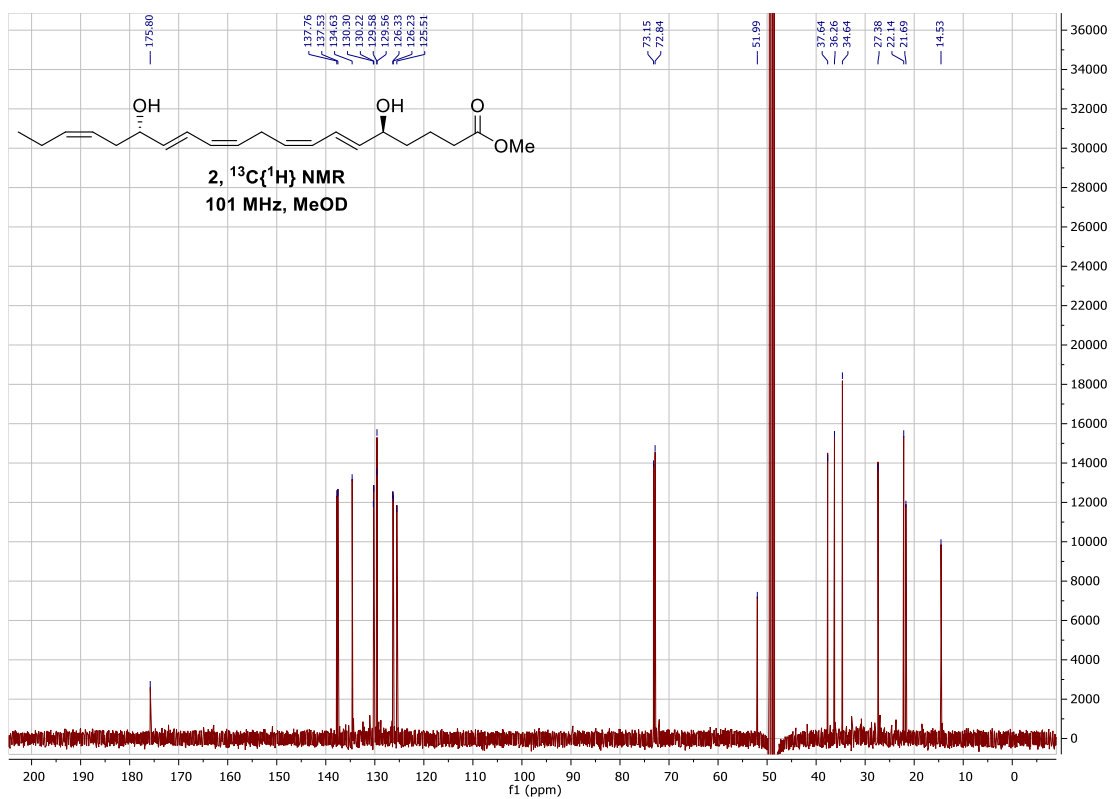


Figure S-39 ^{13}C -NMR of RvE4 methyl ester (2).

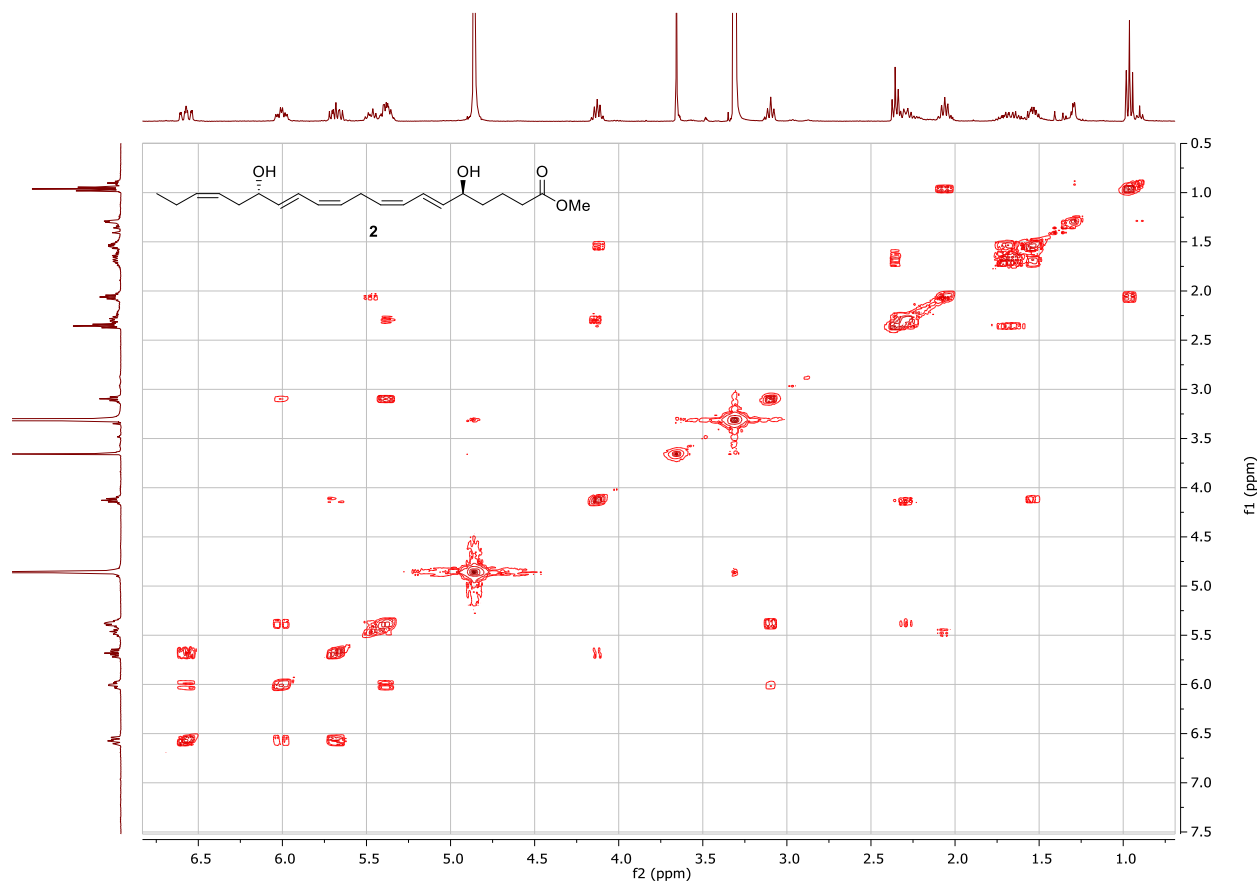


Figure S-40 COSY-spectrum of RvE4 methyl ester (2).

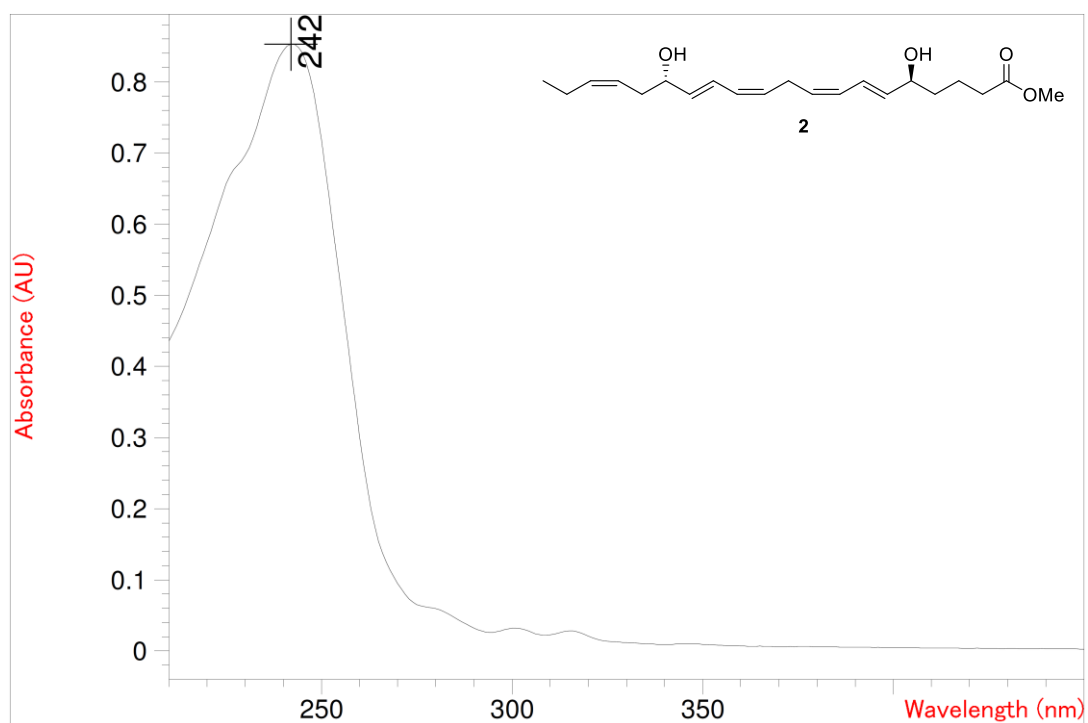


Figure S-41 UV-Vis of RvE4 methyl ester (2).

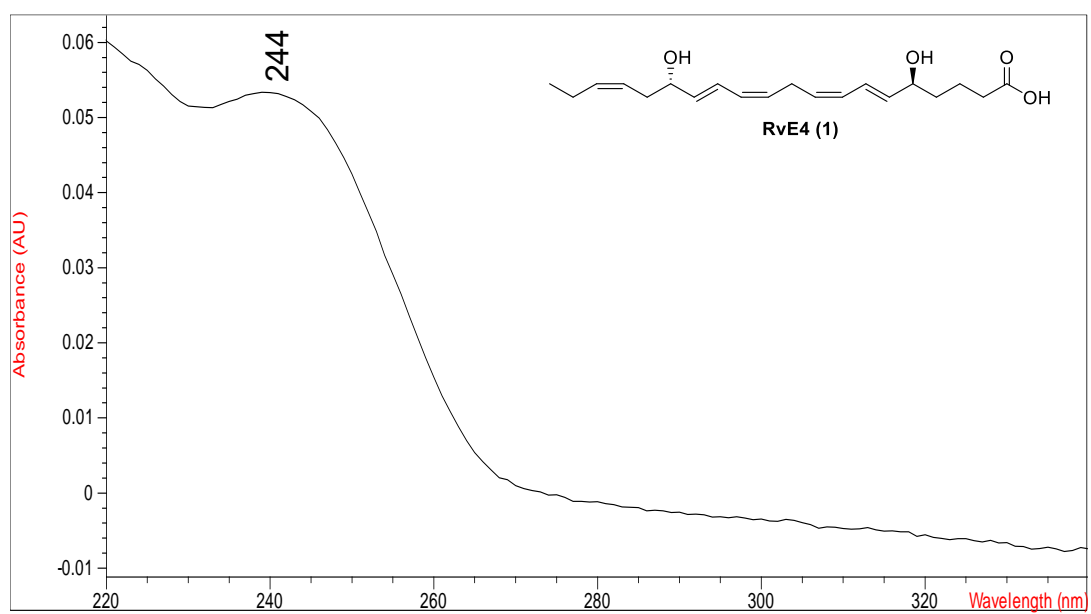
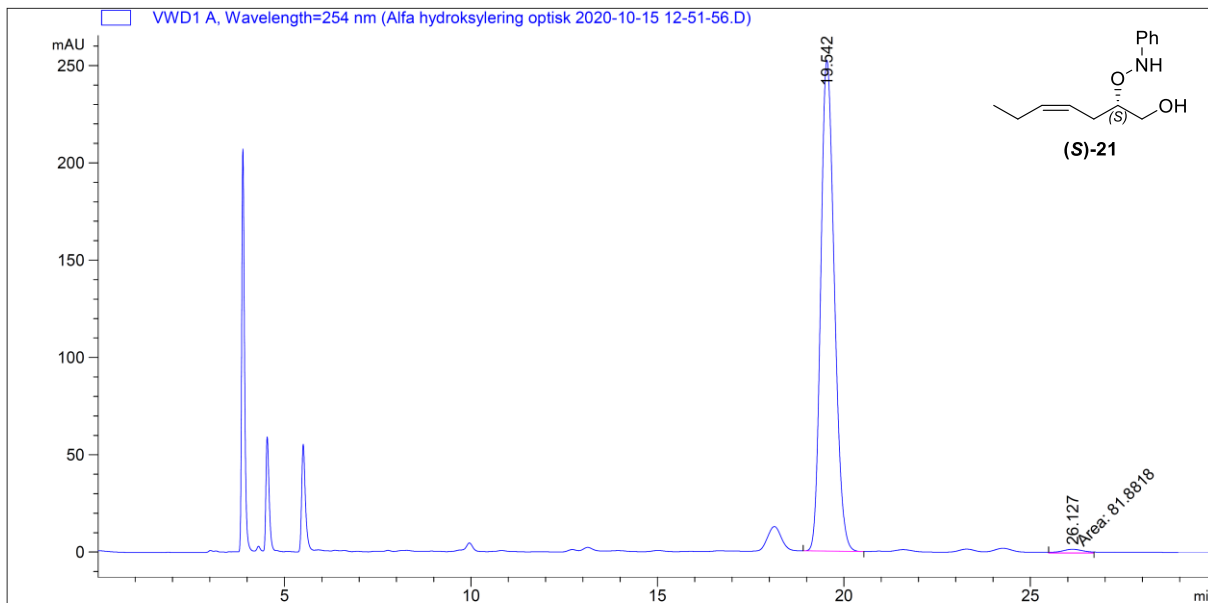


Figure S-42 UV-Vis of RvE4 (1).



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 Area Percent Report
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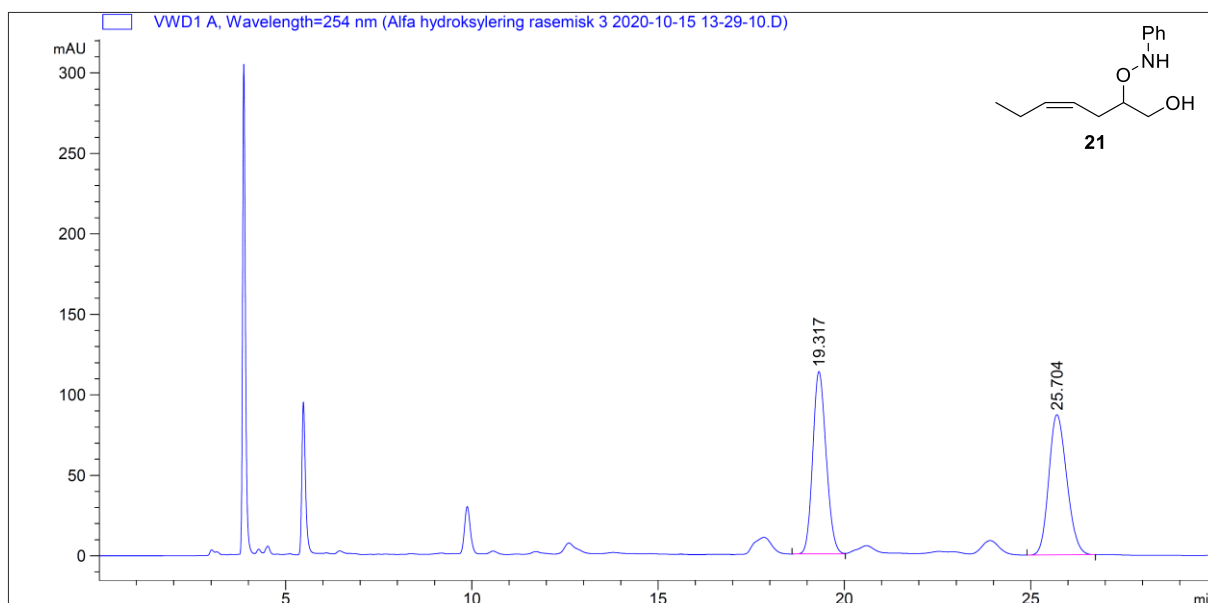
Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	19.542	BB	0.3929	6376.94629	252.25031	98.7323
2	26.127	MM	0.7011	81.88176	1.94639	1.2677

Totals : 6458.82805 254.19669

Figure S-43 HPLC chromatogram of (S)-21



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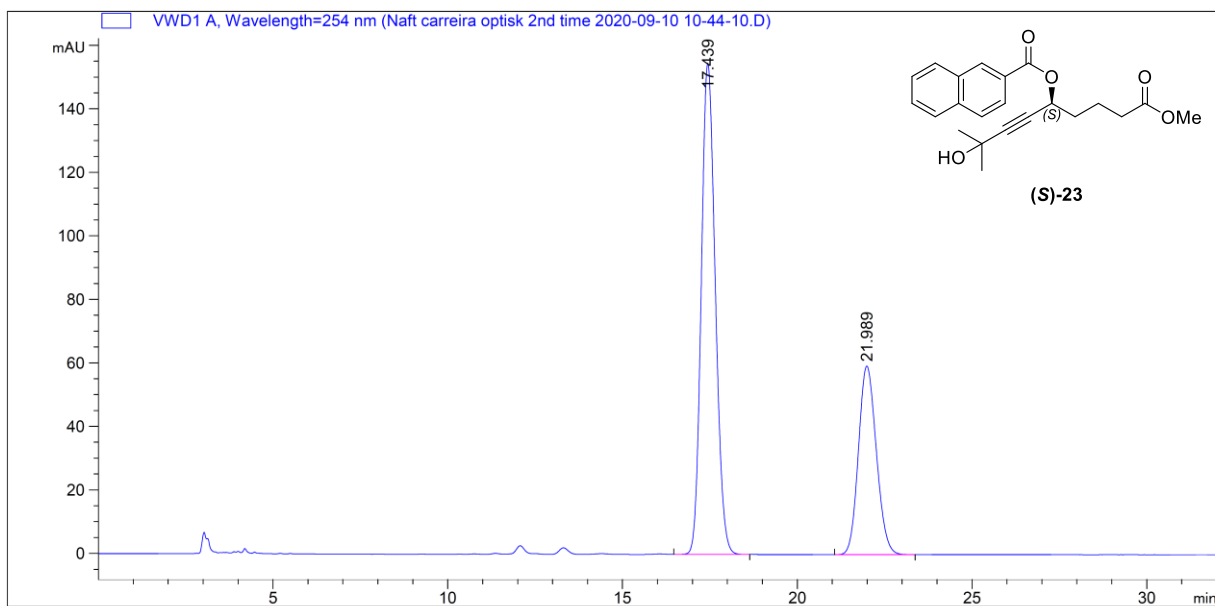
Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	19.317	BV	0.3891	2837.64722	113.32843	49.2803
2	25.704	BB	0.5210	2920.53052	87.13389	50.7197

Totals : 5758.17773 200.46232

Figure S-44 HPLC chromatogram of racemic **21**.



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 Area Percent Report
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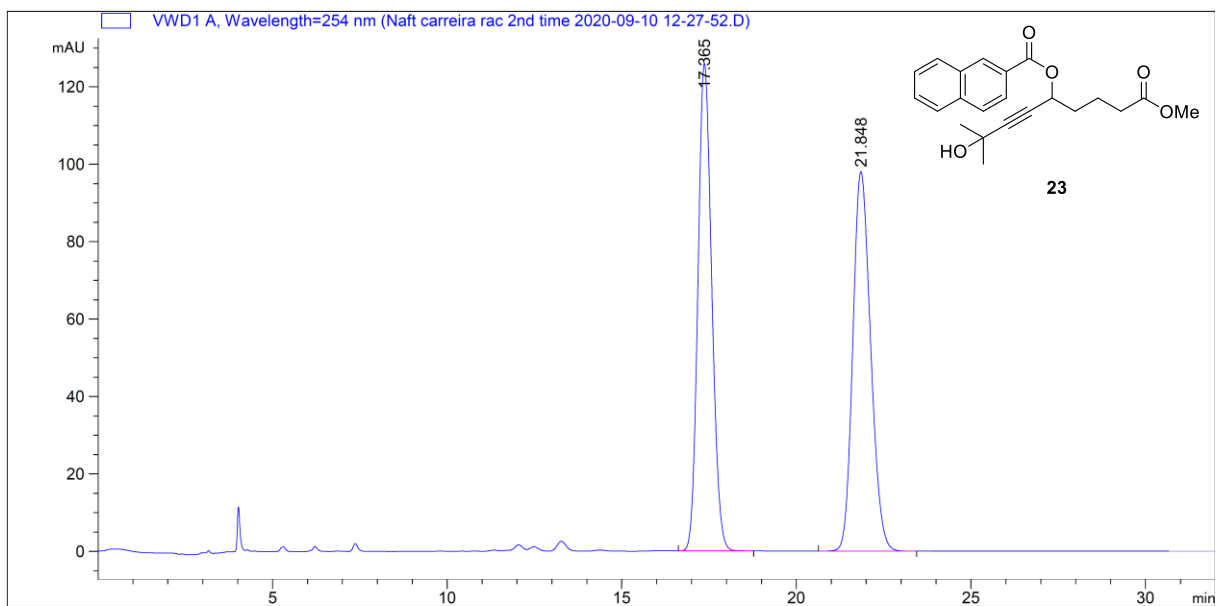
Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	17.439	BB	0.4339	4308.75732	154.70052	67.0838
2	21.989	BB	0.5545	2114.19019	59.37048	32.9162

Totals : 6422.94751 214.07100

Figure S-45 HPLC chromatogram of (S)-23.



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 Area Percent Report
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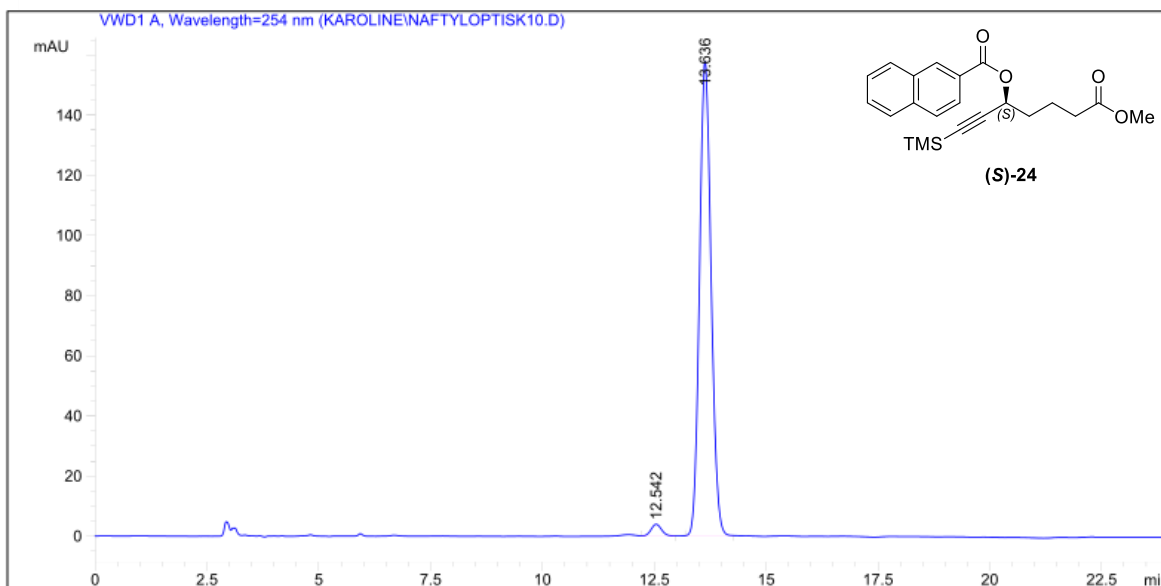
Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	17.365	BB	0.4258	3453.63062	125.97306	49.8648
2	21.848	BB	0.5493	3472.35303	98.02888	50.1352

Totals : 6925.98364 224.00195

Figure S-46 HPLC chromatogram of racemic **23**.



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 Area Percent Report
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Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

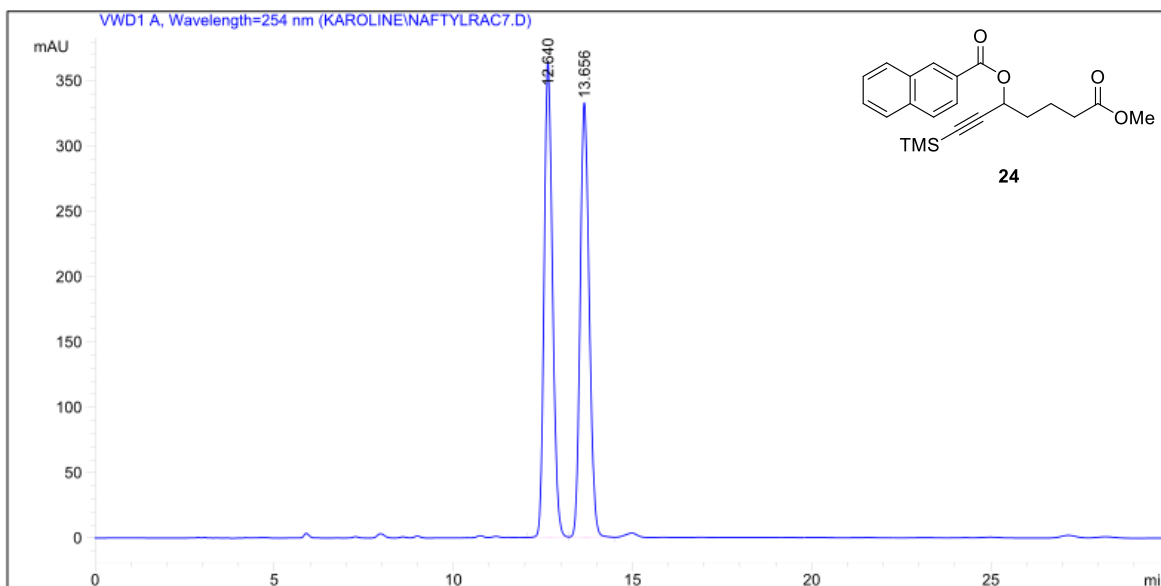
Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area *s	Height [mAU]	Area %
1	12.542	VB	0.2525	62.17613		3.87989	2.1462
2	13.636	BB	0.2796	2834.89526		157.73950	97.8538

Totals : 2897.07139 161.61939

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 *** End of Report ***

Figure S-47 HPLC chromatogram of (S)-24.



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 Area Percent Report
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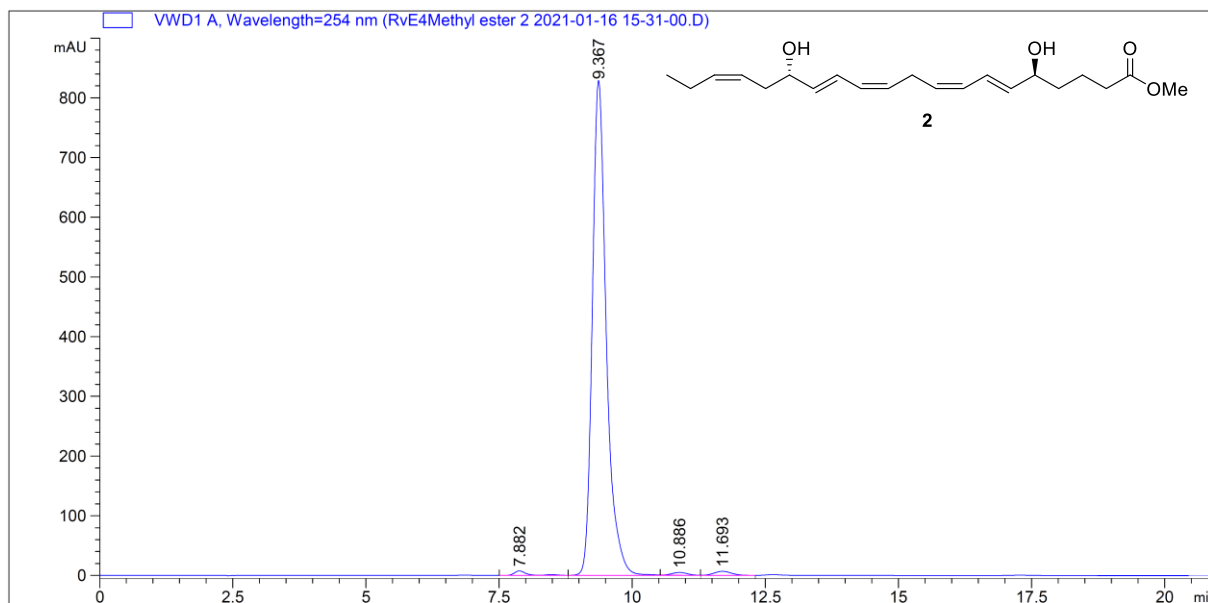
Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	12.640	VV	0.2526	5933.28467	364.37500	50.3024
2	13.656	VV	0.2739	5861.94385	332.81738	49.6976
Totals :				1.17952e4	697.19238	

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 *** End of Report ***

Figure S-48 HPLC chromatogram of racemic **24**.



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 Area Percent Report
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Sorted By : Signal
 Multiplier : 1.0000
 Dilution : 1.0000
 Use Multiplier & Dilution Factor with ISTDs

Signal 1: VWD1 A, Wavelength=254 nm

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Height [mAU]	Area %
1	7.882	BV R	0.2527	130.58907	7.55460	0.8414
2	9.367	BV R	0.2771	1.51413e4	828.86536	97.5560
3	10.886	VV E	0.3130	93.40971	4.67622	0.6018
4	11.693	VB	0.3543	155.33318	6.80567	1.0008

Totals : 1.55207e4 847.90185

Figure S-49 HPLC chromatogram of RvE4 methyl ester (2).

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

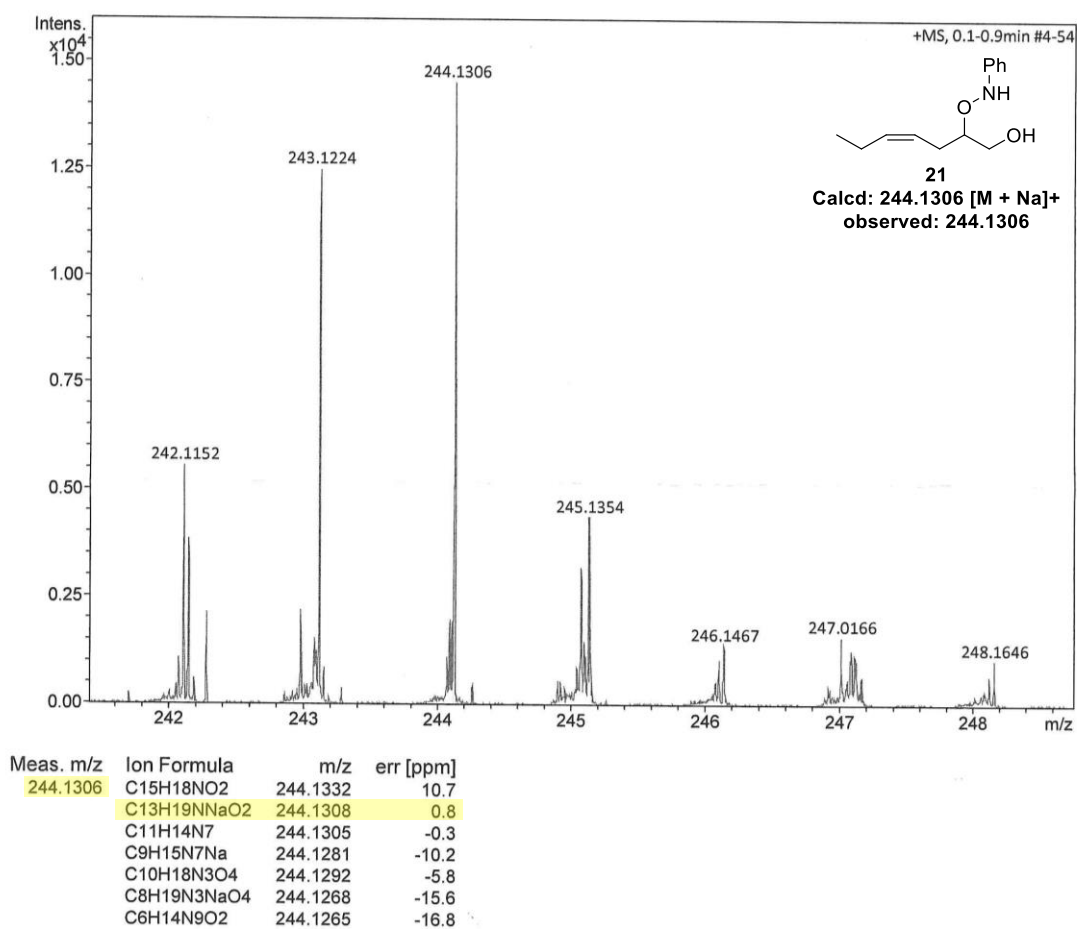
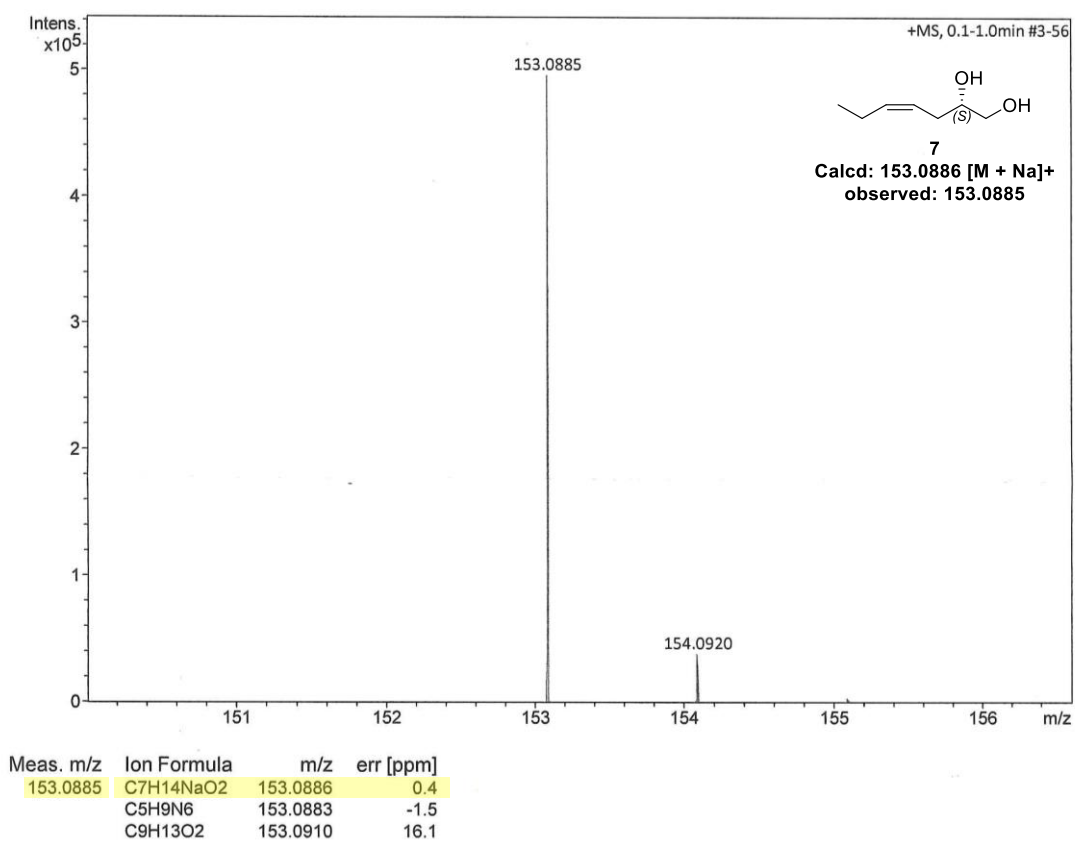


Figure S-50 HRMS spectrum of compound **21**.

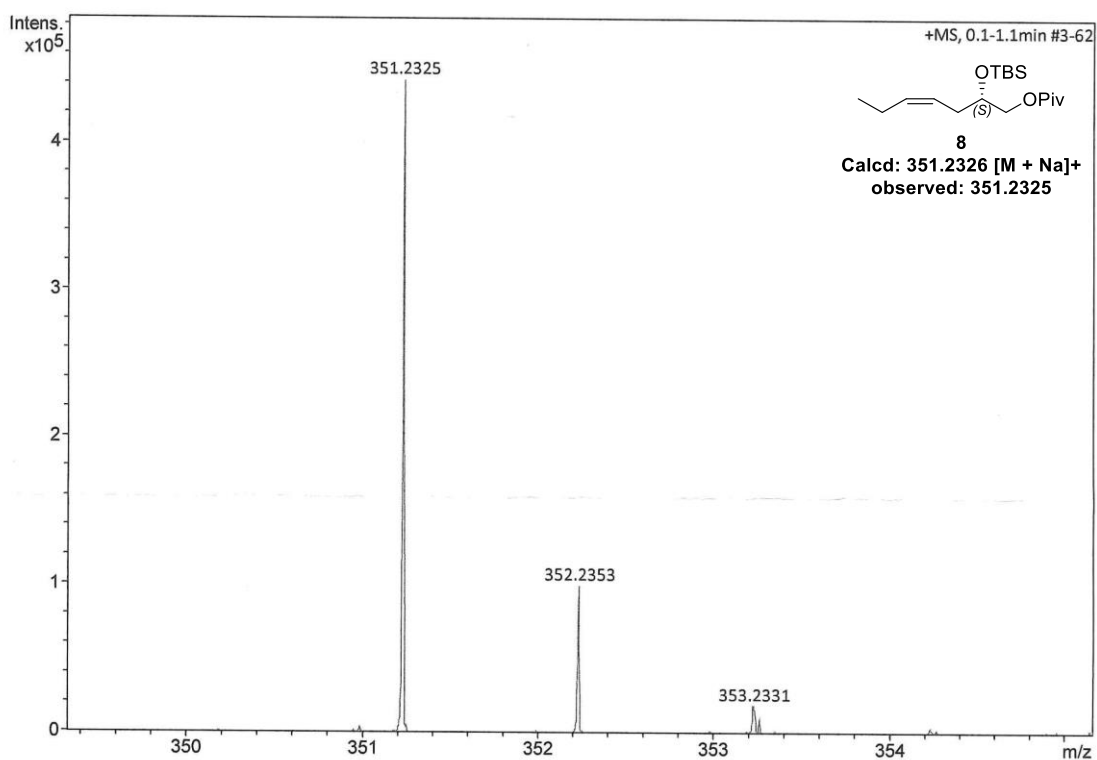
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	1.0 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	250 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	8.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

**Figure S-51** HRMS spectrum of compound **7**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C



Meas. m/z	Ion Formula	m/z	err [ppm]
351.2325	C15H35N2O5Si	351.2310	-4.4
	C16H31N6OSi	351.2323	-0.6
	C18H36NaO3Si	351.2326	0.2
	C24H31O2	351.2319	-1.9

Figure S-52 HRMS spectrum of compound **8**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	1.0 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	250 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	8.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

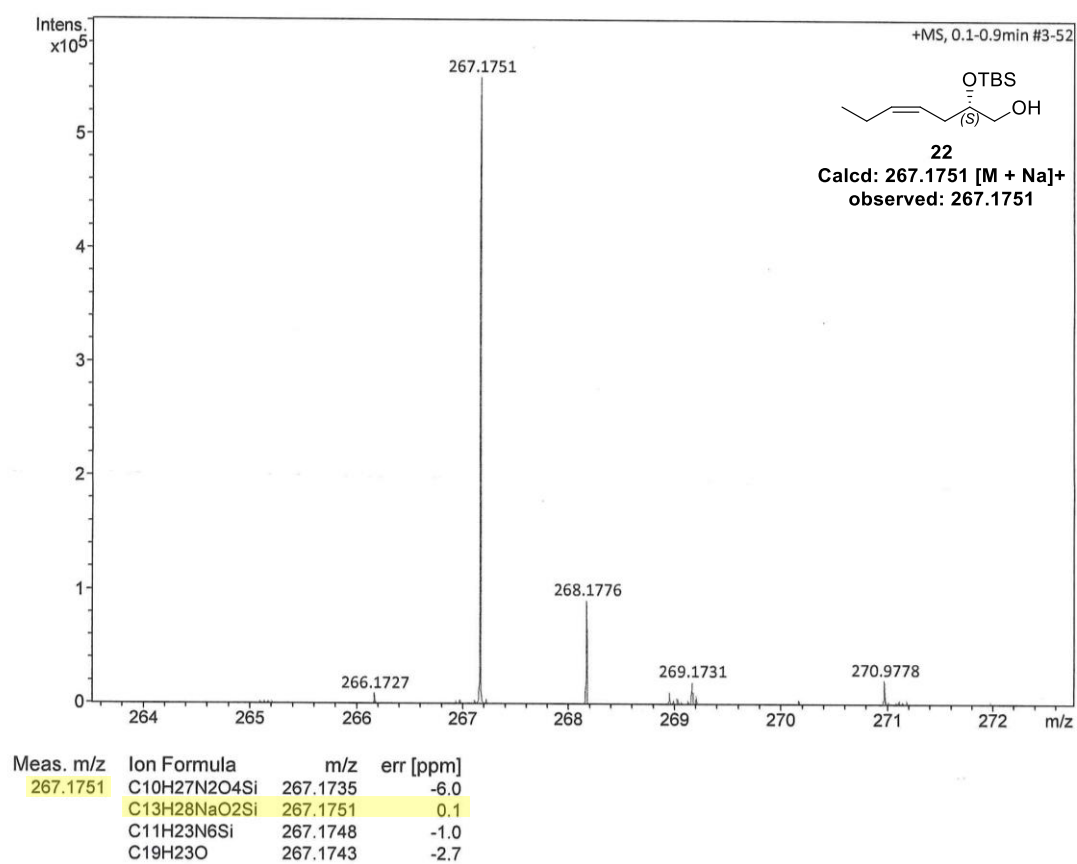
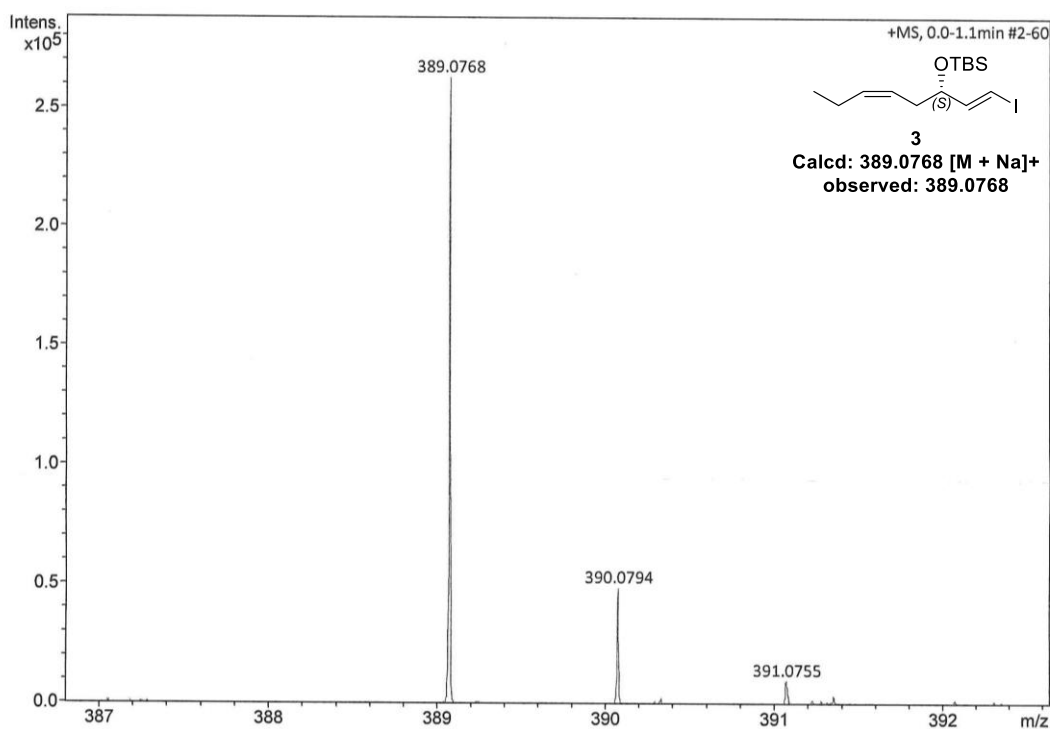


Figure S-53 HRMS spectrum of compound **22**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

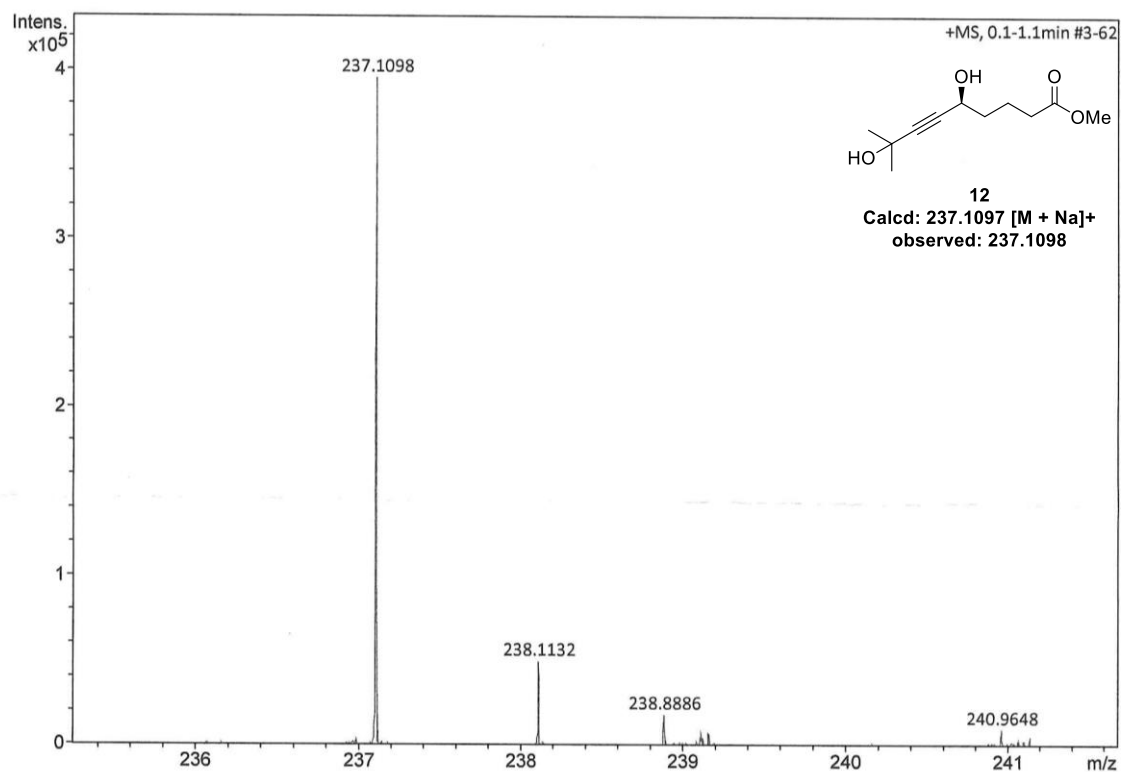


Meas. m/z	Ion Formula	m/z	err [ppm]
389.0768	C11H26IN2O3Si	389.0752	-4.1
	C14H27INaOSi	389.0768	0.1
	C11H14N8NaO5Si	389.0749	-4.9
	C12H17N4O9Si	389.0759	-2.2
	C20H22I	389.0761	-1.8
	C12H10N12NaOSi	389.0762	-1.5
	C13H13N8O5Si	389.0773	1.3
	C15H18N2NaO7Si	389.0775	2.0
	C21H13N2O6	389.0768	0.1
	C18H5N12	389.0755	-3.4
	C20H10N6NaO2	389.0757	-2.7
	C14H9N12OSi	389.0786	4.7
	C22H9N6O2	389.0781	3.5
	C24H14NaO4	389.0784	4.2
	C27H14NaSi	389.0757	-2.8
	C29H13Si	389.0781	3.4

Figure S-54 HRMS spectrum of compound **3**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C



Meas. m/z	Ion Formula	m/z	err [ppm]
237.1098	C ₁₁ H ₁₈ NaO ₄	237.1097	-0.1
	C ₉ H ₁₃ N ₆ O ₂	237.1095	-1.3
	C ₁₁ H ₁₅ N ₃ O ₃	237.1108	4.4
	C ₉ H ₁₆ N ₃ NaO ₃	237.1084	-5.8
	C ₇ H ₁₁ N ₉ O	237.1081	-7.0
	C ₁₂ H ₁₄ N ₄ Na	237.1111	5.5
	C ₈ H ₁₇ N ₂ O ₆	237.1081	-6.9

Figure S-55 HRMS spectrum of compound **12**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

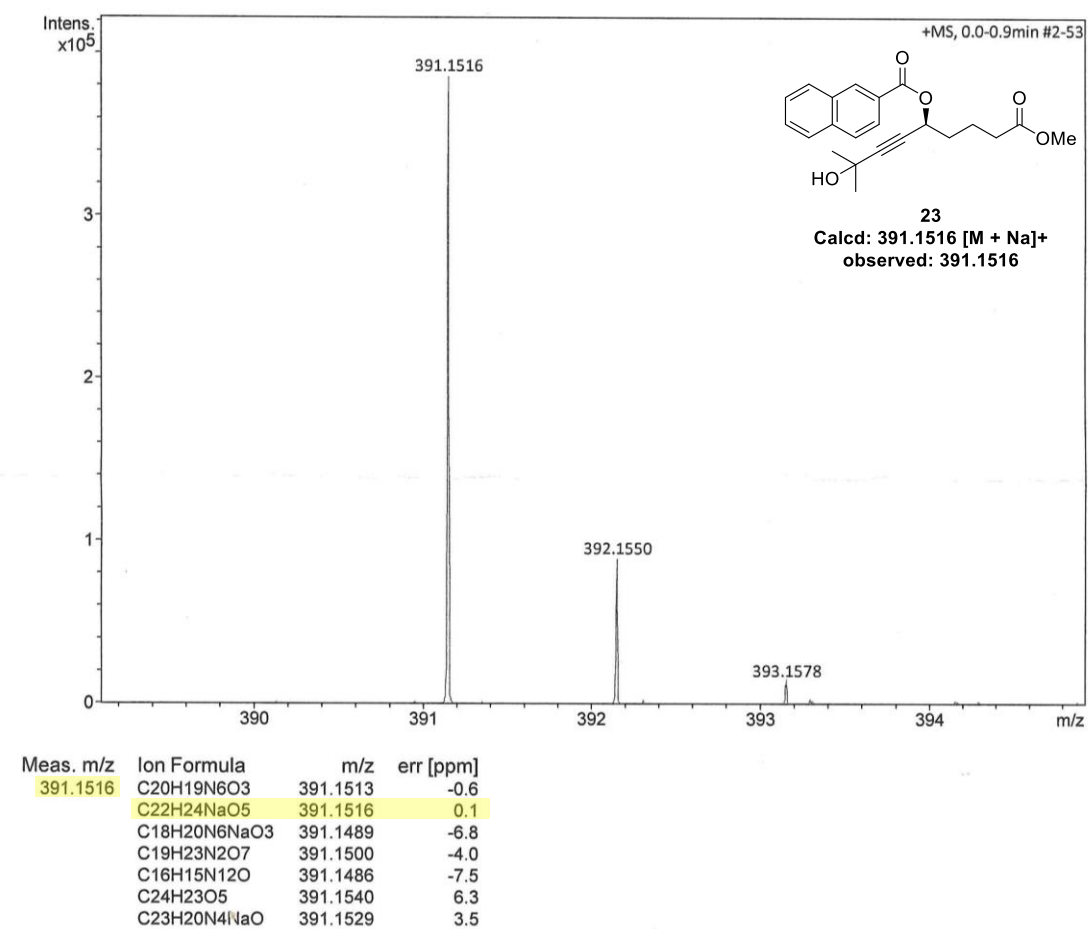
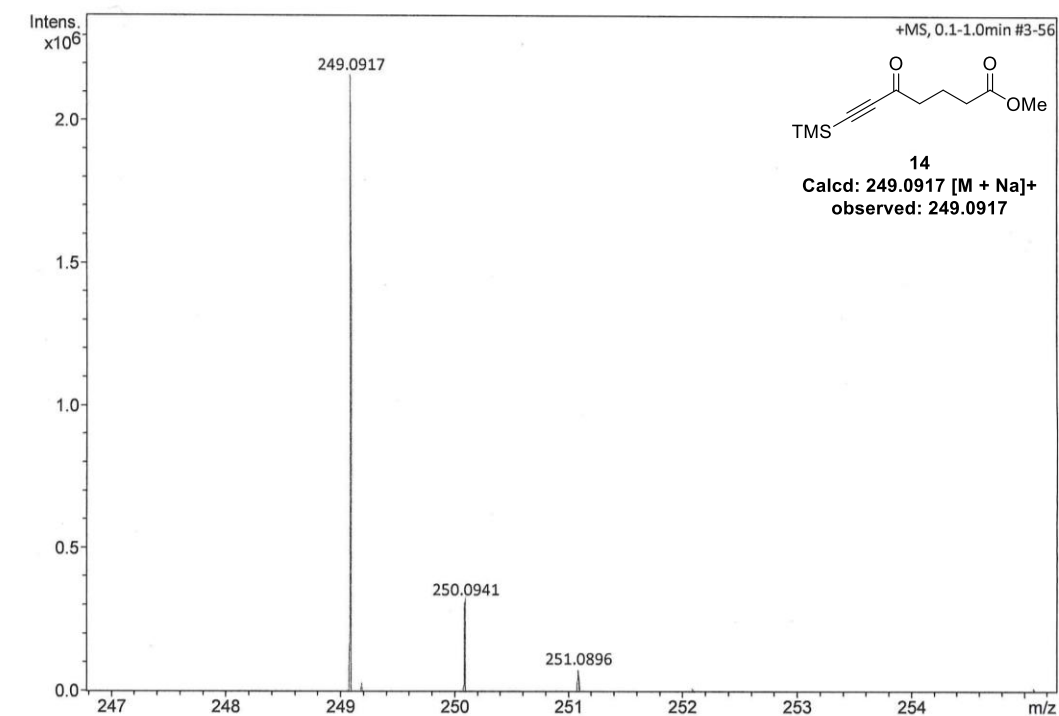


Figure S-56 HRMS spectrum of compound **23**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

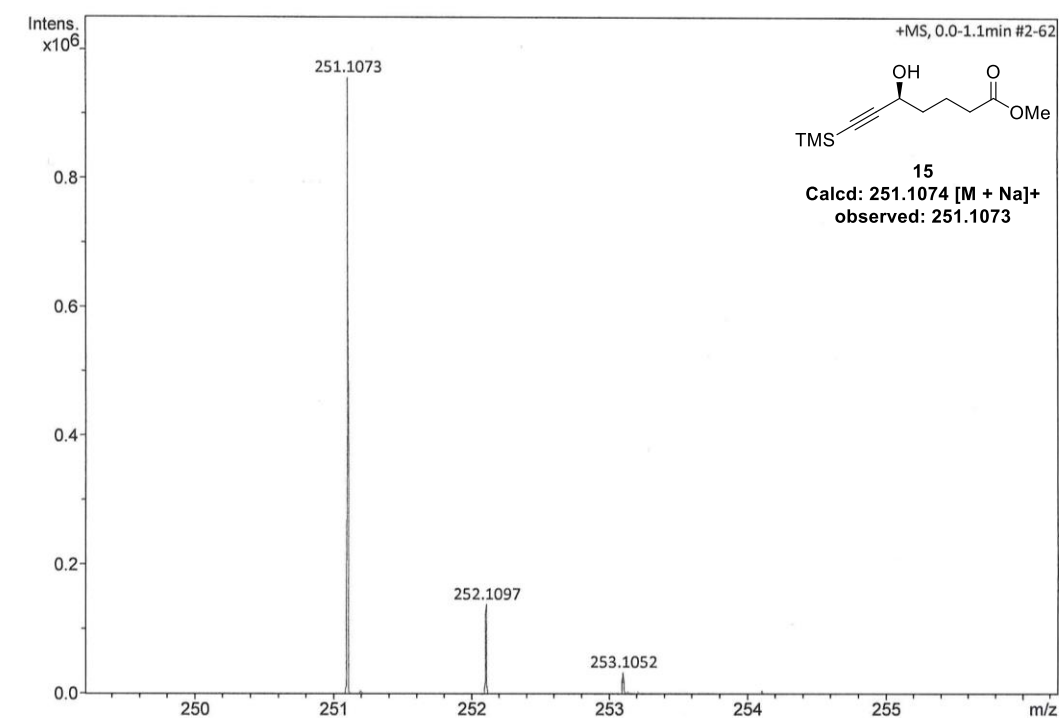


Meas. m/z	Ion Formula	m/z	err [ppm]
249.0917	C8H17N2O5Si	249.0901	-6.4
	C15H14NaO2	249.0886	-12.5
	C9H13N6OSi	249.0915	-1.0
	C13H9N6	249.0883	-13.6
	C11H18NaO3Si	249.0917	0.1
	C17H13O2	249.0910	-2.8
	C13H17O3Si	249.0941	9.8
	C8H18NaO7	249.0945	11.1

Figure S-57 HRMS spectrum of compound **14**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

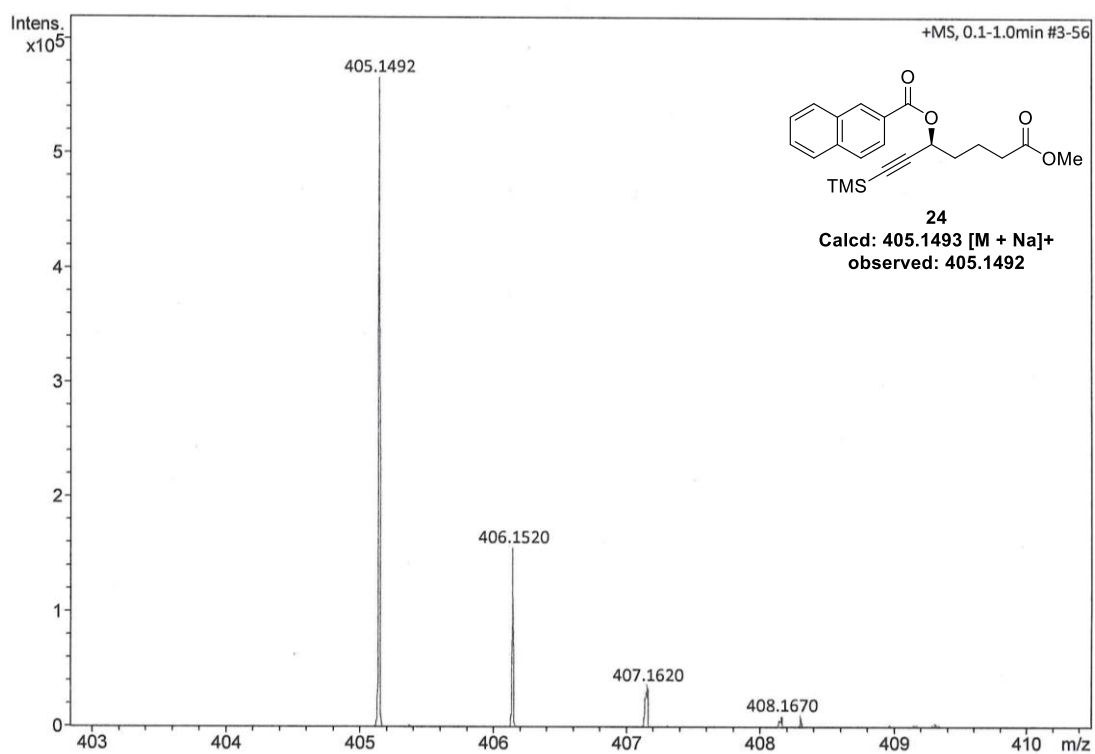


Meas. m/z	Ion Formula	m/z	err [ppm]
251.1073	C ₈ H ₁₉ N ₂ O ₅ Si	251.1058	-6.1
	C ₁₅ H ₁₆ NaO ₂	251.1043	-12.2
	C ₁₃ H ₁₁ N ₆	251.1040	-13.3
	C ₉ H ₁₅ N ₆ O ₅ Si	251.1071	-0.8
	C ₁₁ H ₂₀ NaO ₃ Si	251.1074	0.4
	C ₁₇ H ₁₅ O ₂	251.1067	-2.6
	C ₁₃ H ₁₉ O ₃ Si	251.1098	9.9

Figure S-58 HRMS spectrum of compound **15**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

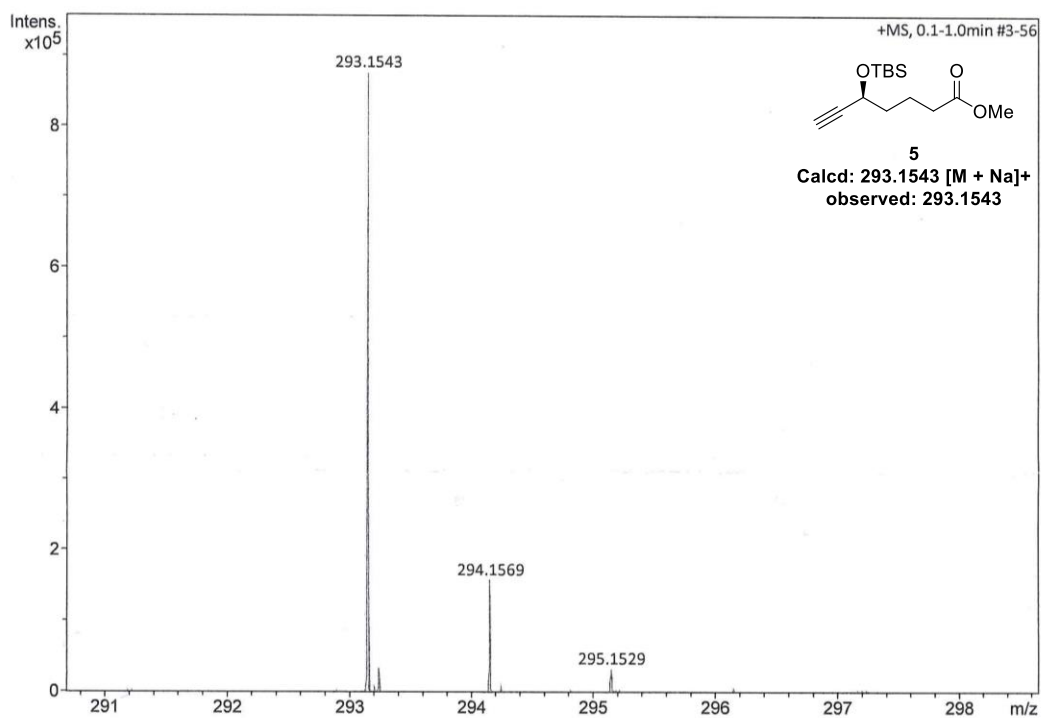


Meas. m/z	Ion Formula	m/z	err [ppm]
405.1492	C ₂₈ H ₂₁ O ₃	405.1485	-1.7
	C ₂₀ H ₂₁ N ₆ O ₂ Si	405.1490	-0.6
	C ₁₉ H ₂₅ N ₂ O ₆ Si	405.1476	-3.9
	C ₂₂ H ₂₆ NaO ₄ Si	405.1493	0.1
	C ₂₃ H ₂₂ N ₄ NaSi	405.1506	3.4

Figure S-59 HRMS spectrum of compound **24**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

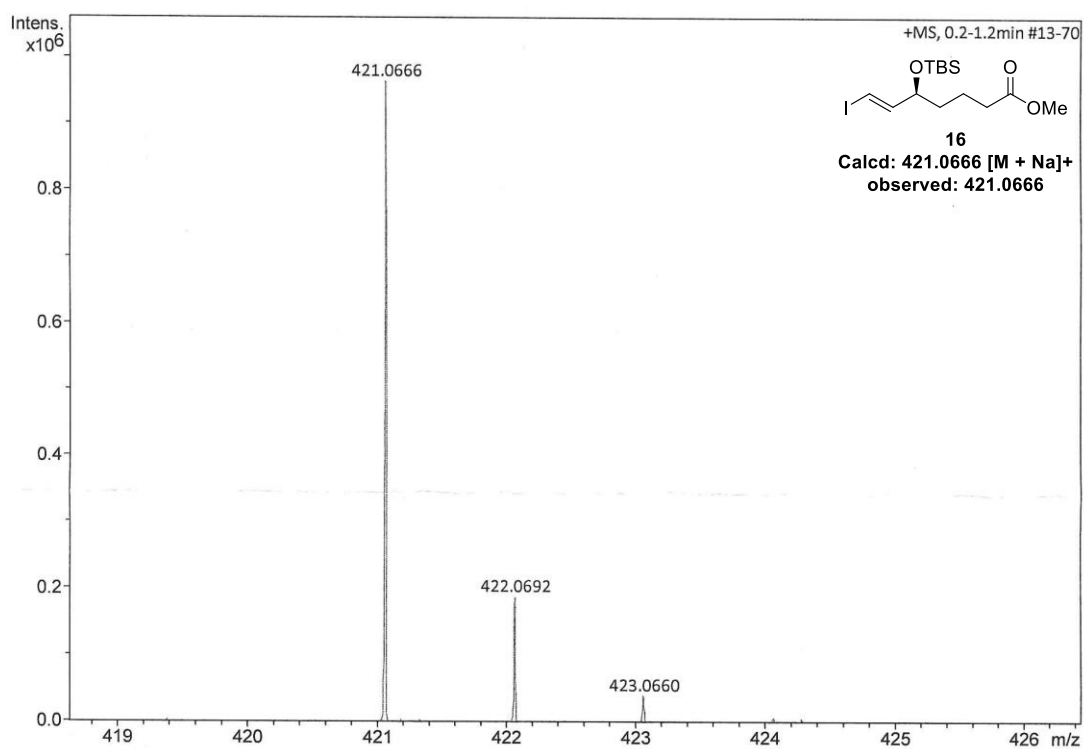


Meas. m/z	Ion Formula	m/z	err [ppm]
293.1543	C ₁₀ H ₂₂ N ₆ NaOSi	293.1517	-8.9
	C ₁₁ H ₂₅ N ₂ O ₅ Si	293.1527	-5.3
	C ₁₂ H ₂₁ N ₆ O ₅ Si	293.1541	-0.7
	C ₁₄ H ₂₆ NaO ₃ Si	293.1543	0.2
	C ₂₀ H ₂₁ O ₂	293.1536	-2.3
	C ₁₆ H ₂₅ O ₃ Si	293.1567	8.4
	C ₁₁ H ₂₆ NaO ₇	293.1571	9.5

Figure S-60 HRMS spectrum of compound 5.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

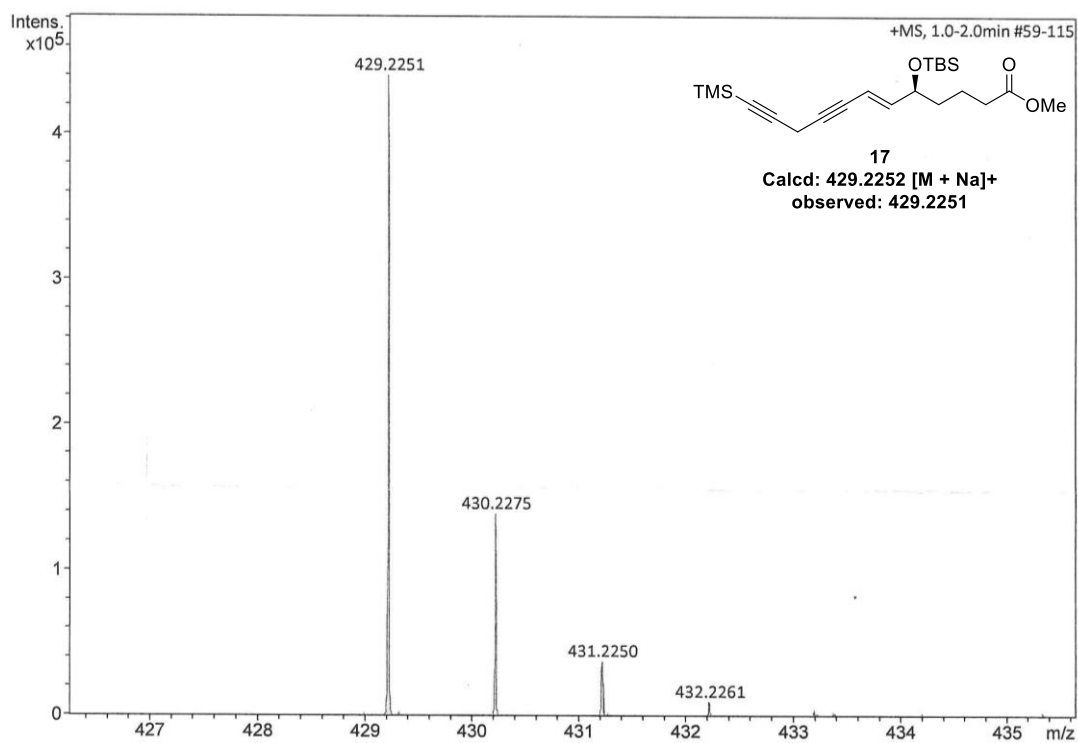


Meas. m/z	Ion Formula	m/z	err [ppm]
421.0666	C ₁₂ H ₂₂ IN ₆ O ₃ Si	421.0664	-0.6
	C ₁₄ H ₂₇ INaO ₃ Si	421.0666	0.1
	C ₂₀ H ₂₂ IO ₂	421.0659	-1.7
	C ₁₂ H ₁₇ N ₄ O ₁₁ Si	421.0658	-2.0
	C ₁₂ H ₁₀ N ₁₂ NaO ₃ Si	421.0660	-1.4
	C ₁₃ H ₁₃ N ₈ O ₇ Si	421.0671	1.2
	C ₁₅ H ₁₈ N ₂ NaO ₉ Si	421.0674	1.8
	C ₂₁ H ₁₃ N ₂ O ₈	421.0666	0.1
	C ₂₁ H ₆ N ₁₀ Na	421.0669	0.7

Figure S-61 HRMS spectrum of compound **16**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

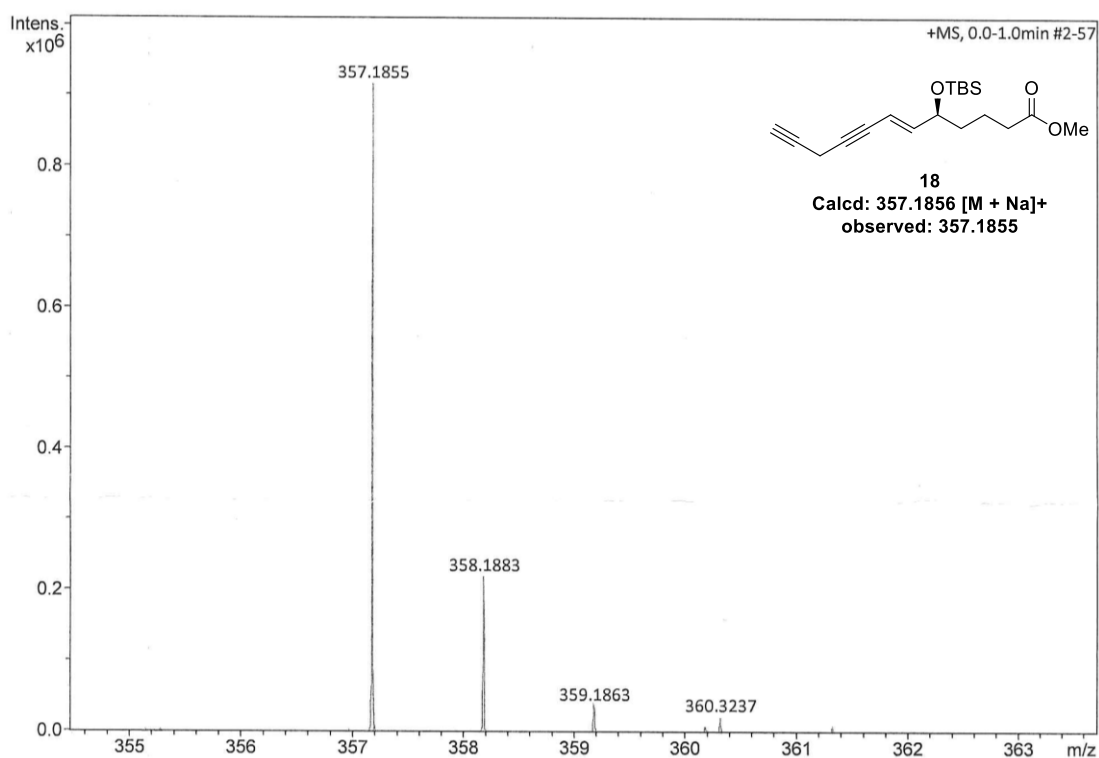


Meas. m/z	Ion Formula	m/z	err [ppm]
429.2251	C ₂₈ H ₃₃ O ₂ Si	429.2244	-1.6
	C ₂₂ H ₃₈ NaO ₃ Si ₂	429.2252	0.1
	C ₂₅ H ₃₃ O ₆	429.2272	4.8
	C ₂₄ H ₃₀ N ₄ NaO ₂	429.2261	2.3
	C ₂₂ H ₂₅ N ₁₀	429.2258	1.6
	C ₂₃ H ₃₄ NaO ₆	429.2248	-0.8

Figure S-62 HRMS spectrum of compound **17**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

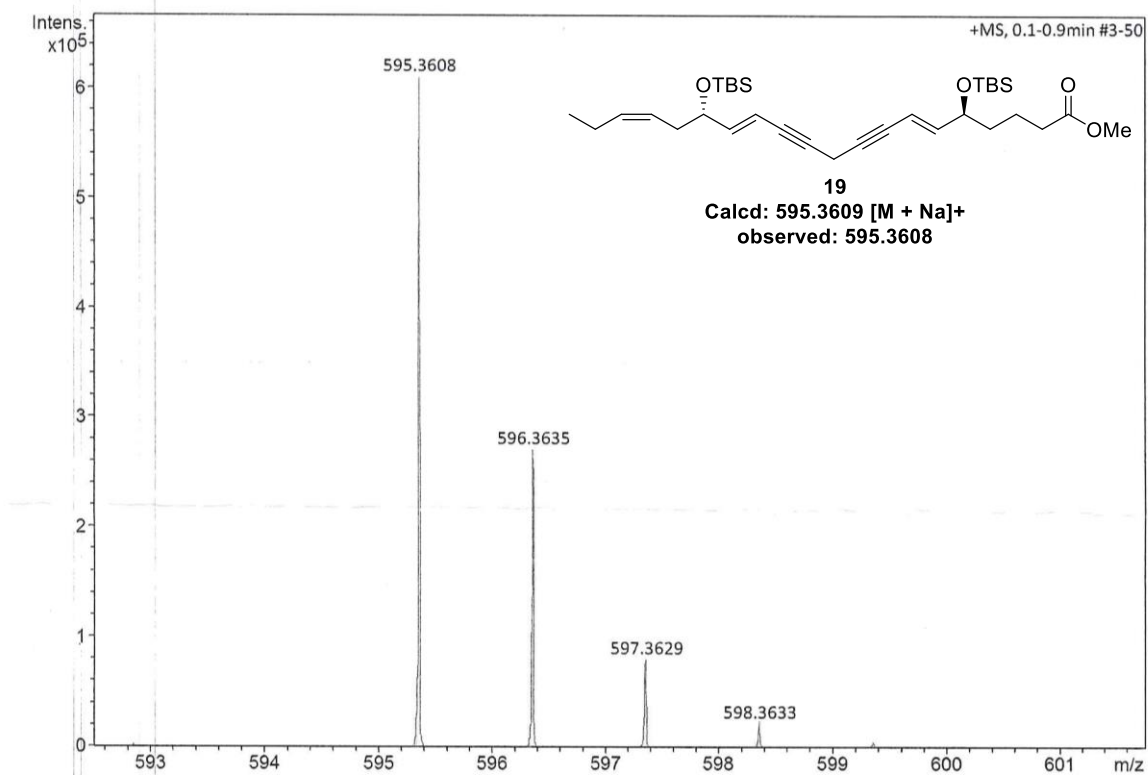


Meas. m/z	Ion Formula	m/z	err [ppm]
357.1855	C ₂₃ H ₂₆ NaO ₂	357.1825	-8.5
	C ₁₆ H ₂₉ N ₂ O ₅ Si	357.1840	-4.2
	C ₁₇ H ₂₅ N ₆ O ₅ Si	357.1854	-0.5
	C ₁₉ H ₃₀ NaO ₃ Si	357.1856	0.3
	C ₂₅ H ₂₅ O ₂	357.1849	-1.7
	C ₂₁ H ₂₉ O ₃ Si	357.1880	7.1
	C ₁₆ H ₃₀ NaO ₇	357.1884	8.0

Figure S-63 HRMS spectrum of compound **18**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

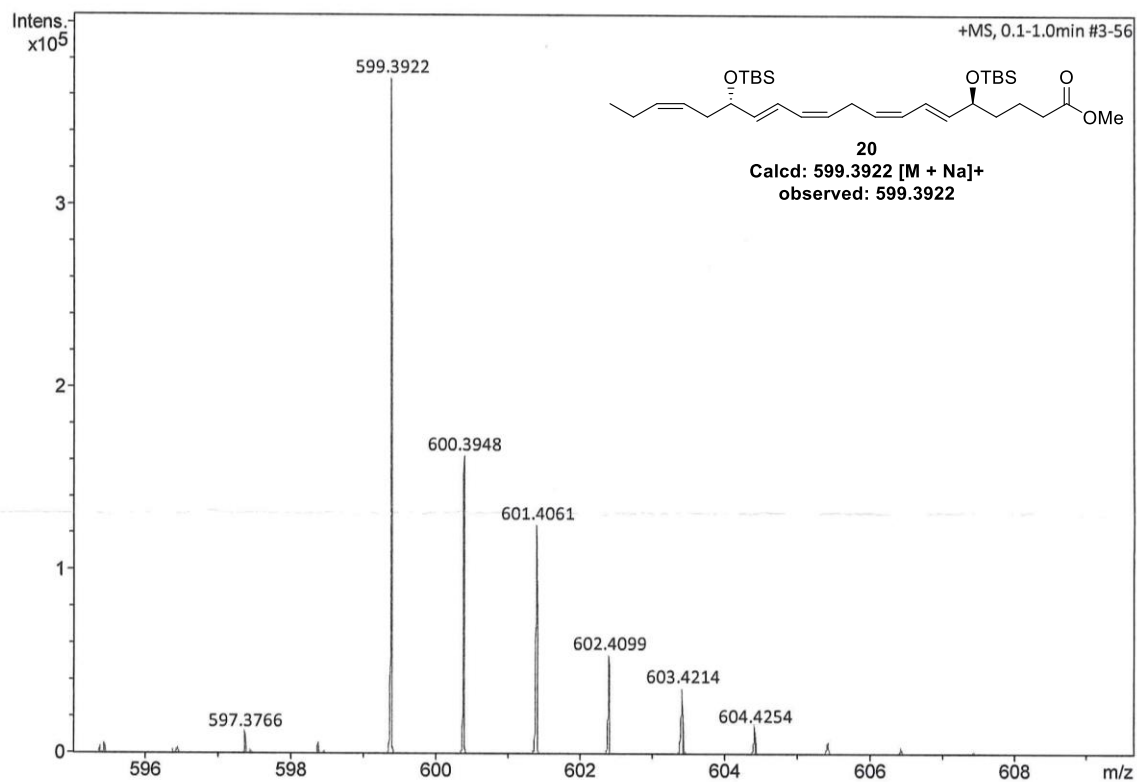


Meas. m/z	Ion Formula	m/z	err [ppm]
595.3608	C ₃₉ H ₅₁ O ₃ Si	595.3602	-1.0
	C ₃₃ H ₅₆ NaO ₄ Si ₂	595.3609	0.2
	C ₃₄ H ₅₂ N ₄ NaSi ₂	595.3623	2.5
	C ₃₅ H ₄₈ N ₄ NaO ₃	595.3619	1.8
	C ₃₃ H ₄₃ N ₁₀ O	595.3616	1.3
	C ₃₄ H ₅₂ NaO ₇	595.3605	-0.5
	C ₃₂ H ₄₇ N ₆ O ₅	595.3602	-0.9

Figure S-64 HRMS spectrum of compound **19**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C



Meas. m/z	Ion Formula	m/z	err [ppm]
599.3922	C ₃₃ H ₆₀ NaO ₄ Si ₂	599.3922	0.1
	C ₃₄ H ₅₆ N ₄ NaSi ₂	599.3936	2.3
	C ₃₉ H ₅₅ O ₃ Si	599.3915	-1.1
	C ₃₅ H ₅₂ N ₄ NaO ₃	599.3932	1.7
	C ₃₄ H ₅₆ NaO ₇	599.3918	-0.6
	C ₃₃ H ₄₇ N ₁₀ O	599.3929	1.2
	C ₃₂ H ₅₁ N ₆ O ₅	599.3915	-1.0

Figure S-65 HRMS spectrum of compound **20**.

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	3500 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	1500 m/z	Set Charging Voltage	2000 V	Set Divert Valve	Waste
		Set Corona	0 nA	Set APCI Heater	0 °C

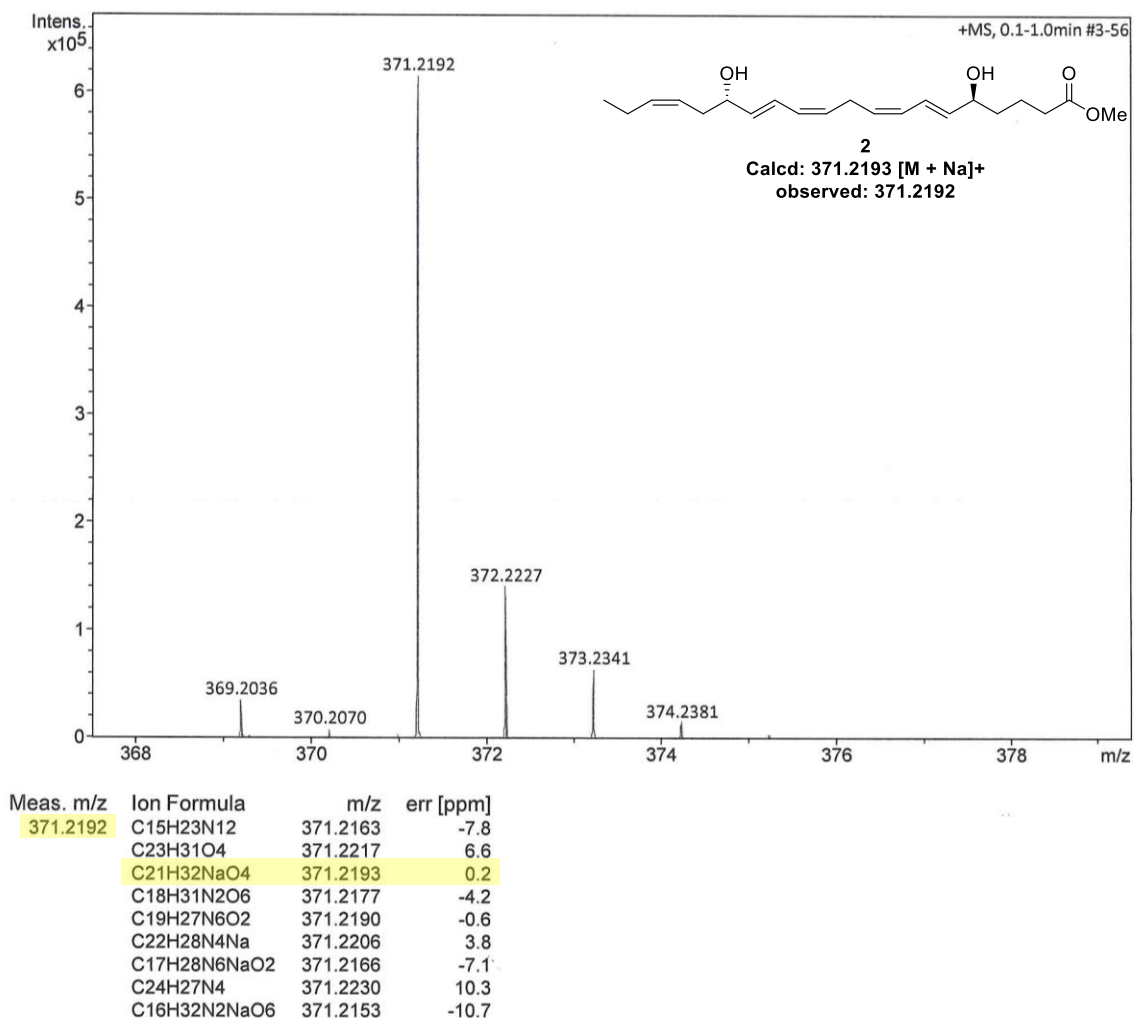
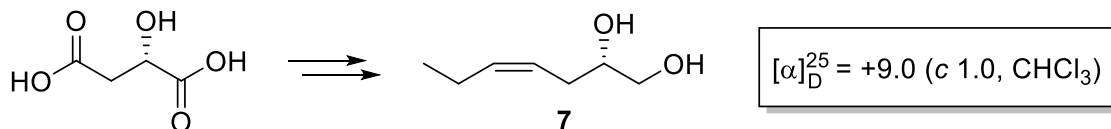


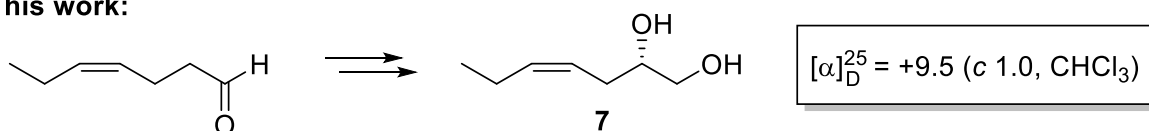
Figure S-66 HRMS spectrum of RvE4 methyl ester (**2**).

**Specific optical rotation measurements:
Confirmation of absolute configuration for key fragments**

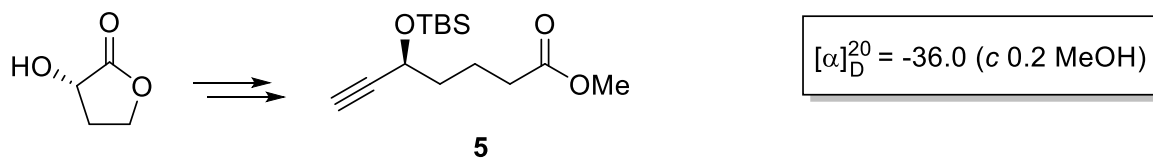
Stereospecific total synthesis of prostaglandins E₃ and F_{3α}
Corey, E. J. et al. *J. Am. Chem. Soc.* **1971**, 93, 6, 1490–1491



This work:



An efficient total synthesis of leukotriene B₄
Hansen, T. V. et al. *Org. Biomol. Chem.* **2015**, 13, 5412–5417



This work:

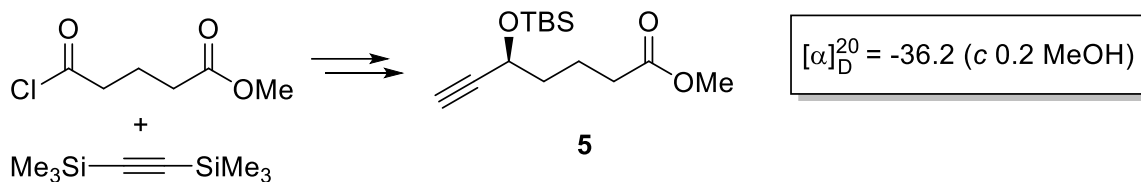


Figure S-67 Specific optical rotations measurements to confirm absolute configurations.