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Analytical Data and References of Compounds from Table 1

Entry #	^{1}H-NMR [a] (300 MHz, δ [ppm])	^{13}C-NMR [a] (75.5 MHz, δ [ppm])	IR (film, ν [cm^{-1}])	MS (m/z, rel. intensity)	Elemental Analysis
1[1]	δ = 2.66-2.81 (m, 2 H), 3.25 (d, ^3J = 3.5 Hz, OH), 3.71 (s, 3 H), 5.12 (m, 1 H), 7.25-7.37 (m, 5 H)	δ = 43.6, 52.3, 70.6, 126.1, 128.3, 129.0, 142.9, 173.2			
2[2]	δ = 1.26 (t, ^3J = 7.1 Hz, 3 H),2.70 (m, 2 H), 3.28 (d, ^3J = 2.1 Hz, 1H, OH), 4.19 (q, ^3J = 7.1 Hz, 2 H), 5.13 (m, 1 H), 7.27-7.39 (m, 5 H)				
3[3]					
4	δ = 1.00 (t, ^3J = 14.6 Hz, 3 H), 1.5 (m, 2 H), 2.48 (s, 1 H, OH), 3.52 (dd, ^3J = 9.3 Hz, ^3J = 2.1 Hz, 1 H), 3.70 (s, 3 H)	δ = 11.6, 20.8, 22.6, 25.0, 47.6, 52.3, 78.8, 178.6	3680-3100, 2960, 1870, 1730, 1465, 1435	(GC/EI) 161 (1.0, [M+H]$^+$), 131 (13.0, [M-C_2H_5]$^+$), 102 (100.0, [M-$C_2H_3O_2$]$^+$), 87 (30.8, [M-C_4H_9O]$^+$)	Calcd. for $C_8H_{16}O_3$ (160.2): C: 60.0 H: 10.1 Found: C: 60.2 H: 9.9
5[4]	δ = 0.82 (d, ^3J = 6.7 Hz, 3 H), 0.97 (d, ^3J = 6.9 Hz, 3 H), 1.19 (s, 3 H), 1.38 (s, 3 H), 1.80 - 1.88 (m, 1 H), 2.88 (d, ^3J = 8.6 Hz, 1H, OH), 3.40 (dd, ^3J = 8.6 Hz, ^3J = 3.6 Hz), 3.69 (s, 3 H)	δ = 16.2, 21.7, 22.4, 23.8, 29.4, 46.0, 51.9, 81.7, 178.6			

6[5]					
7	δ = 1.27 (s, 3 H), 1.28 (s, 3 H), 2.24 (d, ^3J = 5.3 Hz, 1 H, 1H, OH), 2.54 (dd, ^2J = 13.6 Hz, ^3J = 10.3 Hz, 1 H), 2.81 (dd, ^2J = 13.6 Hz, ^3J = 2.1 Hz, 1 H), 3.69 (s, 3 H), 3.92 (ddd, ^3J = 10.3 Hz, ^3J = 5.3 Hz, ^3J = 2.1 Hz, 1 H), 7.19-7.33 (m, 5 H)	δ = 20.7, 21.8, 38.4, 47.2, 52.0, 126.4, 128.5, 129.3, 129.7, 139.1, 177.7 (see also copy of spectrum)	3620-3400, 3030, 2980, 2950, 1720, 1495, 1470, 1453, 1435	(GC/EI): 223 (3.6, $[M+H]^+$), 204 (26.6, $[M-H_2O]^+$), 145 (31.7, $[204-C_2H_3O_2]^+$), 131 (100.0, $[M-C_7H_7]^+$), HRMS calcd. for $C_{13}H_{19}O_3^+$: $[M+H^+]$ 223.1334, Found: 223.1287	Calcd for C_{13} H_{18} O_3 (222.3): C: 70.3 H: 8.2 Found: C: 71.1 H: 7.9

[a] All NMR spectra were recorded in $CDCl_3$ with tetramethylsilane as internal standard

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(2) Maruoka, K.; Hashimoto, S.; Kitagawa, Y.; Yamamoto, H.; Nozaki, H. *J. Am. Chem. Soc.* **1977**, *99*, 7705.

(3) Orsini, F.; Pelizzoni, F.; Ricca, G. *Tetrahedron Lett.* **1982**, *23*, 3945.

(4) Aben, R. W.; Scheeren, J. W. *Synthesis* **1978**, 400.

(5) Orsini, F.; Pelizzoni, F.; Pulici, M.; Vallarino, L. M. *J. Org. Chem.* **1994**, *59*, 1.

References and selected ^{1}H NMR Data of Compounds from Table 2

Entry #	^{1}H-NMR (300 MHz, δ [ppm])[a]
***anti*-8 (9, 10)**[1]	0.86-1.02 (m, 6 H), 1.21 (d, ^3J = 7.1 Hz, 1 H), 1.67-1.76 (m, 1 H), 2.67 (dq, ^3J = 7.1 Hz, ^3J = 5.7 Hz, 1 H), 2.90 (br, OH), 3.39 (dd, ^3J = 5.7 Hz, ^3J = 5.7 Hz, 1 H), 3.71 (s, 3 H)
***syn*-8 (9, 10)**[1]	0.86-1.02 (m, 6 H), 1.19 (d, ^3J = 6.9 Hz, 1 H), 1.67-1.76 (m, 1 H), 2.67 (dq, ^3J = 7.9 Hz, ^3J = 6.9 Hz, 1 H), 2.90 (br, OH), 3.58 (dd, ^3J = 7.9 Hz, ^3J = 3.8 Hz, 1 H), 3.71 (s, 3 H)
***anti*-11**[2]	δ = 1.02 (d, ^3J = 7.2 Hz, 3 H), 1.44 (s, 9 H), 2.71 (dd, ^3J = 8.0 Hz, ^3J = 7.2 Hz, 1 H), 3.21 (d, ^3J = 4.6 Hz, 1 H, OH), 4.70 (dd, ^3J = 8.0 Hz, ^3J = 4.6 Hz, 1 H), 7.25-7.35 (m, 5 H)
***syn*-11**[2]	δ = 1.11 (d, ^3J = 7.1 Hz, 3 H), 1.37 (s, 9 H), 2.70 (dd, ^3J = 7.1 Hz, ^3J = 4.3 Hz, 1 H), 3.10 (d, ^3J = 3.1 Hz, 1 H, OH), 5.02 (dd, ^3J = 4.3 Hz, ^3J = 3.1 Hz, 1 H), 7.25-7.35 (m, 5 H)
12, 13, 14[1]	
***anti*-15**[1]	δ = 0.76 (d, ^3J = 6.3 Hz, 3 H), 0.86 (d, ^3J = 6.7 Hz, 3 H), 1.79 (ddd, ^3J = 7.0 Hz, ^3J = 6.7 Hz, ^3J = 6.3 Hz, 1 H), 2.35 (br, OH), 2.57 (dd, ^3J = 7.0 Hz, ^3J = 6.2 Hz), 3.57 (s, 3 H), 4.95 (m, 1 H), 7.24-7.36 (m, 5 H)
***syn*-15**[1]	δ = 0.79 (d, ^3J = 8.7 Hz, 3 H), 0.88 (d, ^3J = 6.9 Hz, 3 H), 2.12 (ddd, ^3J = 8.7 Hz, ^3J = 6.9 Hz, ^3J = 4.6 Hz, 1 H), 2.35 (br, OH), 2.74 (dd, ^3J = 8.1 Hz, ^3J = 4.6 Hz), 3.49 (s, 3 H), 4.97 (m, 1 H), 7.24-7.36 (m, 5 H)
***anti*-16**[1]	δ = 3.18 (d, ^3J = 4.0 Hz, 1 H, OH), 3.67 (s, 3 H), 3.88 (d, ^3J = 9.3 Hz, 1 H), 5.17 (dd, ^3J = 9.3 Hz, ^3J = 4.0 Hz, 1H), 7.07-7.33 (m, 10 H)
***syn*-16**[1]	δ = 2.69 (d, ^3J = 2.1 Hz, 1 H, OH), 3.51 (s, 3 H), 3.88 (d, ^3J = 7.5 Hz, 1 H), 5.29 (dd, ^3J = 7.5 Hz, ^3J = 2.1 Hz, 1H), 7.07-7.33 (m, 10 H)

17[3]	
18-I (anti ?)	δ = 0.69 (d, ^3J = 6.9 Hz, 3 H), 0.90 (d, ^3J = 6.9 Hz, 3 H), 1.64 (s, 3 H), 3.14 (d, ^3J = 6.0 Hz, 1 H, OH), 3.66 (s, 3 H), 4.17 (dd, ^3J = 6.0 Hz, ^3J = 4.0 Hz, 1 H), 7.24 - 7.38 (m, 5 H)
18-II (syn ?)	δ = 0.77 (d, ^3J = 6.6 Hz, 3 H), 0.92 (d, ^3J = 6.6 Hz, 3H), 1.62 (s, 3 H), 1.73 - 1.80 (m, 1 H), 2.02 (d, ^3J = 4.3 Hz, 1 H, OH), 3.65 (s, 3 H), 4.06 (dd, ^3J = 4.9 Hz, ^3J = 4.3 Hz, 1 H), 7.25-7.49 (m, 5 H)
19-I (anti ?)	δ = 1.16 (s, 3 H), 1.19 (s, 3 H), 1.25 (d, ^3J = 7.0 Hz, 3 H), 2.78 (d, 7.7 Hz, OH), 2.92 (dq, ^3J = 7.0 Hz, 3J = 7.0 Hz, 1 H), 3.57 (s, 3 H), 3.84 (dd, ^3J = 7.7 Hz, ^3J = 7.0 Hz, 1 H), 7.17 - 7.28 (m, 5 H)
19-II (syn ?)	δ = 1.23 (s, 3 H), 1.27 (s, 3 H), 1.33 (d, ^3J = 7.1 Hz, 3 H), 2.87 (br, OH), 2.98 (dq, ^3J = 7.1 Hz, ^3J = 4.2 Hz, 1 H), 3,26 (s, 3 H), 3.68 (br, 1 H), 7.19 - 7.28 (m, 5 H)
20[4]	

[a] All NMR spectra were recorded in $CDCl_3$ with tetramethylsilane as internal standard

(1) Canceill, J.; Basselier, J.-J.; Jacques, J. *Bull. Soc. Chim. Fr.* **1967**, 1024.

(2) Heathcock, C. H.; Pirrung, M. C.; Sohn, J. E. *J. Org. Chem.* **1979**, *44*, 4294.

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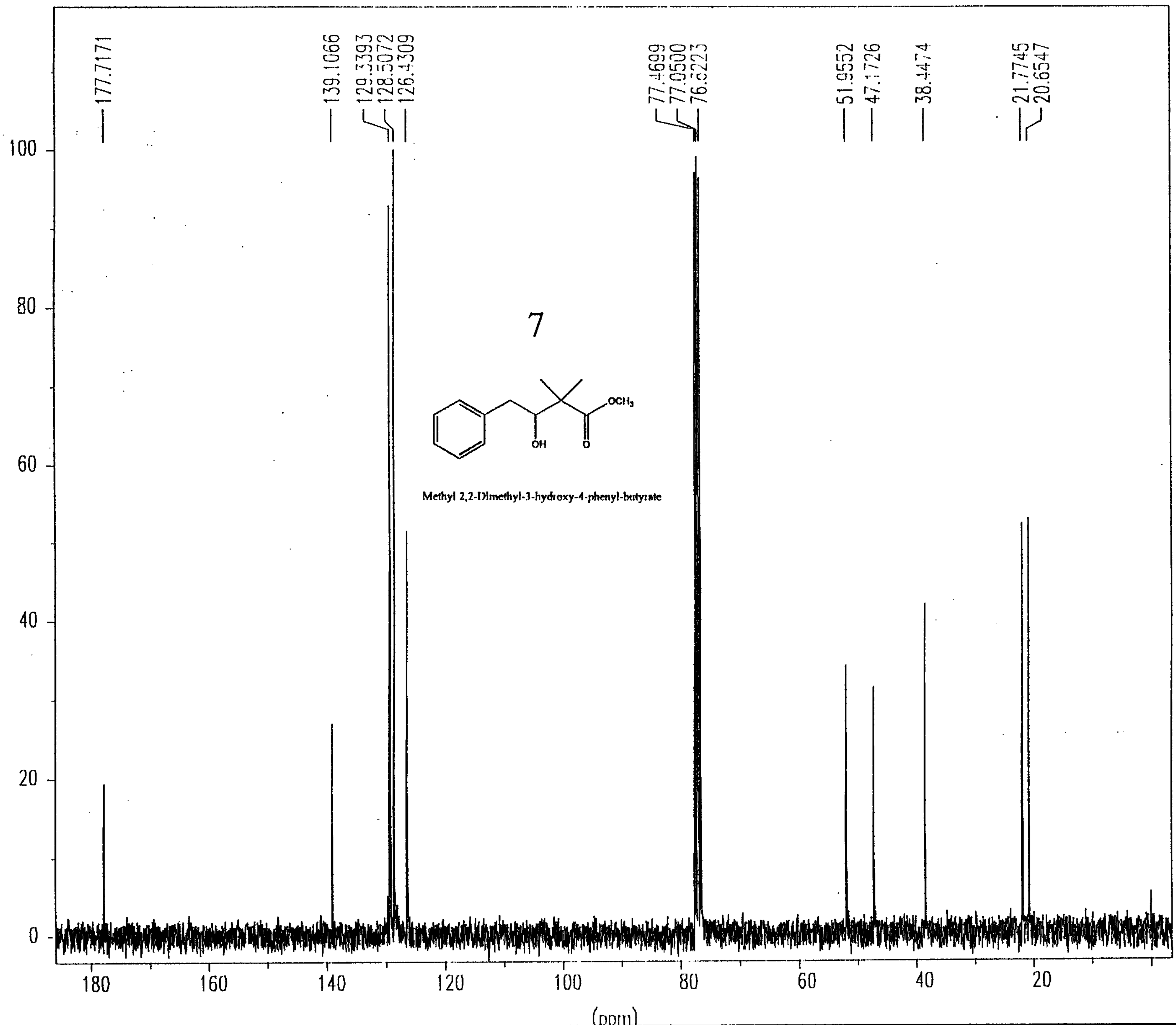
(4) Matsumoto, T.; Hosoda, Y.; Mori, K.; Fukui, K. *Bull. Chem. Soc. Jpn.* **1972**, *45*, 3156.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128.3072
126.4309
77.4699
77.0500
76.6223
51.9552
47.1726
38.4474
21.7745
20.6547
100
80
60
40
20
0
7
OCH3
OH
O
Methyl 2,2-Dimethyl-3-hydroxy-4-phenyl-butyrate
180
160
140
120
100
80
60
40
20
(ppm)

Suppl.