Electronic Supplementary Information

Synthesis of Enantiomerically Pure Bis(2,2-dimethyl-1,3-dioxolanylmethyl)chalcogenides and Dichalcogenides

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General Information: The reactions were monitored by TLC carried out on Merck silica gel (60 F_{254}) by using UV light as visualizant agent and 5% vanillin in 10% H_2SO_4 and heat as developing agents. Baker silica gel (particle size 0.040-0.063 mm) was used for flash chromatography. Proton nuclear magnetic resonance spectra (^{1}H NMR) were obtained at 300 MHz on a Varian Gemini NMR and at 400 MHz on Bruker DPX 400 spectrometers. Spectra were recorded in $CDCl_3$ and DMSO-d_6 solutions. Chemical shifts are reported in ppm, referenced to tetramethylsilane (TMS) as the external reference. Coupling constants (*J*) are reported in Hertz. Carbon-13 nuclear magnetic resonance spectra (^{13}C NMR) were obtained at 75 MHz on a Varian Gemini NMR and at 100 MHz on Bruker DPX 400 spectrometers. Chemical shifts are reported in ppm, referenced to the solvent peak of $CDCl_3$ and DMSO-d_6. Low-resolution mass spectra were obtained with a Shimadzu GC-MS-QP2010 mass spectrometer. Mass spectra were obtained for all compounds on a LTQ Orbitrap Discovery mass spectrometer (Thermo Fisher Scientific). This hybrid system meets the LTQ XL linear ion trap mass spectrometer and an Orbitrap mass analyzer. The experiments were performed via direct infusion of sample (flow: 10 μL/min) in the positive-ion mode using electrospray ionization. Elemental composition calculations for comparison were executed using the specific tool included in the Qual Browser module of Xcalibur (Thermo Fisher Scientific, release 2.0.7) software. Elemental analyses CHN were performed on a model 2400 Series II - Perkin Elmer elemental analysis instrument. Optical rotations were measured with a JASCO P-2000 Polarimeter in CH_2Cl_2 solutions as the solvents with percent concentrations. All enantiomeric excesses were obtained using Shimadzu GC-2010 chromatograph and Agilent 6820 GC System using the following column: HYDRODEX®-β-3P (25 m x 0.25 mm ID) - Macherey-Nagel.

General procedure for the directly synthesis of bis-1,3-dioxolanylmethyl chalcogenides 3:

To a mixture of respective chalcogen **2** (0.5 mmol) in PEG-400 (4.0 mL) under N_2 atmosphere, was added $NaBH_4$ (0.042g, 1.1 mmol) and the mixture was heated slowly to 50 °C, stirring for 40 min. The respective (*R*)- or (*S*)-tosyl dioxolane **1** were then added at 50 °C. The reaction progress was monitored by TLC. After the time indicated in Table 2, the solution was cooled to room temperature and water (10.0 mL) and ethyl acetate (15.0 mL) were added. The organic phase was washed with water (2x 10.0 mL), separated, dried over $MgSO_4$, and the solvent was evaporated under reduced pressure. The product was isolated by column

chromatography using hexane/ethyl acetate (97:3) as eluent.

General procedure for the directly synthesis of bis-1,3-dioxolanylmethyl dichalcogenides 4:

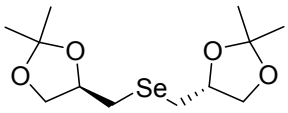
In a two-necked round-bottomed flask containing a suspension of the elemental chalcogenium **2** (2.0 mmol) in THF (2.0 mL) under N_2 atmosphere, lithium triethyl borohydride (2.0 mmol; 2.0 mL of a sol. 1M in THF) was added. The reaction mixture was stirred for 30 min at room temperature. The respective (*R*)- or (*S*)-tosyl dioxolane **1** (0.85 mmol) were then added as a solution in THF (7.5 mL) at reaction mixture. The reaction progress was followed by TLC. After, the complete consumption of starting material saturated aqueous NH_4Cl (25.0 mL) was added to the reaction mixture. Then, the solution was diluted with dichloromethane (30.0 mL) and washed with water (3 x 10.0 mL). The organic phase was separated, dried over $MgSO_4$, and the solvent was evaporated under reduced pressure. The product was isolated by column chromatography using hexane/ethyl acetate (97:3) as eluent.

General procedure for synthesis of (*R*)-3-(2,3-dihydroxypropylselanyl)propanenitrile 6b:

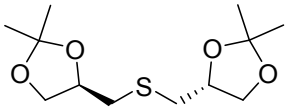
(**i**) To a mixture of diselenide (*R*)-**4a** (0.390g, 1.0 mmol) in PEG-400 (4.0 mL) under N_2 atmosphere, $NaBH_4$ (0.046g, 1.2 mmol) was added at room temperature and the mixture stirred during 30 min. After, it was added acrylonitrile (0.053g, 1.0 mmol) and the mixture was stirred for additional 2 h at 50 °C. Then, the solution was cooled to room temperature, diluted with ethyl acetate (10.0 mL) and washed with water (3x 10.0 mL). The organic phase was separated, dried over $MgSO_4$, and the solvent was evaporated under reduced pressure. The product was isolated by column chromatography using hexane/ethyl acetate (80:20) as the eluent.

(**ii**) **Deprotection step**: to a mixture of (*R*)-**6a** (0.125g, 0.5 mmol) in water (2.0 mL), $ZnBr_2$ (0.111g, 0.5 mmol) was added and the resulting solution was stirred for 24 h under reflux. Then, the solution was cooled to room temperature, received in brine (15.0 mL) and the product was extracted with ethyl acetate (3x 10.0 mL). The organic phase was separated, dried over $MgSO_4$, and the solvent was evaporated under reduced pressure. The product was isolated by column chromatography using hexane/ethyl acetate (50:50) as eluent.

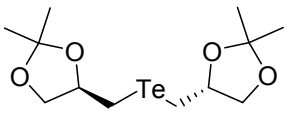
Spectral data of the compounds:



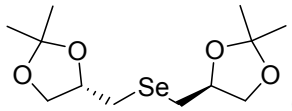
(*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)selenide (3a): Yield: 0.130 g (84%, 99.9 ee); Yelowish oil; $[\alpha]_D^{20}$: + 47.47 (*c* 0.92, CH_2Cl_2). ^{1}H NMR ($CDCl_3$, 400 MHz): δ 4.28-4.34 (m, 2H); 4.11 (dd, *J* = 8.3 and 6.0 Hz, 2H); 3.69 (dd, *J* = 8.3 and 6.4 Hz, 2H); 2.87 (dd, *J* = 12.5 and 5.6 Hz, 2H); 2.70 (dd, *J* = 12.5 and 7.2 Hz, 2H); 1.42 (d, *J* = 0.6 Hz, 6H); 1.35 (d, *J* = 0.6 Hz, 6H). ^{13}C NMR (100 MHz, $CDCl_3$); δ (ppm): 109.5, 75.9, 69.3, 27.1, 26.9, 25.5. MS: *m/z* (rel. int.) 310 (8.8), 101 (73.6), 43 (100.0). HRMS (ESI): *m/z* calcd for $C_{12}H_{22}O_4Se$ $[M+Na]^+$: 333.0581; found: 333.0593.



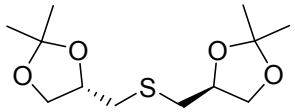
(*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)sulfide (3b): Yield: 0.098 g (75%, 99.9 ee); Colorless oil; $[\alpha]_D^{20}$: + 35.13 (*c* 0.44, CH_2Cl_2). ^{1}H NMR ($CDCl_3$, 300 MHz): δ 4.23-4.31 (m, 2H); 4.10 (dd, *J* = 8.3 and 6.0 Hz, 2H); 3.72 (dd, *J* = 8.3 and 6.3 Hz, 2H); 2.84 (dd, *J* = 13.4 and 5.7 Hz, 2H); 2.67 (dd, *J* = 13.4 and 6.9 Hz, 2H); 1.43 (s, 6H); 1.36 (s, 6H). ^{13}C NMR (100 MHz, $CDCl_3$); δ (ppm): 109.5, 75.5, 68.7, 35.7, 26.8, 25.4. MS: *m/z* (rel. int.) 262 (3.7), 101 (100.0), 43 (81.4). HRMS (ESI): *m/z* calcd for $C_{12}H_{22}O_4S$ $[M+H]^+$: 263.1317; found: 263.1312.



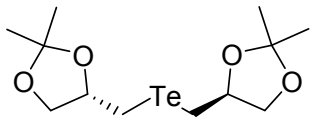
(*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)telluride (3c): Yield: 0.108 g (60%, 99.9 ee); Yelowish oil; $[\alpha]_D^{20}$: + 28.95 (*c* 0.70, CH_2Cl_2). ^{1}H NMR ($CDCl_3$, 400 MHz): δ 4.30-4.36 (m, 2H), 4.14 (dd, *J* = 8.2 and 5.9 Hz, 2H), 3.62 (dd, *J* = 8.2 and 6.7 Hz, 2H), 2.95 (dd, *J* = 12.1 and 5.6 Hz, 2H), 2.78 (dd, *J* = 12.1 and 7.3 Hz, 2H), 1.43 (d, *J* = 0.6 Hz, 6H), 1.34 (d, *J* = 0.7 Hz, 6H). ^{13}C NMR (100 MHz, $CDCl_3$); δ (ppm): 109.7, 76.9, 70.5, 27.0, 25.7, 6.6. MS: *m/z* (rel. int.) 360 (18.3), 101 (23.3), 43 (100.0). HRMS (ESI): *m/z* calcd for $C_{12}H_{22}O_4Te$ $[M+H]^+$: 361.0659; found: 361.0653.



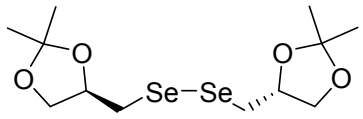
(*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)selenide (3a): Yield: 0.109 g (70%, 99.9 ee); Yelowish oil; $[\alpha]_D^{20}$: - 48.60 (*c* 1.08, CH_2Cl_2). The characterization data from NMR, MS and HRMS spectra were identical in all aspects with those of (*R*,*R*)-(+)-**3a** enantiomer.



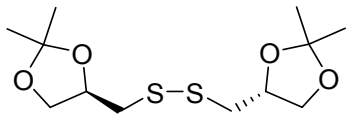
(*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)sulfide (3b): Yield: 0.085 g (65%, 99.9 ee); Colorless oil; $[\alpha]_D^{20}$: - 48.58 (*c* 0.45, CH_2Cl_2). The characterization data from NMR, MS and HRMS spectra were identical in all aspects with those of (*R*,*R*)-(+)-**3b** enantiomer.



(*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)telluride (3c): Yield: 0.099 g (55%, 99.9 ee); Yelowish oil; $[\alpha]_D^{20}$: - 32.25 (*c* 0.56, CH_2Cl_2). The characterization data from NMR, MS and HRMS spectra were identical in all aspects with those of (*R*,*R*)-(+)-**3c** enantiomer.

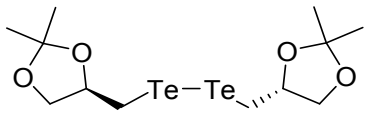


(*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)diselenide (4a): Yield: 0.133 g (80%, 99.9 ee); Orangish oil; $[\alpha]_D^{20}$: + 34.01 (*c* 0.48, CH_2Cl_2). ^{1}H NMR ($CDCl_3$, 400 MHz): δ 4.34-4.41 (m, 2H); 4.14 (dd, *J* = 8.4 and 6.0 Hz, 2H); 3.74 (dd, *J* = 8.4 and 6.1 Hz, 2H); 3.20 (dd, *J* = 12.4 and 5.8 Hz, 2H); 3.07 (dd, *J* = 12.4 and 7.1 Hz, 2H); 1.44 (s, 6H); 1.36 (s, 6H). ^{13}C NMR (100 MHz, $CDCl_3$); δ (ppm): 109.6, 75.9, 69.0, 33.0, 27.0, 25.5. MS: *m/z* (rel. int.) 390 (10.5), 115 (76.5), 101 (21.2), 57 (97.5), 43 (100.0)**.** HRMS (ESI): *m/z* calcd for $C_{12}H_{22}O_4Se_2$ $[M+H]^+$: 390.9927; found: 390.9921.

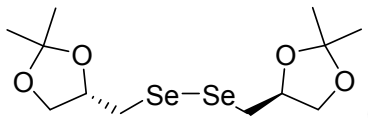


(*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)disulfide (4b):

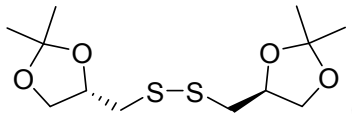
Yield: 0.052 g (42%, 99.9 ee). Colorless oil; $[\alpha]_D^{20}$: + 24.66 (*c* 0.52, CH_2Cl_2). ^1H NMR ($CDCl_3$, 300 MHz): δ 4.33-4.41 (m, 2H); 4.14 (dd, *J* = 8.4 and 6.0 Hz, 2H); 3.76 (dd, *J* = 8.4 and 6.0 Hz, 2H); 2.98 (dd, *J* = 13.5 and 5.7 Hz, 2H); 2.82 (dd, *J* = 13.5 and 7.0 Hz, 2H); 1.43 (s, 6H); 1.36 (s, 6H). ^{13}C NMR (75 MHz, $CDCl_3$); δ (ppm): 109.6, 74.7, 68.6, 42.1, 26.9, 25.5. MS: *m/z* (rel. int.) 294 (11.8), 101 (91.7), 43 (100.0). HRMS (ESI): *m/z* calcd for $C_{12}H_{22}O_4S_2$ $[M+H]^+$: 295.1032; found: 294.9932.



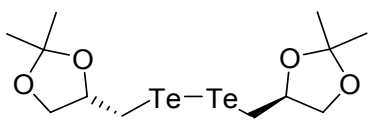
(*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)ditelluride (4c): Yield: 0.098 g (47%, 99.9 ee); Reddish oil; $[\alpha]_D^{20}$: + 30.13 (*c* 0.54, CH_2Cl_2). ^1H NMR ($CDCl_3$, 400 MHz): δ 4.25-4.31 (m, 2H); 4.14 (dd, *J* = 8.2 and 6.0 Hz, 2H); 3.67 (dd, *J* = 8.2 and 6.5 Hz, 2H); 3.45 (dd, *J* = 11.7 and 5.8 Hz, 2H); 3.36 (dd, *J* = 11.7 and 7.1 Hz, 2H); 1.44 (s, 6H); 1.35 (s, 6H). ^{13}C NMR (100 MHz, $CDCl_3$); δ (ppm): 109.7, 77.6, 69.9, 27.1, 25.7, 8.7. MS: *m/z* (rel. int.) 488 (M^+ - 2, 1.0), 115 (32.1), 57 (64.8), 43 (100.0). HRMS (ESI): *m/z* calcd for $C_{12}H_{22}O_4Te_2$ $[M+Na]^+$: 508.9511; found: 508.9533.



(*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)diselenide (4a): Yield: 0.124 g (75%, 99.9 ee); Orangish oil; $[\alpha]_D^{20}$: - 39.11 (*c* 0.53, CH_2Cl_2). The characterization data from NMR, MS and HRMS spectra were identical in all aspects with those of (*R*,*R*)-(+)-**4a** enantiomer.

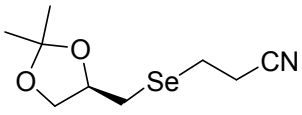


(*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)disulfide (4b): Yield: 0.037 g (30%, 99.9 ee); Colorless oil; $[\alpha]_D^{20}$: - 24.69 (*c* 0.27, CH_2Cl_2). The characterization data from NMR, MS and HRMS spectra were identical in all aspects with those of (*R*,*R*)-(+)-**4b** enantiomer.

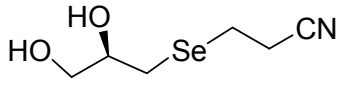


(*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)ditelluride (4c):

Yield: 0.102 g (49%, 99.9 ee). Reddish oil; $[\alpha]_D^{20}$: - 33.74 (*c* 0.39, CH_2Cl_2). The characterization data from NMR, MS and HRMS spectra were identical in all aspects with those of (*R*,*R*)-(+)-**4c** enantiomer.



(*R*)-3-(2,2-dimethyl-1,3-dioxolanylmethylselanyl)propanenitrile 6a: Yield: 0.219 g (88%, 99.9 ee). Colorless oil; $[\alpha]_D^{20}$: + 17.10 (*c* 0.57, CH_2Cl_2). ^{1}H NMR ($CDCl_3$, 400 MHz): δ 4.31-4.37 (m, 1H); 4.11 (dd, *J* = 8.3 and 6.1 Hz, 1H); 3.68 (dd, *J* = 8.3 and 6.6 Hz, 1H); 2.93-2.78 (m, 6H); 1.44 (s, 3H); 1.36 (d, *J* = 0.5 Hz, 3H). ^{13}C NMR (100 MHz, $CDCl_3$); δ (ppm): 118.7, 109.6, 76.0, 69.2, 27.2, 26.8, 25.4, 19.6, 18.2. MS: *m/z* (rel. int.) 249 (2.1), 101 (31.5), 43 (100.0). Anal. Calcd for $C_9H_{15}NO_2Se$: C 43.56, H 6.09, N 5.64. Found: C 43.42, H 5.98, N 5.76.



(*R*)-3-(2,3-dihydroxypropylselanyl)propanenitrile 6b: Yield: 0.041 g (40%, 99.9 ee). Colorless oil; $[\alpha]_D^{20}$: - 22.64 (*c* 0.66, CH_2Cl_2). ^{1}H NMR (DMSO-d_6, 300 MHz): δ 3.98 (d, *J* = 5.0 Hz, 1H); 3.74 (t, *J* = 5.6 Hz, 1H); 2.67-2.77 (m, 1H); 2.37-2.48 (m, 2H); 1.98-2.02 (m, 2H); 1.84-1.91 (m, 3 H); 1.72 (dd, *J* = 12.5 and 6.8 Hz, 1H). ^{13}C NMR (75 MHz, DMSO-d_6); δ (ppm): 120.2, 71.6, 64.9, 28.3, 18.9, 18.0. MS: *m/z* (rel. int.) 209 (19.3), 133 (30.8), 54 (100.0). HRMS (ESI): *m/z* calcd for $C_6H_{11}NO_2Se$ $[M+Na]^+$: 231.9853; found: 231.9833.

SELECTED SPECTRA

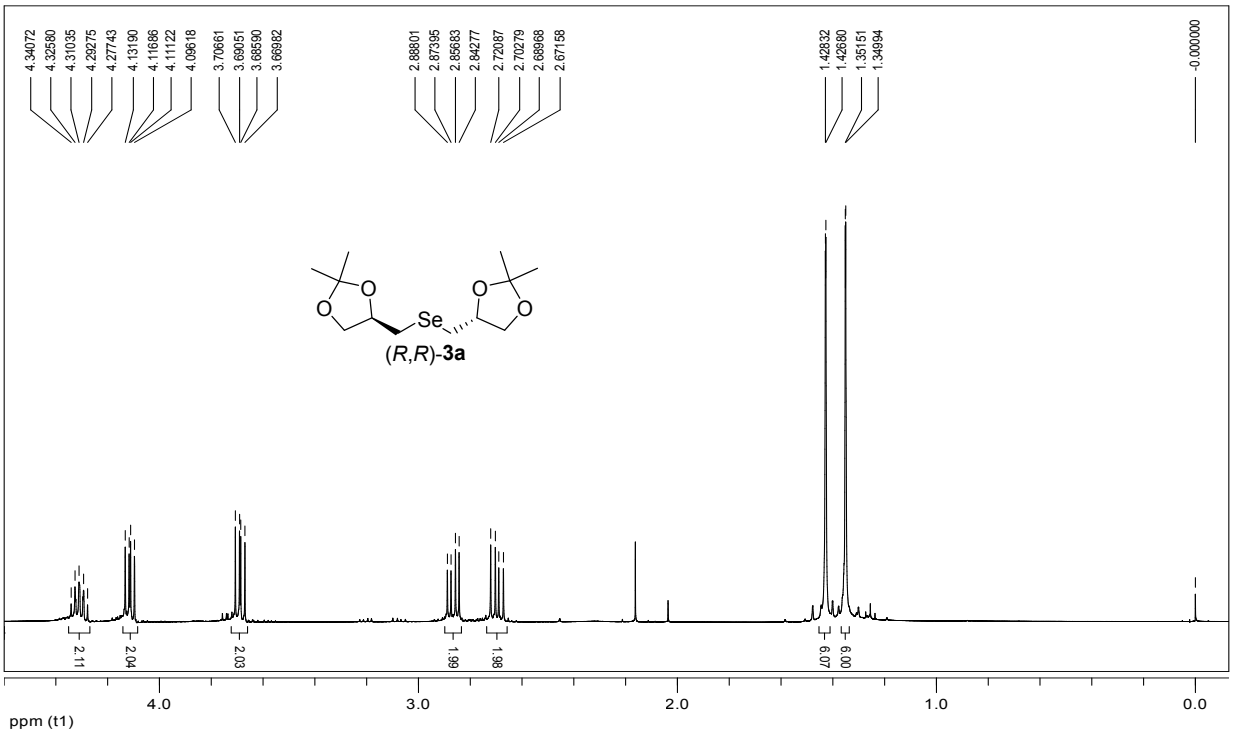


Figure 1. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)selenide **(3a)**.

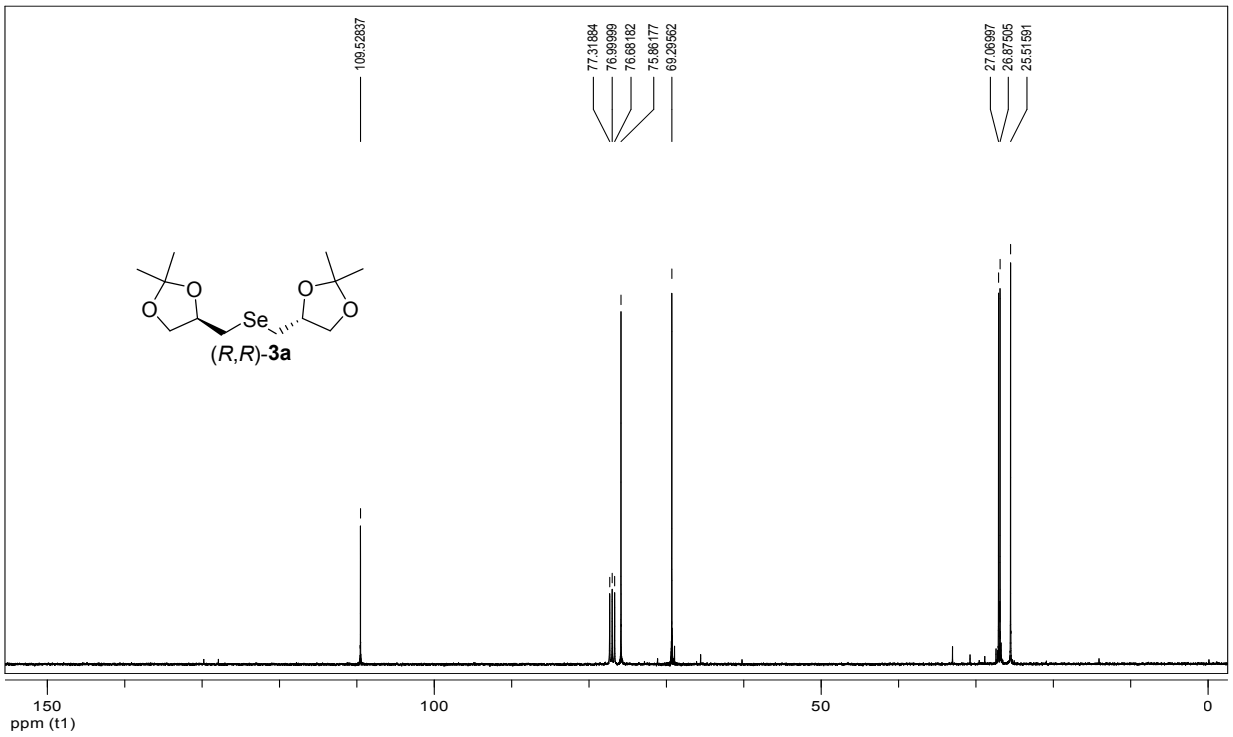


Figure 2. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)selenide **(3a)**.

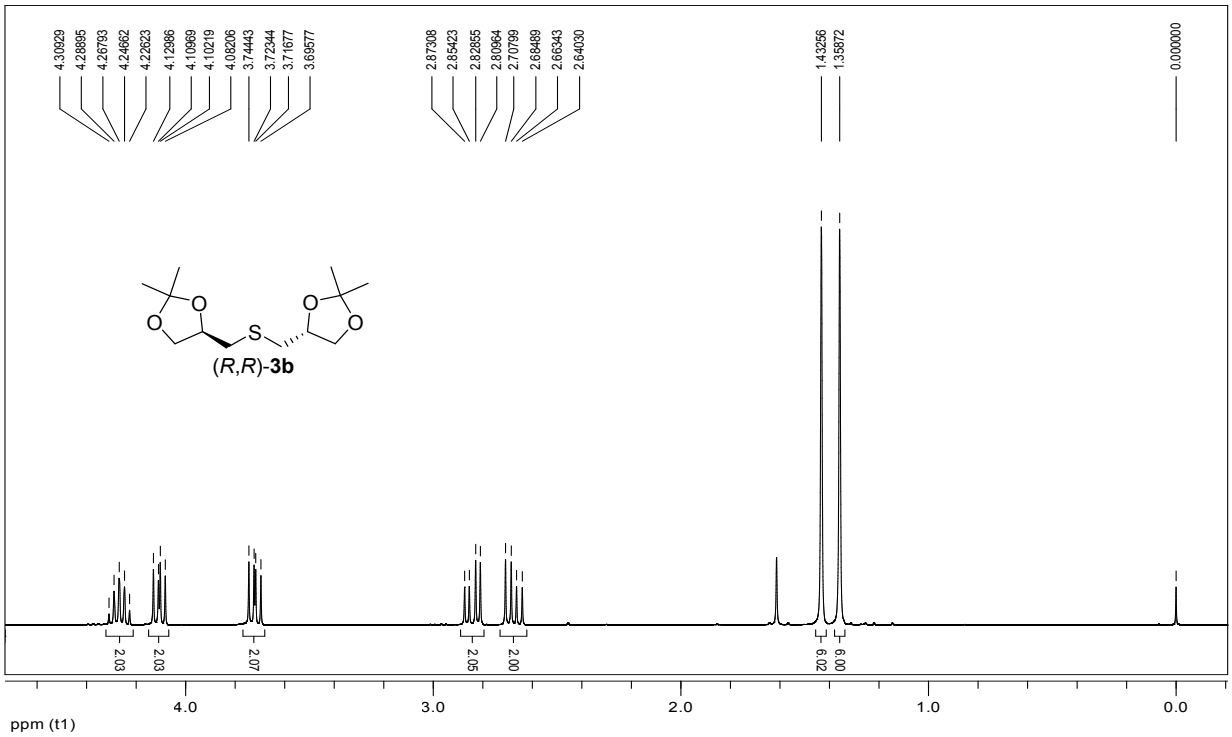


Figure 3. ^{1}H NMR (300 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)sulfide **(3b)**.

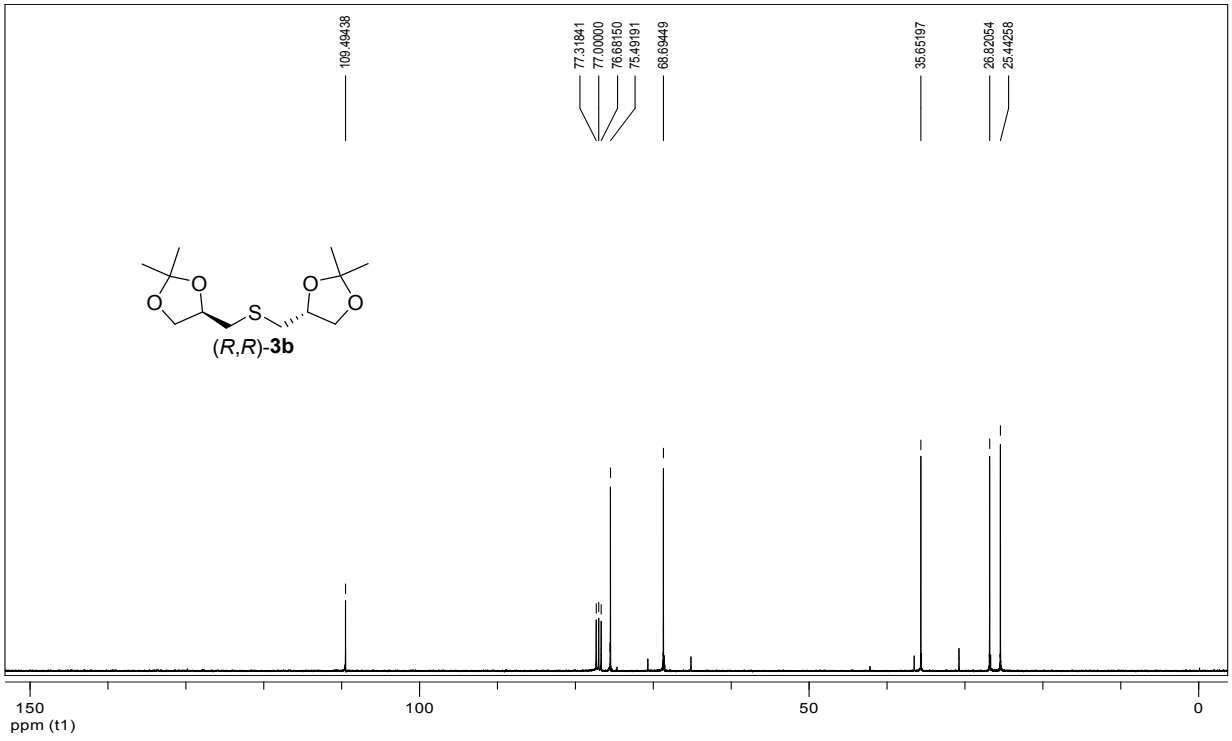


Figure 4. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)sulfide **(3b)**.

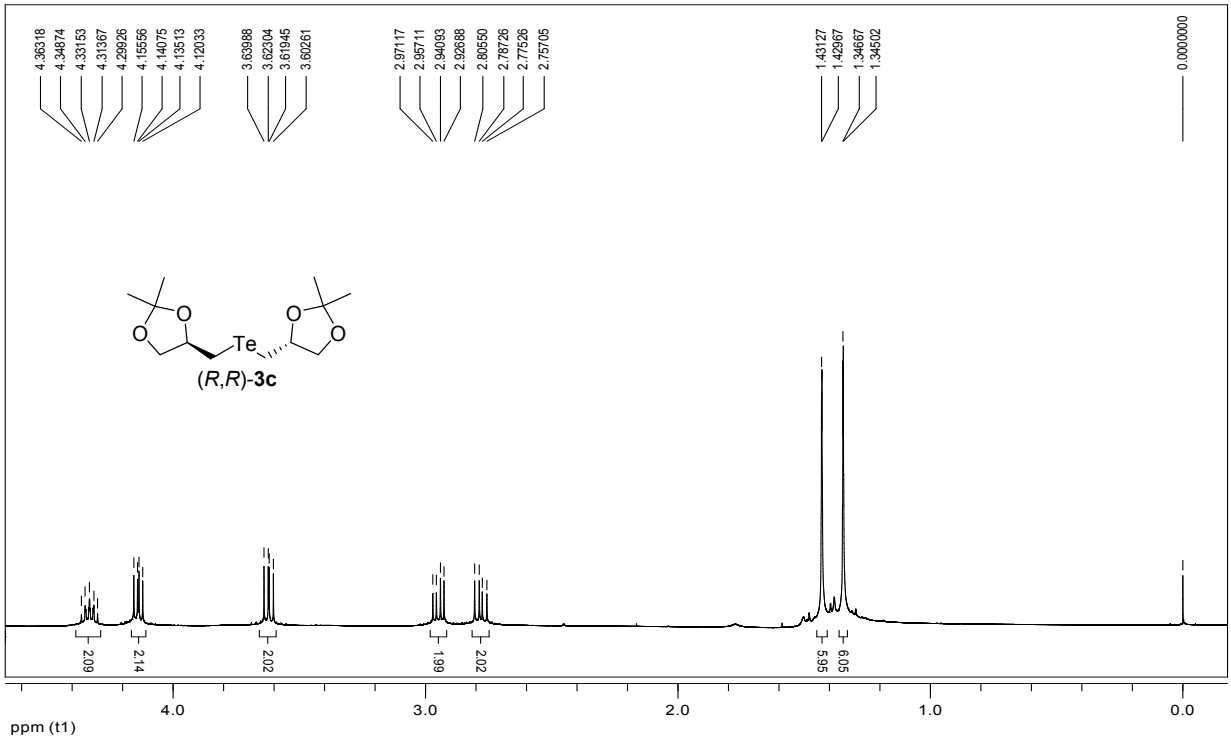


Figure 5. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)telluride **(3c)**.

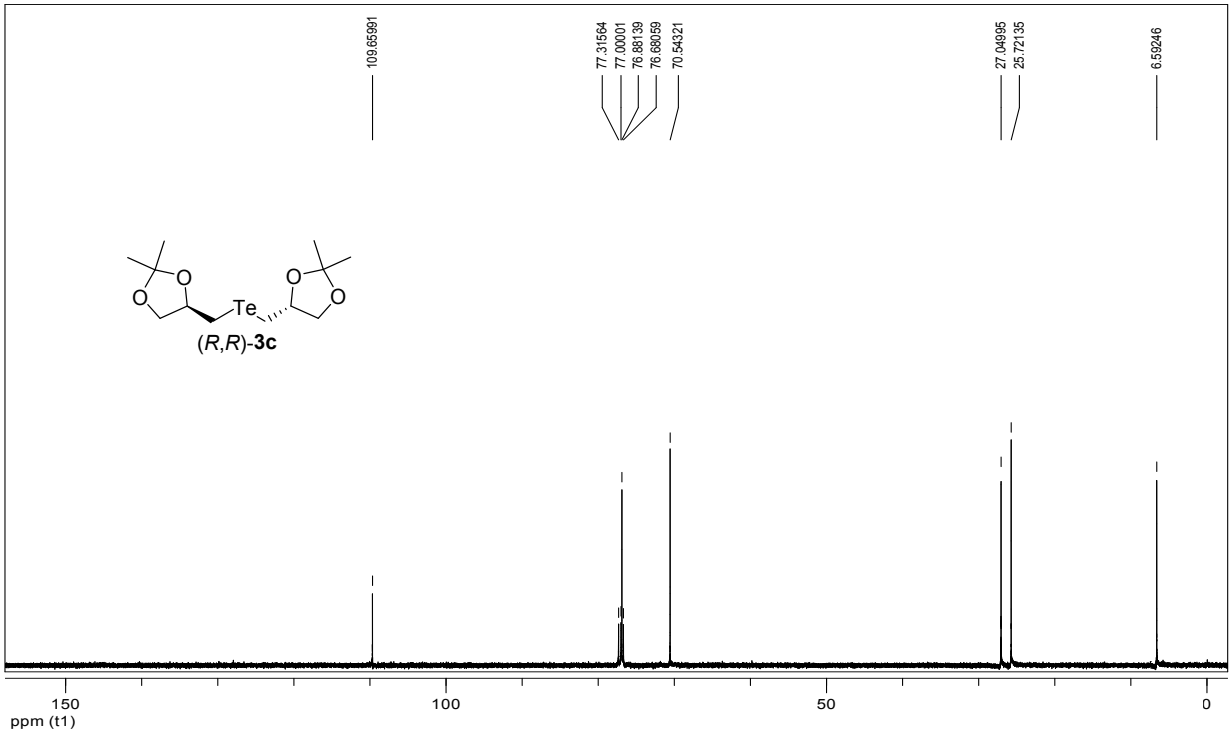


Figure 6. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)telluride **(3c)**.

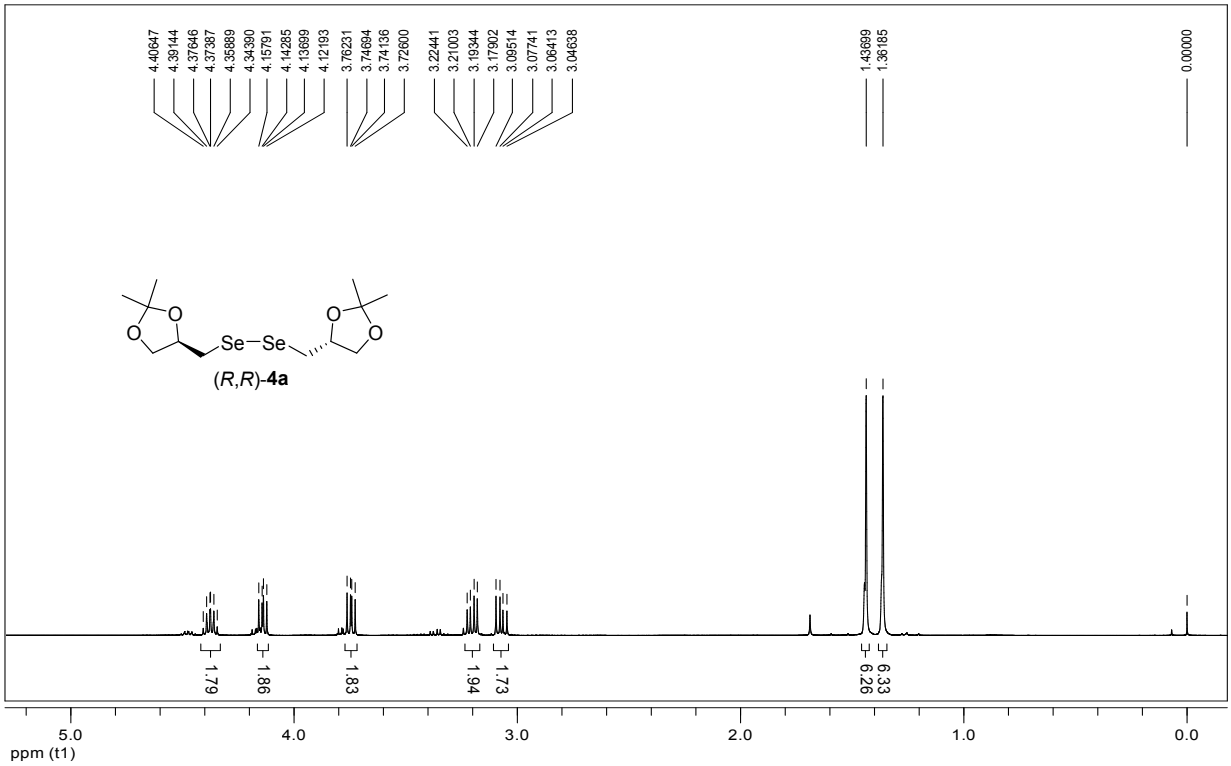


Figure 7. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)diselenide **(4a)**.

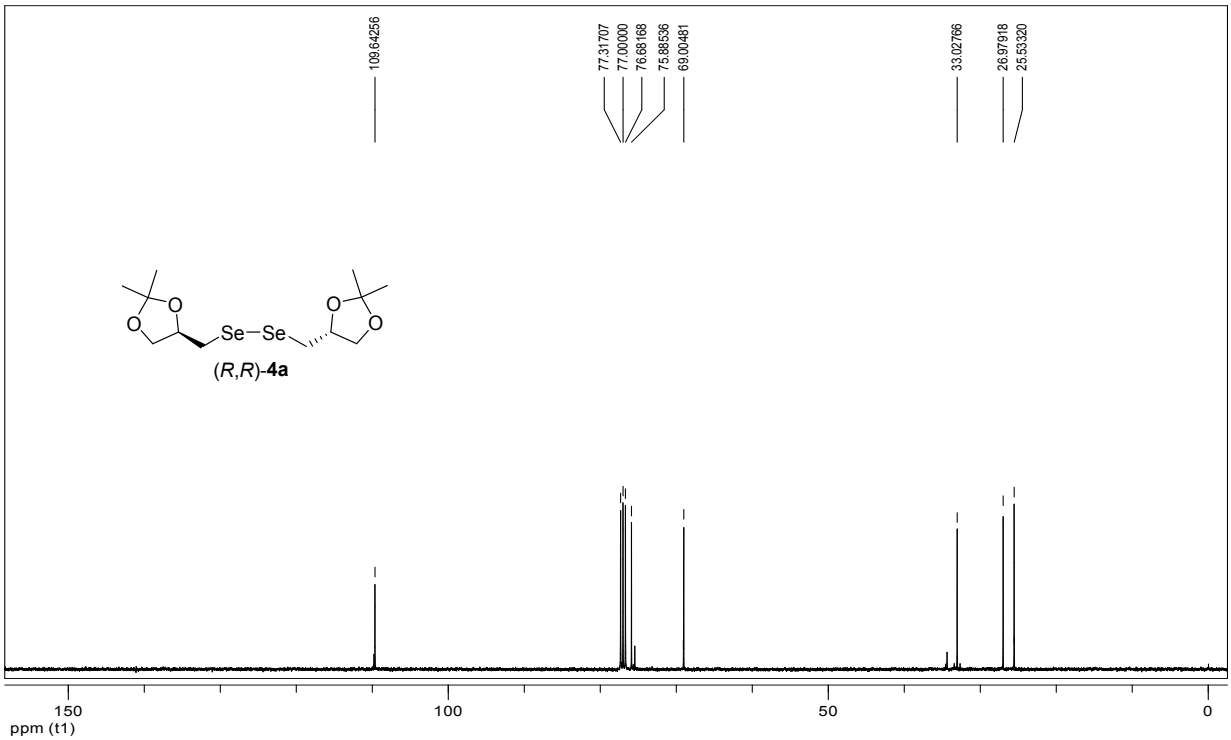


Figure 8. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)diselenide **(4a)**.

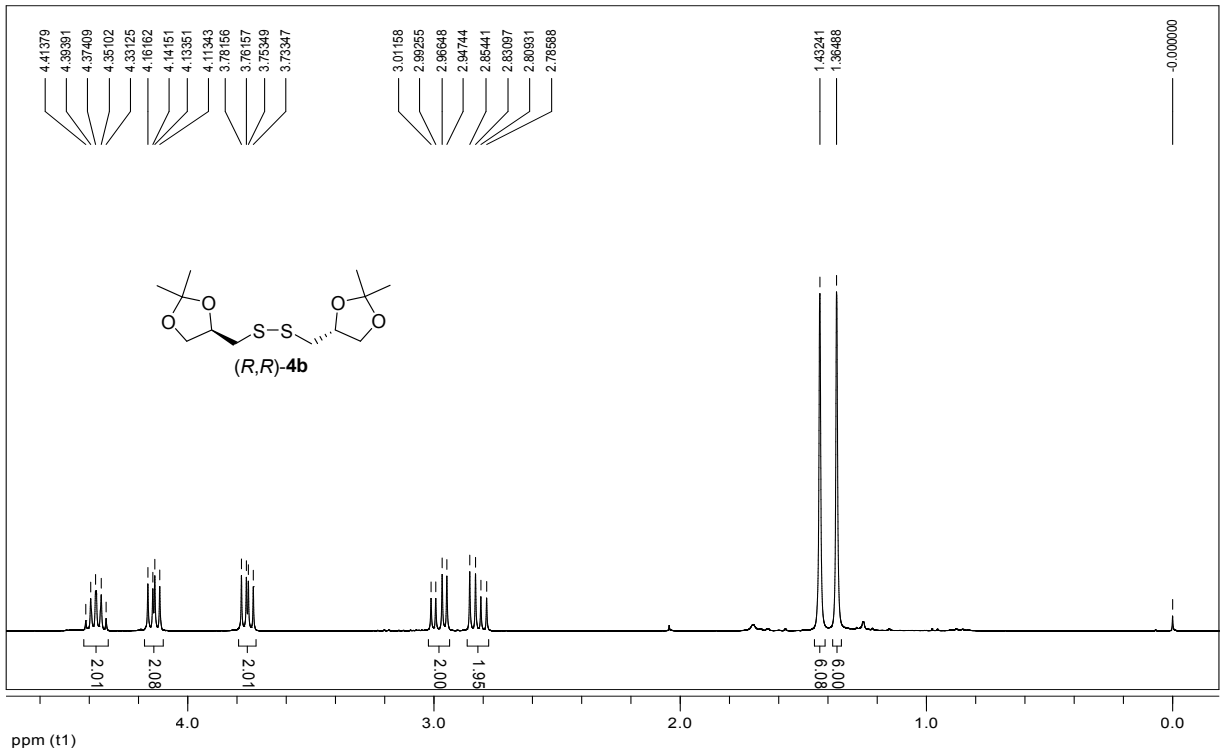


Figure 9. ^{1}H NMR (300 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)disulfide **(4b)**.

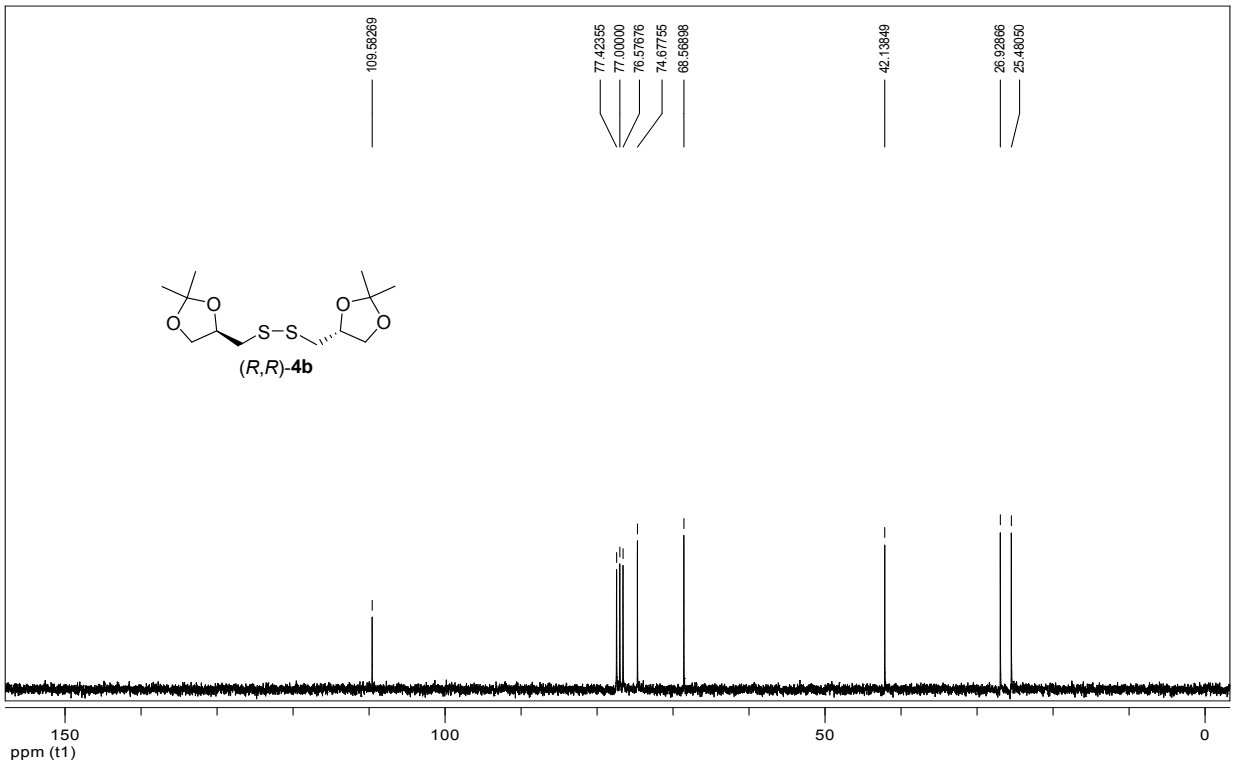


Figure 10. ^{13}C NMR (75 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)disulfide **(4b)**.

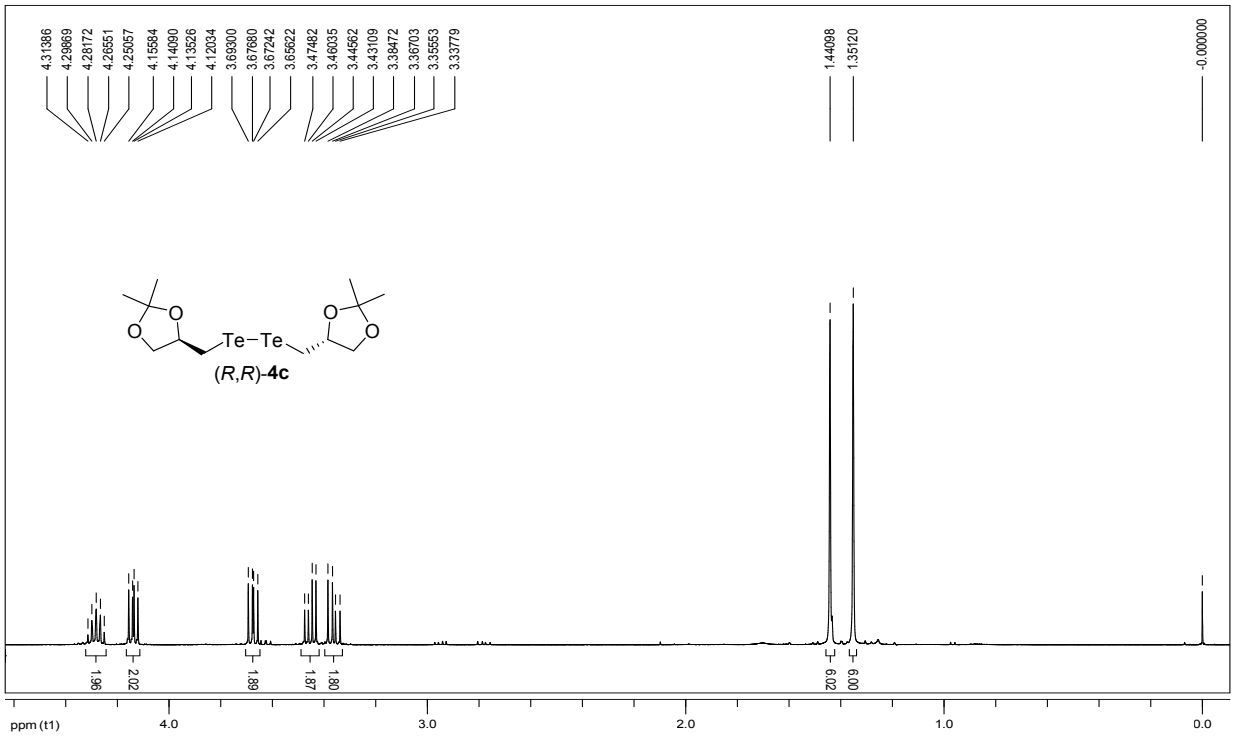


Figure 11. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)ditelluride **(4c)**.

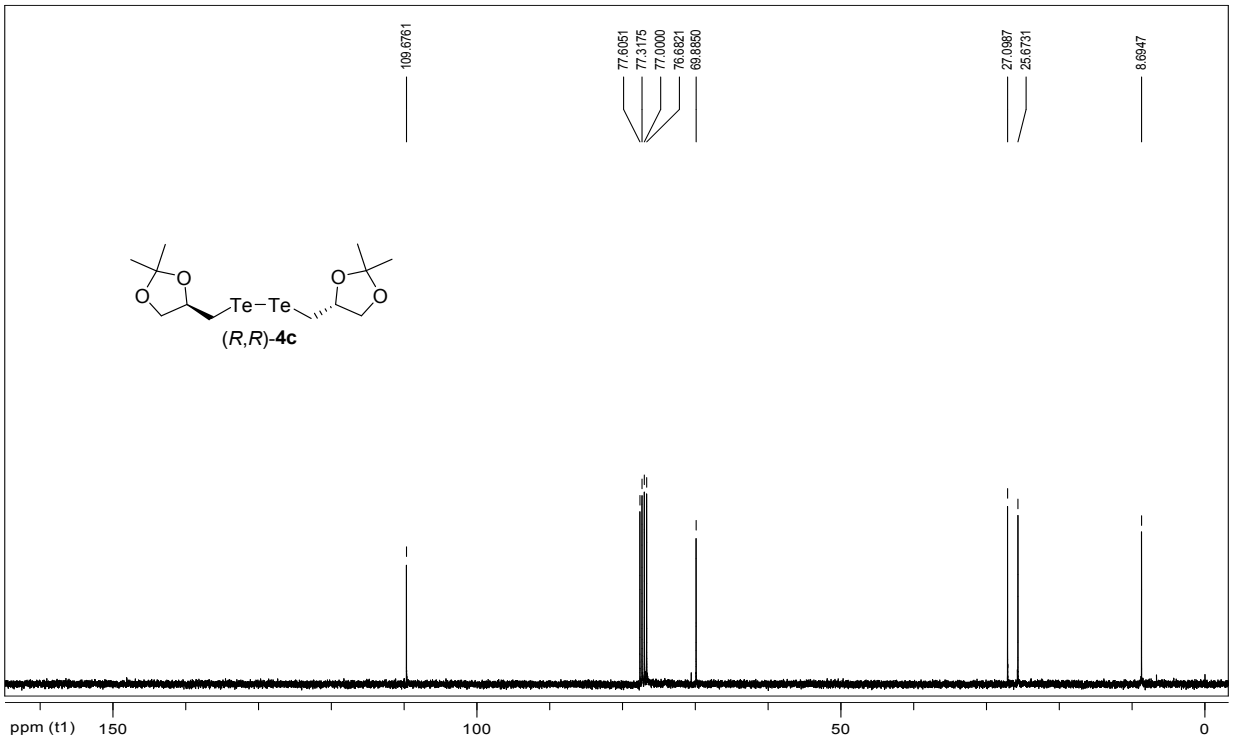


Figure 12. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)ditelluride **(4c)**.

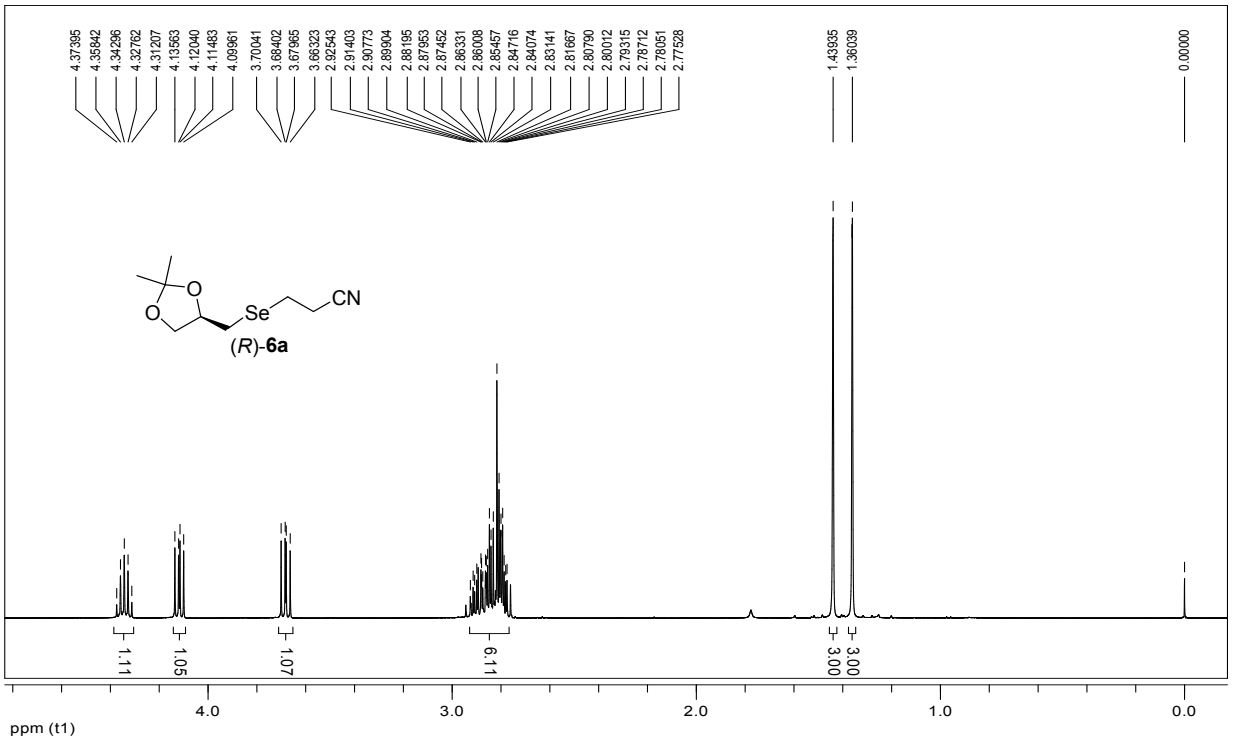


Figure 13. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of (*R*)-3-(2,2-dimethyl-1,3-dioxolanylmethylselanyl)propanenitrile **(6a)**.

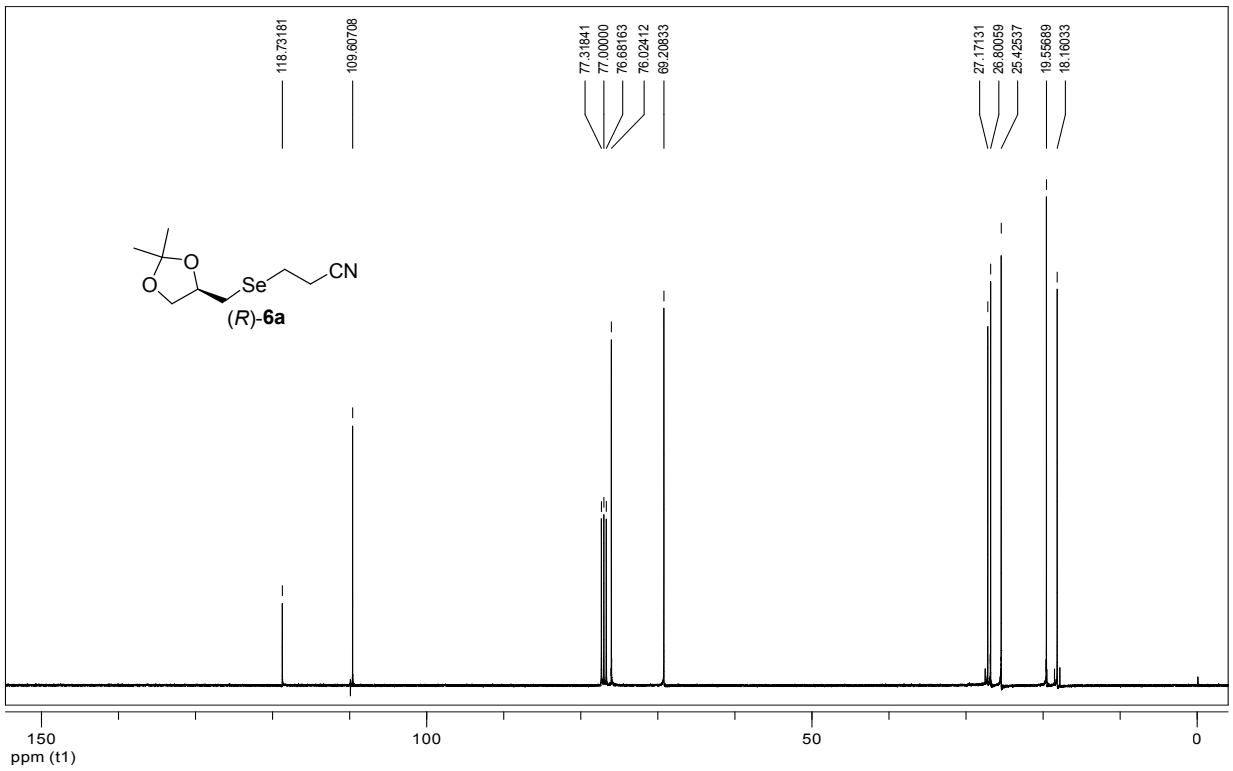


Figure 14. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of (*R*)-3-(2,2-dimethyl-1,3-dioxolanylmethylselanyl)propanenitrile **(6a)**.

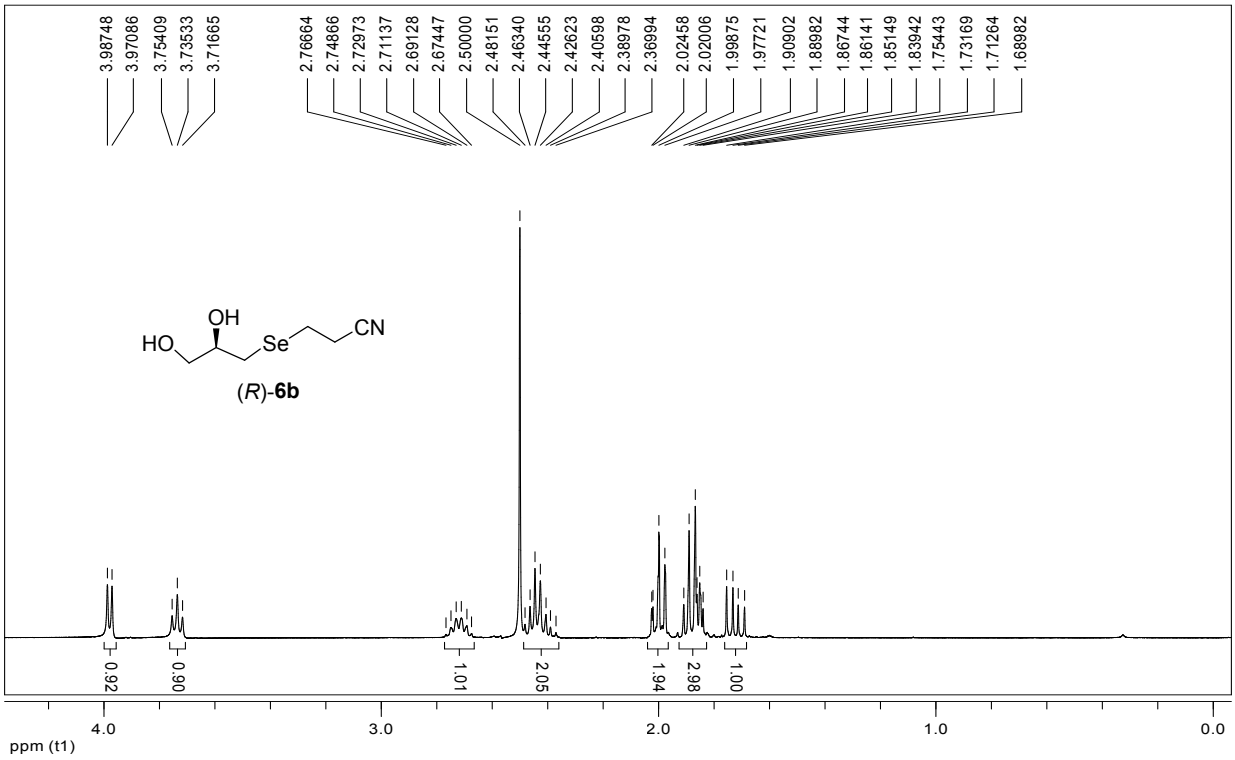


Figure 15. ^{1}H NMR (300 MHz, DMSO-d_6) spectrum of (*R*)-3-(2,3-dihydroxypropylselanyl)propanenitrile **(6b)**.

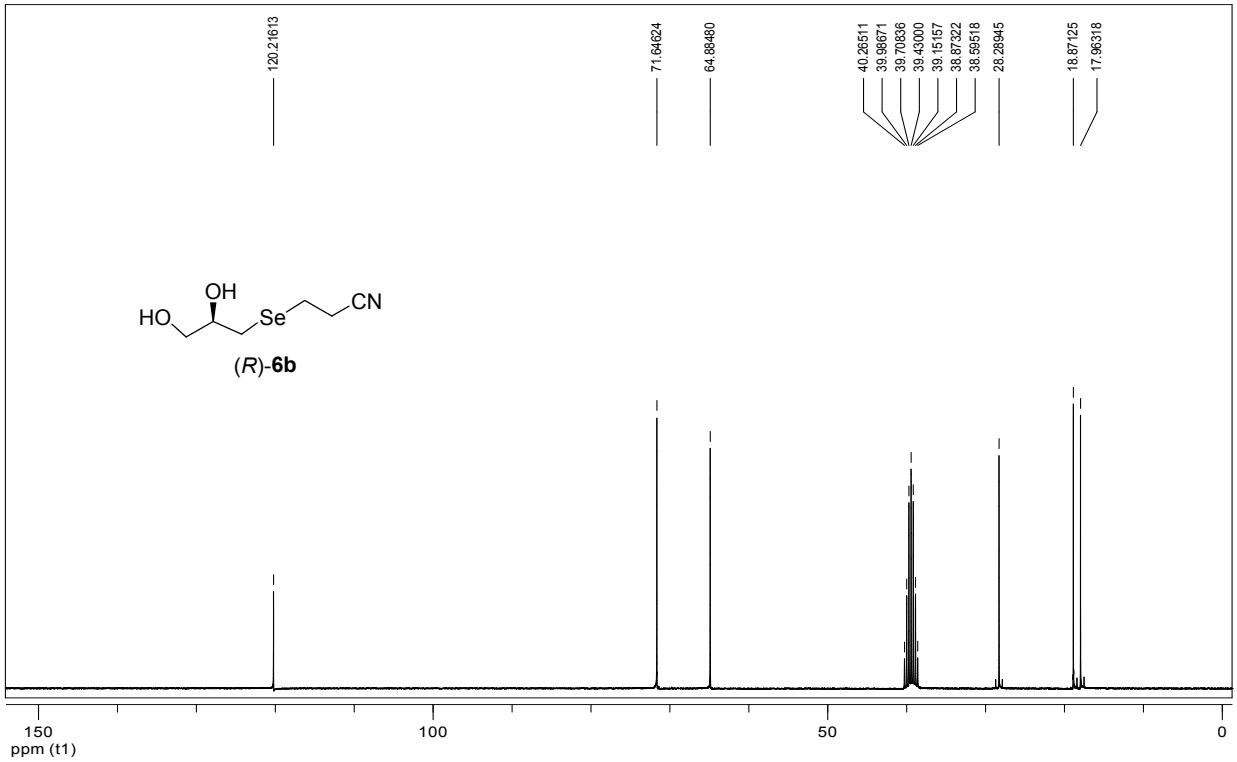
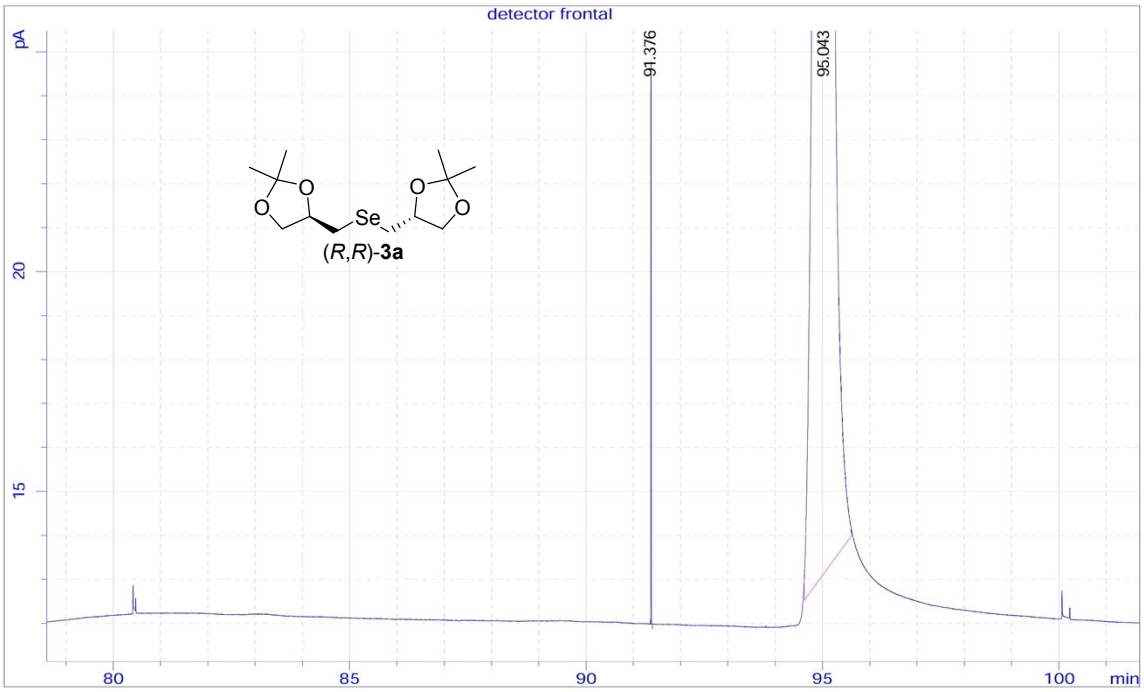
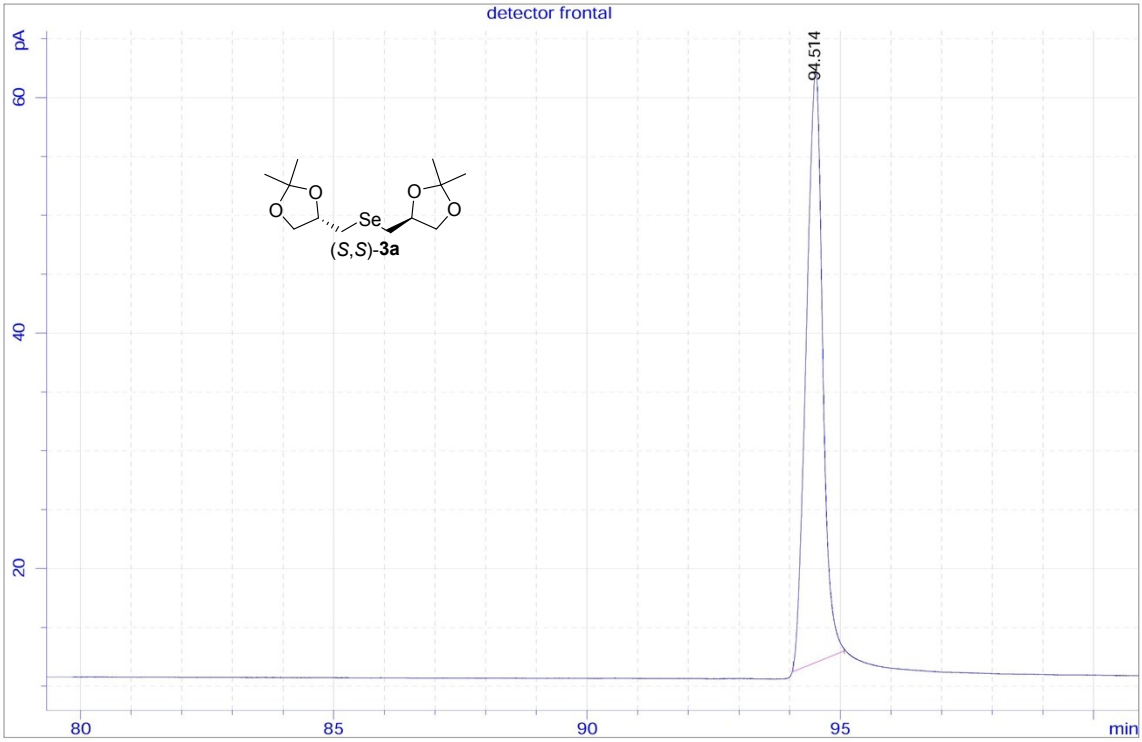


Figure 16. ^{13}C NMR (75 MHz, DMSO-d_6) spectrum of (*R*)-3-(2,3-dihydroxypropylselanyl)propanenitrile **(6b)**.



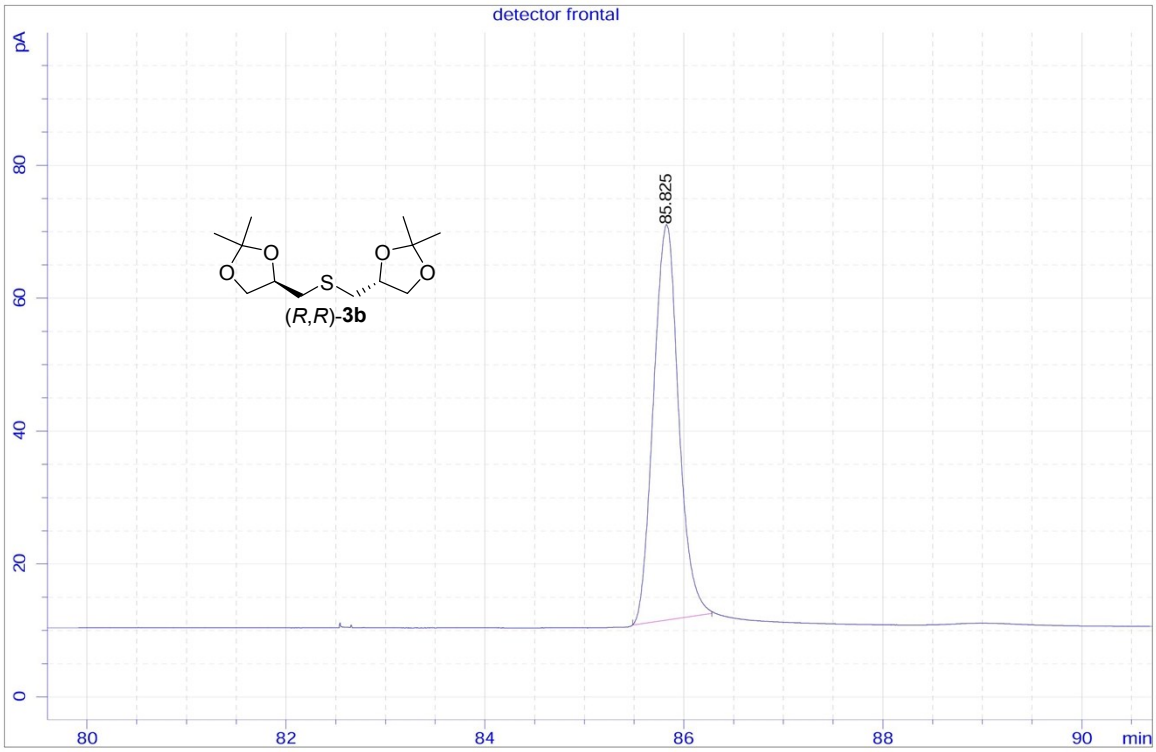
Peak#	R.Time [Min]	Area	Area %
1	95,043	1045,81632	100,00000

Figure 17. Chiral GC analysis of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)selenide (**3a**).



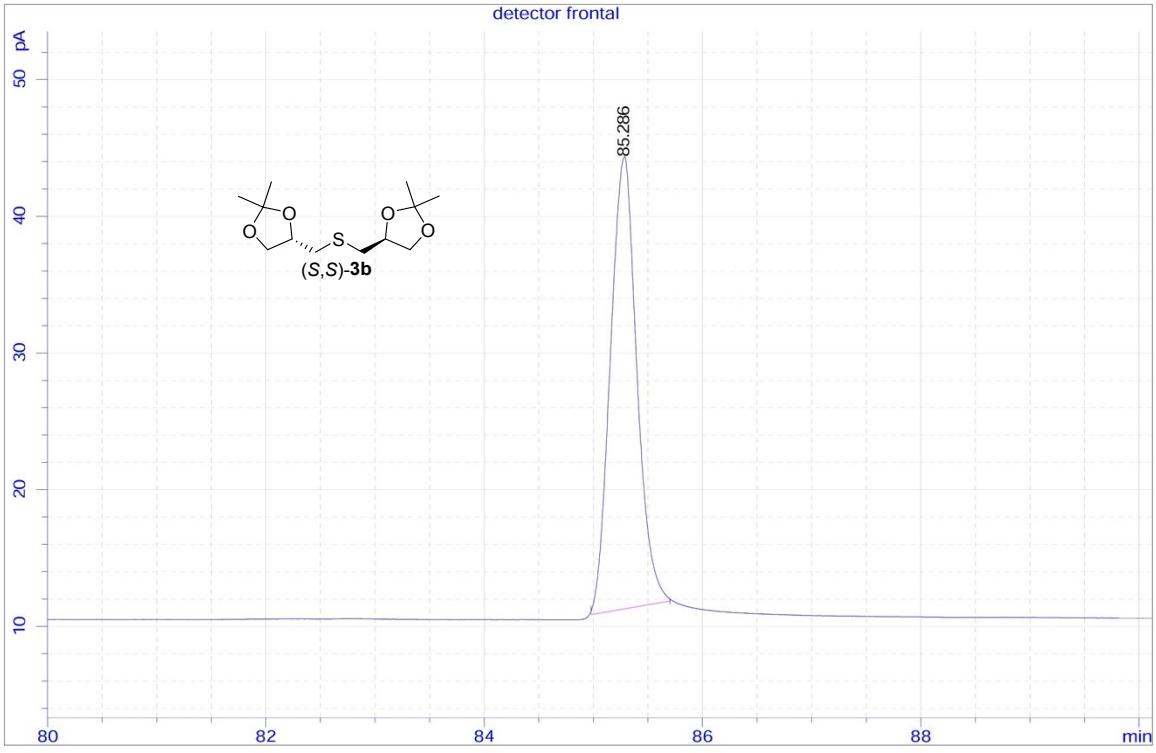
Peak#	R.Time [Min]	Area	Area %
1	94,514	1128,09342	100,00000

Figure 18. Chiral GC analysis of (*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)selenide (**3a**).



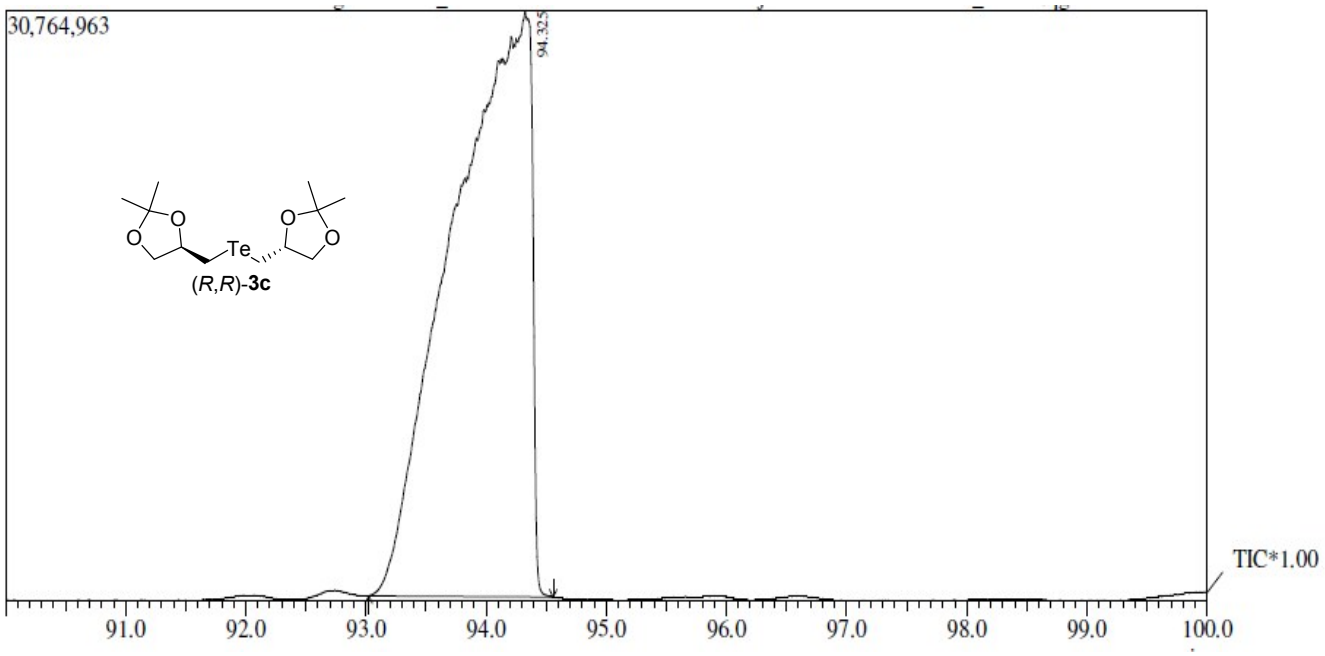
Peak#	R.Time [Min]	Area	Area %
1	85,825	1044,92111	100,00000

Figure 19. Chiral GC analysis of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)sulfide (**3b**).



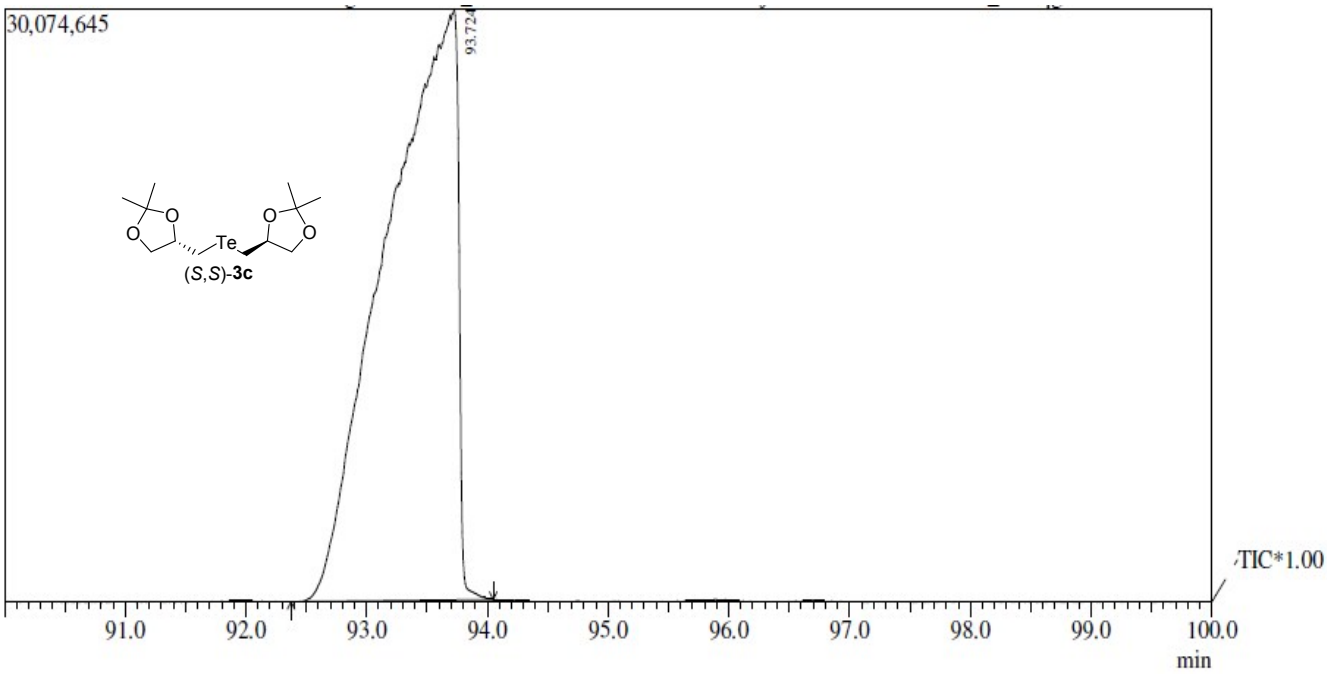
Peak#	R.Time [Min]	Area	Area %
1	85,286	555,44867	100,00000

Figure 20. Chiral GC analysis of (*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)sulfide (**3b**).



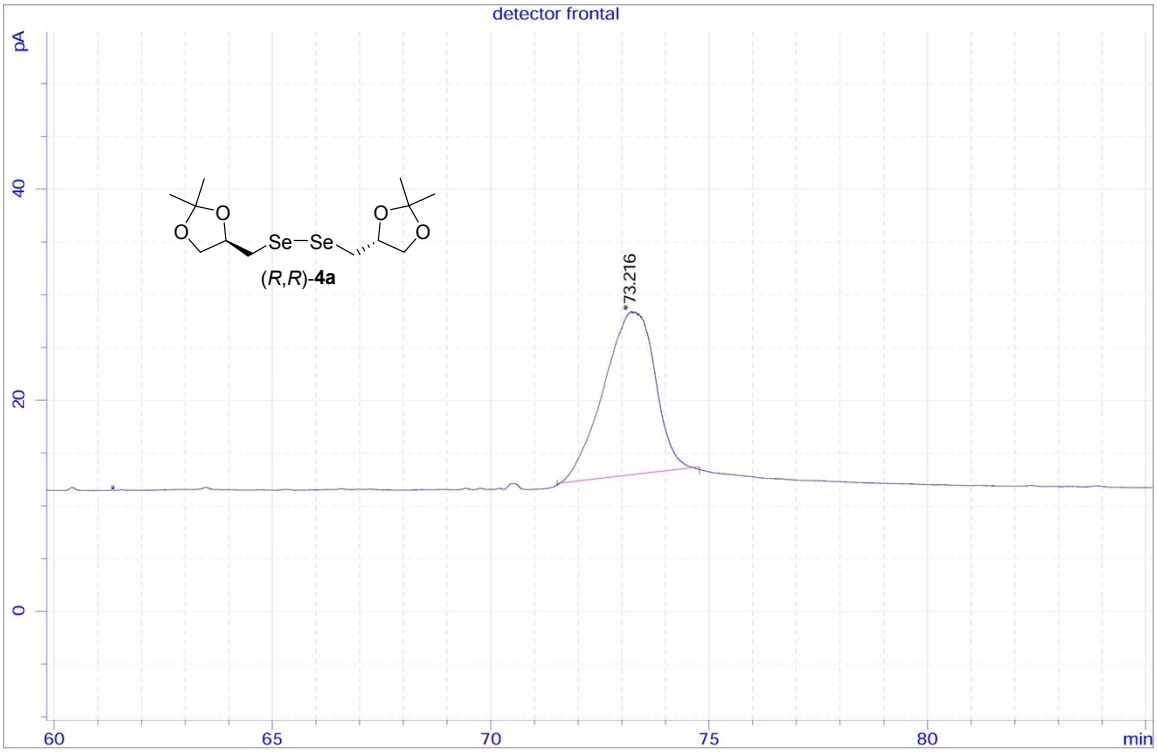
Peak#	R.Time [Min]	Area	Area %
1	94,325	1393134440	100,00000

Figure 21. Chiral GC analysis of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)telluride (**3c**).



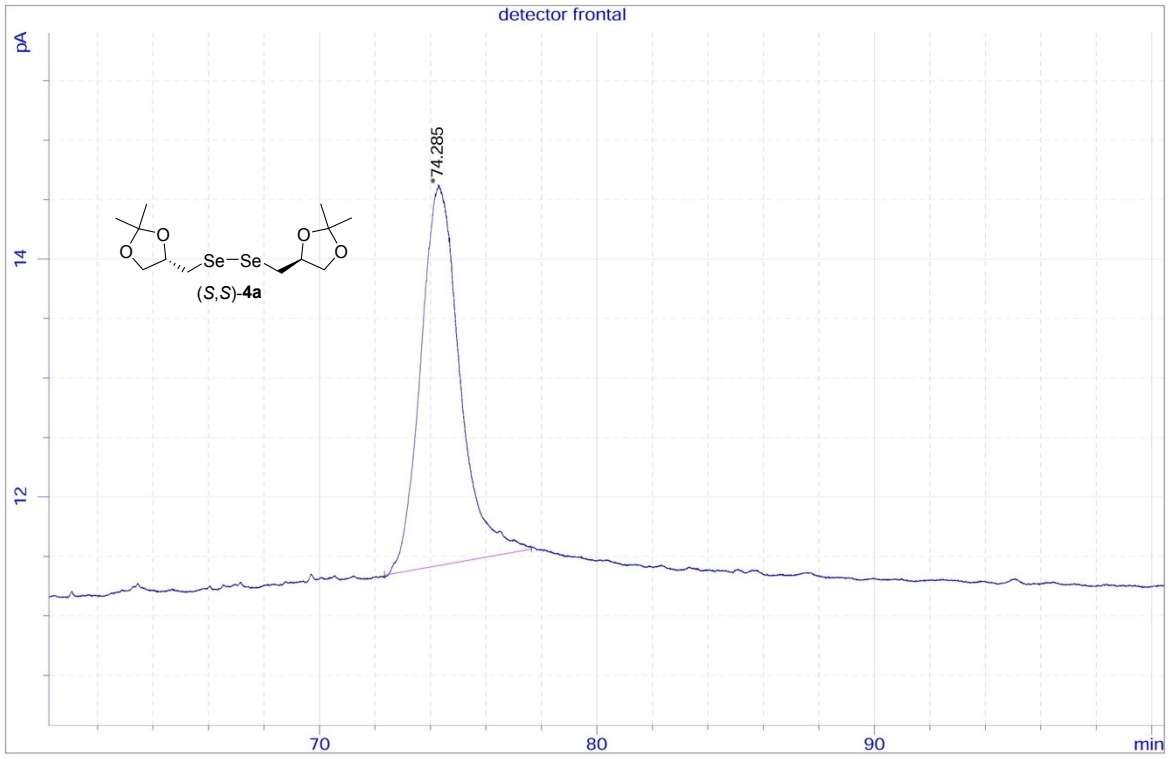
Peak#	R.Time [Min]	Area	Area %
1	93,724	1235889454	100,00000

Figure 22. Chiral GC analysis of (*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)telluride (**3c**).



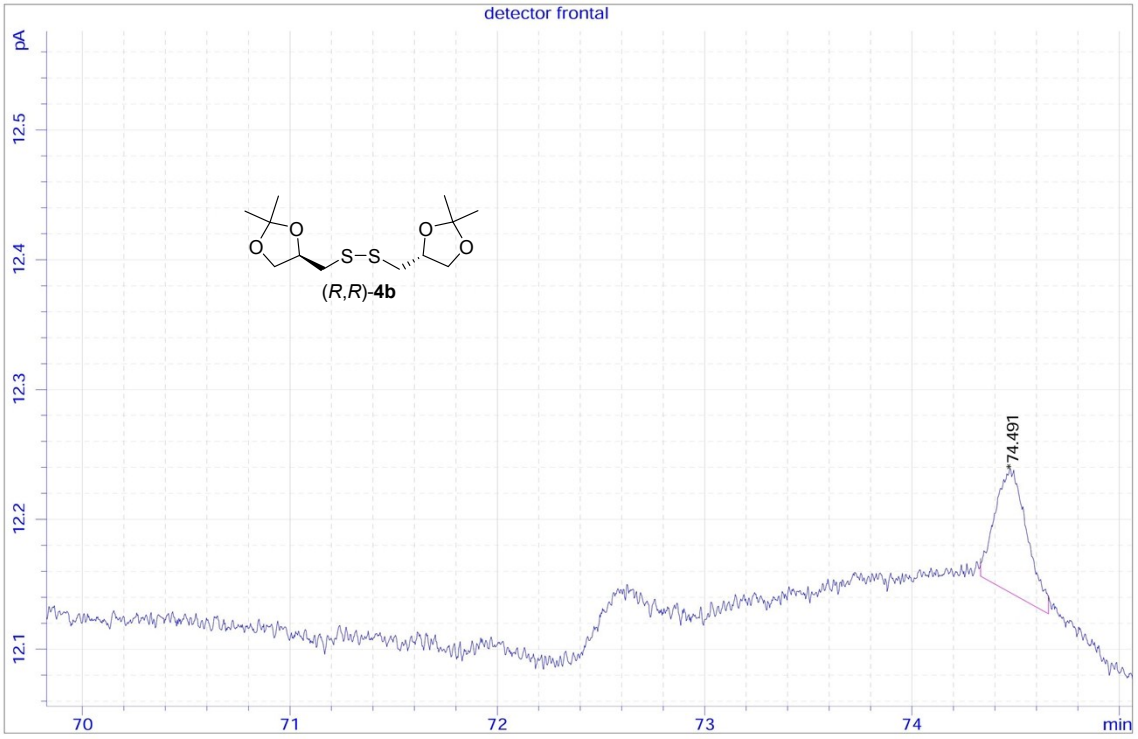
Peak#	R.Time [Min]	Area	Area %
1	73,216	302,97749	100,00000

Figure 23. Chiral GC analysis of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)diselenide (**4a**).



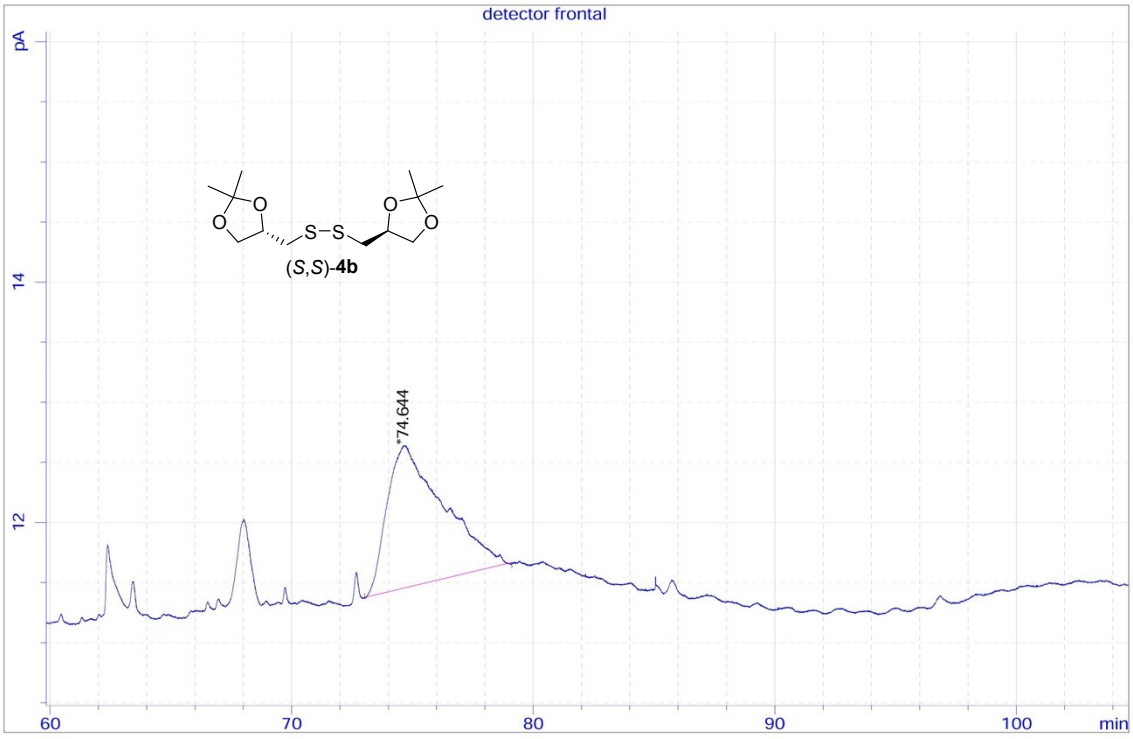
Peak#	R.Time [Min]	Area	Area %
1	74,285	176,89651	100,00000

Figure 24. Chiral GC analysis of (*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)diselenide (**4a**).



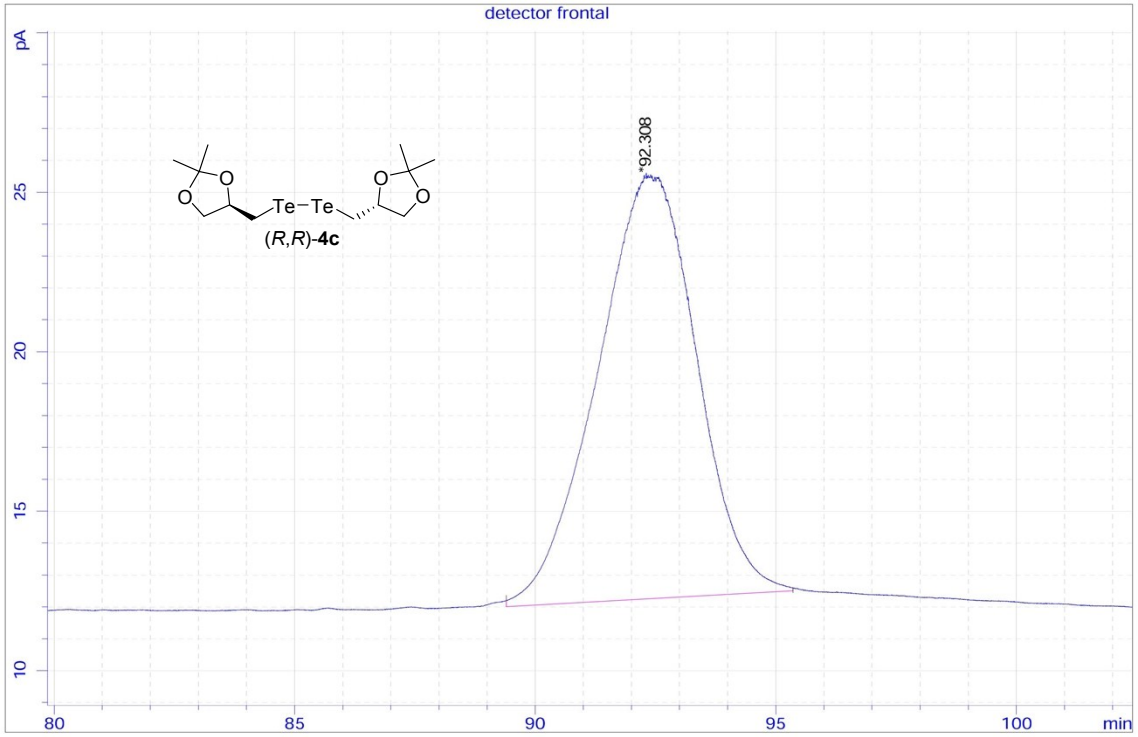
Peak#	R.Time [Min]	Area	Area %
1	74,491	2,19285	100,00000

Figure 25. Chiral GC analysis of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)disulfide (**4b**).



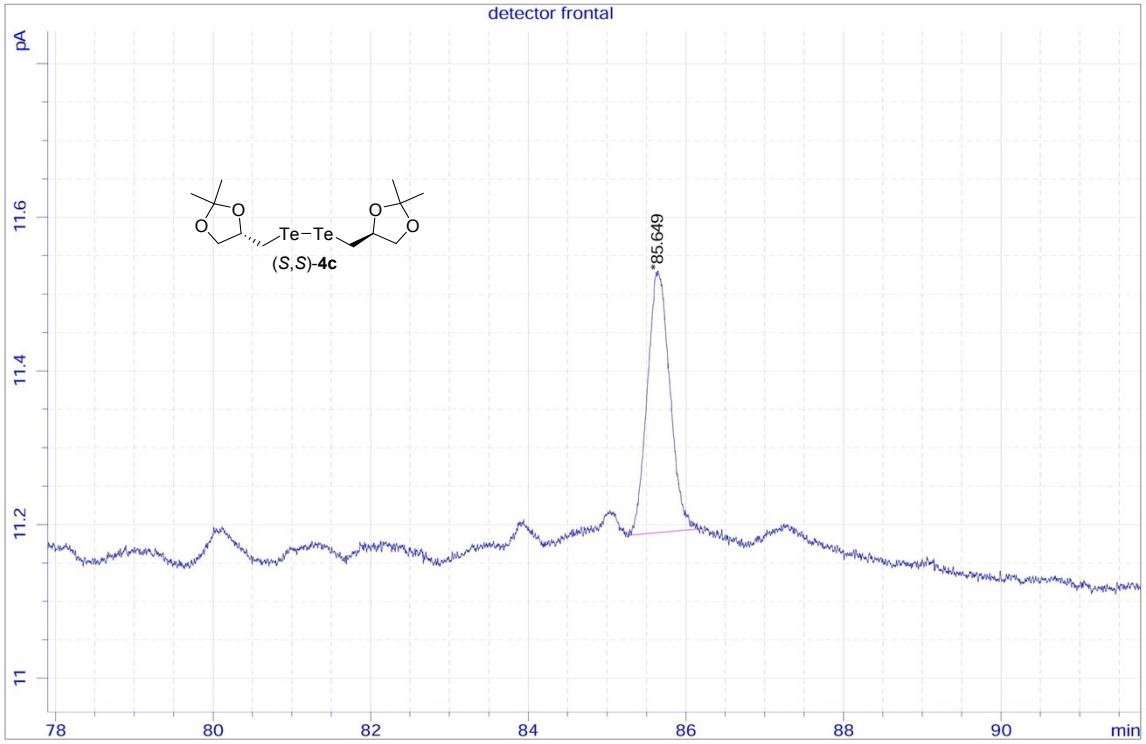
Peak#	R.Time [Min]	Area	Area %
1	74,644	88,18930	100,00000

Figure 26. Chiral GC analysis of (*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)disulfide (**4b**).



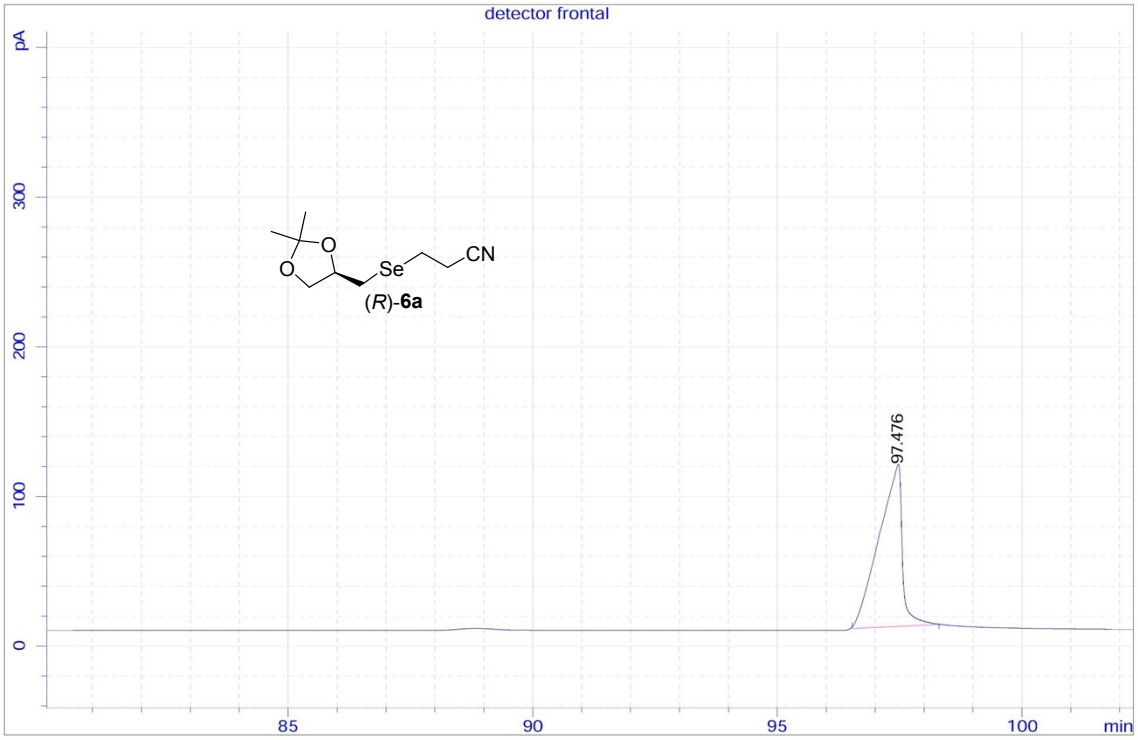
Peak#	R.Time [Min]	Area	Area %
1	92,308	548,90123	100,00000

Figure 27. Chiral GC analysis of (*R*,*R*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)ditelluride (**4c**).



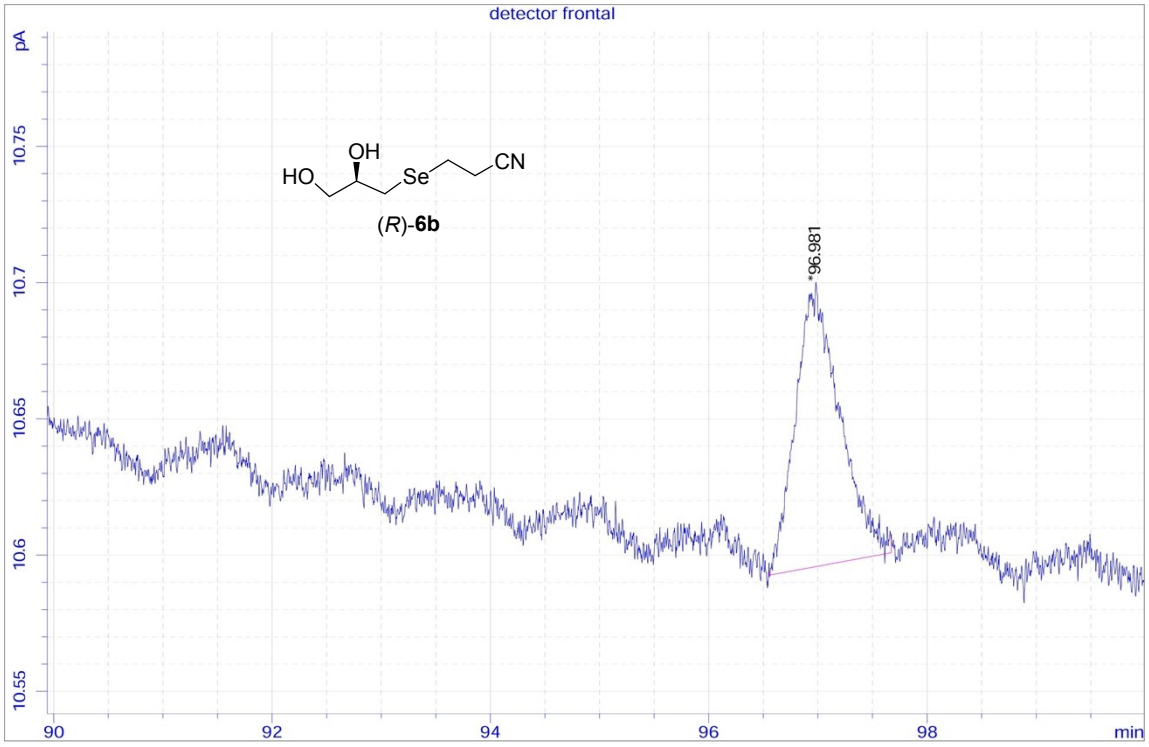
Peak#	R.Time [Min]	Area	Area %
1	85,649	2,71087	100,00000

Figure 28. Chiral GC analysis of (*S*,*S*)-bis(2,2-dimethyl-1,3-dioxolanylmethyl)ditelluride (**4c**).



Peak#	R.Time [Min]	Area	Area %
1	97,476	3604,72225	100,00000

Figure 29. Chiral GC analysis of (*R*)-3-(2,2-dimethyl-1,3-dioxolanylmethylselanyl)propanenitrile (**6a**).



Peak#	R.Time [Min]	Area	Area %
1	96,981	1,07275	100,00000

Figure 30. Chiral GC analysis of (*R*)-3-(2,3-dihydroxypropylselanyl)propanenitrile (**6b**).