Neuroprotective Glycosides from the Root of *Iodes cirrhosa*

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Supporting Information Available

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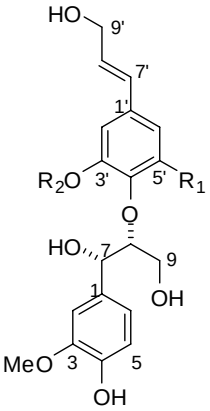

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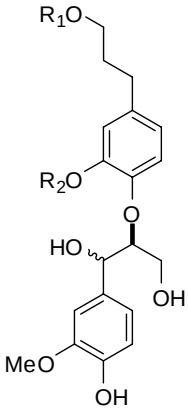
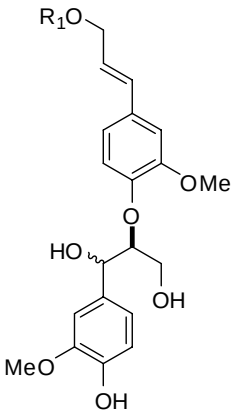
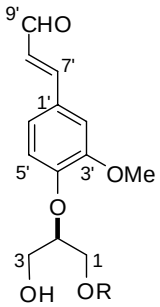
1a R_1 = R_2 = H
3 R_1 = OMe, R_2 = Glc
3a R_1 = OMe, R_2 = H



2 R_1 = H, R_2 = Glc; 7*R*
2a R_1 = R_2 = H; 7*R*
4 R_1 = Glc, R_2 = H; 7*R*
4a R_1 = R_2 = H; 7*R*
7 R_1 = Glc, R_2 = Me; 7*S*
7a R_1 = H, R_2 = Me; 7*S*



5 R_1 = Glc; 7*R*
5a R_1 = H; 7*R*
6 R_1 = Glc; 7*S*
6a R_1 = H; 7*S*



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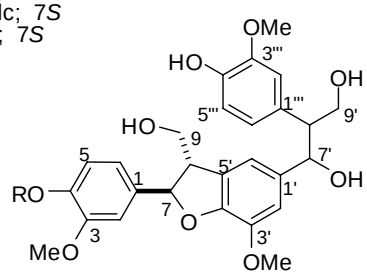
8a R = H



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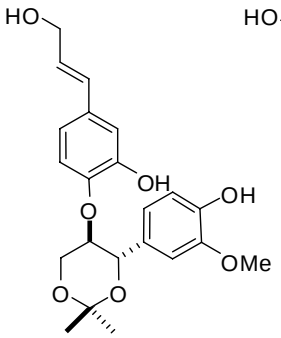
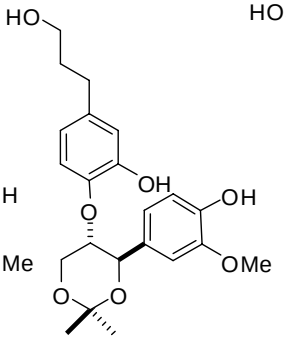
9a R = H



1b



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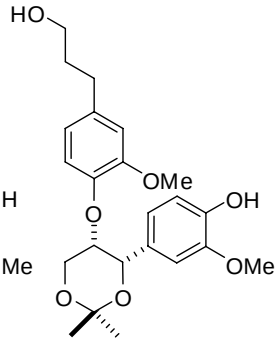
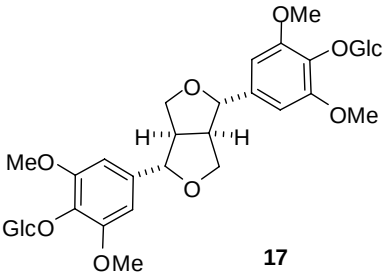


7b



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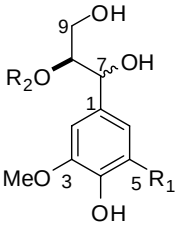
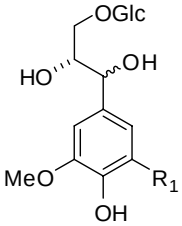


10 R_1 = OMe, R_2 = Glc; 7*R*
10a R_1 = OMe, R_2 = H; 7*R*
11 R_1 = OMe, R_2 = Glc; 7*S*
11a R_1 = OMe, R_2 = H; 7*S*
12 R_1 = H, R_2 = Glc; 7*R*
12a R_1 = R_2 = H; 7*R*
13 R_1 = H, R_2 = Glc; 7*S*
13a R_1 = R_2 = H; 7*S*



14 R_1 = H; 7*S*
15 R_1 = H; 7*R*
16 R_1 = OMe; 7*R*

Glc =

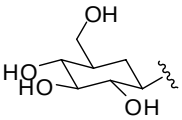


Figure S1. Key NOE effects and HMBC correlations of compounds **1** and **9**

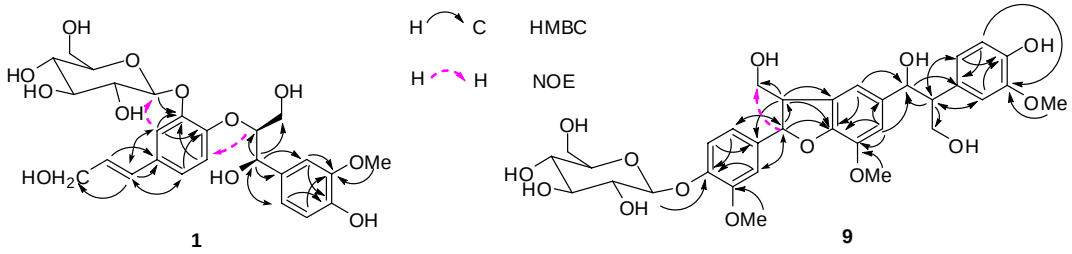


Figure S2. CD spectra of Compounds **1**–**7**

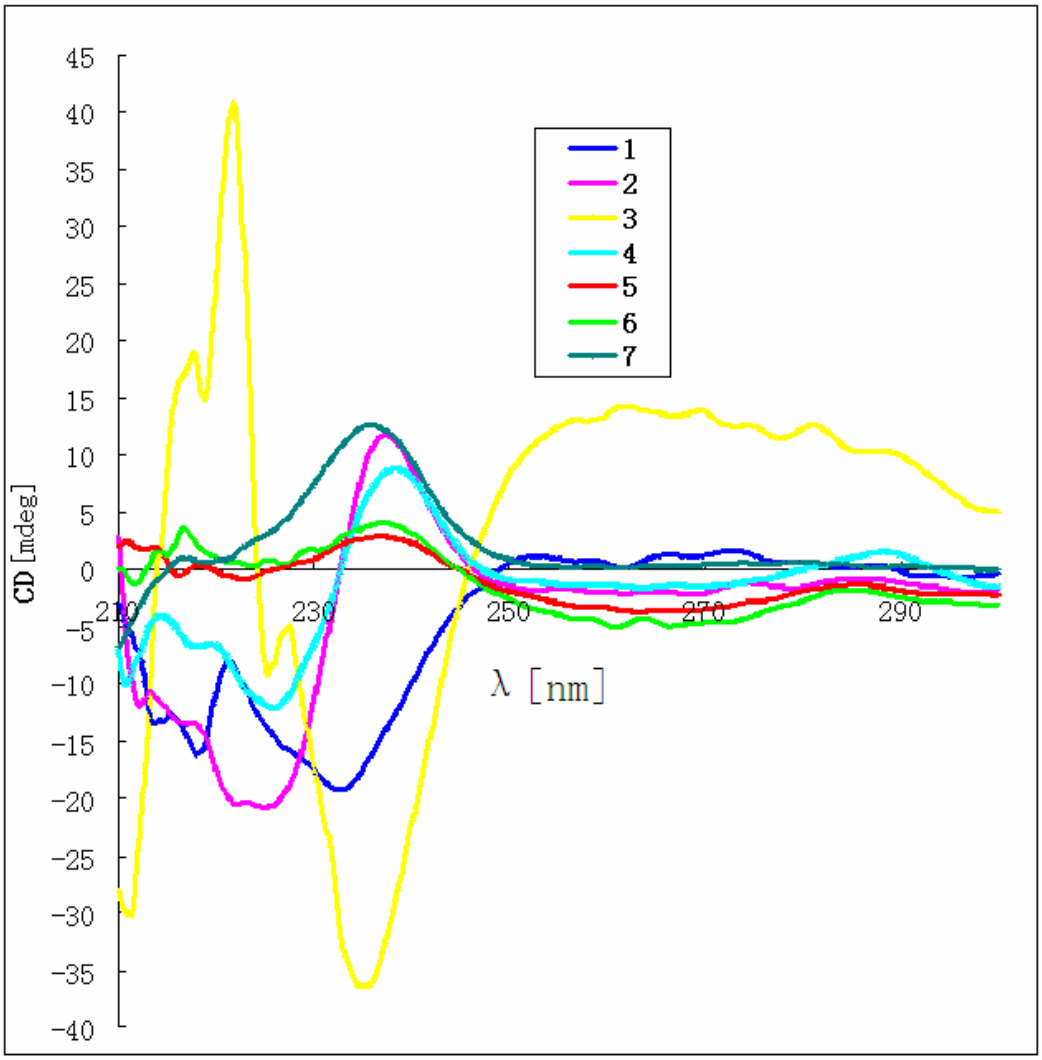
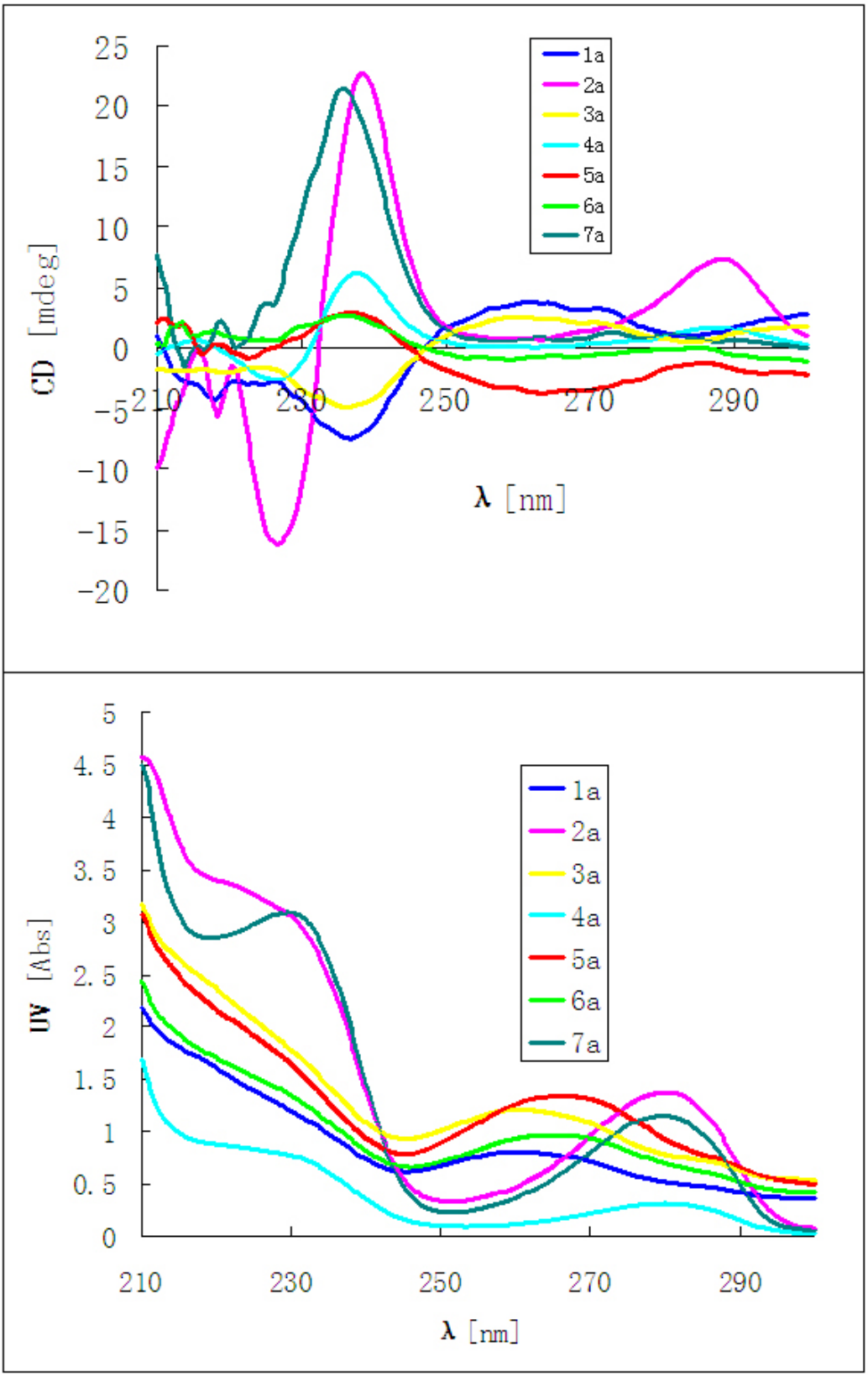
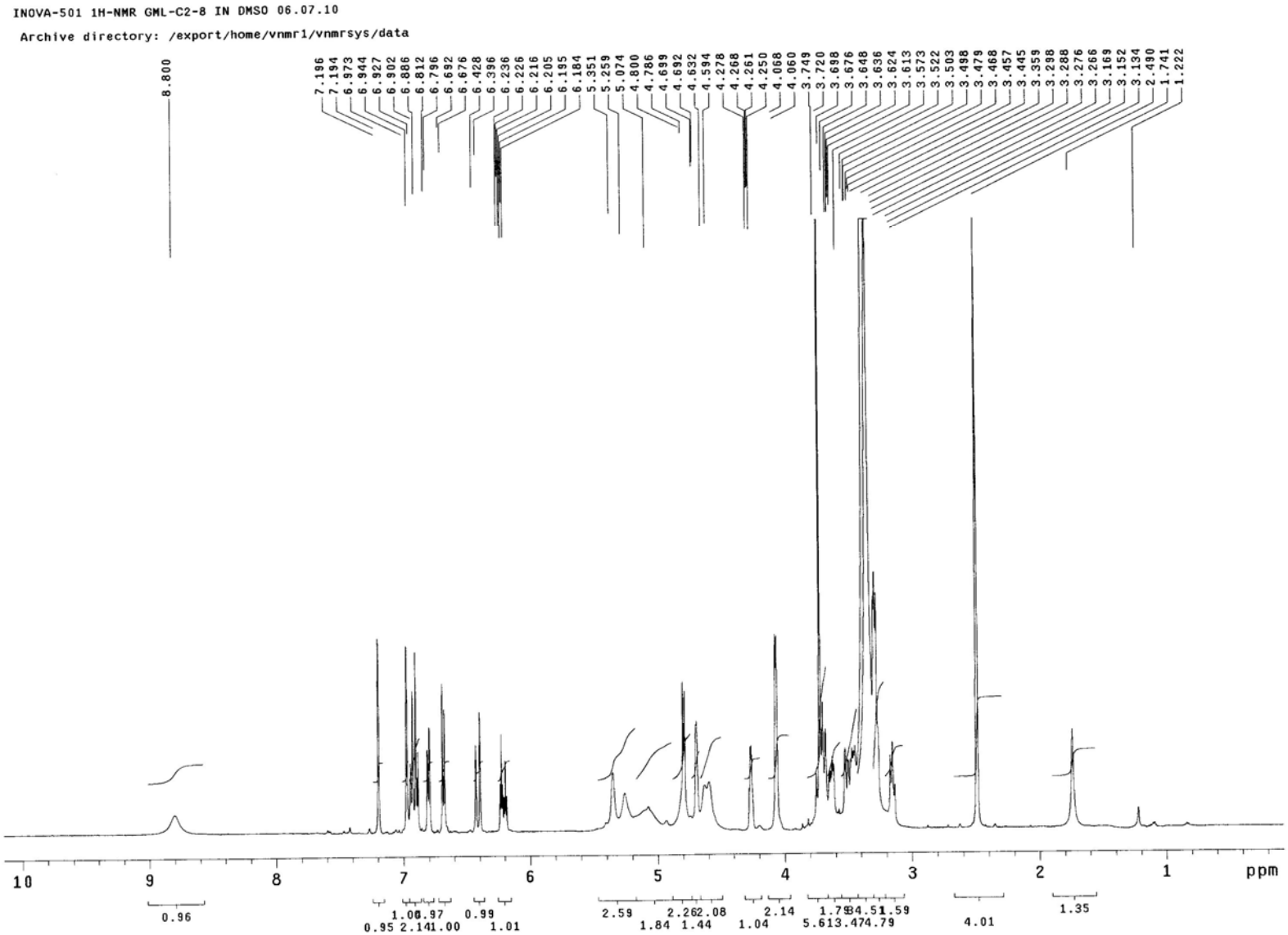
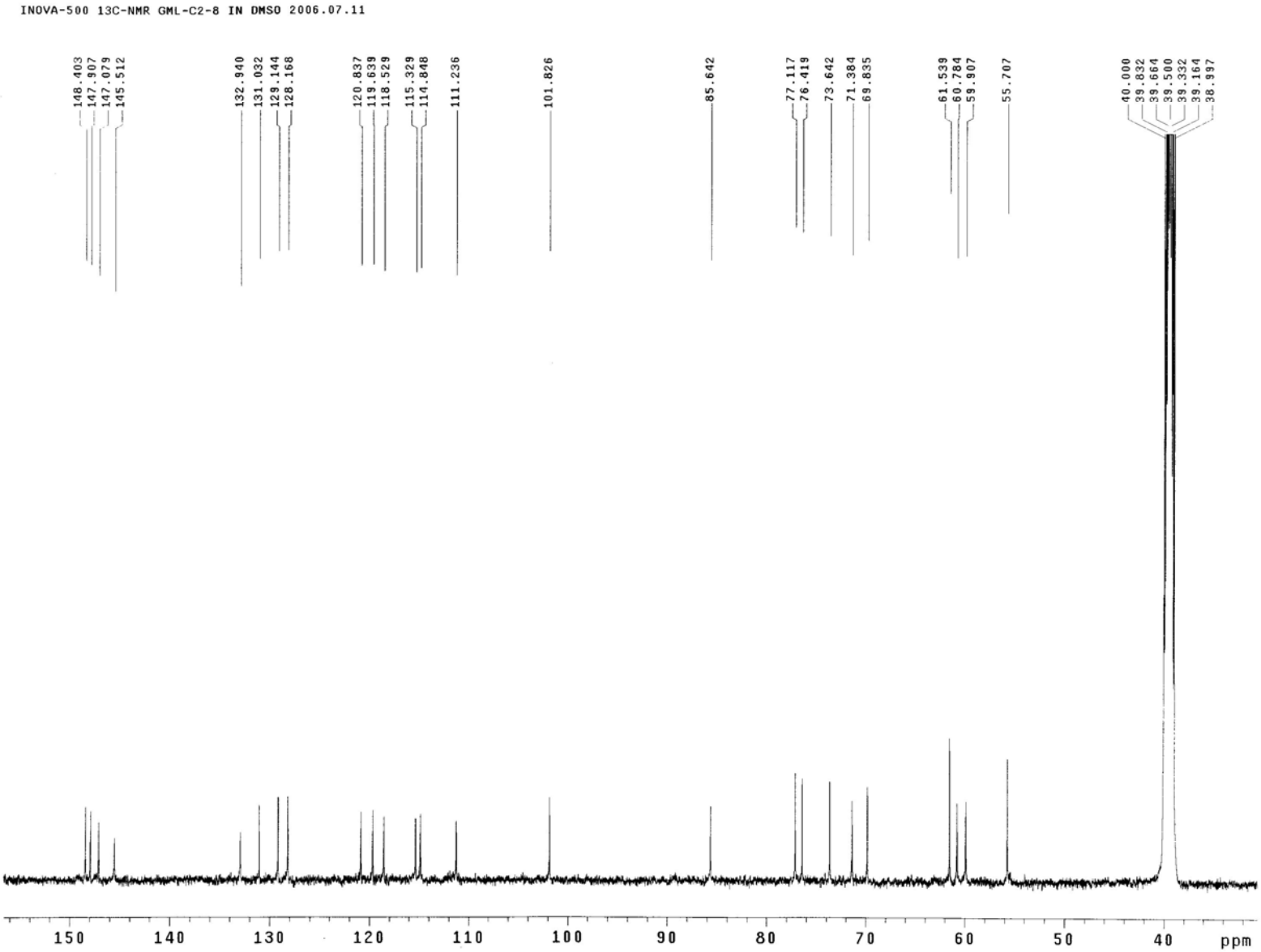


Figure S3. CD and UV spectra of Compounds **1a**–**7a**

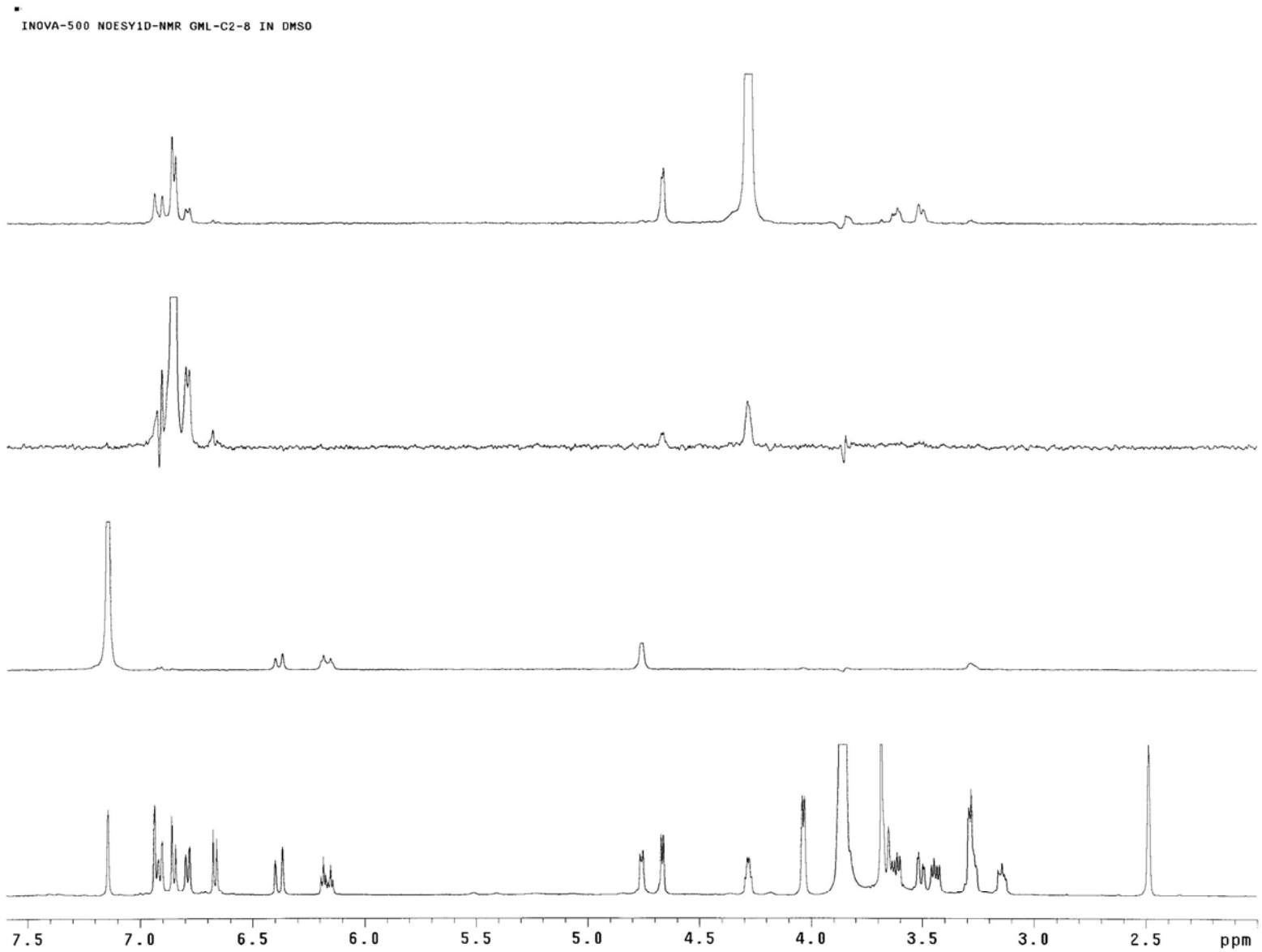




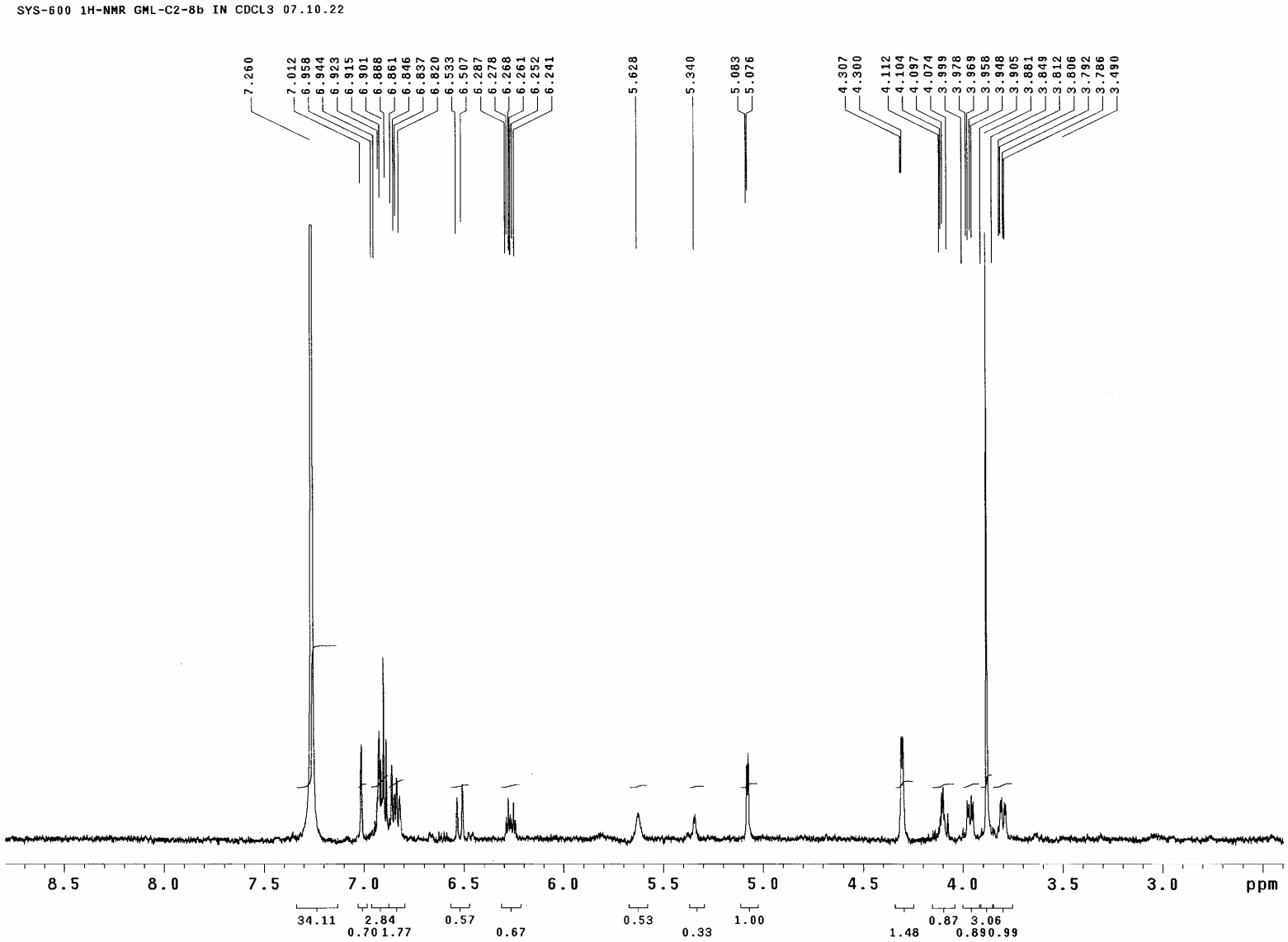
The ^{1}H NMR Spectrum of (–)-(7*S*,8*R*,7′*E*)- 4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolign-7′-ene 3′-*O*-*β*-D-glucopyranoside (1) in DMSO-d_6



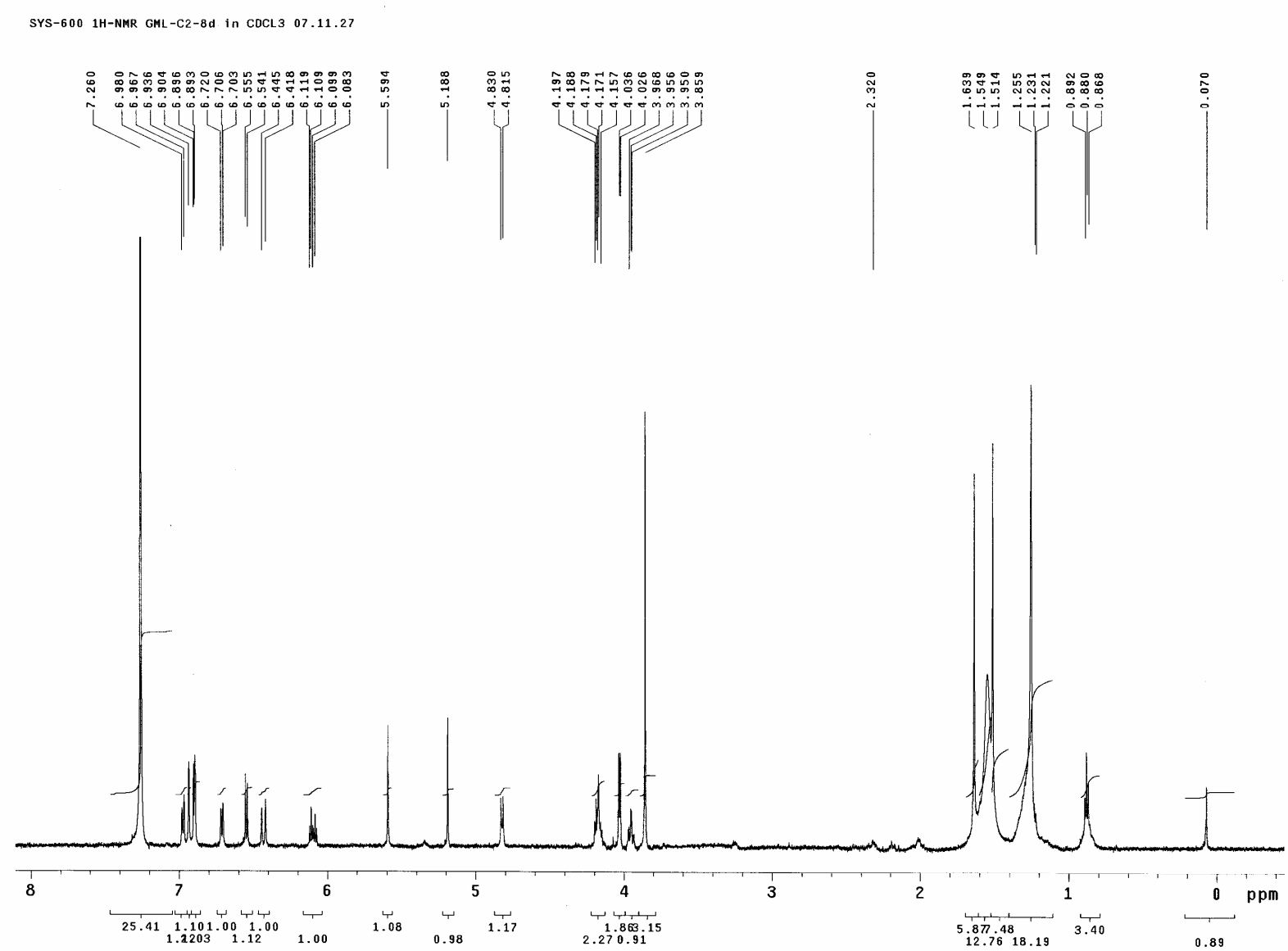
The ^{13}C NMR Spectrum of (–)-(7*S*,8*R*,7′*E*)- 4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolign-7′-ene 3′-*O*-*β*-D-glucopyranoside (1) in DMSO-d_6



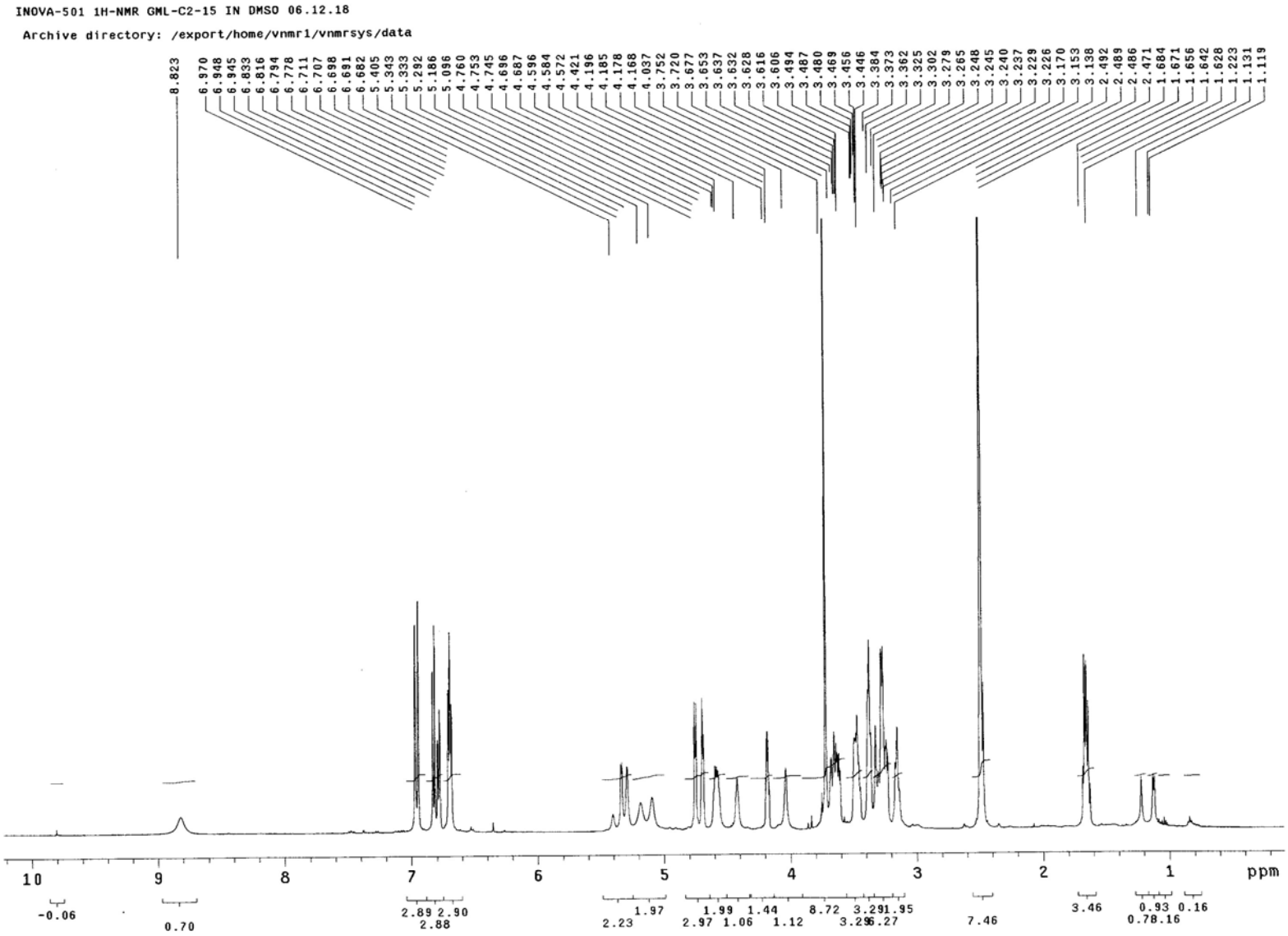
The NOE Difference Spectrum of (–)-(7*S*,8*R*,7′*E*)- 4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolign-7′-ene 3′-*O*-*β*-D-glucopyranoside (1) in DMSO-d_6



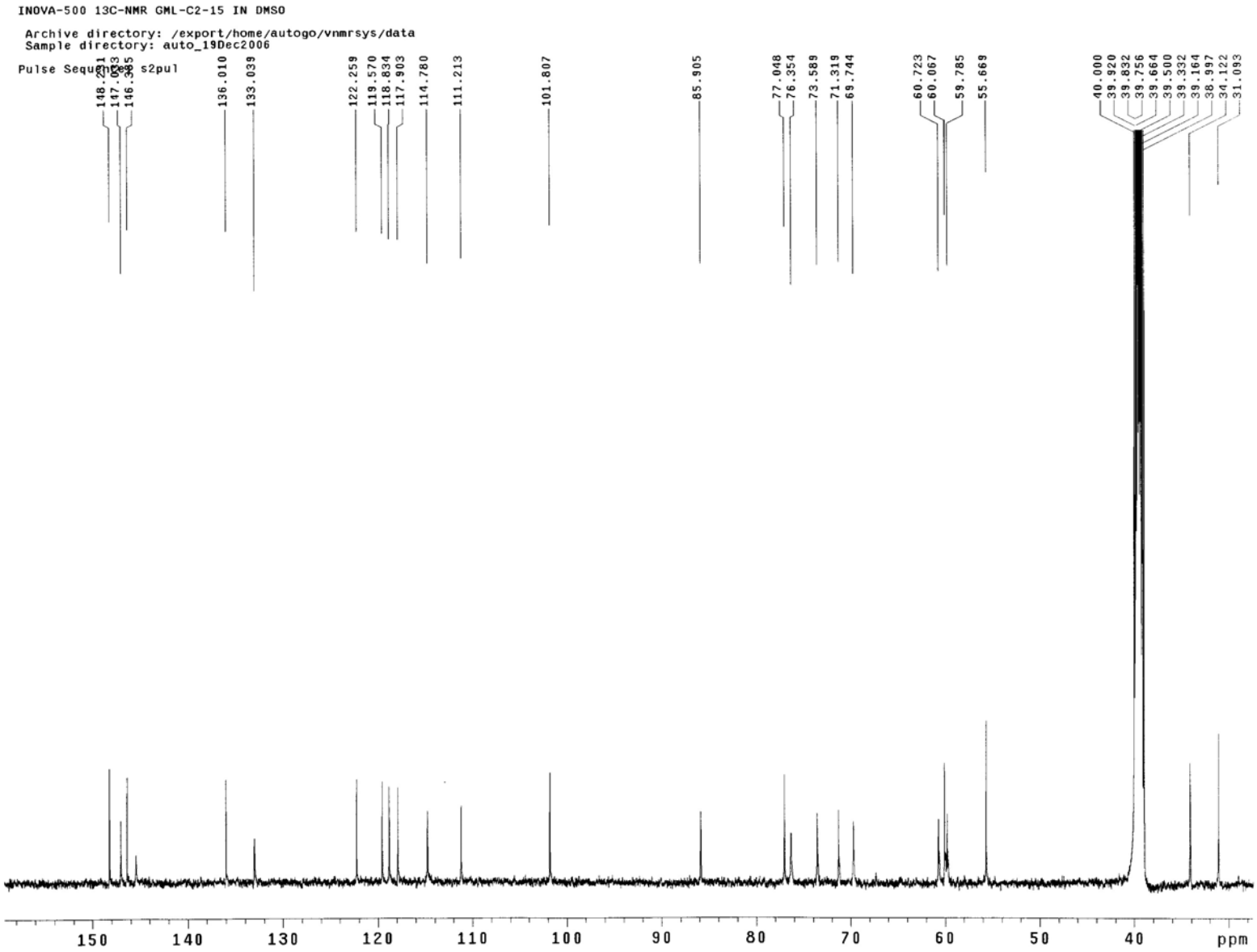
The ^{1}H NMR Spectrum of Compound 1a in $CDCl_3$



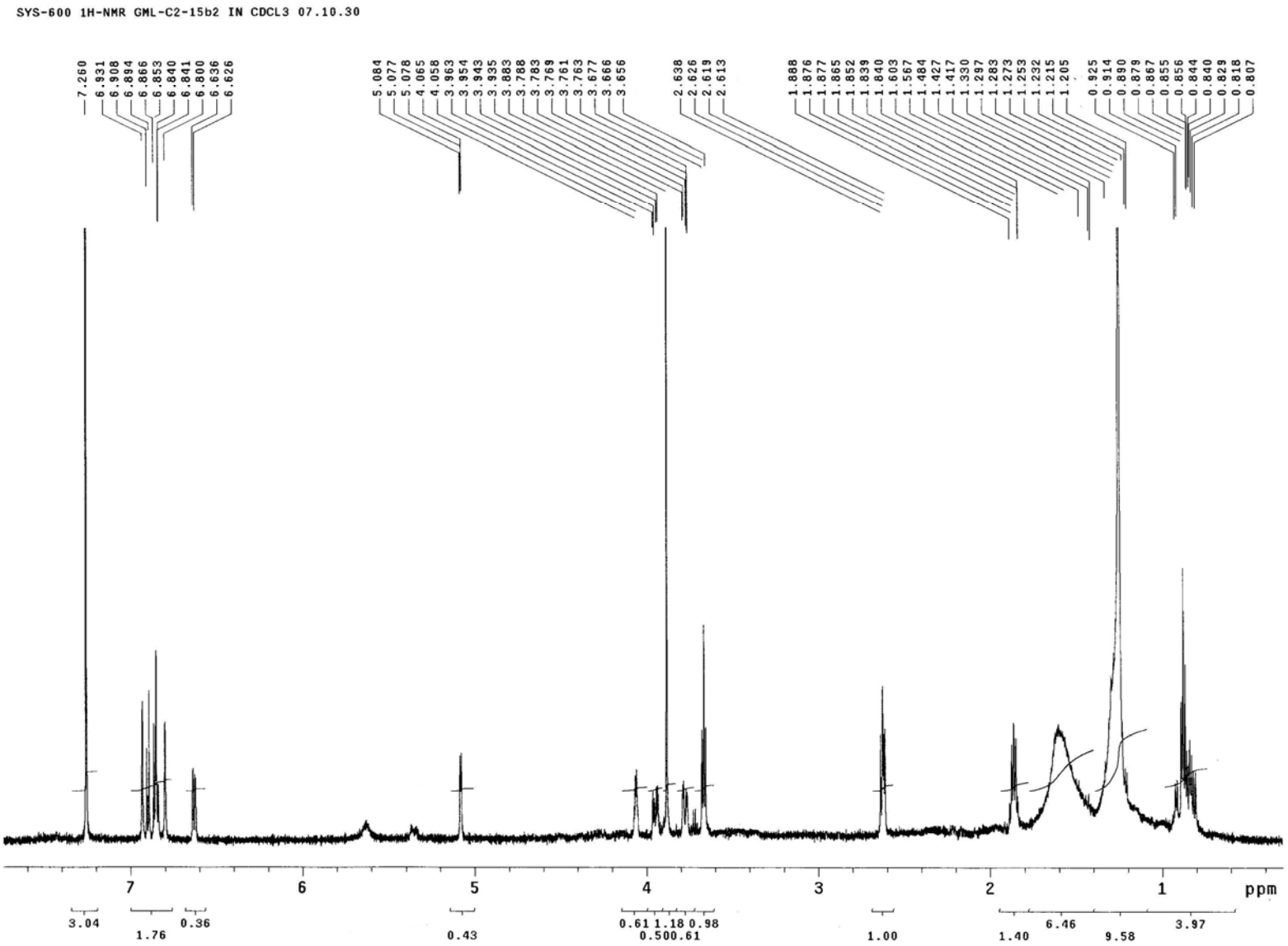
The ^{1}H NMR Spectrum of Compound 1b in $CDCl_3$



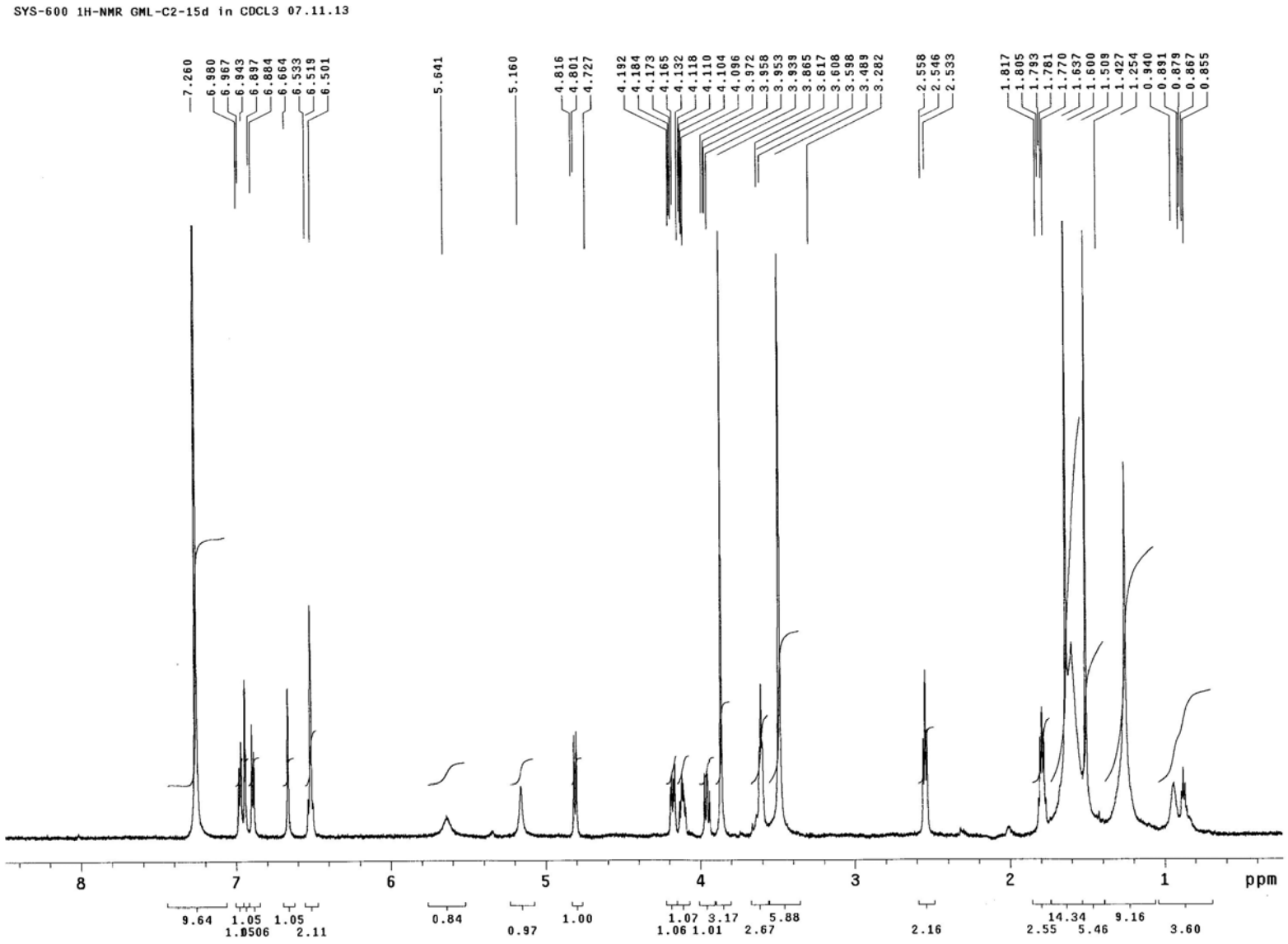
The ^{1}H NMR Spectrum of (–)-(7*R*,8*S*)- 4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolignan 3′-*O*-*β*-D-glucopyranoside (2) in DMSO-d_6



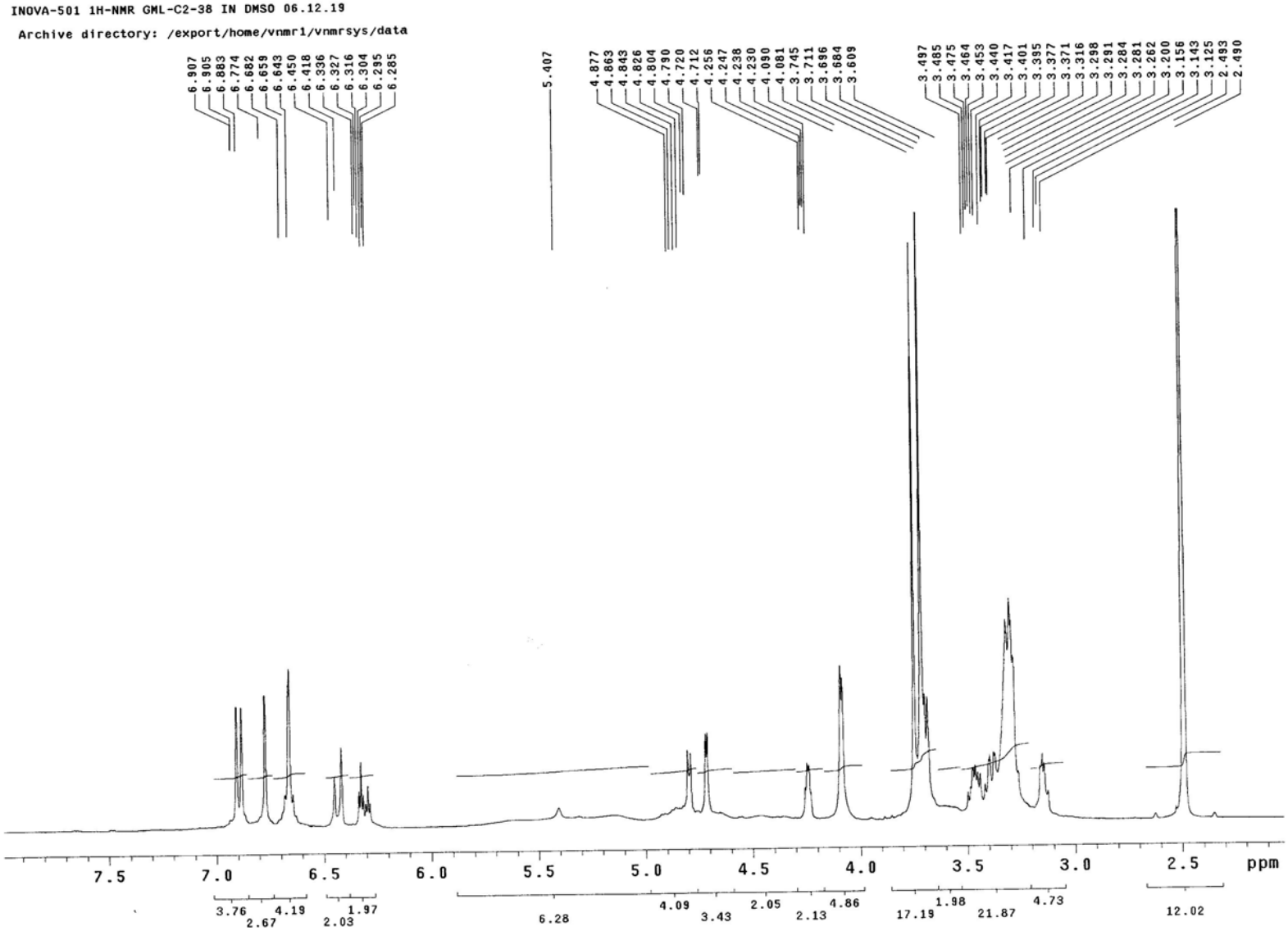
The ^{13}C NMR Spectrum of (–)-(7*R*,8*S*)- 4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolignan 3′-*O*-*β*-D-glucopyranoside (2) in DMSO-d_6



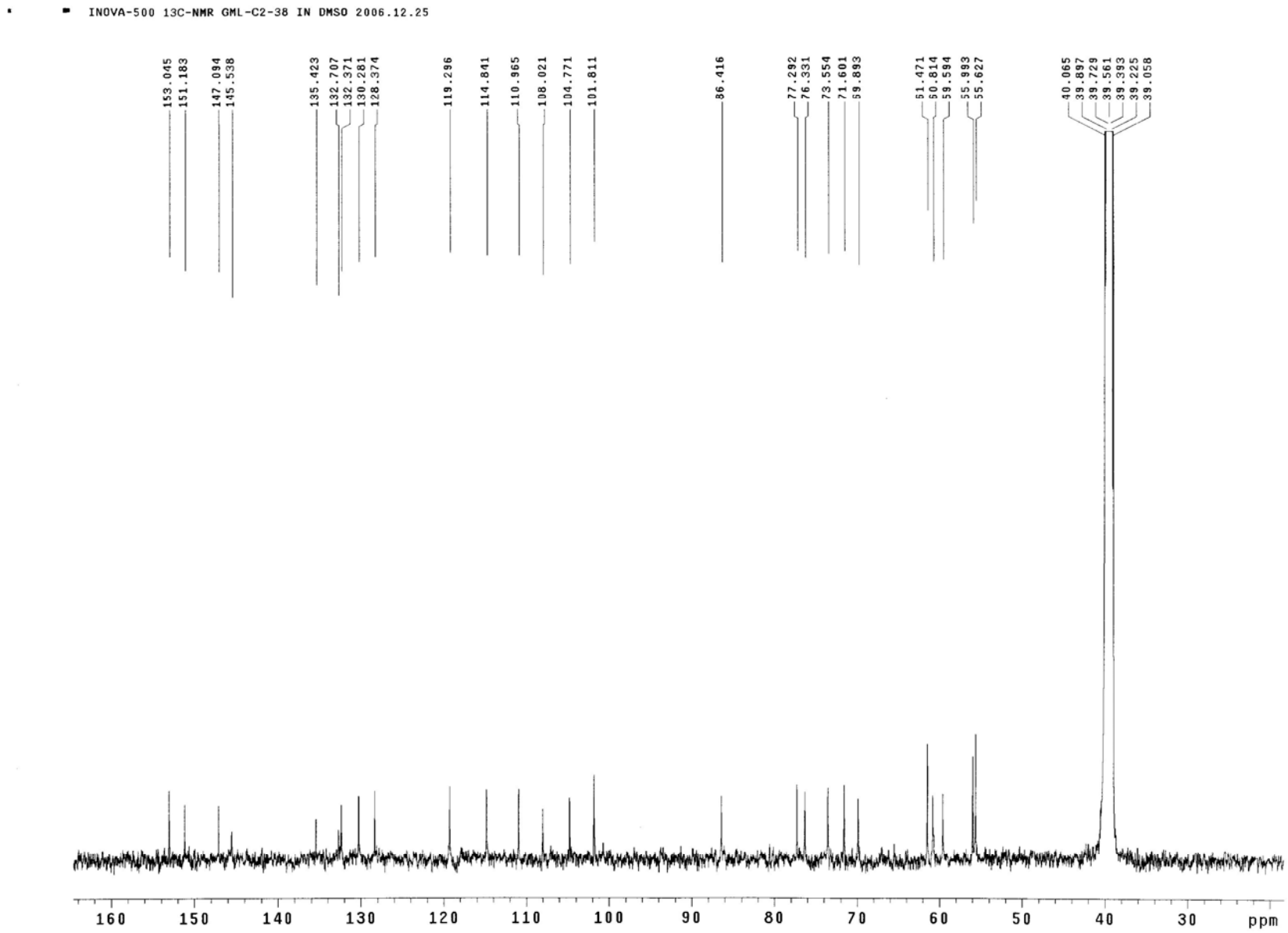
The ^{1}H NMR Spectrum of Compound 2a in $CDCl_3$



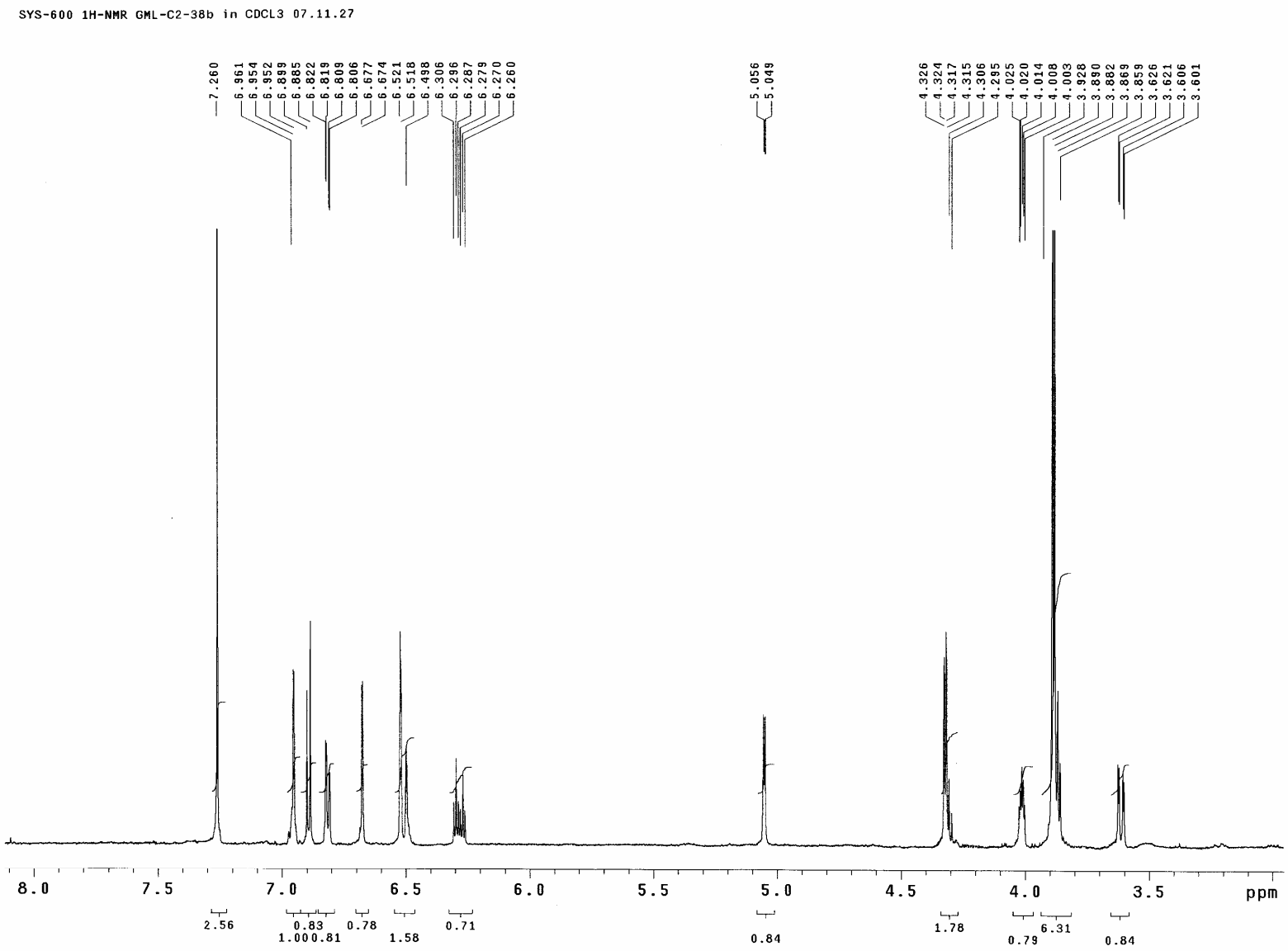
The ^{1}H NMR Spectrum of Compound 2b in $CDCl_3$



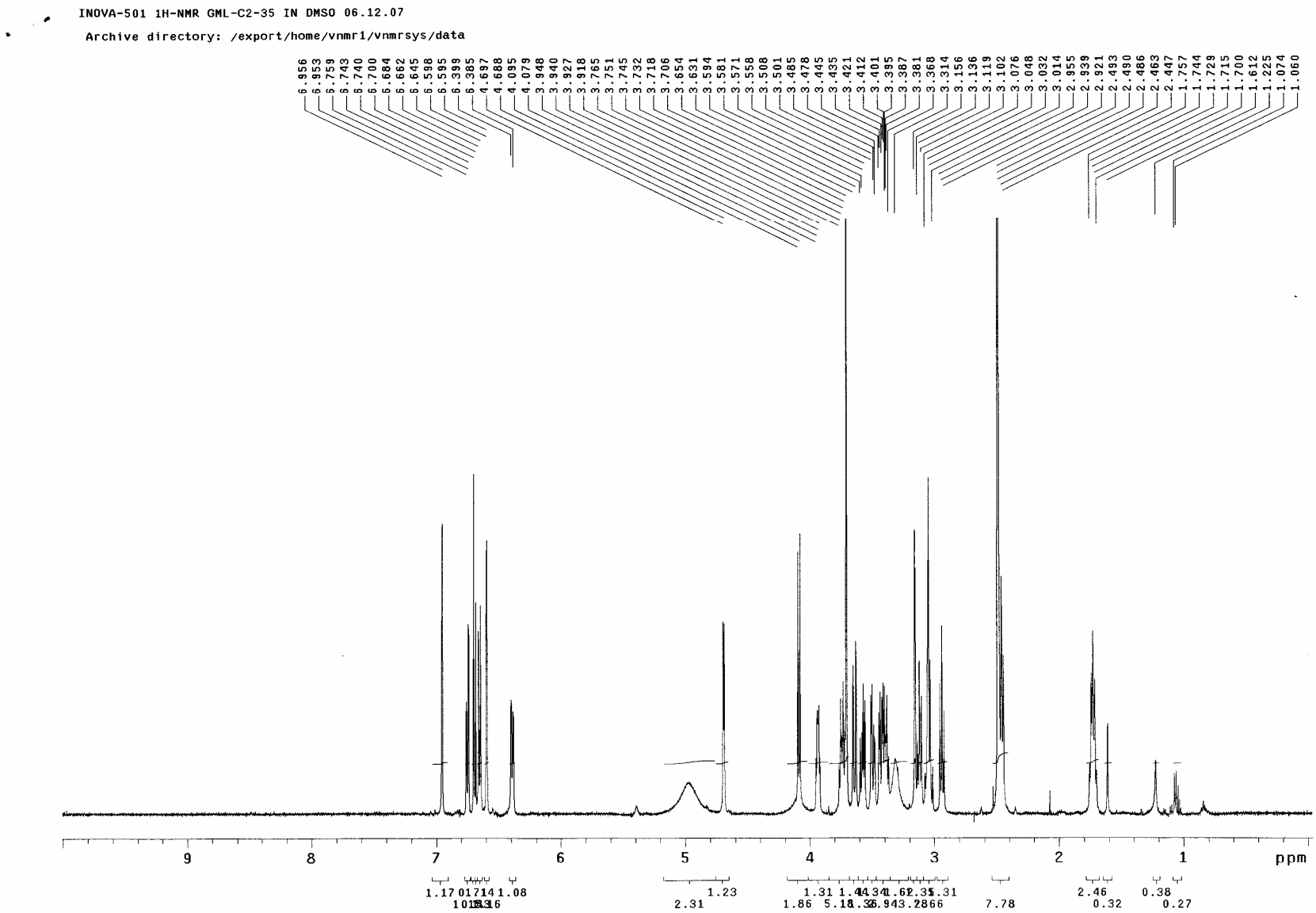
The ^{1}H NMR Spectrum of (–)-(7*S*,8*R*,7′*E*)- 4,7,9,3′,9′-Pentahydroxy-3,5′-dimethoxy-8-4′-oxyneolign-7′-ene 3′-*O*-*β*-D-glucopyranoside (3) in DMSO-d_6



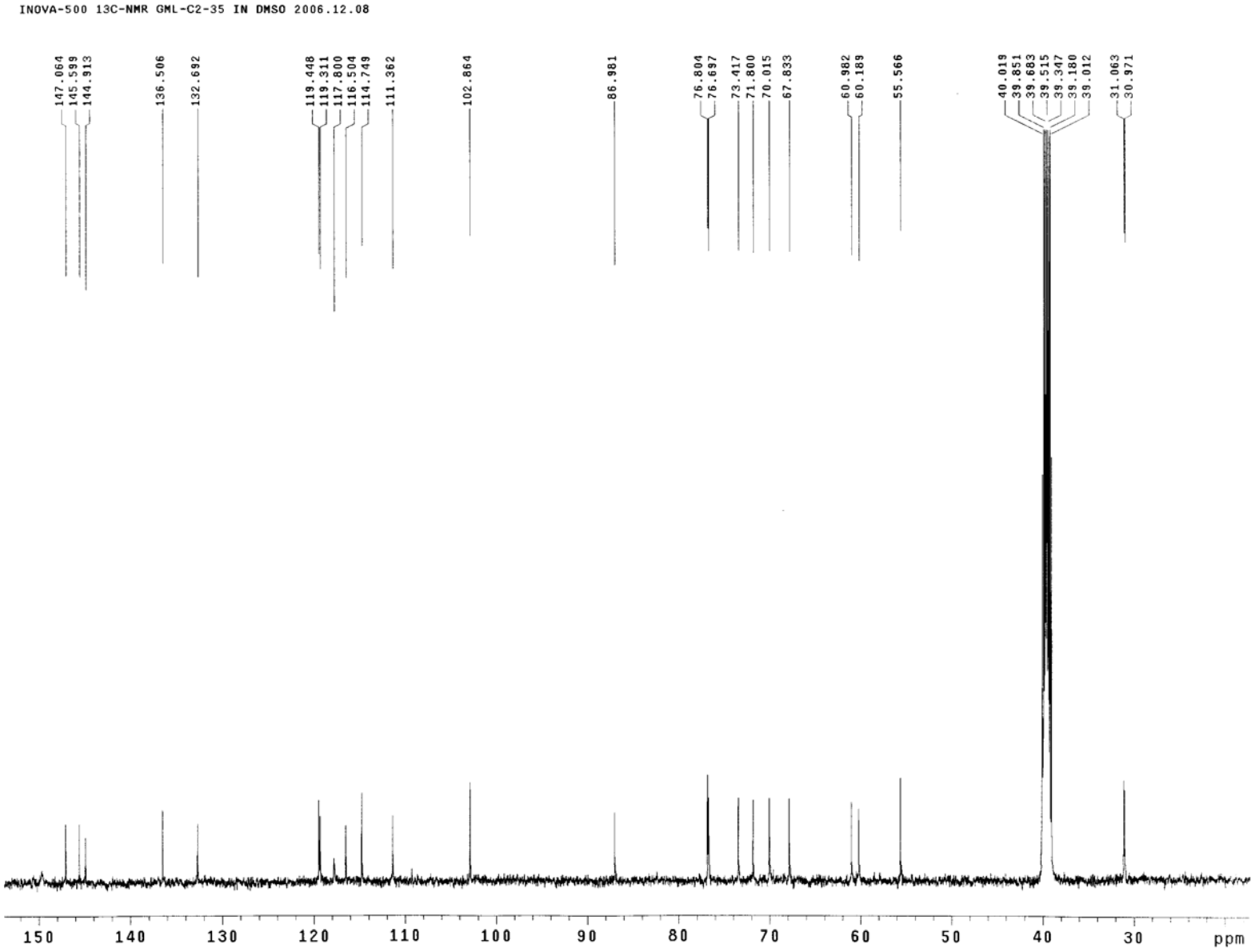
The ^{13}C Spectrum of (–)-(7*S*,8*R*,7′*E*)- 4,7,9,3′,9′-Pentahydroxy-3,5′-dimethoxy-8-4′-oxyneolign-7′-ene 3′-*O*-*β*-D-glucopyranoside (3) in DMSO-d_6



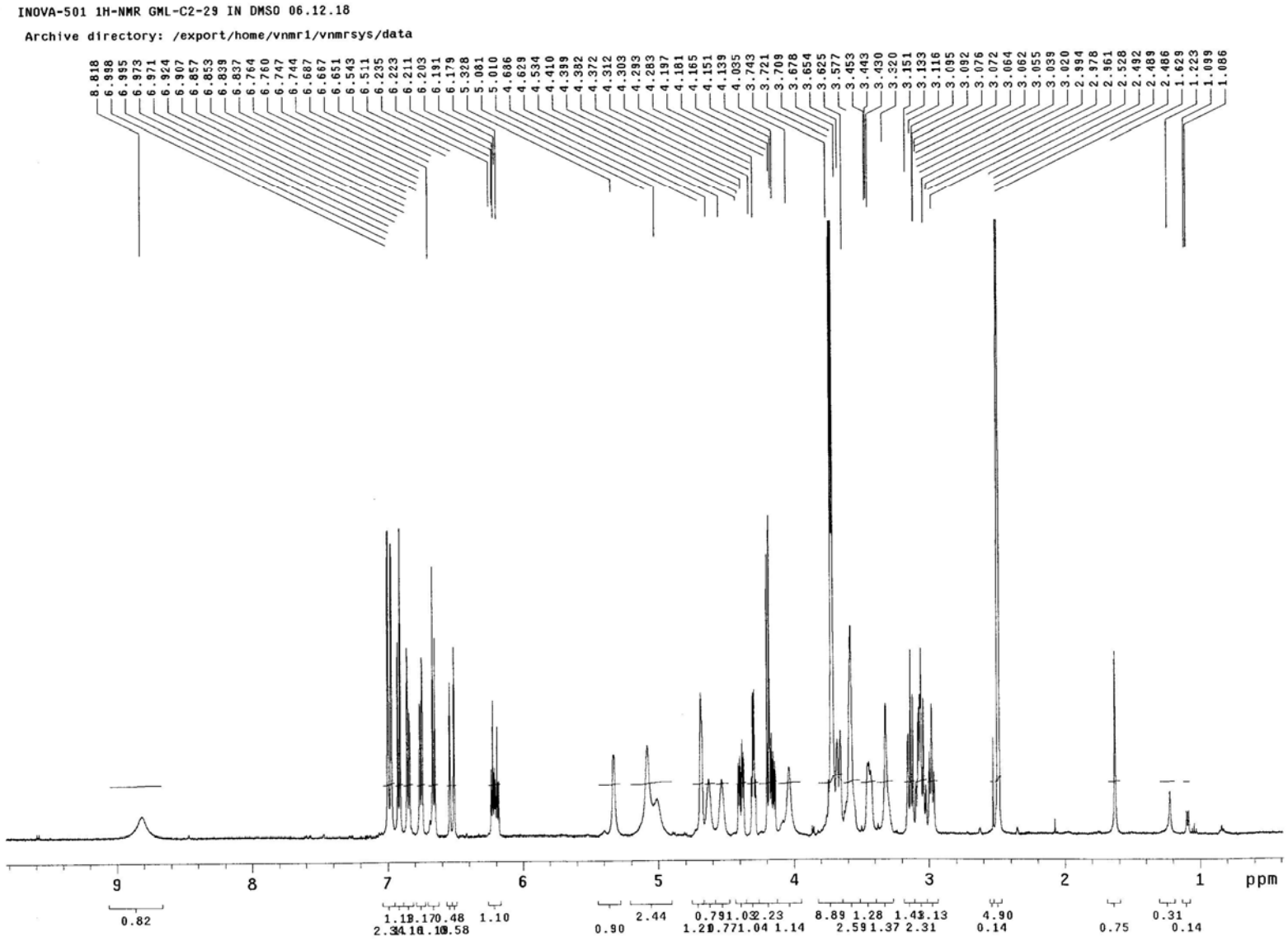
The ^{1}H NMR Spectrum of Compound 3a in $CDCl_3$



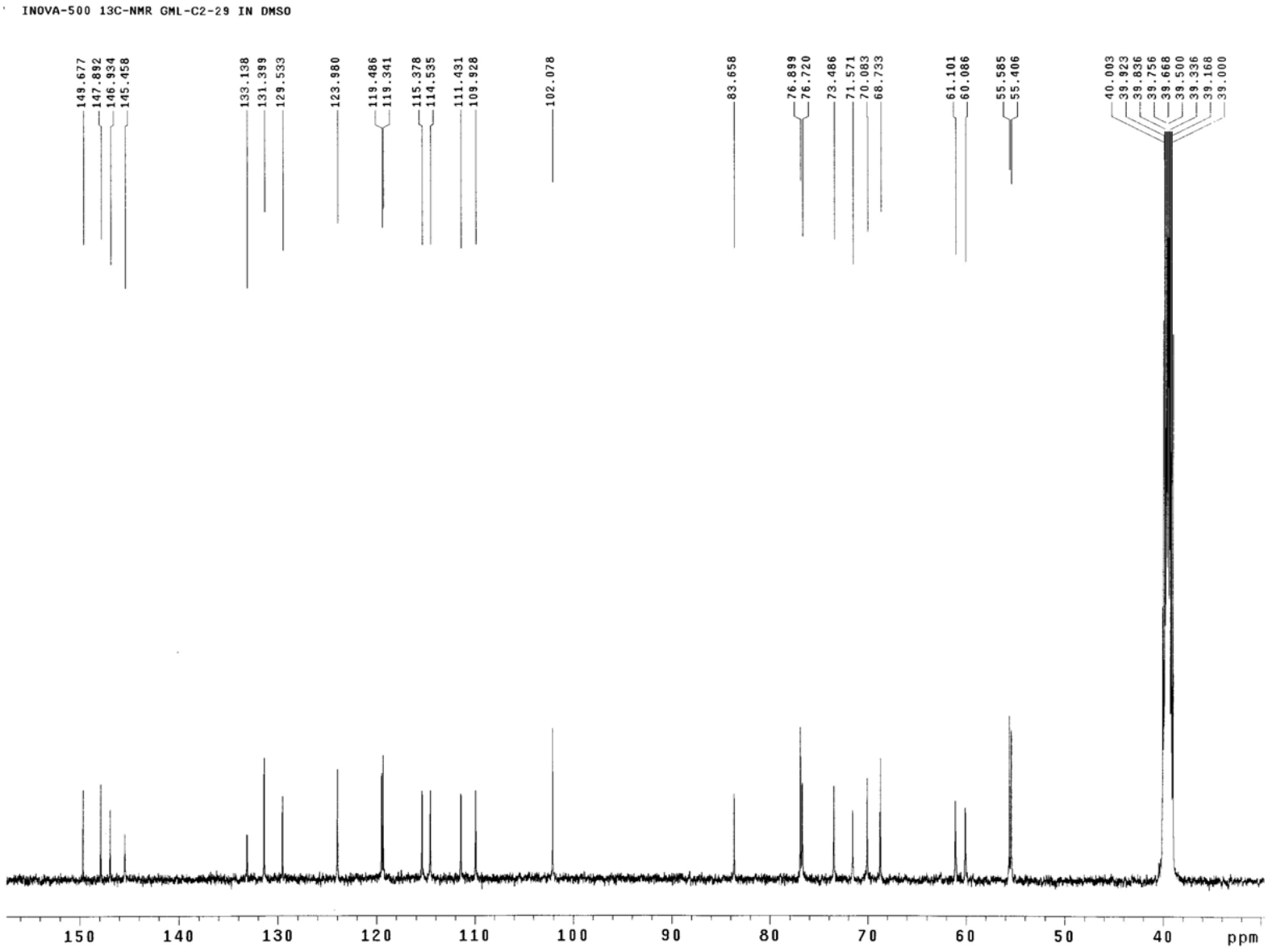
The ^{1}H NMR Spectrum of (–)-(7*R*,8*S*)- 4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolignan 9′-*O*-*β*-D-glucopyranoside (4) in DMSO-d_6



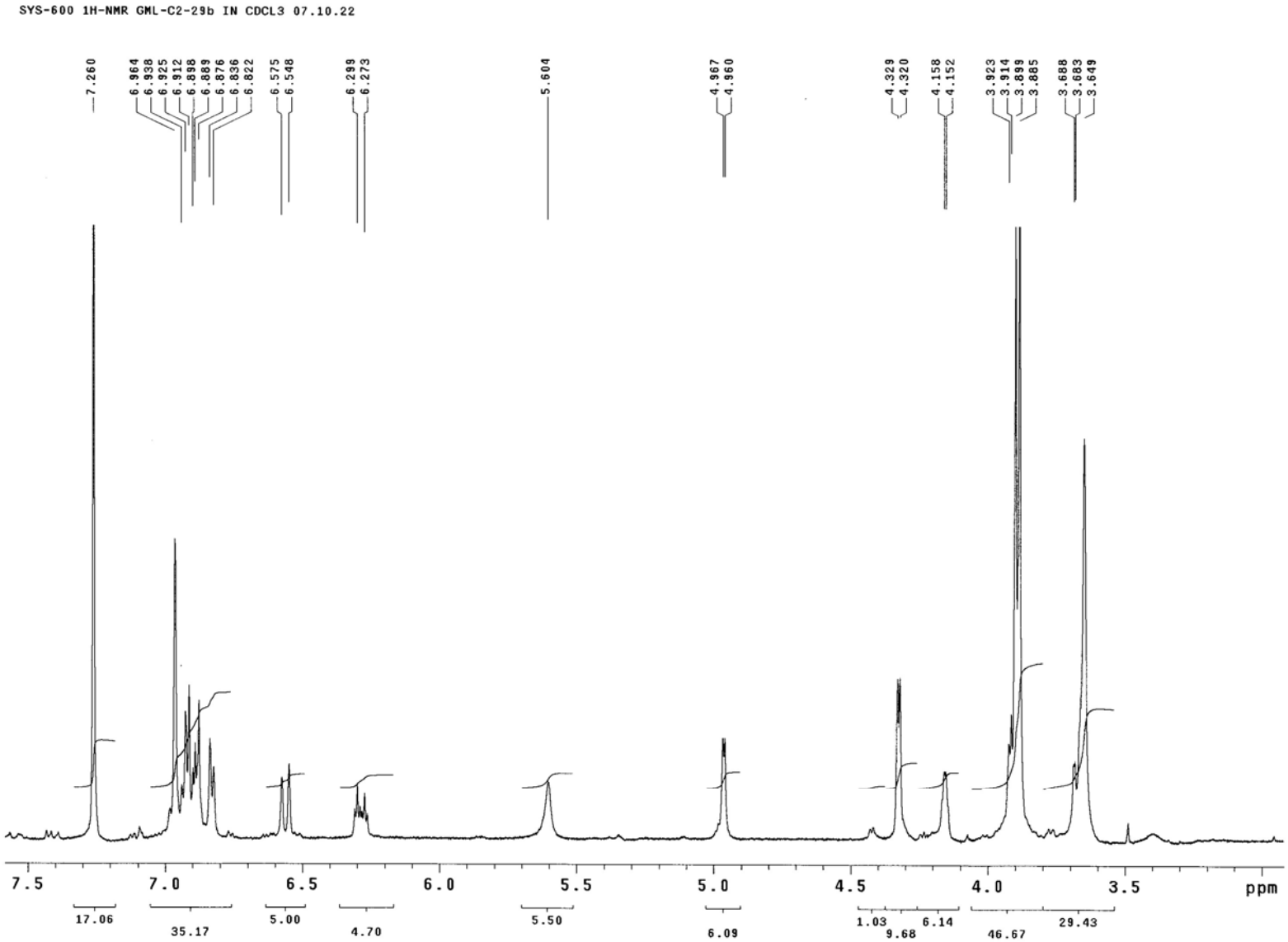
The ^{13}C NMR Spectrum of (–)-(7*R*,8*S*)-4,7,9,3′,9′-Pentahydroxy-3-methoxy-8-4′-oxyneolignan 9′-*O*-*β*-D-glucopyranoside (4) in DMSO-d_6



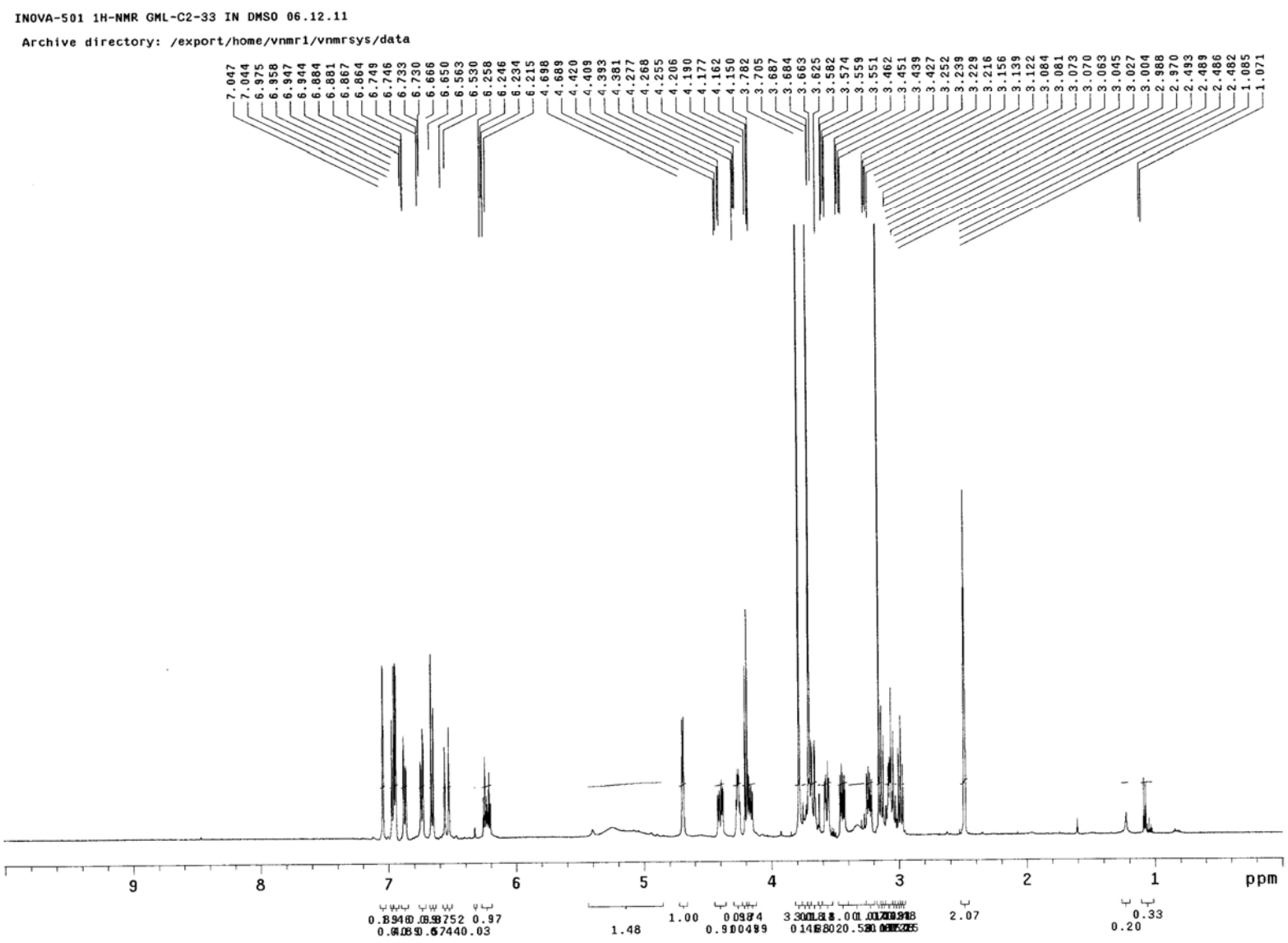
The ^{1}H NMR Spectrum of (–)-(7*R*,8*S*,7′*E*)-4,7,9,9′-Tetrahydroxy-3,3′-dimethoxy-8-4′-oxyneolign-7′-ene 9′-*O*-*β*-D-glucopyranoside (5) in DMSO-d_6



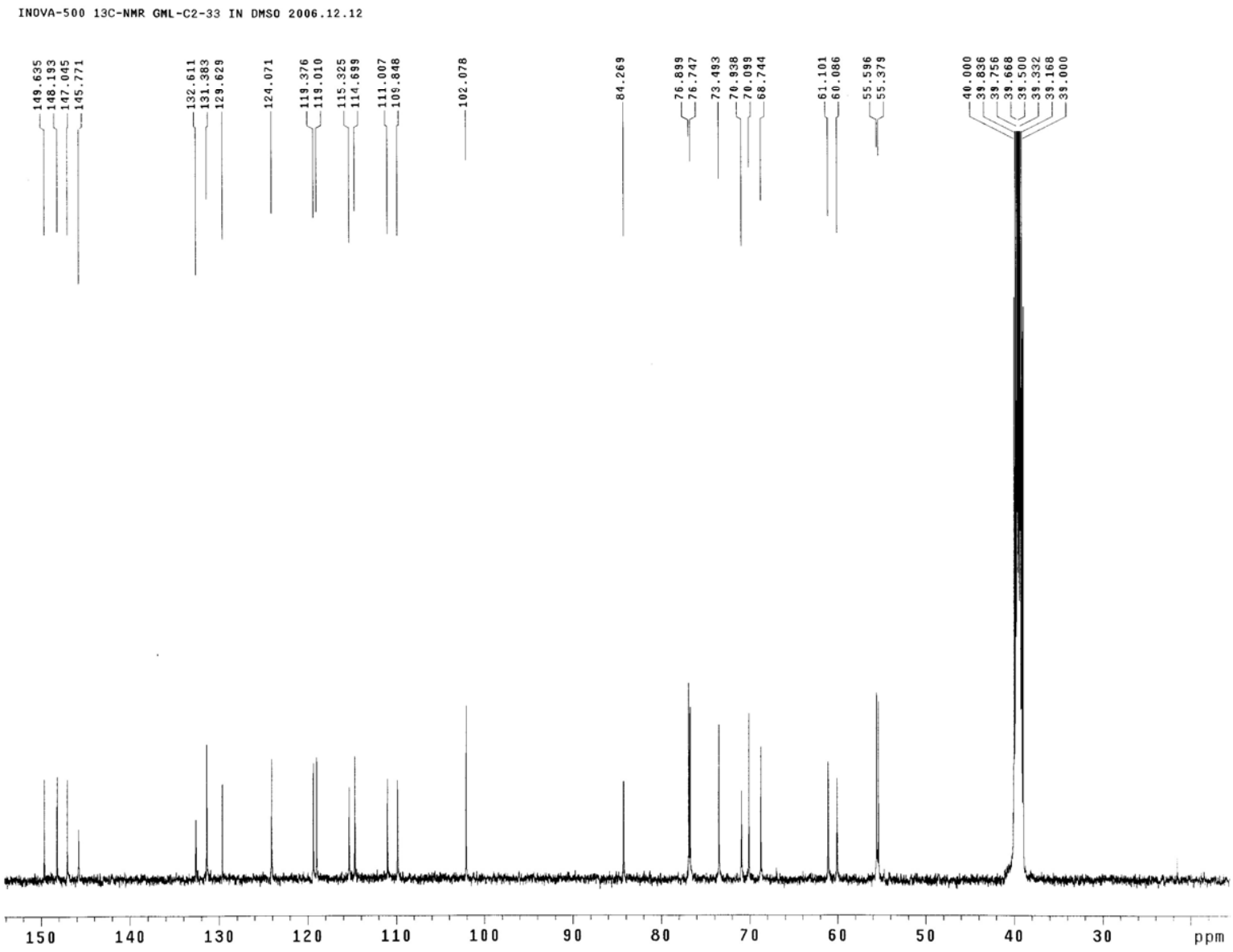
The ^{13}C NMR Spectrum of (–)-(7*R*,8*S*,7′*E*)-4,7,9,9′-Tetrahydroxy-3,3′-dimethoxy-8-4′-oxyneolign-7′-ene 9′-*O*-*β*-D-glucopyranoside (5) in DMSO-d_6



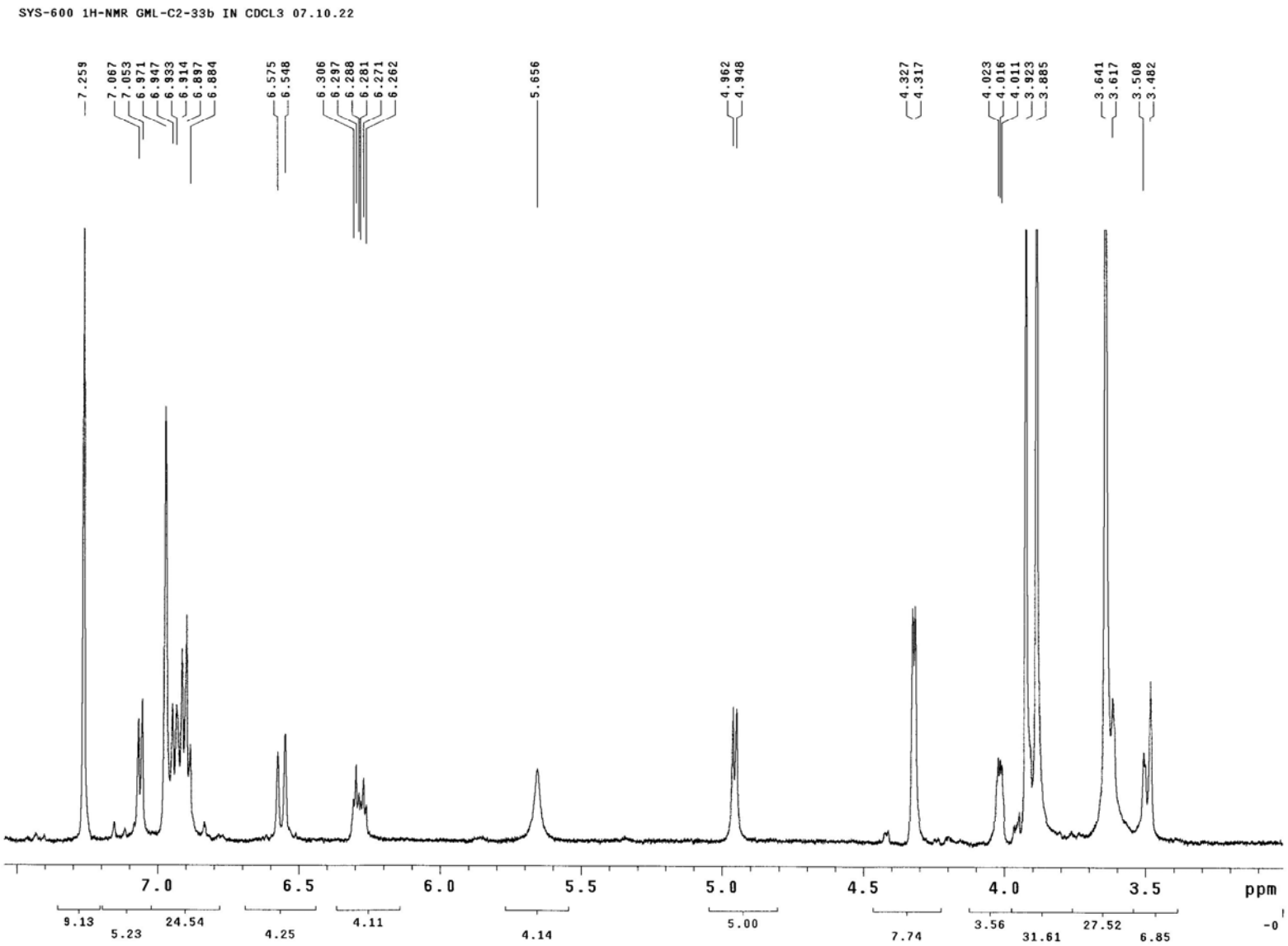
The ^{1}H NMR Spectrum of Compound 5a $CDCl_3$



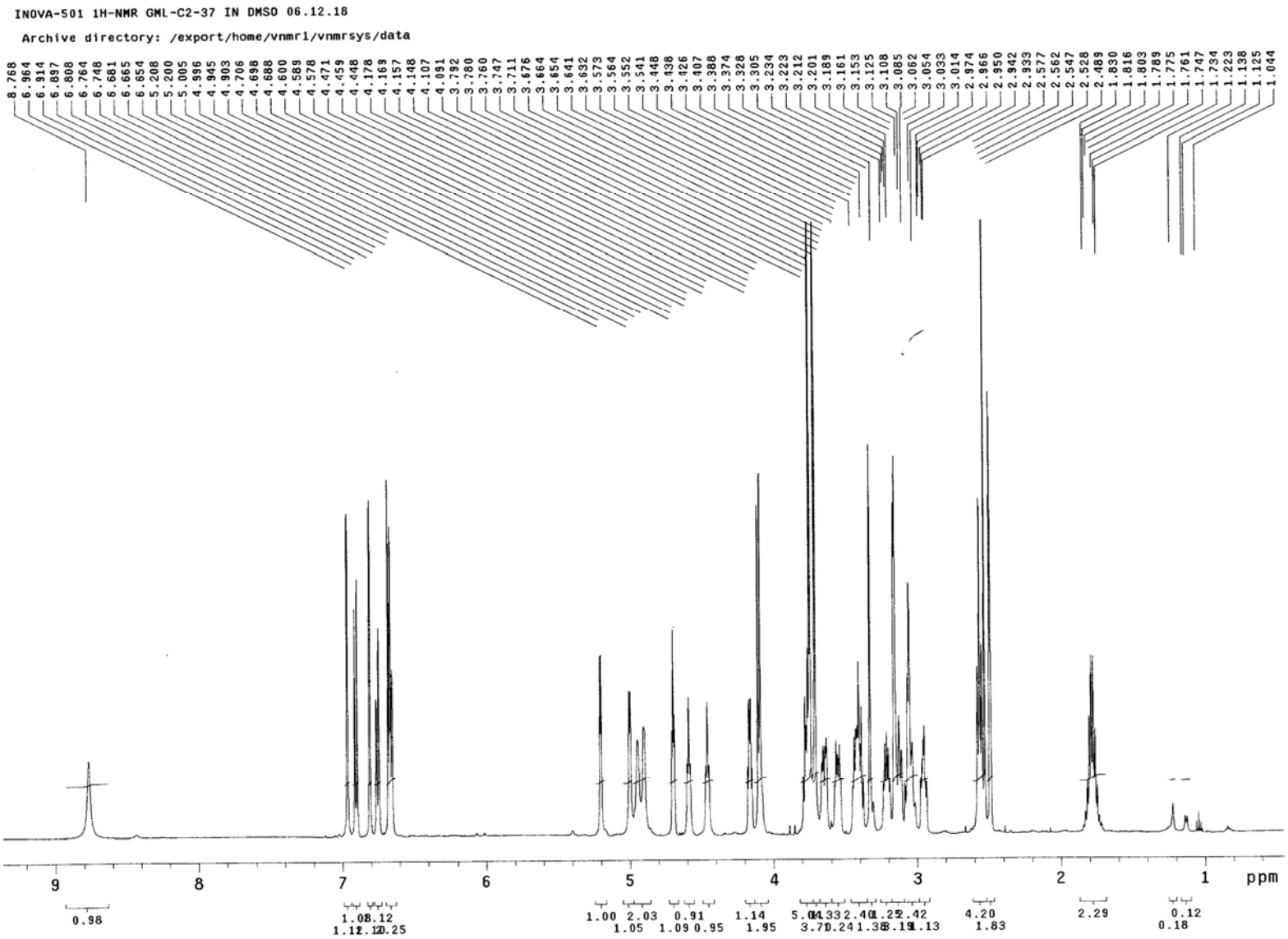
The ^{1}H NMR Spectrum of (–)-(7*S*,8*S*,7′*E*)-4,7,9,9′-Tetrahydroxy-3,3′-dimethoxy-8-4′-oxyneolign-7′-ene 9′-*O*-*β*-D-glucopyranoside (6) in DMSO-d_6



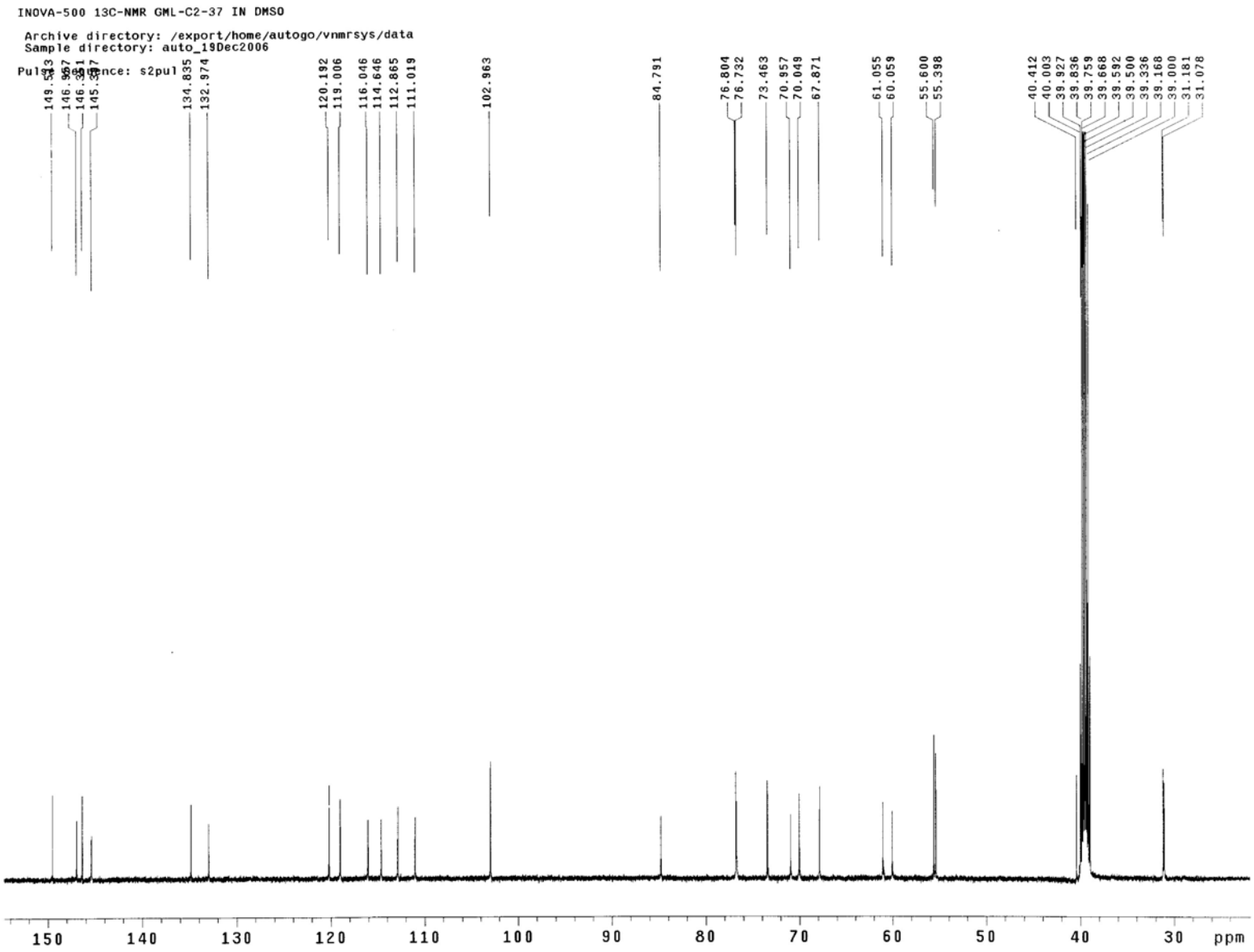
The ^{13}C NMR Spectrum of (–)-(7*S*,8*S*,7′*E*)-4,7,9,9′-Tetrahydroxy-3,3′-dimethoxy-8-4′-oxyneolign-7′-ene 9′-*O*-*β*-D-glucopyranoside (6) in DMSO-d_6



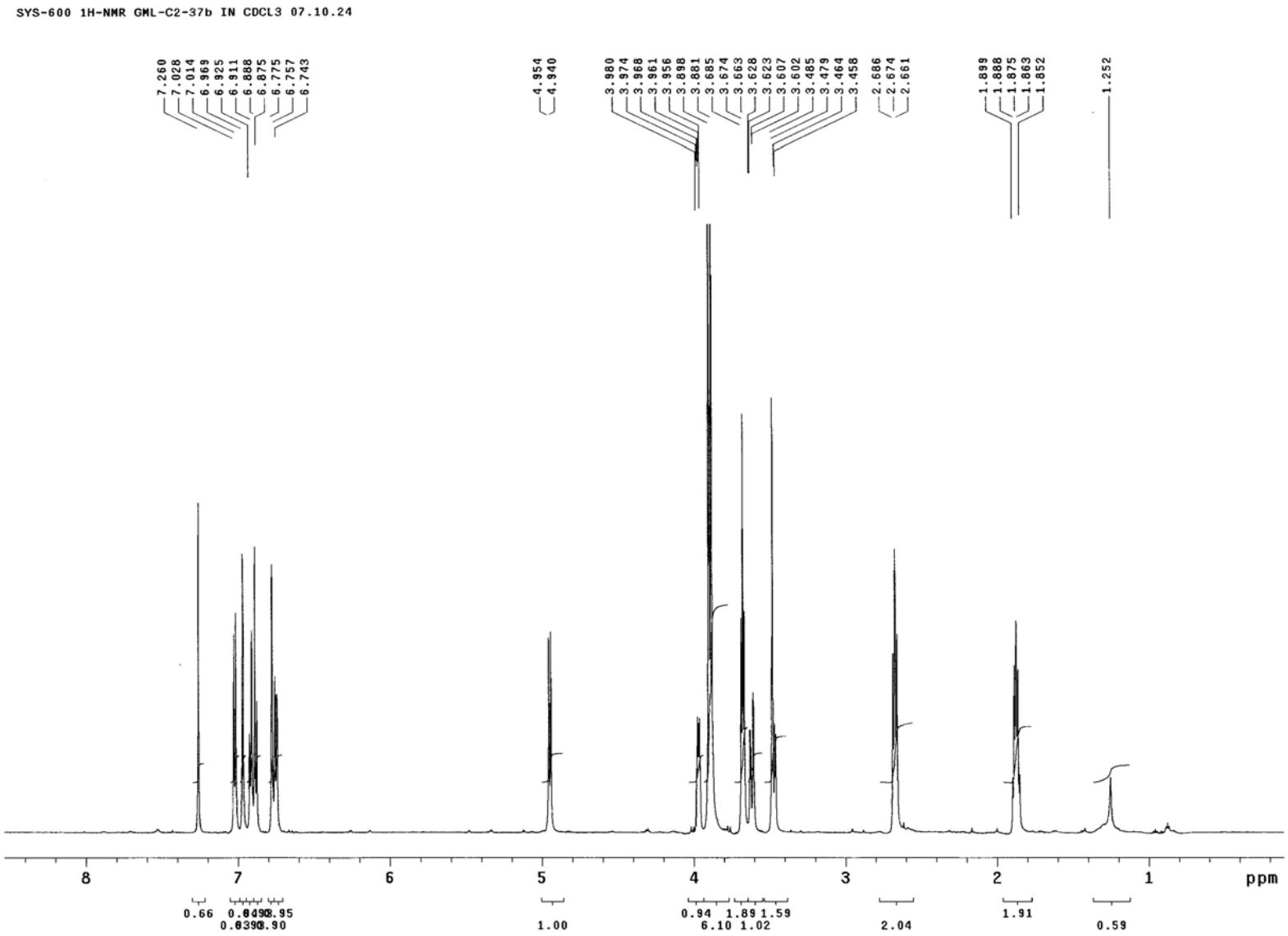
The ^{1}H NMR Spectrum of Compound 6a in $CDCl_3$



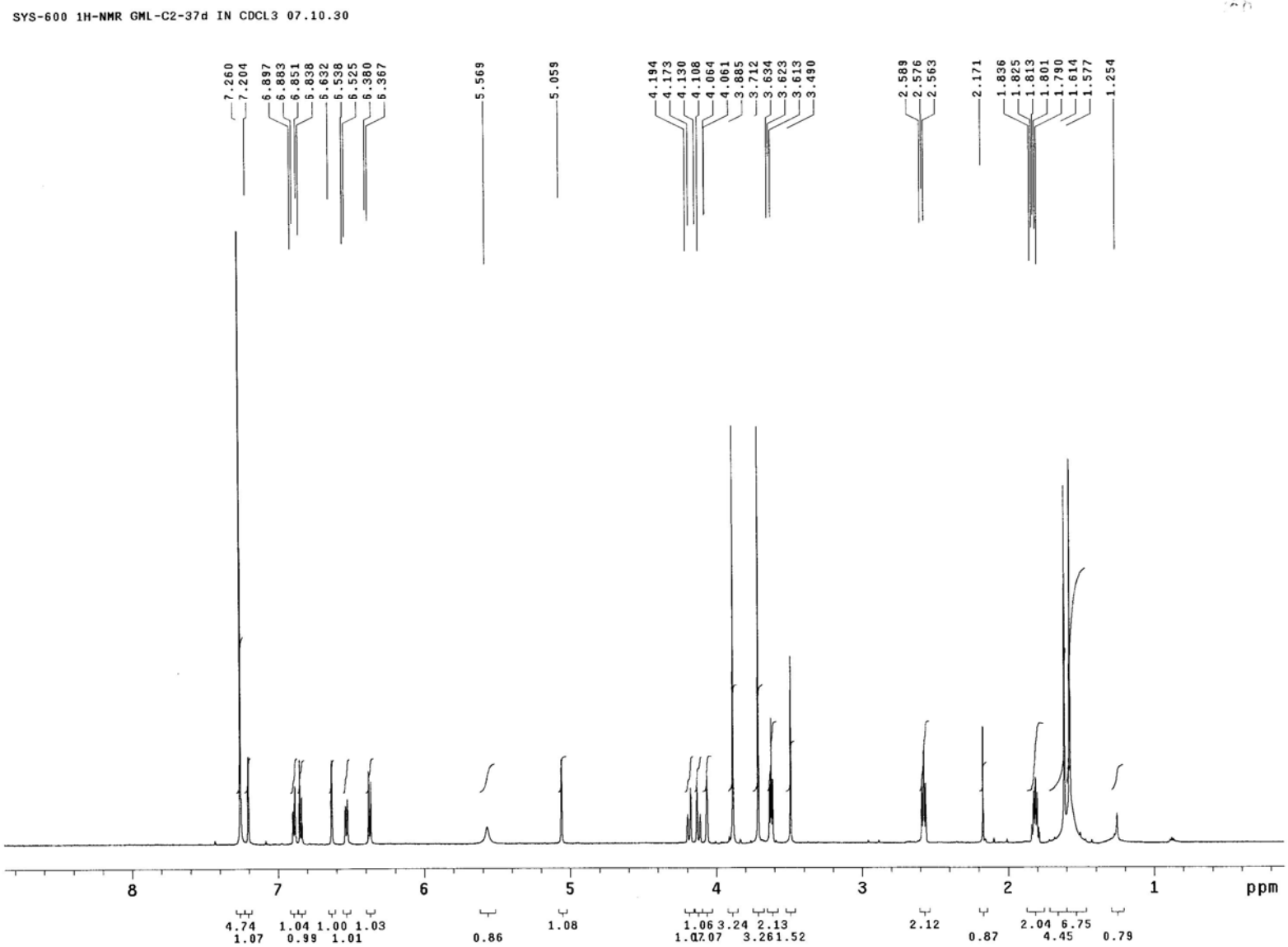
The ^{1}H NMR Spectrum of (+)-(7*S*,8*S*)-4,7,9,9′-Tetrahydroxy-3,3′-dimethoxy-8-4′-oxyneolign 9′-*O*-*β*-D-glucopyranoside (7) in DMSO-d_6



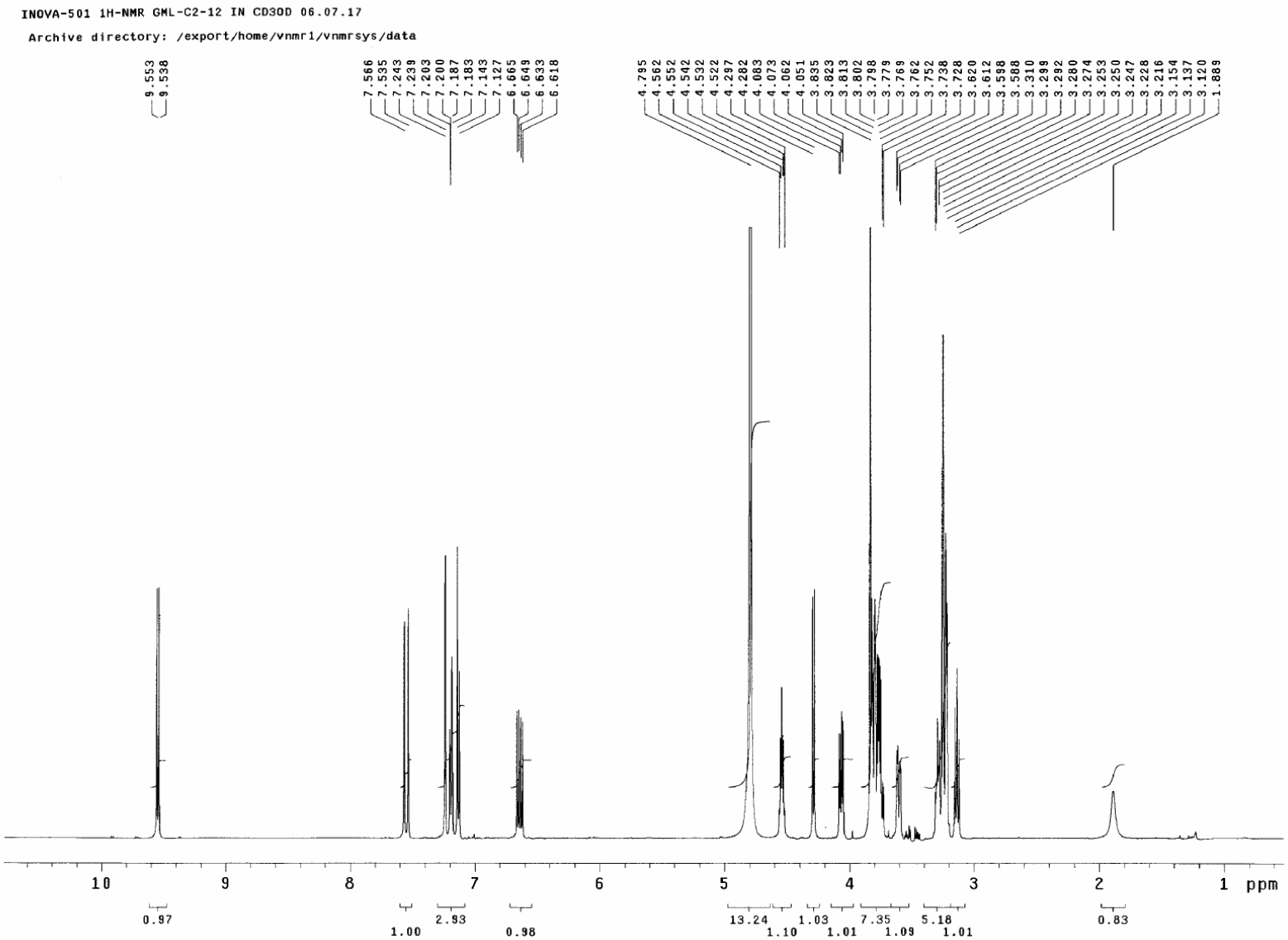
The ^{13}C NMR Spectrum of (+)-(7*S*,8*S*)-4,7,9,9′-Tetrahydroxy-3,3′-dimethoxy-8-4′-oxyneolign 9′-*O*-*β*-D-glucopyranoside (7) in DMSO-d_6



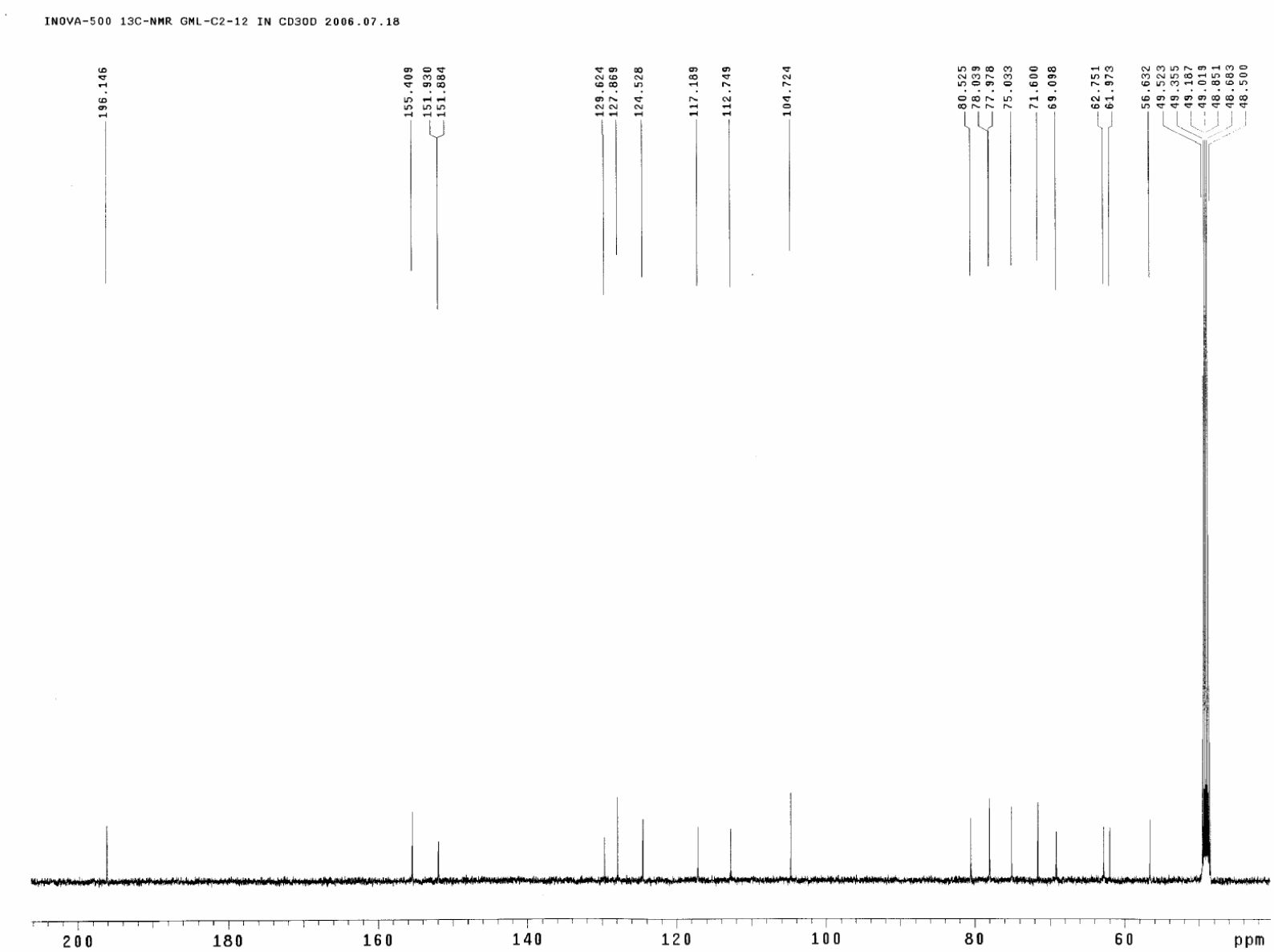
The ^{1}H NMR Spectrum of Compound 7a in $CDCl_3$



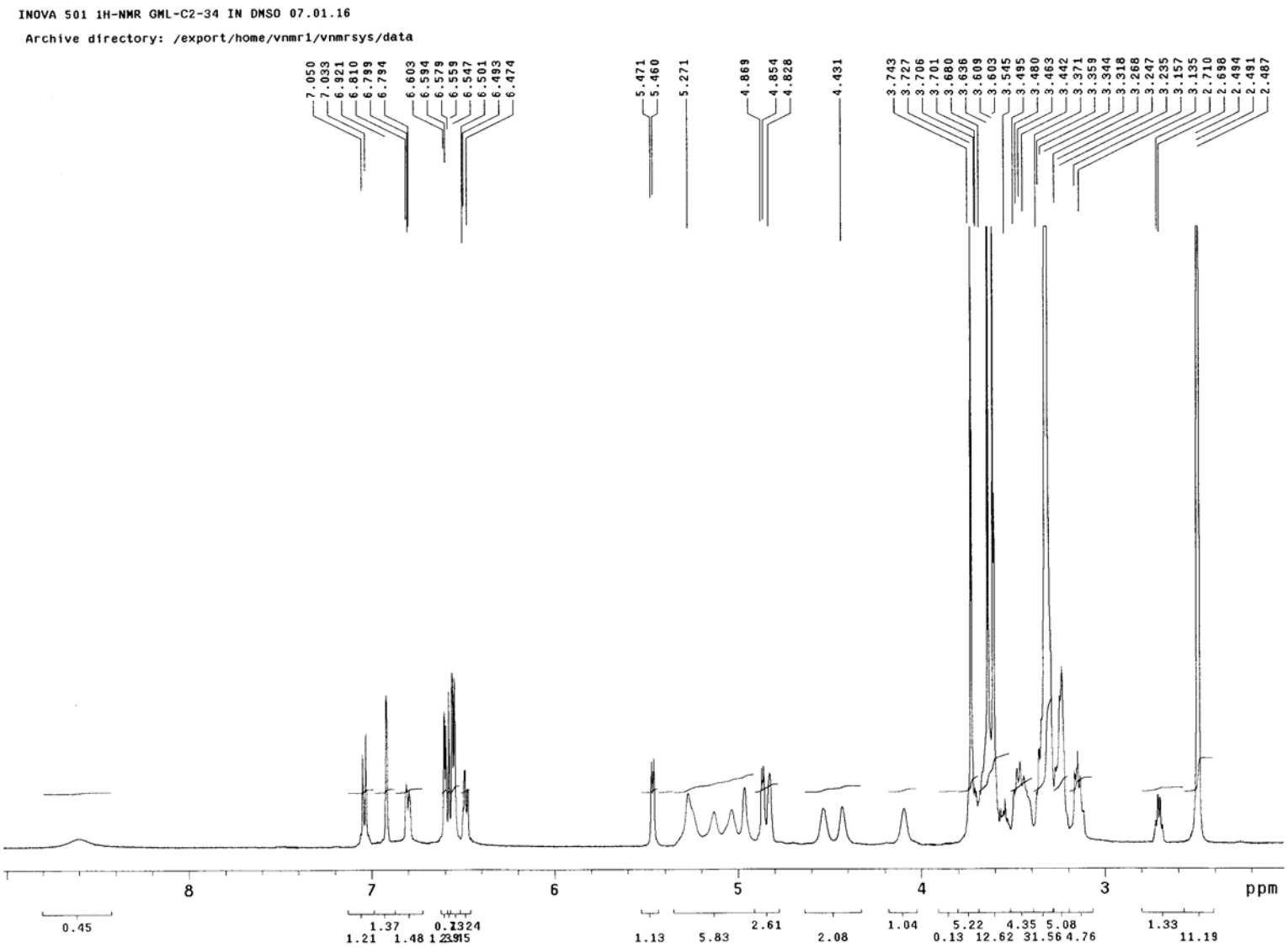
The ^{1}H NMR Spectrum of Compound 7b in $CDCl_3$



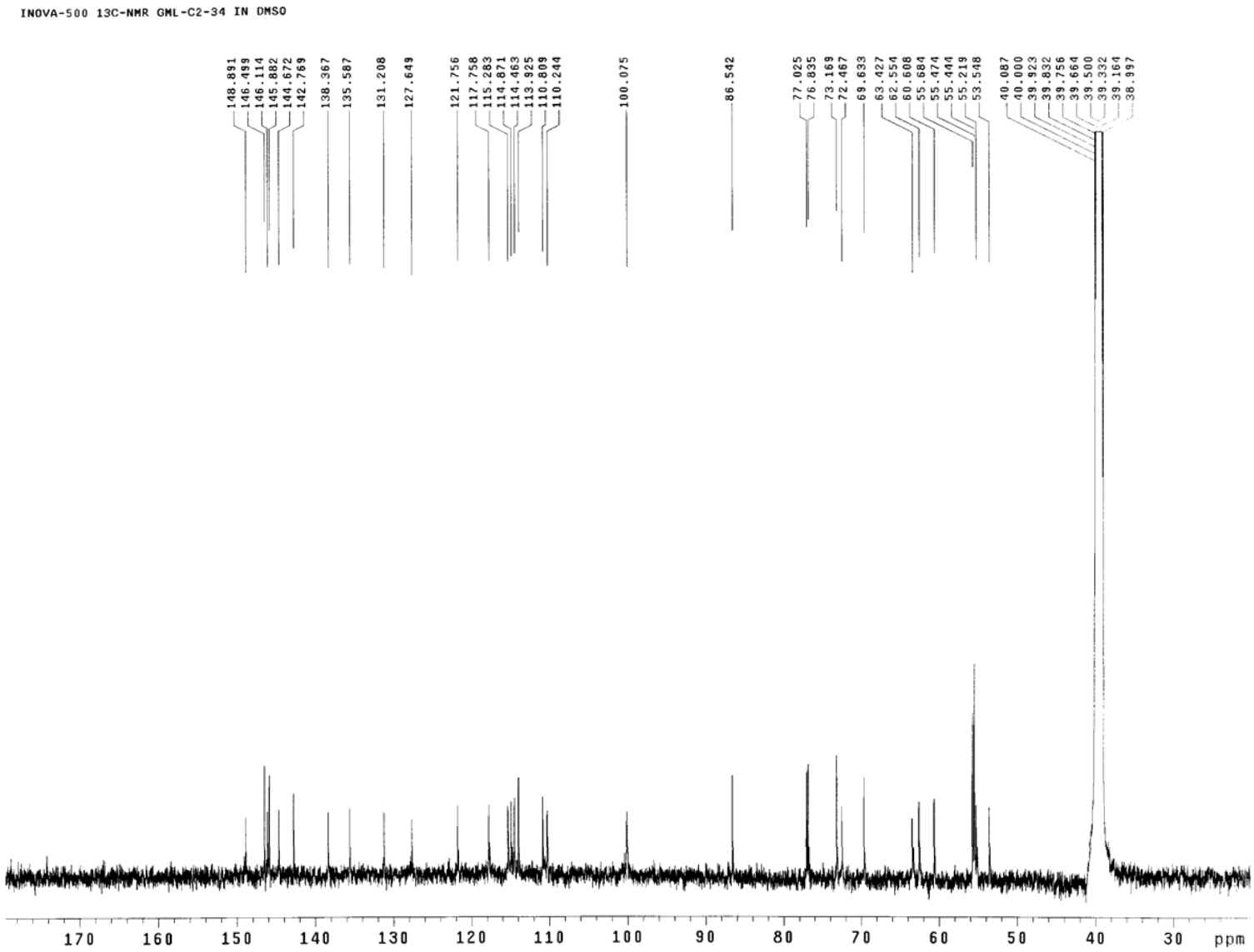
The ^{1}H NMR Spectrum of (–)-(2*R*)-1-*O*-*β*-D-Glucopyranosyl-2-{2-methoxy-4-[(*E*)-formylvinyl]phenoxyl}propane-3-ol (8) in MeOH-d_4



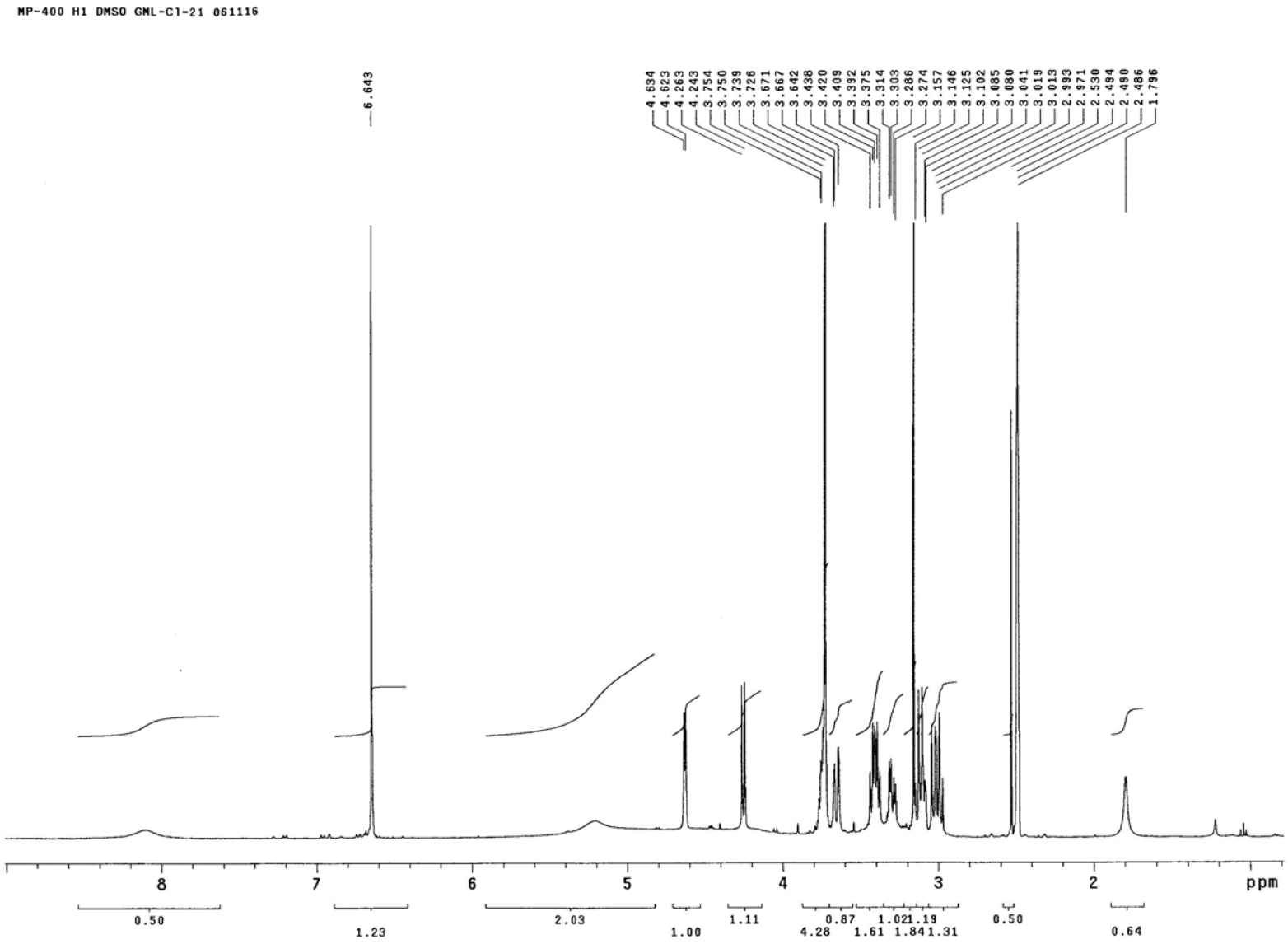
The ^{13}C NMR Spectrum of (–)-(2*R*)-1-*O*-*β*-D-Glucopyranosyl-2-{2-methoxy-4-[(*E*)-formylvinyl]phenoxyl}propane-3-ol (8) in MeOH-d_4



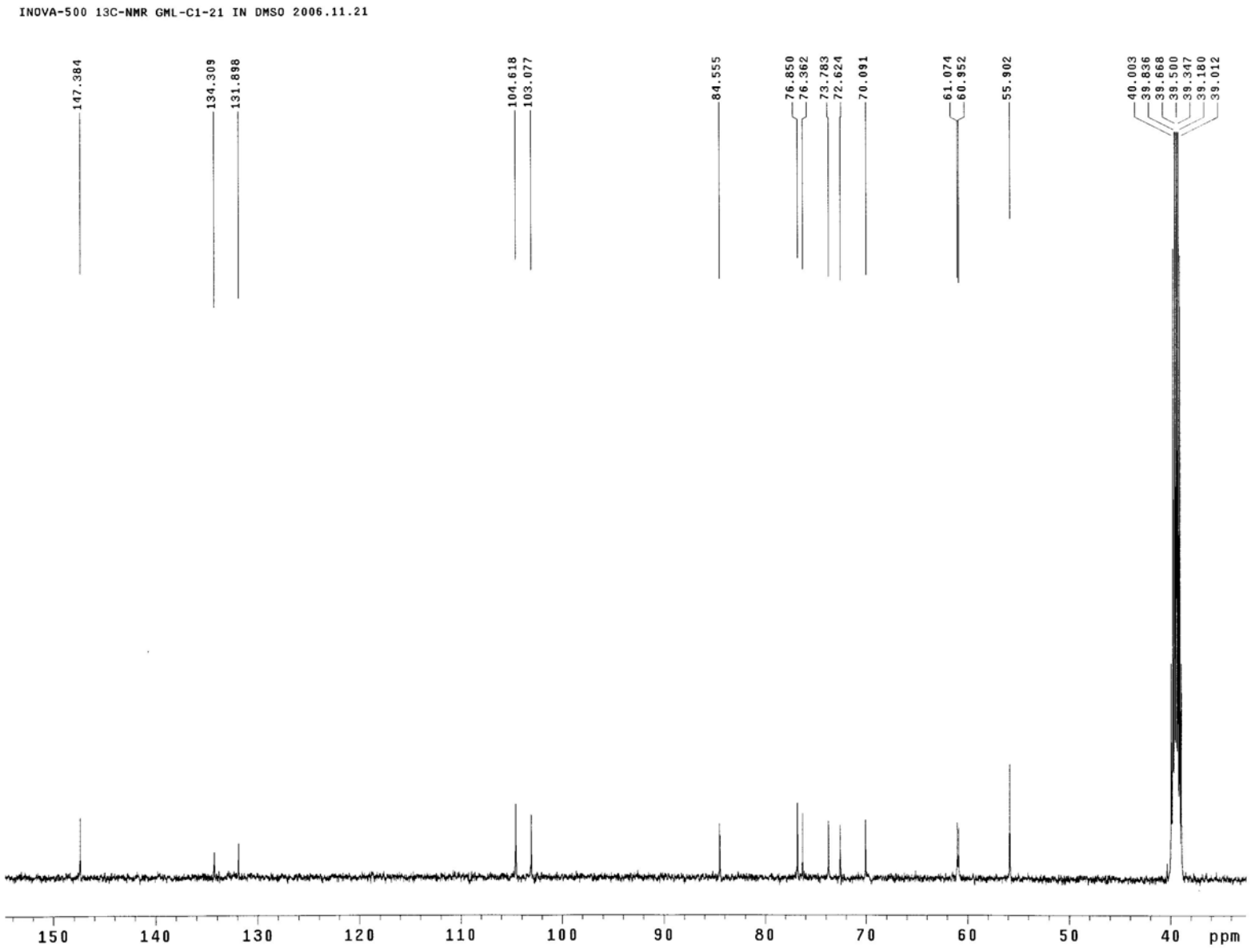
The ^{1}H NMR Spectrum of (–)-*Erythro*-2-(4-hydroxy-3-methoxyphenyl)-1-[2-(4-*O*-*β*-D-glucopyranosyl-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-2,3-dihydrobenzofuran-5-yl]-propan-1,3-diol (9) in DMSO-d_6



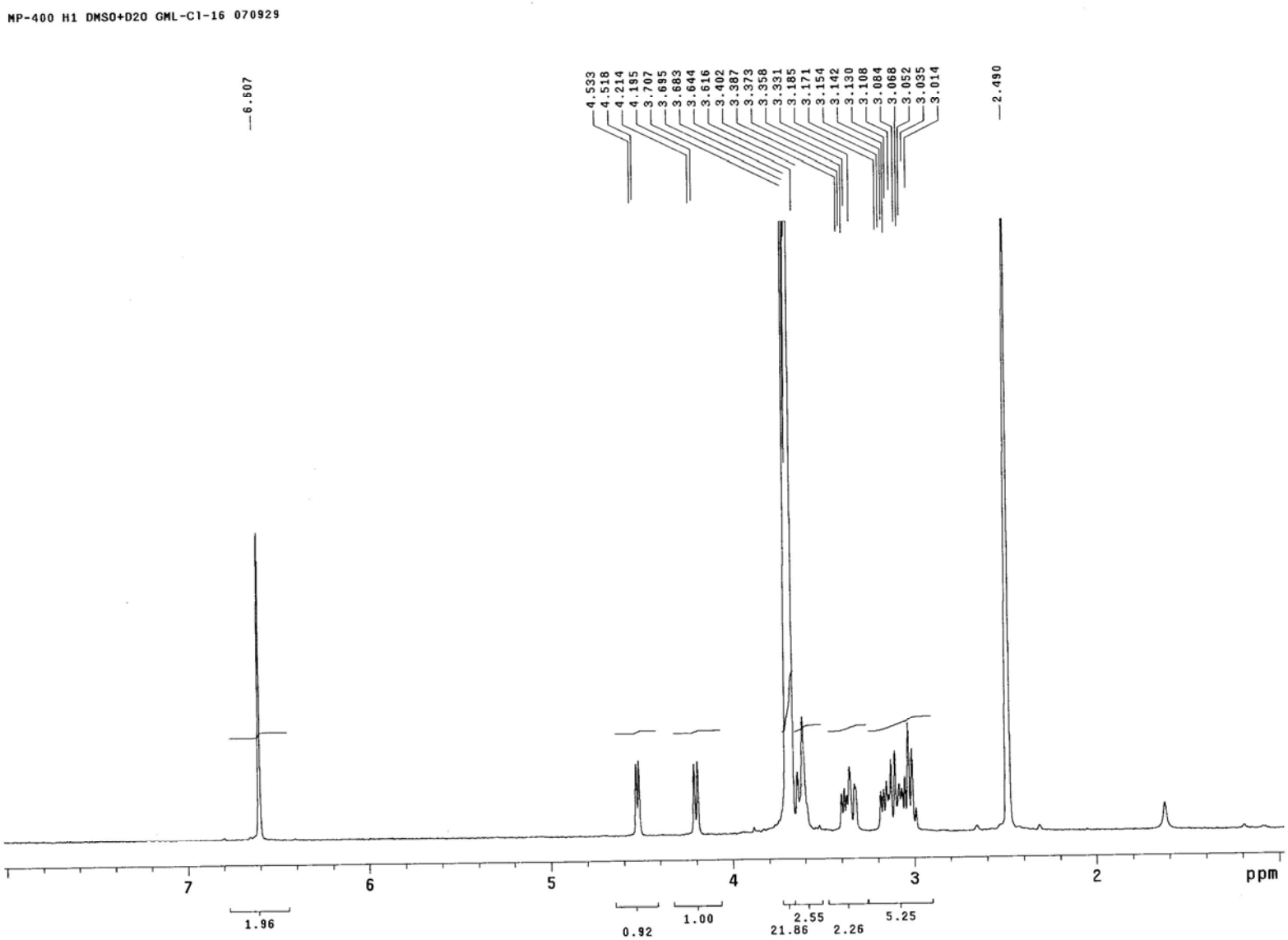
The ^{13}C NMR Spectrum of (–)-*Erythro*-2-(4-hydroxy-3-methoxyphenyl)-1-[2-(4-*O*-*β*-D-glucopyranosyl-3-methoxyphenyl)-3-hydroxymethyl-7-methoxy-2,3-dihydrobenzofuran-5-yl]-propan-1,3-diol (9) in DMSO-d_6



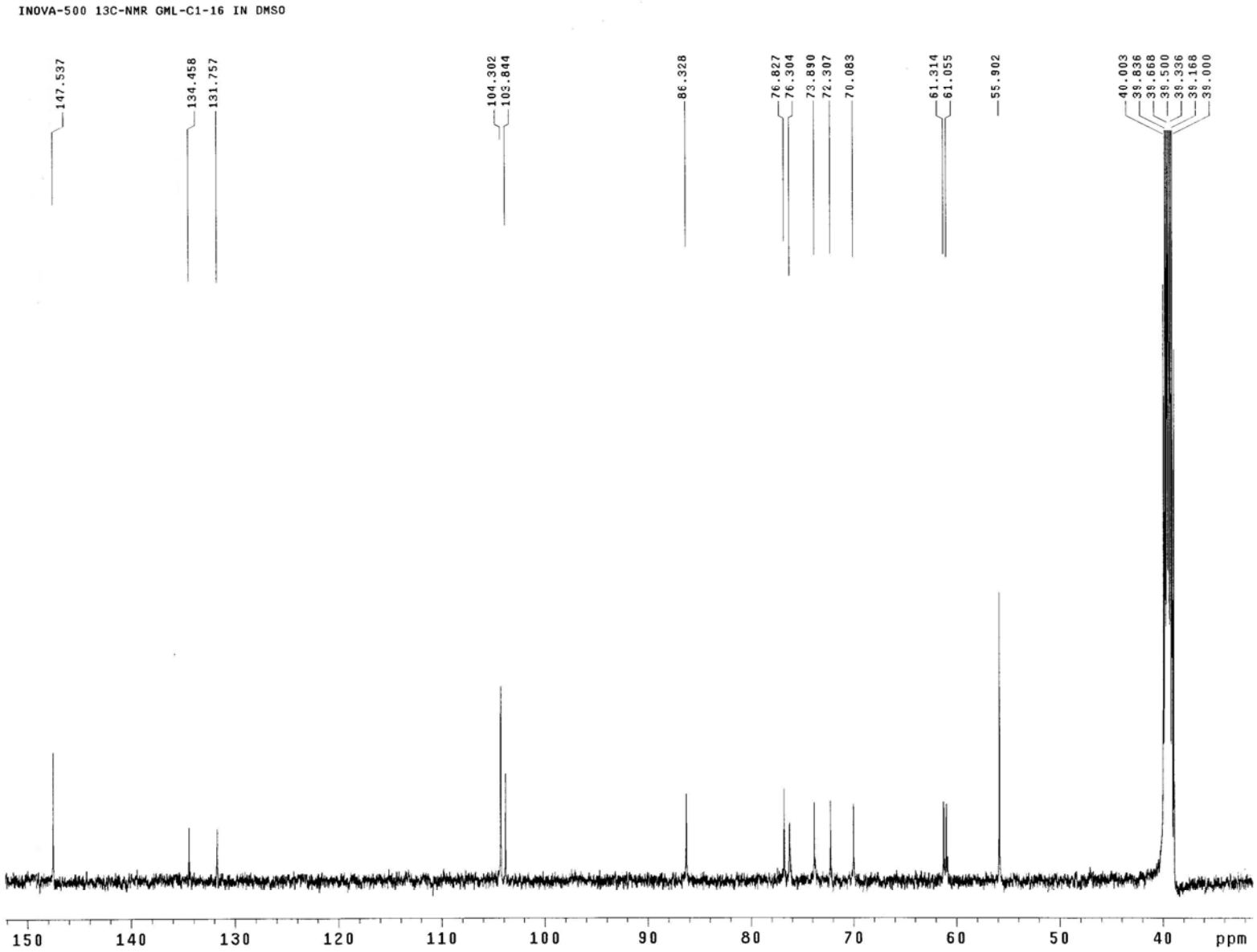
The ^{1}H NMR Spectrum of (–)-(7*R*,8*S*)-Syringylglycerol 8-*O*-*β*-D-glucopyranoside (10) in DMSO-d_6



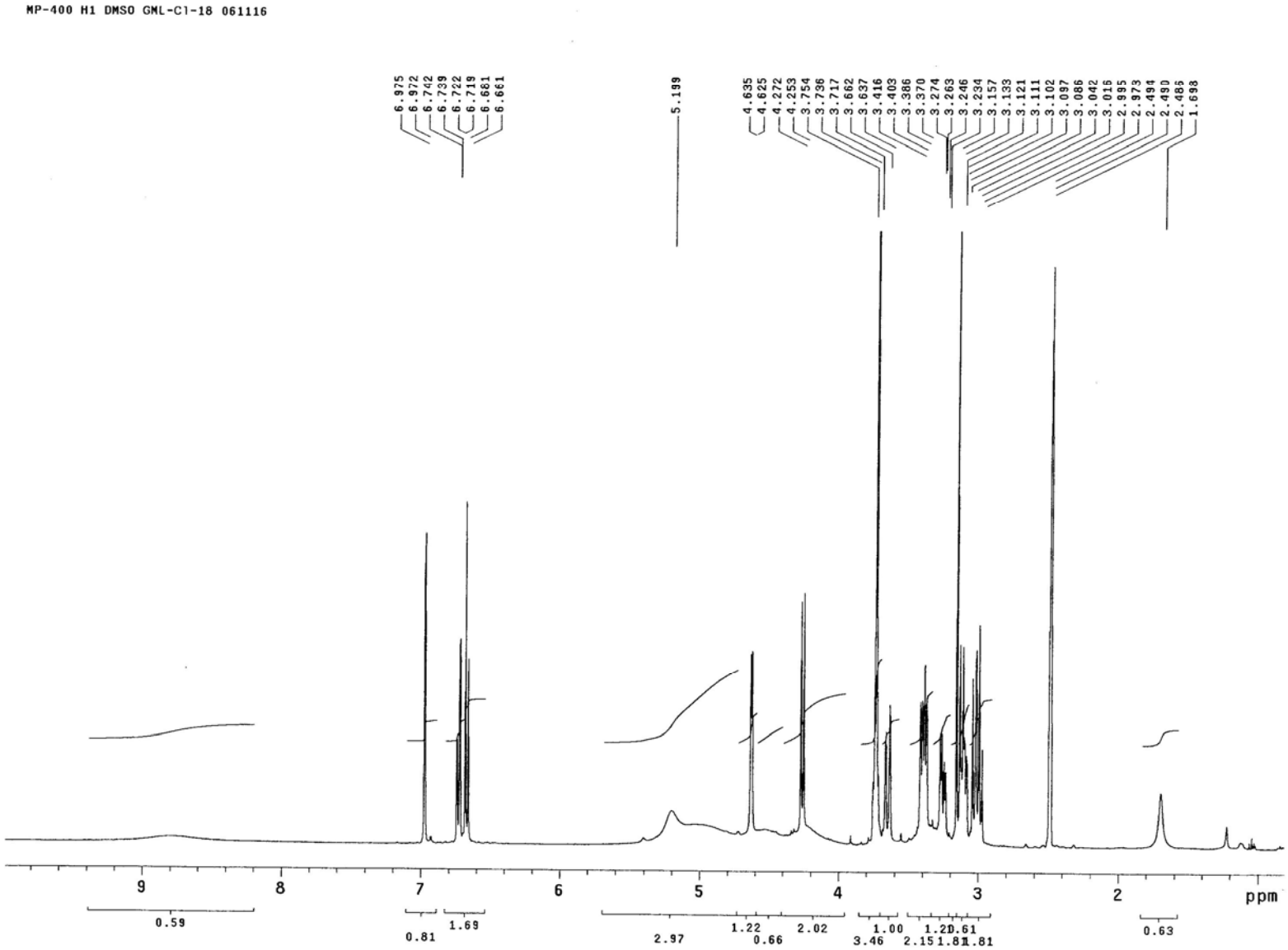
The ^{13}C NMR Spectrum of (–)-(7*R*,8*S*)-Syringylglycerol 8-*O*-*β*-D-glucopyranoside (10) in DMSO-d_6



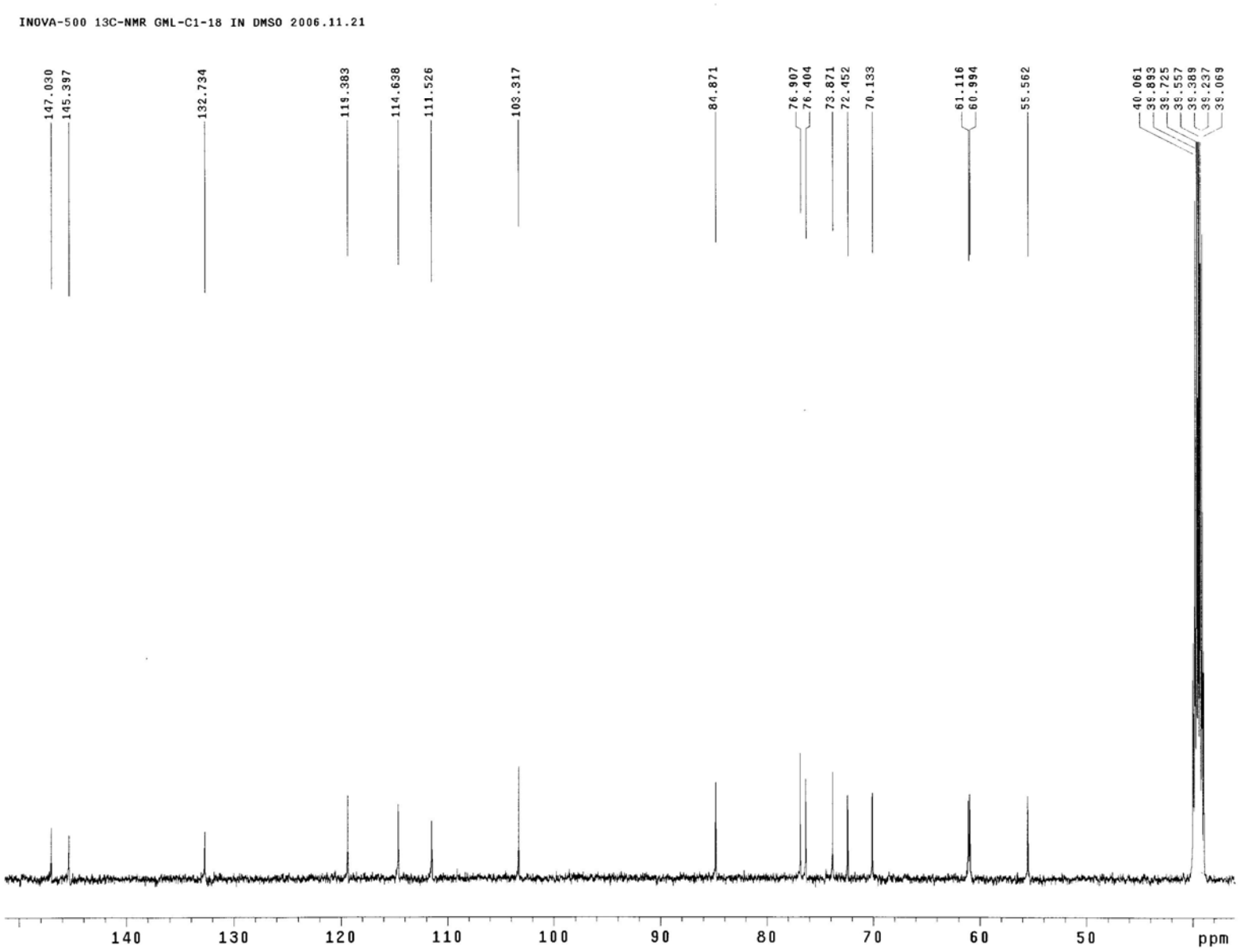
The ^{1}H NMR Spectrum of (+)-(7*S*,8*S*)-Syringylglycerol 8-*O*-*β*-D-glucopyranoside (11) in DMSO-d_6



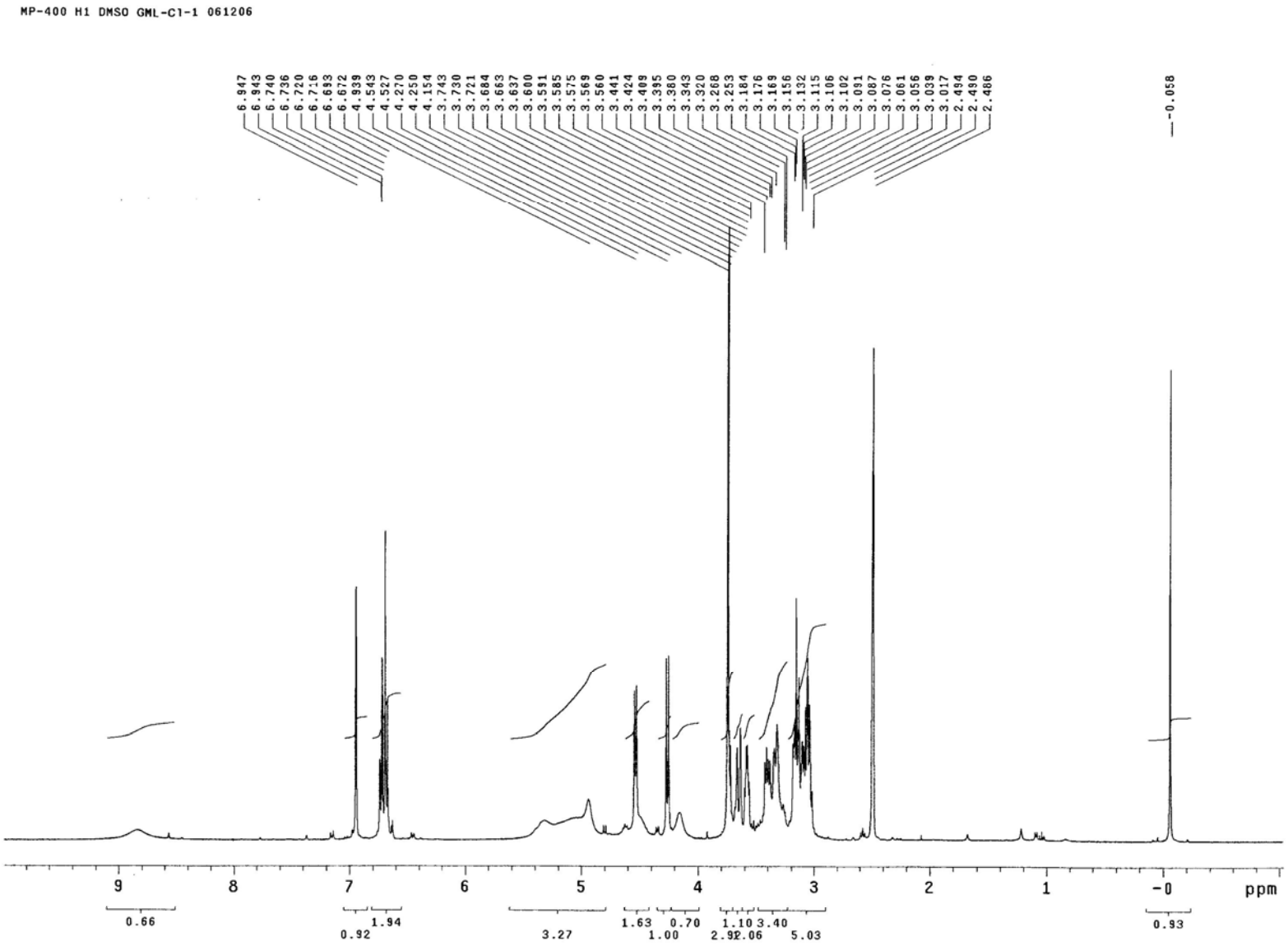
The ^{13}C NMR Spectrum of (+)-(7*S*,8*S*)-Syringylglycerol 8-*O*-*β*-D-glucopyranoside (11) in DMSO-d_6



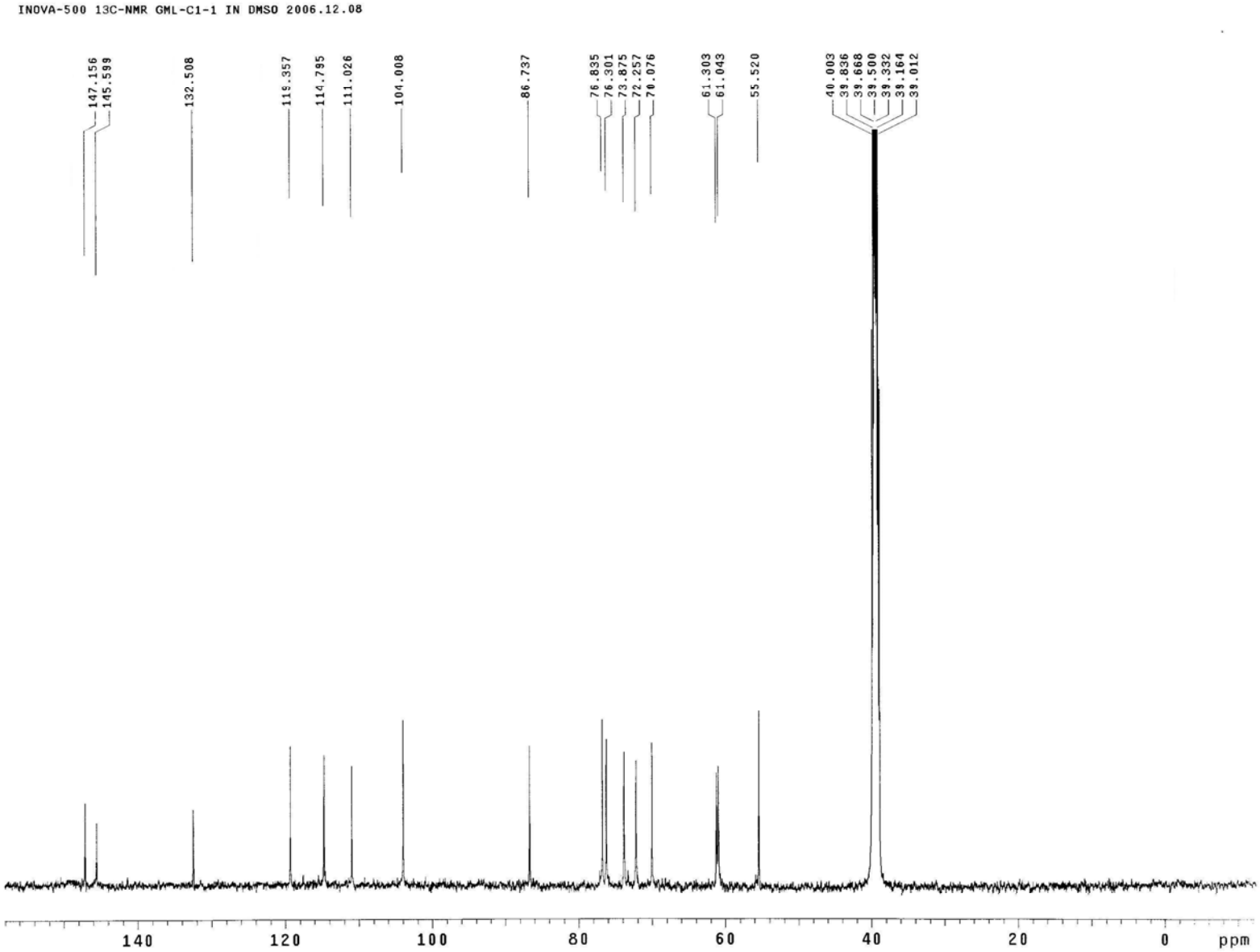
The ^{1}H NMR Spectrum of (–)-(7*R*,8*S*)-Guaiacylglycerol 8-*O*-*β*-D-glucopyranoside (12) in DMSO-d_6



The ^{13}C NMR Spectrum of (–)-(7*R*,8*S*)-Guaiacylglycerol 8-*O*-*β*-D-glucopyranoside (12) in DMSO-d_6



The ^{1}H NMR Spectrum of (+)-(7*S*,8*S*)-Guaiacylglycerol 8-*O*-*β*-D-glucopyranoside (13) in DMSO-d_6



The ^{13}C NMR Spectrum of (+)-(7*S*,8*S*)-Guaiacylglycerol 8-*O*-*β*-D-glucopyranoside (13) in DMSO-d_6

Table S1. ^{1}H NMR Data (δ) for Compounds **1a**, **1b**, **2a**(**4a**), and **2b** in Different Solvents[a]

no.	**1a**(*Erythro*)			**1b**(*Erythro*)	**2a**(**4a**) (*Erythro*)			**2b**(*Erythro*)
	Me_2CO-d_6+D_2O	CD_3OD	$CDCl_3$	$CDCl_3$	Me_2CO-d_6+D_2O	CD_3OD	$CDCl_3$	$CDCl_3$
2	7.04 brs	6.95 brs	6.92 brs	6.94 d (1.8)	7.04 d (1.2)	6.94 d (1.8)	6.93 brs	6.94 brs
5	6.74 d (7.8)	6.69 d (7.8)	6.89 d (8.4)	6.89 d (7.8)	6.75 d (7.8)	6.69 d (8.4)	6.90 d (8.4)	6.89 d (7.8)
6	6.85 brd (7.8)	6.79 brd (7.8)	6.85 brd (8.4)	6.97 dd (7.8,1.8)	6.84 dd (7.8,1.2)	6.77 dd (8.4,1.8)	6.84 brd (8.4)	6.97 brd (7.8)
7	**4.91 d (4.8)**	**4.80 (overlapped)**	**5.08 d (4.2)**	**4.82 d (9.0)**	**4.91 d (4.8)**	**4.80 (overlapped)**	**5.08 d (3.6)**	**4.80 d (9.0)**
8	4.16 ddd (6.6,4.8,3.6)	4.15 m	4.10 ddd (5.4,4.2,3.6)	3.95 ddd (9.6,9.0,3.6)	4.06 ddd (6.6,4.8,4.2)	4.07 m	4.06 ddd (4.8,3.6,3.0)	4.12 ddd (9.0,8.4,4.8)
9a	3.83 dd (11.4,6.6)	3.80 dd (12.0,6.6)	3.96 dd (12.0,5.4)	4.19 dd (10.8,3.6)	3.81 dd (11.4,6.6)	3.78 dd (11.4,6.6)	3.94 dd (11.4,4.8)	4.17 dd (11.4,4.8)
9b	3.71 dd,(11.4,3.6)	3.70 dd (12.0,3.6)	3.80 dd (12.0,3.6)	4.16 dd (10.8,9.6)	3.68 dd (11.4,4.2)	3.67 dd (11.4,3.6)	3.77 dd (11.4,3.0)	3.95 dd (11.4,8.4)
2′	6.87 d (2.4)	6.82 brs	7.01 brs	6.89 d (1.8)	6.66 d (1.8),	6.60 d (1.8)	6.80 brs	6.66 brs
5′	6.78 d (8.4)	6.67 d (8.4)	6.91 d (8.4)	6.55 d (7.8)	6.72 d (8.4)	6.65 d (8.4)	6.86 d (7.8)	6.51 d (8.4)
6′	6.70 dd (8.4,2.4)	6.66 brd (8.4)	6.83 brd (8.4)	6.71 dd (7.8,1.8)	6.49 dd (8.4,1.8)	6.47 dd (8.4,1.8)	6.63 brd (7.8)	6.52 brd (8.4)
7′	6.42 d (15.6)	6.39 d (16.2)	6.52 d (15.6)	6.43 d (15.4)	2.51 t (7.2)	2.48 t (7.2)	2.63 t (7.2)	2.55 t (7.2)
8′	6.18 dt (15.6,5.4)	6.12 dt (16.2,6.0)	6.27 dt (15.6,5.4)	6.10 dt (15.4,6.0)	1.73 tt (7.2,6.6)	1.71 tt (7.2,6.6)	1.86 tt (7.2,6.0)	1.79 tt (7.2,6.0)
9′	4.15 d (5.4)	4.12 d (6.0)	4.30 d (5.4)	4.03 d (6.0)	3.50 t (6.6)	3.48 t (6.6)	3.67 t (6.0)	3.60 t (6.0)
3-OMe	3.76 s	3.75 s	3.88 s	3.86 s	3,77 s	3.75 s	3.89 s	3.85 s
CH_3ax				1.51 s				1.51 s
CH_3eq				1.64 s				1.64 s

[a] ^{1}H NMR data were measured at 600 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S2. ^{1}H NMR Data (δ) for Compounds **3a**, **5a** and **6a** in Different Solvents[a]

no.	**3a** (*Erythro*)			**5a**(*Erythro*)			**6a**(*Threo*)		
	Me_2CO-d_6+D_2O	CD_3OD	$CDCl_3$	Me_2CO-d_6+D_2O	CD_3OD	$CDCl_3$	Me_2CO-d_6+D_2O	CD_3OD	$CDCl_3$
2	7.05 brs	6.96 d (1.8)	6.95 d (1.8)	7.06 d (1.8)	6.96 d (1.8)	6.96 brs	7.07 d (1.8)	6.97 d (1.8)	6.97 brs
5	6.76 d (8.4)	6.70 d (8.4)	6.89 d (8.4)	6.72 d (7.8)	6.67 d (7.8)	6.90 d (7.8)	6.74 d (7.8)	6.69 d (8.4)	6.89 d (7.8)
6	6.83 brd (8.4)	6.75 dd (8.4,1.8)	6.81 dd (8.4,1.8)	6.85 dd (7.8,1.8)	6.77 dd (7.8,1.8)	6.93 brd (7.8)	6.89 dd (7.8,1.8)	6.80 dd (8.4,1.8)	6.91 brd (7.8)
7	**5.06 d (3.0)**	**4.96 d (4.2)**	**5.05 d (4.2)**	**4.86 d (5.4)**	**4.76 d (6.0)**	**4.96 d (4.2)**	**4.86 d (6.6)**	**4.82 d (5.4)**	**4.95 d (8.4)**
8	3.99 ddd (4.2,3.0,3.0)	4.02 ddd (6.6,4.2,4.2)	4.01 ddd (6.0,4.2,3.0)	4.33 ddd, (5.4,5.4,3.6)	4.30 ddd (6.0,6.0,3.6)	4.16 ddd (5.4,4.2,3.0)	4.24 ddd (6.6,6.0,4.2)	4.23 ddd (5.4,5.4,4.2)	4.02 m
9a	3.82 dd (11.4,4.2)	3.81 dd (12.0,6.6)	3.87 dd (12.0,6.0)	3.80 dd (12.0,5.4)	3.79 dd (12.0,6.0)	3.92 dd (12.0,5.4)	3.68 dd (12.0,4.2)	3.67 dd (12.0,4.2)	3.62 brd (12.0)
9b	3.48 dd (11.4,3.0)	3.47 dd (12.0,4.2)	3.62 dd (12.0,3.0)	3.69 dd (12.0,3.6)	3.71 dd (12.0,3.6)	3.68 dd (12.0,3.0)	3.47 dd (12.0,6.0)	3.41 dd (12.0,5.4)	3.49 brd (12.0)
2′	6.61 brs	6.54 brs	6.67 d (1.8)	7.01 d (1.8)	6.94 brs	6.96 brs	7.08 d (1.8)	7.01 d (1.8)	6.97 brs
5′				6.89 d (7.8)	6.81 brs	6.88 d (8.4)	7.07 d (8.4)	6.94 d (8.4)	7.06 d (8.4)
6′	6.57 brs	6.54 brs	6.52 d (1.8)	6.83 dd (7.8,1.8)	6.81 brs	6.83 brd (8.4)	6.86 dd (8.4,1.8)	6.85 dd (8.4,1.8)	6.94 brd (8.4)
7′	6.46 d (16.2)	6.43 brd (15.6)	6.49 brd (15.6)	6.46 brd (15.6)	6.45 brd (16.2)	6.56 d (16.2)	6.50 d (15.6)	6.48 brd (16.2)	6.56 d (16.2)
8′	6.28 dt (16.2,5.4)	6.20 dt (15.6,6.0)	6.28 dt (15.6,6.0)	6.23 dt,(15.6,5.4)	6.18 dt (16.2,5.4)	6.28 dt (16.2,5.4)	6.27 dt (15.6,5.4)	6.20 dt (16.2,6.0)	6.28 dt (16.2,6.0)
9′	4.18 d (5.4)	4.15 dd (6.0,1.2)	4.32 dd (6.0,1.2)	4.14 dd (5.4,1.2)	4.13 dd (5.4,1.2)	4.32 d (5.4)	4.17 d (5.4)	4.14 dd (6.0,1.2)	4.32 d (6.0)
3-OMe	3.79 s	3.76 s	3.88 s	3.77 s	3.74 s	3.89 s	3.79 s	3.76 s	3.89 s
3′-OMe	3.83 s	3.78 s	3.89 s	3.81 s	3.75 s	3.90 s	3.88 s	3.82 s	3.92 s

[a] ^{1}H NMR data were measured at 600 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S3. ^{1}H NMR Data (δ) for Compounds **7a** and **7b** in Different Solvents [a]

no.	**7a**(*Threo*)			**7b**
	Me_2CO-d_6+D_2O	CD_3OD	$CDCl_3$	$CDCl_3$
2	7.04 d (1.8)	6.96 d (1.8)	6.97 brs	7.20 brs
5	6.73 d (8.4)	6.69 d (7.8)	6.88 d (7.8)	6.84 d (7.8)
6	6.85 dd (8.4,1.8)	6.80 dd (7.8,1.8)	6.91 brd (7.8)	6.89 brd (7.8)
7	**4.86 d (6.0)**	**4.81 d (6.0)**	**4.95 d (8.4)**	**5.06 brs**
8	4.17 ddd (6.0,5.4,4.2)	4.13 ddd (6.0,5.4,4.2)	3.96 ddd (8.4,3.6,3.0)	4.06 d (1.8)
9a	3.67 dd (12.0,4.2)	3.65 dd (12.0,4.2)	3.61 dd (12.6,3.0)	4.18 dd (12.6,1.8)
9b	3.44 dd (12.0,5.4)	3.39 dd (12.0,5.4)	3.47 dd (12.6,3.6)	4.12 d (12.6)
2′	6.85 d (1.8)	6.79 d (1.8)	6.78 brs	6.63 brs
5′	7.00 d (8.4)	6.91 d (7.8)	7.02 d (8.4)	6.37 d (7.8)
6′	6.68 dd (8.4,1.8)	6.45 dd (7.8,1.8)	6.75 brd (8.4)	6.53 brd (7.8)
7′	2.58 t (7.8)	2.56 t (7.8)	2.67 t (7.8)	2.58 t (7.8)
8′	1.76 tt (7.8,6.0)	1.75 tt (7.8,6.0)	1.88 tt (7.8,6.6)	1.81 tt (7.8,6.0)
9	3.51 t (6.0)	3.50 t (6.0)	3.67 t (6.6)	3.62 t (6.0)
3-OMe	3.77 s	3.76 s	3.88 s	3.71 s
3′-OMe	3.83 s	3.79 s	3.90 s	3.89 s
CH_3ax				1.58 s
CH_3eq				1.61 s

[a] ^{1}H NMR data were measured at 600 MHz. Proton coupling constants (*J*) in Hz are given in parentheses.

Table S4. ^{1}H NMR Data (δ) for Compounds **5** and **6** in Different Solvents

no.	**5** (*Erythro*)				**6** (*Threo*)			
	D_2O[a]	DMSO-d_6[b]	C_5D_5N[a]	CD_3OD[a]	D_2O[a]	DMSO-d_6[b]	C_5D_5N[a]	CD_3OD[a]
2	6.95 brs	6.97 d (1.5)	7.59 d (1.8)	6.96 brs	7.02 brs	6.94 d (1.5)	7.58 brs	6.97 d (1.8)
5	6.79 d (7.8)	6.66 d (8.0)	7.24 d (8.4)	6.67 d (8.0)	6.87 d (7.8)	6.66 d (8.0)	7.25 d (7.8)	6.69 d (8.4)
6	6.87 brd (7.8)	6.75 dd (8.0,1.5)	7.38 dd (8.4,1.8)	6.77 brd (8.0)	6.94 brd (7.8)	6.74 dd (8.0,1.5)	7.40 brd (7.8)	6.80 dd (8.4,1.8)
7	**4.75 d (7.8)**	**4.69 d (5.5)**	**5.61 d (4.8)**	**4.77 d (6.0)**	**4.97 d (4.8)**	**4.69 d (4.5)**	**5.58 d (5.4)**	**4.83 d (5.4)**
8	4.67 m	4.30 m	5.05 ddd (6.0,5.4,4.8)	4.31 ddd (6.0,5.6,4.0)	4.64 ddd (5.4,4.8,3.6)	4.26 ddd (6.5,4.5,4.0)	4.95 ddd (6.0,5.4,5.4)	4.25 ddd (5.4,5.4,4.2)
9a	4.10 brd (12.0)	3.58 brs	4.55 dd (12.0,5.4)	3.79 dd (11.6,5.6)	3.84 dd (12.0,3.6)	3.57 dd (11.5,4.0)	4.42 dd (12.6,5.4)	3.67 dd (12.0,4.2)
9b	3.94 dd (12.0,6.0)		4.46 dd (12.0,6.0)	3.72 dd (11.6,4.0)	3.66 dd (12.0,5.4)	3.24 dd(11.5,6.5)	4.10 dd (12.6,6.0)	3.41 dd (12.0,5.4)
2′	6.90 brs	7.00 d (1.5)	7.02 d (1.8)	6.96 brs	7.12 brs	7.05 d (1.5)	7.03 brs	7.02 d (1.8)
5′	6.95 brs	6.91 d (8.5)	7.35 d (8.4)	6.82 brs	6.92 d (7.8)	6.96 d (8.5)	7.44 d (8.4)	6.94 d (8.4)
6′	6.95 brs	6.84 dd (8.5,1.5)	6.95 dd (8.4,1.8)	6.82 brs	6.88 brd (7.8)	6.87 dd (8.5,1.5)	6.95 brd (8.4)	6.86 dd (8.4,1.8)
7′	6.63 d (15.6)	6.53 d (16.0)	6.68 d (15.6)	6.53 d (16.2)	6.63 d (16.2)	6.54 d (16.5)	6.70 d (16.2)	6.55 d (16.2)
8′	6.25 dt (15.6,6.0)	6.20 dt (16.0,6.0)	6.35 dt (15.6,6.0)	6.18 dt (16.2,6.0)	6.27 dt (16.2,6.0)	6.23 dt (16.5,6.0)	6.37 ddd (16.2,6.6,5.4)	6.21 dt (16.2,6.0)
9′a	4.51 dd (12.6,6.0)	4.39 dd (13.0,6.0)	4.73 dd (13.2,6.0)	4.44 dd (12.8,6.0)	4.51 dd (12.0,6.0)	4.40 dd (12.0,6.0)	4.74 dd (12.6,5.4)	4.45 dd (12.6,6.0)
9′b	4.38 dd (12.6,6.0)	4.16 dd (13.0,6.0)	4.43 dd (13.2,6.0)	4.24 dd (12.8,6.0)	4.39 dd (12.0,6.0)	4.17 dd (12.0,6.0)	4.46 dd (12.6,6.6)	4.25 dd (12.6,6.0)
1″	4.55 d (7.8)	4.19 d (8.0)	4.98 d (7.8)	4.30 d (8.0)	4.54 d (7.8)	4.20 d (8.0)	4.98 d (7.8)	4.30 d (7.8)
2″	3.32 dd (8.4,7.8)	2.98 dd (8.5,8.0)	4.11 dd (8.4,7.8)	3.16 dd (8.4,8.0)	3.32 dd (8.4,7.8)	2.99 dd (8.5,8.0)	4.11 dd (8.4,7.8)	3.17 dd (8.4,7.8)
3″	3.41 dd (9.0,8.4)	3.13 dd (8.5,8.5)	4.27 dd (8.4,8.4)	3.23 dd (8.4,8.4)	3.40 dd (9.0,8.4)	3.14 dd (8.5,8.5)	4.28 dd (8.4,8.4)	3.23 dd (8.4,7.8)
4″	3.50 dd (9.0,9.0)	3.04 dd (9.0,8.5)	4.27 dd (8.4,8.4)	3.30 dd (8.4,8.0)	3.49 dd (9.0,9.0)	3.04 dd (9.0,8.5)	4.28 dd (8.4,8.4)	3.30 dd (8.4,7.8)
5″	3.46 m	3.06 m	3.97 m	3.23 m	3.44 m	3.09 m	3.97 m	3.22 m
6″a	3.93 brd (12.0)	3.66 brd (12.0)	4.58 brd (12.6)	3.82 brd (11.6)	3.92 brd (12.0)	3.67 dd(12.0,1.5)	4.58 brd (10.8)	3.82 dd (12.0,2.4)
6″b	3.74 dd (12.0,5.4)	3.44 dd (12.0,5.0)	4.41 dd (12.6,4.8)	3.62 dd (11.6,5.2)	3.73 dd (12.0,6.0)	3.44 dd(12.0,5.5)	4.40 dd (10.8,4.8)	3.62 dd (12.0,5.4)
3-OMe	3.69 s	3.71 s	3.68 s	3.74 s	3.78 s	3.70 s	3.71 s	3.76 s
3′-OMe	3.69 s	3.72 s	3.72 s	3.74 s	3.88 s	3.78 s	3.72 s	3.82 s

[a] ^{1}H NMR data were measured at 600 MHz. [b] ^{1}H NMR data were measured at 500 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S5. ^{1}H NMR Data (δ) for Compounds **7** in Different Solvents

no.	**7** (*Threo*)			
	D_2O[a]	DMSO-d_6[b]	C_5D_5N[a]	CD_3OD[a]
2	7.00 brs	6.96 d (1.5)	7.56 brs	6.96 d (1.8)
5	6.84 d (7.8)	6.67 d (8.0)	7.24 d (8.4)	6.69 d (8.4)
6	6.89 brd (7.8)	6.75 dd (8.0,1.5)	7.39 brd (8.4)	6.80 dd (8.4,1.8)
7	**4.96 d (5.4)**	**4.68 d (4.5)**	**5.58 d (6.0)**	**4.82 d (6.0)**
8	4.59 ddd (6.0,5.4,4.2)	4.16 ddd (5.5,4.5,4.0)	4.88 ddd (6.0,6.0,5.4)	4.15 ddd (6.0,5.4,4.2)
9a	3.84 dd (12.0,4.2)	3.55 dd (11.0,4.0)	4.39 dd (12.0,5.4)	3.65 dd (12.0,4.2)
9b	3.66 dd (12.0,6.0)	3.22 dd (11.0,5.5)	4.06 dd (12.0,6.0)	3.40 dd (12.0,5.4)
2′	6.90 brs	6.81 d (1.5)	6.90 d (1.8)	6.82 d (1.8)
5′	6.82 d (8.4)	6.90 d (8.5)	7.43 d (8.4)	6.90 d (7.8)
6′	6.71 brd (8.4)	6.66 dd (8.5,1.5)	6.76 dd (8.4,1.8)	6.67 dd (7.8,1.8)
7′	2.62 t (7.2)	2.56 t (7.5)	2.68 m	2.62 m
8′	1.88 m	1.78 m	1.96 m	1.83 m
9′a	3.90 dt (12.0,6.0)	3.79 dt ((10.0,7.5)	4.13 dt (12.6,6.6)	3.86 dt (10.4,6.6)
9′b	3.61 dt (12.0,6.0)	3.39 dt (10.0,6.0)	3.66 dt (12.6,6.6)	3.47 dt (10.4,6.6)
1″	4.41 d (8.4)	4.09 d (8.0)	4.83 d (7.8)	4.19 d (7.2)
2″	3.29 dd (9.0,8.4)	2.95 dd (8.0,8.0)	4.06 dd (8.4,7.8)	3.14 dd (7.8,7.2)
3″	3.40 dd (9.0,9.0)	3.14 dd (8.0,8.0)	4.24 dd (8.4,8.4)	3.23 dd (8.4,7.8)
4″	3.50 dd (9.0,9.0)	3.02 dd (8.0,8.5)	4.24 dd (8.4,8.4)	3.30 dd (9.0,8.4)
5″	3.42 m	3.07 m	3.94 m	3.19 m
6″a	3.90 brd (12.0)	3.63 dd (12.0,2.0)	4.55 brd (11.2)	3.80 dd (12.0,2.4)
6″b	3.73 dd (12.0,5.4)	3.41 dd (12.0,6.0)	4.36 dd (11.2,4.8)	3.60 ddd (12.0,6.0)
3-OMe	3.77 s	3.68 s	3.69 s	3.76 s
3′-OMe	3.84 s	3.70 s	3.74 s	3.82 s

[a] ^{1}H NMR data were measured at 600 MHz. [b] ^{1}H NMR data were measured at 500 MHz. Proton coupling constants (*J*) in Hz are given in parentheses.

Table S6. ^{13}C NMR Data (δ) for Compounds **1a**, **2a**(**4a**), **5a**–**7a** in Different Solvents[a]

no.	**1a**(*Erythro*)		**2a**(**4a**,*Erythro*)		**5a**(*Erythro*)			**6a**(*Threo*)			**7a**(*Threo*)		
	Me_2CO-d_6	CD_3OD	Me_2CO-d_6	CD_3OD	Me_2CO-d_6	CD_3OD	$CDCl_3$	Me_2CO-d_6	CD_3OD	$CDCl_3$	Me_2CO-d_6	CD_3OD	$CDCl_3$
1	133.5	133.8	133.5	133.8	132.9	134.1	131.7	133.8	133.8	131.4	133.7	133.8	131.5
2	111.4	111.7	111.4	111.7	111.4	111.9	109.8	111.4	111.7	109.8	111.4	111.7	109.4
3	146.9	148.8	146.9	148.8	148.0	148.7	146.6	148.0	148.8	146.7	148.0	148.8	146.6
4	145.4	147.2	145.4	147.1	146.7	147.0	145.1	146.8	147.2	145.6	146.6	147.2	145.5
5	115.3	115.8	115.3	115.8	115.1	115.7	114.3	115.1	115.8	114.3	115.2	115.8	114.3
6	120.5	120.8	120.5	120.6	120.2	120.7	120.1	120.3	120.8	120.2	120.3	120.8	120.2
7	**73.7**	**74.0**	**73.8**	**74.0**	**73.8**	**74.1**	**72.8**	**73.8**	**74.0**	**74.0**	**73.3**	**74.2**	**74.0**
8	**88.1**	**87.3**	**88.4**	**87.8**	**86.7**	**86.2**	**87.4**	**88.5**	**87.2**	**89.5**	**87.4**	**87.8**	**89.6**
9	61.7	62.0	61.7	62.0	61.8	62.2	60.8	61.9	61.9	61.1	61.3	61.9	61.0
1′	134.1	133.7	139.1	138.7	132.9	133.1	133.1	133.0	133.2	133.1	137.4	138.2	138.2
2′	114.4	114.6	117.0	117.2	111.0	111.4	108.6	110.8	111.3	109.4	113.5	113.9	112.4
3′	150.2	149.6	153.6	149.5	151.9	151.9	151.6	151.7	151.8	151.2	150.9	151.7	151.1
4′	148.1	147.3	150.1	145.7	148.6	149.0	147.6	149.2	149.3	147.3	147.2	147.6	145.6
5′	118.5	119.3	119.9	120.2	119.4	118.9	119.0	119.7	118.9	120.1	118.7	119.7	121.0
6′	121.0	119.5	121.3	120.8	120.5	121.0	120.8	120.5	120.8	120.8	121.5	122.0	121.3
7′	129.7	128.4	32.3	32.5	129.6	128.5	128.1	129.7	128.6	128.2	32.3	32.7	31.8
8′	129.8	131.5	35.5	35.5	129.8	131.5	130.5	129.8	131.4	130.5	35.3	35.6	34.2
9′	63.3	63.8	61.7	62.3	63.3	63.8	63.6	63.3	63.8	63.6	61.5	62.2	62.1
3-OMe	56.2	56.4	56.2	56.4	56.2	56.3	56.0	56.2	56.3	55.9	56.1	56.3	55.9
3′-OMe					56.3	56.5	56.0	56.3	56.6	56.0	56.2	56.5	56.0
$\Delta\delta_{C8–C7}$	**14.4**	**13.3**	**14.6**	**13.8**	**12.9**	**12.1**	**14.6**	**14.7**	**13.2**	**15.5**	**14.1**	**13.6**	**15.6**

[a] ^{13}C NMR data (δ) were measured at 150 MHz. The assignments were based on DEPT, ^{1}H-^{1}H COSY, HMQC, and HMBC experiments.

Table S7. ^{13}C NMR Data (δ) for Compounds **2** and **5**–**7** in Different Solvents[a]

no.	**2**(*Erythro*)	**5**(*Erythro*)				**6**(*Threo*)				**7**(*Threo*)			
	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD
1	134.2	134.9	133.1	134.8	134.1	135.3	132.6	134.1	133.8	135.4	133.0	134.1	133.8
2	111.7	112.6	111.4	112.2	111.9	112.9	111.0	111.9	111.7	113.7	111.0	111.9	111.7
3	148.8	149.9	146.9	148.7	148.7	150.1	147.0	148.5	148.8	150.0	147.0	148.5	148.8
4	147.0	147.2	145.5	147.7	147.0	147.4	145.8	147.6	147.2	147.3	145.4	147.6	147.2
5	115.9	117.7	114.5	116.2	115.7	118.1	114.7	116.1	115.8	117.9	114.6	116.1	115.8
6	120.9	122.6	119.5	120.4	120.8	122.6	119.0	120.6	120.7	122.5	119.0	120.7	120.8
7	**73.4**	**75.4**	**71.6**	**73.7**	**74.1**	**75.4**	**70.9**	**73.3**	**74.0**	**75.3**	**71.0**	**73.5**	**74.1**
8	**87.1**	**86.4**	**83.7**	**86.3**	**86.2**	**86.1**	**84.3**	**87.2**	**87.1**	**86.4**	**84.8**	**87.8**	**87.7**
9	61.7	64.4	60.1	61.9	62.2	63.6	60.1	61.8	61.9	63.6	60.1	61.8	61.9
1′	138.3	133.6	129.5	131.4	132.8	133.4	129.6	131.2	132.9	139.1	134.8	136.3	138.2
2′	120.2	114.2	109.9	111.0	111.4	113.9	109.8	110.7	111.3	115.6	112.9	113.5	114.1
3′	149.7	152.0	149.7	151.3	151.9	151.9	149.6	151.0	151.7	151.7	149.5	151.0	151.7
4′	147.9	150.0	147.9	149.3	149.1	150.1	148.2	149.6	149.4	148.1	146.4	147.7	147.6
5′	120.4	119.3	115.4	117.6	118.8	118.2	115.3	117.5	118.7	118.7	116.0	118.4	119.6
6′	124.4	123.9	119.3	120.8	121.0	122.9	119.4	120.2	121.0	123.8	120.2	121.2	122.1
7′	32.4	136.4	131.4	132.5	133.6	136.3	131.4	132.3	133.6	33.6	31.1	32.1	32.7
8′	35.3	126.1	124.0	125.0	125.2	126.2	124.1	124.9	125.3	33.5	31.2	32.2	32.7
9′	62.2	73.2	68.7	70.2	70.8	73.2	68.7	70.0	70.9	72.3	67.9	69.0	69.9
1″	103.7	103.8	102.1	104.1	103.2	103.9	102.1	104.0	103.3	105.2	103.0	104.9	104.5
2″	75.1	76.0	73.5	75.5	75.1	76.0	73.5	75.3	75.2	76.0	73.5	75.3	75.2
3″	77.9	78.7	76.7	78.8	78.0	78.7	76.7	78.6	78.0	78.7	76.7	78.5	78.0
4″	71.5	72.5	70.1	71.9	71.7	72.5	70.1	71.7	71.7	72.5	70.0	71.7	71.7
5″	78.2	78.8	76.9	78.9	78.1	78.8	76.9	78.6	78.1	78.7	76.8	78.6	78.1
6″	62.6	63.6	61.1	63.0	62.8	63.6	61.1	62.8	62.8	63.6	61.1	62.8	62.8
3-OMe	56.5	58.2	55.4	56.0	56.3	58.5	55.4	55.8	56.3	58.5	55.4	55.8	56.4
3′-OMe		58.6	55.6	56.0	56.5	58.7	55.6	55.8	56.5	58.6	55.6	56.0	56.6
$\Delta\delta_{C8-C7}$	**13.7**	**11.0**	**12.1**	**12.6**	**12.1**	**10.7**	**13.4**	**13.9**	**13.1**	**11.1**	**13.8**	**14.3**	**13.6**

[a] ^{13}C NMR data (δ) were measured at 125 MHz. The assignments were based on DEPT, ^{1}H-^{1}H COSY, HMQC, and HMBC experiments.

Table S8. ^{1}H NMR Data (δ) for Compounds **10** and **11** in Different Solvents[a]

no.	**10** (*Erythro*)				**11** (*Threo*)			
	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD
2,6	6.82 s	6.64 s	7.28 s	6.68 s	6.81 s	6.63 s	7.16 s	6.65 s
7	**4.82 d (6.0)**	**4.63 d (4.4)**	**5.53 d (4.0)**	**4.72 d (4.4)**	**4.80 (overlap)**	**4.53 d (6.0)**	**5.35 d (7.6)**	**4.63 d (6.4)**
8	4.08 m	3.75 m	4.70 m	3.86 m	4.07 m	3.61 m	4.42 m	3.76 m
9a	3.78 dd (11.2,2.8)	3.42 dd (11.2,4.4)	4.35 brd (11.6)	3.58 dd (12.0,4.8)	3.73 brd (11.6)	3.34 dd (11.2,3.6)	4.13 m	3.51 dd (11.6,3.6)
9b	3.72 dd (11.2.5.6)	3.29 dd (11.2,4.8)	4.25 dd (11.6,3.6)	3.52 dd (12.0,3.2)	3.50 dd (11.6,5.6)	3.19 dd (11.2,6.0)	3.93 m	3.35 dd (11.6,5.6)
1′	4.27 d (8.0)	4.25 d (8.0)	5.23 d (7.6)	4.27 d (7.6)	4.43 d (7.2)	4.23 d (7.6)	5.28 d (7.6)	4.31 d (7.2)
2′	3.26 dd (8.0,8.0)	3.00 dd (8.8,8.0)	4.08 dd (8.0,7.6)	3.18 dd (8.4,7.6)	3.37 m	3.04 dd (8.4,7.6)	4.13 m	3.16 dd (8.0,7.2)
3′	3.37 m	3.10 dd (8.8,8.8)	4.21 m	3.25 dd (8.4,8.0)	3.37 m	3.12 dd (8.4,8.0)	4.21 m	3.25 dd (8.8,8.0)
4′	3.37 m	3.02 dd (8.8,8.8)	4.23 m	3.28 dd (8.4,8.0)	3.37 m	3.05 dd (8.4,8.0)	4.23 m	3.27 dd (8.8,8.8)
5′	3.37 m	3.10 m	3.96 m	3.20 m	3.37 m	3.08 m	3.93 m	3.18 m
6′a	3.90 brd (11.6)	3.66 dd (11.6,1.2)	4.51 brd (11.2)	3.78 brd (12.0)	3.90 brd (12.0)	3.64 brd (12.0)	4.49 brd (11.6)	3.76 brd (11.6)
6′b	3.76 dd (11.6,6.0)	3.38 dd (11.6,5.2)	4.32 dd (11.2,5.6)	3.59 dd (12.0,4.8)	3.70 brd (12.0)	3.39 dd (12.0,5.6)	4.31 dd (11.6,5.2)	3.59 dd (11.6,5.6)
OMe	3.89 s	3.73 s	3.75 s	3.80 s	3.90 s	3.73 s	3.73 s	3.80 s

[a] ^{1}H NMR data were measured at 400 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S9. ^{1}H NMR Data (δ) for Compounds **12** and **13** in Different Solvents[a]

no.	**12** (*Erythro*)[b]			**13** (*Threo*)			
	D_2O	DMSO-d_6	C_5D_5N	D_2O	DMSO-d_6	C_5D_5N	CD_3OD
2	7.11 s	6.97 d (1.2)	7.60 brs	7.09 s	6.95 d (1.6)	7.50 s	6.95 d (1.6)
5	6.95 s	6.67 d (8.0)	7.21 d (8.0)	6.95 s	6.68 d (8.0)	7.21 d (8)	6.71 d (8.0)
6	6.95 s	6.73 dd (8.0,1.2)	7.33 brd (8.0)	6.95 s	6.73 dd (8.0,1.6)	7.27 brd (8.0)	6.76 dd (8.0,1.6)
7	**4.83 d (6.0)**	**4.63 d (4.0)**	**5.50 d (4.0)**	**4.83 d (6.8)**	**4.53 d (6.4)**	**5.33 d (7.6)**	**4.61 d (6.8)**
8	4.07 m	3.72 m	4.66 m	4.05 m	3.60 m	4.42 m	3.74 m
9a	3.78 m	3.39 dd (11.2,5.2)	4.28 dd (11.6,4.0)	3.67 dd (12.0,3.2)	3.33 brd (11.2)	4.09 brd (11.6)	3.48 dd (12.0,3.2)
9b	3.72 m	3.25 dd (11.2,4.8)	4.19 dd (11.6,5.6)	3.47 dd (12.0,5.6)	3.17 dd (11.2,5.6)	3.91 dd (11.6,6.4)	3.32 dd (12.0,6.0)
1′	4.33 d (8.0)	4.26 d (7.6)	5.22 d (7.6)	4.50 d (7.6)	4.26 d (8.0)	5.31 d (7.6)	4.34 d (7.6)
2′	3.26 dd (8.0,7.6)	3.00 dd (8.8,7.6)	4.08 dd (8.0,7.6)	3.37 dd (8.8,7.6)	3.04 dd (8.0,8.0)	4.15 dd (8.0,7.6)	3.20 dd (8.0,7.6)
3′	3.38 m	3.13 dd (8.8,8.8)	4.19 m	3.40 m	3.13 dd (8.8,8.0)	4.23 dd (8.8,8.0)	3.26 dd (8.0,8.0)
4′	3.38 m	3.02 dd (8.8,8.4)	4.21 m	3.40 m	3.06 dd (8.8,8.0)	4.25 dd (8.8,8.0)	3.28 dd (8.0,8.0)
5′	3.38 m	3.10 m	3.96 m	3.40 m	3.09 m	3.98 m	3.20 m
6′a	3.90 brd (12.0)	3.64 brd (12.0)	4.50 dd (11.6,2.0)	3.90 brd (12.0)	3.65 brd (11.6)	4.52 brd (11.2)	3.78 dd (12.0,2.0)
6′b	3.73 m	3.39(12.0,6.4)	4.32 brd (11.6,5.6)	3.73 dd (12.0,4.0)	3.40 dd (11.6,6.0)	4.34 dd (11.2,5.2)	3.59 dd (12.0,5.2)
OMe	3.91 s	3.74 s	3.71 s	3.90 s	3.74 s	3.70 s	3.81 s

[a] ^{1}H NMR data were measured at 400 MHz. Proton coupling constants (J) in Hz are given in parentheses.

[b] The ^{13}C NMR data of **12** in CD_3OD were not measured due to a loss of the compound.

Table S10. ^{13}C NMR Data (δ) for Compounds **10**–**13** in Different Solvents[a]

no.	**10** (*Erythro*)				**11** (*Threo*)				**12** (*Erythro*)[b]			**13** (*Threo*)			
	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	D_2O	DMSO-d_6	C_5D_5N	CD_3OD
1	134.8	131.9	133.2	132.9	134.6	131.8	132.3	132.8	135.4	132.7	134.1	135.2	132.5	133.2	133.5
2	107.6	104.6	105.7	105.2	107.2	104.3	105.7	105.2	114.2	111.5	112.1	113.9	111.0	111.7	111.5
3	150.6	147.4	148.9	149.1	150.6	147.5	149.0	149.2	150.3	147.0	148.4	150.3	147.2	148.6	149.0
4	136.5	134.3	136.7	135.9	136.5	134.5	137.2	136.2	147.6	145.4	147.3	147.6	145.6	147.8	147.4
5	150.6	147.4	148.9	149.1	150.6	147.5	149.0	149.2	118.2	114.6	115.9	118.3	114.8	116.1	116.0
6	107.6	104.6	105.7	105.2	107.2	104.3	105.7	105.2	123.0	119.4	120.6	122.8	119.4	120.9	120.8
7	**75.6**	**72.6**	**74.4**	**74.6**	**76.3**	**72.3**	**74.9**	**75.0**	**75.3**	**72.5**	**74.2**	**76.4**	**72.3**	**74.8**	**75.0**
8	**85.7**	**84.6**	**86.6**	**85.5**	**87.0**	**86.3**	**89.4**	**87.2**	**86.0**	**84.9**	**86.7**	**87.5**	**86.7**	**89.6**	**87.7**
9	64.1	61.1	62.8	62.6	64.4	61.3	63.0	63.2	64.0	61.1	62.7	64.4	61.3	63.0	63.2
1′	104.9	103.1	105.0	104.0	105.7	103.8	106.2	105.2	105.0	103.3	105.1	105.9	104.0	106.2	105.3
2′	76.1	73.8	75.6	75.3	76.1	73.9	75.7	75.5	76.1	73.9	75.5	76.1	73.9	75.7	75.5
3′	78.4	76.4	78.3	77.8	78.5	76.3	78.4	77.9	78.4	76.4	78.2	78.5	76.3	78.5	77.9
4′	72.4	70.1	71.6	71.5	72.4	70.1	71.6	71.4	72.4	70.1	71.5	72.4	70.1	71.6	71.4
5′	78.8	76.9	78.6	78.1	78.8	76.8	78.6	78.1	78.7	76.9	78.6	78.7	76.8	78.6	78.0
6′	63.5	61.0	62.5	62.6	63.5	61.1	62.5	62.5	63.5	61.0	62.5	63.5	61.0	62.5	62.5
OMe	59.2	55.9	56.3	56.7	59.2	55.9	56.3	56.7	58.8	55.6	55.8	58.8	55.5	55.8	56.4
$\Delta\delta_{C8–C7}$	**10.1**	**12.0**	**12.2**	**10.9**	**10.7**	**14.0**	**14.5**	**12.2**	**10.7**	**12.4**	**12.5**	**11.1**	**14.4**	**14.8**	**12.7**

[a] ^{13}C NMR data were measured at 125 MHz. The assignments were based on DEPT, ^{1}H-^{1}H COSY, HMQC, and HMBC experiments.
[b] The ^{13}C NMR data of **12** in CD_3OD were not measured due to the loss of the compound.

Table S11. ^{1}H NMR Data (δ) for Compounds **10a** and **11a** in Different Solvents[a]

no.	**10a** (*Erythro*)				**11a** (*Threo*)			
	Me_2CO-d_6+D_2O	CD_3OD	C_5D_5N	DMSO-d_6	Me_2CO-d_6+D_2O	CD_3OD	C_5D_5N	DMSO-d_6
2,6	6.69 s	6.64 s	7.21 s	6.57 s	6.67 s	6.63 s	7.19 s	6.55 s
7	4.55 d (5.6)	4.46 d (6.0)	5.32 d (5.2)	4.32 brs	4.53 d (6.0)	4.47 d (6.4)	5.33 d (6.4)	4.37 d (5.2)
8	3.68 m	3.67 m	4.51 m	3.48 m	3.62 m	3.61 m	4.42 m	3.44 m
9a	3.59 dd (11.2,4.0)	3.60 dd (11.2,4.0)	4.47 dd (11.2,4.0)	3.46 dd (11.2,4.0)	3.46 dd (11.2,4.4)	3.44 dd (11.2,4.0)	4.27 dd (11.2,4.0)	3.30 dd (11.2,4.8)
9b	3.54 dd (11.2,6.4)	3.53 dd (11.2,6.4)	4.45 dd (11.2,6.4)	3.36 dd (11.2,6.4)	3.35 dd (11.2,6.0)	3.31 dd (11.2,6.0)	4.12 dd (11.2,6.4)	3.13 dd (11.2,6.4)
OMe	3.80 s	3.79 s	3.71 s	3.72 s	3.78 s	3.79 s	3.72 s	3.70 s

[a] ^{1}H NMR data were measured at 400 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S12. ^{1}H NMR Data (δ) for Compounds **12a** and **13a** in Different Solvents.[a]

no.	**12a** (*Erythro*)				**13a** (*Threo*)			
	Me_2CO-d_6+D_2O	CD_3OD	C_5D_5N	DMSO- d_6	Me_2CO-d_6+D_2O	CD_3OD	C_5D_5N	DMSO- d_6
2	6.98 brs	6.95 d (1.6)	7.50 brs	6.87 brs	6.99 brs	6.93 brs	7.48 brs	6.88 brs
5	6.72 d (8.0)	6.70 d (8.0)	7.24 d (8.0)	6.65 d (8.0)	6.74 d (8.0)	6.69 d (8.0)	7.24 d (8.0)	6.66 d (8.0)
6	6.79 brd (8.0)	6.76 dd (8.0,1.6)	7.37 brd (8.0)	6.68 brd (8.0)	6.79 brd (8.0)	6.74 brd (8.0)	7.33 brd (8.0)	6.68 brd (8.0)
7	4.54 d (6.0)	4.47 d (6.4)	5.30 d (6.0)	4.31 d (6.0)	4.53 d (6.0)	4.46 d (6.4)	5.30 d (6.0)	4.36 d (5.2)
8	3.68 m	3.68 m	4.50 m	3.48 m	3.61 m	3.61 m	4.39 m	3.42 m
9a	3.60 dd (11.2,4.0)	3.60 dd (11.2,4.0)	4.45 dd (11.2,4.0)	3.43 dd (11.2,4.4)	3.46 dd (11.2,4.0)	3.42 dd (11.2,4.0)	4.22 dd (11.2,4.0)	3.29 dd (10.8,4.4)
9b	3.56 dd (11.2,6.4)	3.52 dd (11.2,6.4)	4.40 dd (11.2,6.4)	3.33 dd (11.2,5.6)	3.34 dd (11.2,6.0)	3.29 dd (11.2,6.4)	4.09 dd (11.2,6.4)	3.11 dd (10.8,6.4)
OMe	3.79 s	3.80	3.65 s	3.72 s	3.80 s	3.80 s	3.66 s	3.72 s

[a] ^{1}H NMR data were measured at 400 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S13. ^{13}C NMR data (δ) for compounds **10a**–**13a** in Different Solvents[a]

no.	**10a** (*Erythro*)				**11a** (*Threo*)				**12a** (*Erythro*)				**13a** (*Threo*)			
	Me_2CO-d_6	CD_3OD	C_5D_5N	DMSO-d_6	Me_2CO-d_6	CD_3OD	C_5D_5N	DMSO-d_6	Me_2CO-d_6	CD_3OD	C_5D_5N	DMSO-d_6	Me_2CO-d_6	CD_3OD	C_5D_5N	DMSO-d_6
1	134.0	134.1	134.7	133.5	133.9	134.1	134.5	133.4	135.1	134.8	135.3	134.4	134.9	134.8	135.1	134.3
2	105.3	105.5	105.8	104.5	105.1	105.2	105.5	104.0	111.2	111.9	111.9	111.3	111.1	111.5	111.7	110.9
3	148.3	149.0	148.8	147.3	148.4	149.1	149.0	147.4	147.9	148.8	148.4	146.9	148.0	148.9	148.5	146.9
4	136.0	136.0	136.7	134.1	136.0	136.0	136.2	134.1	146.5	147.0	147.3	145.2	146.7	147.1	147.4	145.2
5	148.3	149.0	148.8	147.3	148.4	149.1	149.0	147.4	115.1	115.7	116.0	114.5	115.2	115.9	116.1	114.6
6	105.3	105.5	105.8	104.5	105.1	105.2	105.5	104.0	120.5	121.0	120.9	119.6	120.3	120.7	120.5	119.0
7	**76.2**	**76.3**	**76.5**	**74.0**	**75.0**	**75.6**	**75.1**	**72.9**	**76.106**	**76.1**	**76.2**	**73.9**	**74.8**	**75.4**	**74.9**	**72.7**
8	**76.4**	**76.7**	**77.0**	**75.3**	**77.3**	**77.6**	**77.8**	**75.8**	**76.106**	**76.7**	**77.0**	**75.3**	**77.3**	**77.6**	**77.8**	**75.8**
9	64.4	64.5	65.0	62.9	64.0	64.3	64.4	62.5	64.4	64.5	65.0	63.1	63.9	64.3	64.3	62.4
OMe	56.5	56.7	56.2	55.9	56.6	56.8	56.3	55.8	56.1	56.3	55.7	55.5	56.2	56.3	55.8	55.5
$\Delta\delta_{C8\text{-}C7}$	**0.2**	**0.4**	**0.5**	**1.3**	**2.3**	**2.0**	**2.7**	**2.9**	**0.000**	**0.6**	**0.8**	**1.4**	**2.5**	**2.2**	**2.9**	**3.1**

[a] ^{13}C NMR data were measured at 125 MHz. The assignments were based on DEPT, ^{1}H-^{1}H COSY, HMQC, and HMBC experiments.

Table S14. ^{1}H NMR data (δ) for compounds **14**–**16** in Different Solvents[a]

no.	**14** (*Erythro*)				**15** (*Threo*)				**16** (*Threo*)			
	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD
2	7.08 s	6.89 d (1.2)	7.45 brs	6.95 brs	7.08 s	6.94 d (2.0)	7.53 brs	6.95 d (2.0)	6.75 s	6.62 s	7.28 s	6.65 s
5	6.93 s	6.67 d (8.0)	7.20 d (8.0)	6.69 d (8.0)	6.96 s	6.68 d (8.0)	7.21 d (8.0)	6.69 d (8.0)				
6	6.93 s	6.71 dd (8.0,1.2)	7.29 brd (8.0)	6.76 brd (8.0)	6.96 s	6.75 dd (8.0,2.0)	7.36 brd (8.0)	6.77 dd (8.0,2.0)	6.75 s	6.62 s	7.28 s	6.65 s
7	**4.65 d (7.2)**	**4.36 d (4.0)**	**5.26 d (6.4)**	**4.50 d (6.4)**	**4.68 d (6.8)**	**4.48 d (5.2)**	**5.35 d (5.6)**	**4.51 d (6.4)**	**4.65 d (6.8)**	**4.48 d (5.2)**	**5.42 d (5.6)**	**4.54 d (6.0)**
8	4.07 m	3.67 m	4.58 m	3.85 m	4.02 m	3.63 m	4.44 m	3.78 m	3.98 m	3.64 m	4.45 m	3.77 m
9a	4.13 dd (12.0,1.2)	3.86 dd (10.4,2.8)	4.73 dd (10.4,2.4)	3.99 dd (10.4,2.4)	3.87 dd (11.2,3.6)	3.73 dd (10.0,4.0)	4.58 dd (10.4,4.0)	3.78 dd (10.4,3.6)	3.83 brd (10.8)	3.74 dd (10.4,3.6)	4.61 dd (10.4,3.6)	3.81 dd (10.4,3.2)
9b	3.74 dd (12.0,6.0)	3.39 dd (10.4,6.4)	4.38 dd (10.4,6.4)	3.55 dd (10.4,7.2)	3.47 dd (11.2,6.0)	3.13 dd (10.0,6.0)	4.00 dd (10.4,6.0)	3.75 dd (10.4,2.0)	3.44 dd (10.8,6.4)	3.12 dd (10.4,6.4)	3.98 dd (10.4,5.2)	3.76 dd (10.4,2.0)
1′	4.48 d (8.0)	4.13 d (7.6)	5.01 d (8.0)	4.23 d (7.6)	4.35 d (7.6)	4.06 (7.6)	4.95 d (7.6)	4.14 d (8.0)	4.32 d (8.0)	4.05 d (7.6)	4.96 d (7.6)	4.15 d (8.0)
2′	3.34 dd (8.0,8.4)	2.96 dd (8.0,7.6)	4.09 dd (8.0,8.0)	3.16 dd (8.0,7.6)	3.32 dd (8.0,7.6)	2.96 dd (8.8,7.6)	4.07 dd (8.0,7.6)	3.16 dd (8.4,8.0)	3.28 dd (8.4,8.0)	2.97 dd (8.4,7.6)	4.08 dd (8.4,7.6)	3.16 dd (8.8,8.0)
3′	3.40 dd (8.4,8.4)	3.13 dd (8.8,8.0)	4.22 dd (8.4,8.0)	3.21 dd (8.0,8.0)	3.38 dd (8.0,8.0)	3.11 dd (8.8,8.8)	4.20 dd (8.8,8.0)	3.22 dd (8.4,8.4)	3.34 dd (8.4,8.4)	3.11 dd (8.4,8.4)	4.21 dd (8.8,8.4)	3.22 dd (8.8,8.4)
4′	3.51 dd (8.8,8.4)	3.05 dd (8.8,8.0)	4.24 dd (8.8,8.4)	3.30 dd (8.0,8.0)	3.49 dd (8.0,8.0)	3.05 dd (8.8,8.0)	4.23 dd (8.8,8.8)	3.29 dd (8.4,8.4)	3.45 dd (8.4,8.4)	3.04 dd (8.4,8.4)	4.25 dd (8.8,8.4)	3.28 dd (8.4,8.4)
5′	3.44 m	3.06 m	3.90 m	3.20 m	3.38 m	3.05 m	3.88 m	3.16 m	3.34 m	3.04 m	3.90 m	3.17 m
6′a	3.92 brd (11.2)	3.64 brd (11.2)	4.47 brd (12.0)	3.78 brd (12.4)	3.88 dd (12.4,1.2)	3.63 brd (11.6)	4.47 dd (12.0,2.0)	3.77 brd (12.0)	3.84 brd (12.0)	3.62 brd (12.0)	4.50 brd (11.6)	3.76 brd (12.0)
6′b	3.72 dd (11.2,6.0)	3.39 dd (11.2,4.8)	4.34 dd (12.0,5.2)	3.60 dd (12.4,5.2)	3.70 dd (12.4,4.4)	3.40 dd (11.6,4.4)	4.32 dd (12.0,5.6)	3.58 dd (12.0,5.2)	3.66 dd (12.4,4.0)	3.40 brd (12.0)	4.35 dd (11.6,5.2)	3.58 dd (12.0,5.2)
OMe	3.90 s	3.73 s	3.65 s	3.81 s	3.90 s	3.73 s	3.70 s	3.80 s	3.85 s	3.72 s	3.77 s	3.79 s

[a] ^{1}H NMR data were measured at 400 MHz. Proton coupling constants (J) in Hz are given in parentheses.

Table S15. ^{13}C NMR data (δ) for Compounds **14–16** in Different Solvents[a]

no.	**14** (*Erythro*)				**15** (*Threo*)				**16** (*Tthreo*)			
	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD	D_2O	DMSO-d_6	C_5D_5N	CD_3OD
1	135.7	134.1	135.1	135.1	135.6	133.9	135.1	134.5	135.1	133.0	134.2	133.7
2	114.1	111.2	111.9	112.3	113.7	111.1	111.9	111.6	107.4	104.3	105.5	105.2
3	150.2	147.0	148.3	149.3	150.1	146.9	148.3	148.9	150.7	147.4	148.9	149.1
4	147.6	145.3	147.1	147.5	147.3	145.3	147.1	147.2	136.7	134.3	136.7	136.0
5	118.2	114.7	115.8	116.3	118.1	114.7	116.0	115.9	150.7	147.4	148.9	149.1
6	123.2	119.4	120.7	121.4	122.6	119.1	120.4	120.7	107.4	104.3	105.5	105.2
7	**76.3**	**73.6**	**75.3**	**76.0**	**76.6**	**72.6**	**74.3**	**75.4**	**77.10**	**72.8**	**74.7**	**75.6**
8	**76.3**	**73.9**	**75.6**	**76.1**	**76.9**	**74.0**	**76.1**	**76.2**	**77.17**	**74.0**	**76.3**	**76.2**
9	74.0	71.5	73.1	73.0	73.7	70.9	72.3	72.4	73.9	70.8	72.2	72.3
1′	105.7	103.8	105.7	105.5	105.5	103.6	105.5	105.0	105.7	103.6	105.6	105.0
2′	76.1	73.7	75.2	75.7	75.8	73.6	75.2	75.2	76.1	73.6	75.3	75.2
3′	78.5	76.4	78.3	78.4	78.3	76.4	78.3	77.9	78.5	76.5	78.5	77.9
4′	72.5	70.0	71.4	72.0	72.3	69.9	71.5	71.5	72.6	70.0	71.6	71.5
5′	78.7	76.9	78.5	78.5	78.5	76.8	78.4	77.9	78.7	76.8	78.6	77.9
6′	63.6	61.0	62.4	63.1	63.3	61.0	62.5	62.6	63.6	61.0	62.6	62.6
OMe	58.8	55.6	55.7	56.9	58.6	55.6	55.9	56.4	59.3	55.9	56.4	56.8
$\Delta\delta_{C8–C7}$	**0.0**	**0.3**	**0.3**	**0.1**	**0.3**	**1.4**	**1.8**	**0.8**	**0.07**	**1.2**	**1.6**	**0.6**

[a] ^{13}C NMR data were measured at 125 MHz. The assignments were based on DEPT, ^{1}H-^{1}H COSY, HMQC, and HMBC experiments.