Supporting Information

On the Structure of Passifloricin A: Asymmetric Synthesis of the δ-Lactones of 2*Z*,5*S*,7*R*,9*S*,11*S*- and 2*Z*,5*R*,7*R*,9*S*,11*S*-Tetrahydroxyhexacos-2-enoic Acid

Jorge García-Fortanet,[1a] **Juan Murga,**[1a] **Miguel Carda,**[1a,*] **and J. Alberto Marco**[1b,*]

[a]*Departamento de Química Inorgánica y Orgánica, Universidad Jaume I, E-12080 Castellón, Spain, and* [b]*Departamento de Química Orgánica, Universidad de Valencia, E-46100 Burjassot, Valencia, Spain,*

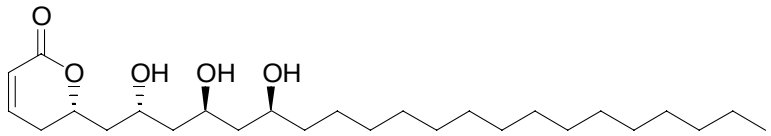
For Senior Authors (J.A. Marco):

-Mailing address: as above[b]
-Phone No.: 34-96-3544337
-Fax No.: 34-96-3544328
-E-Mail: alberto.marco@uv.es

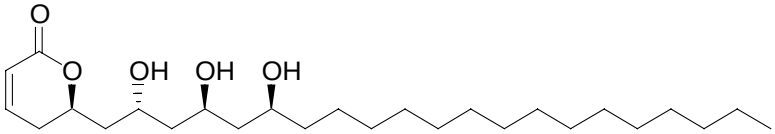
(M. Carda)

-Mailing address: as above[a]
-Phone No.: 34-964-728242
-Fax No.: 34-964-728214
-E-Mail: mcarda@qio.uji.es

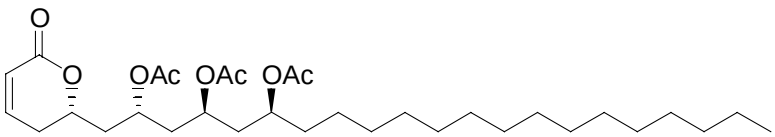
General Features. NMR spectra were measured at 30ºC in a VARIAN Unity 500 MHz spectrometer. IR spectra were determined as films deposited on NaCl plates.



Amorphous solid; $[\alpha]_D$ −15.8 (*c* 1.4; MeOH); IR (NaCl) 3525, 3350 (br), 2908, 2850, 1702 (br), 1468, 1252, 1018, 807 cm^{-1}; ^1H NMR (500 MHz) δ 6.89 (1H, ddd, J = 9.6, 5, 3.5 Hz), 6.00 (1H, br d, J = 9.6 Hz), 4.68 (1H, m), 4.40 (1H, br s, OH), 4.19 (2H, m), 3.87 (1H, m), 3.75 (1H, br s, OH), 2.44 (2H, m), 2.04 (1H, m), 1.80-1.30 (10H, br m), 1.30-1.20 (24H, br s), 0.87 (3H, t, J = 7 Hz); ^{13}C NMR (125 MHz) δ 164.4 (C), 145.6, 121.2, 76.7, 73.1, 70.2, 65.8 (CH), 43.2, 42.6, 42.0, 38.4, 31.9, 29.7 (several overlapped peaks), 29.6 (several overlapped peaks), 29.5, 29.4, 29.3, 25.4, 22.7 (CH_2), 14.1 (CH_3).

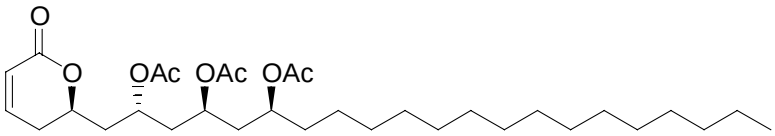


Amorphous solid; $[\alpha]_D$ +16.7 (*c* 1.3; MeOH); IR (NaCl) 3300 (br), 2908, 2851, 1728, 1707, 1470, 1435, 1281, 1046, 809 cm^{-1}; ^1H NMR (500 MHz) δ 6.87 (1H, ddd, J = 9.8, 5, 3.5 Hz), 5.98 (1H, br d, J = 9.8 Hz), 4.74 (1H, br t, J = 9.7 Hz), 4.50 (1H, br s, OH), 4.26 (1H, m), 4.16 (1H, m), 4.00 (1H, br s, OH), 3.82 (1H, m), 3.50 (1H, br s, OH), 2.35 (2H, m), 1.82 (1H, m), 1.72 (1H, m), 1.65-1.30 (8H, br m), 1.30-1.20 (24H, br s), 0.85 (3H, t, J = 7 Hz); ^{13}C NMR (125 MHz) δ 164.9 (C), 145.7, 121.2, 75.1, 73.1, 70.3, 64.1 (CH), 43.6, 42.7, 42.6, 38.3, 31.9, 30.0, 29.7 (several overlapped peaks), 29.6 (several overlapped peaks), 29.3, 25.4, 22.7 (CH_2), 14.1 (CH_3).

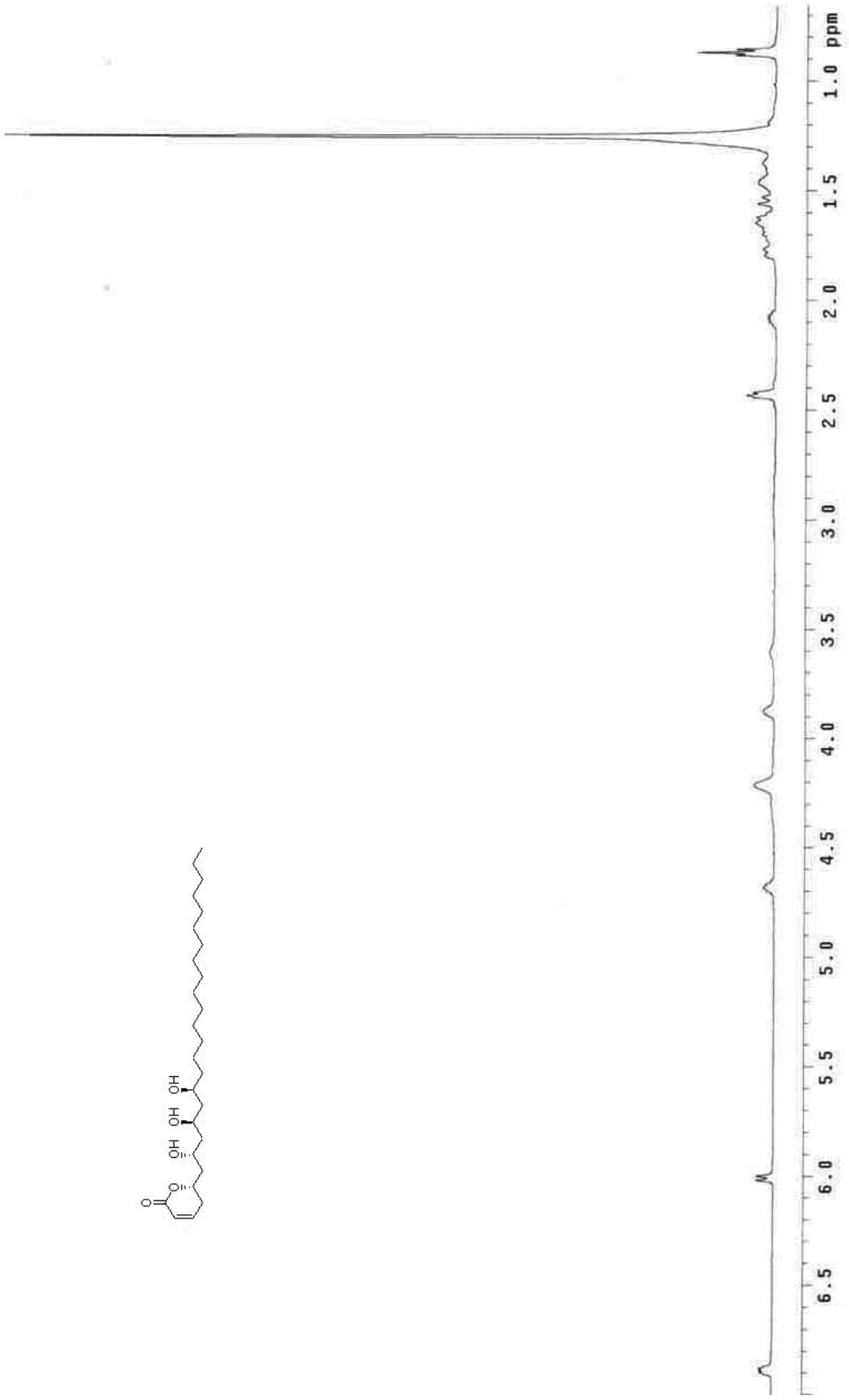


Oil; $[\alpha]_D$ −15.6 (*c* 1.6; $CHCl_3$); IR (NaCl) 1735 (br) cm^{-1}; ^1H NMR (400 MHz) δ 6.85 (1H, ddd, J = 9.7, 6.2, 2.3 Hz), 6.00 (1H, br dd, J = 9.7, 2.5 Hz), 5.08 (1H, m), 4.95 (1H, m), 4.88 (1H, m), 4.46 (1H, m), 2.48 (1H, ddd, J = 18.2, 6.2, 3.8 Hz), 2.28 (1H, ddt, J = 18.2, 11.6, 2.5 Hz), 2.13 (1H, ddd, J = 14.5, 8, 6.3 Hz), 2.04 (6H, s), 2.02 (3H, s), 2.00-1.70 (6H, br m), 1.52 (2H, br m), 1.30-1.20 (25H, br s), 0.87

(3H, t, J = 7 Hz); ^{13}C NMR (100 MHz) δ 170.8, 170.7, 170.5, 163.8 (C), 144.7, 121.5, 74.9, 71.0, 67.2, 66.6 (CH), 40.0, 39.3, 38.8, 34.5, 32.0, 29.7 (several overlapped peaks), 29.6, 29.5, 29.4, 29.3, 25.2, 22.7 (CH_2), 21.2, 21.1, 21.0, 14.1 (CH_3).



Oil; $[\alpha]_D$ +13.2 (*c* 1.8; $CHCl_3$); IR (NaCl) 1735 (br) cm^{-1}; ^{1}H NMR (400 MHz) δ 6.84 (1H, ddd, J = 9.8, 5.5, 3 Hz), 6.00 (1H, ddd, J = 9.8, 2.5, 1.2 Hz), 5.11 (1H, hept, J = 4.5 Hz), 4.93 (1H, m), 4.87 (1H, m), 4.45 (1H, m), 2.35 (2H, m), 2.03 (3H, s), 2.01 (3H, s), 2.00 (3H, s), 1.98 (1H, ddd, J = 14, 8.5, 4.5 Hz), 1.95-1.85 (4H, br m), 1.70 (2H, m), 1.52 (2H, br m), 1.30-1.20 (25H, br s), 0.86 (3H, t, J = 7 Hz); ^{13}C NMR (100 MHz) δ 170.7, 170.5, 170.4, 163.7 (C), 144.6, 121.6, 74.8, 71.0, 67.3, 67.1 (CH), 40.3, 39.3, 39.0, 34.4, 31.9, 29.7 (several overlapped peaks), 29.6, 29.5, 29.4, 29.3, 25.2, 22.7 (CH_2), 21.2 (two carbons), 21.0, 14.1 (CH_3).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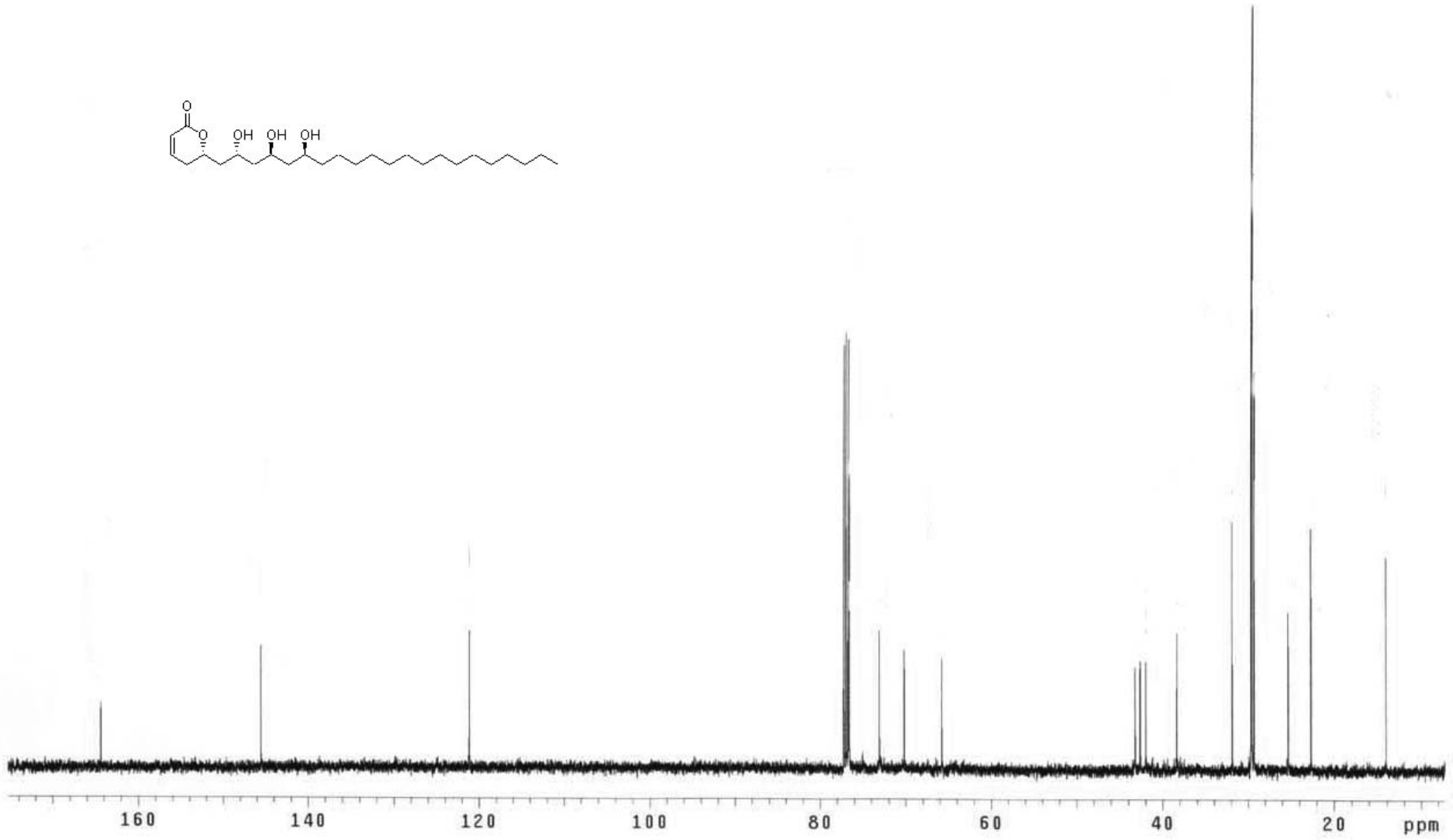
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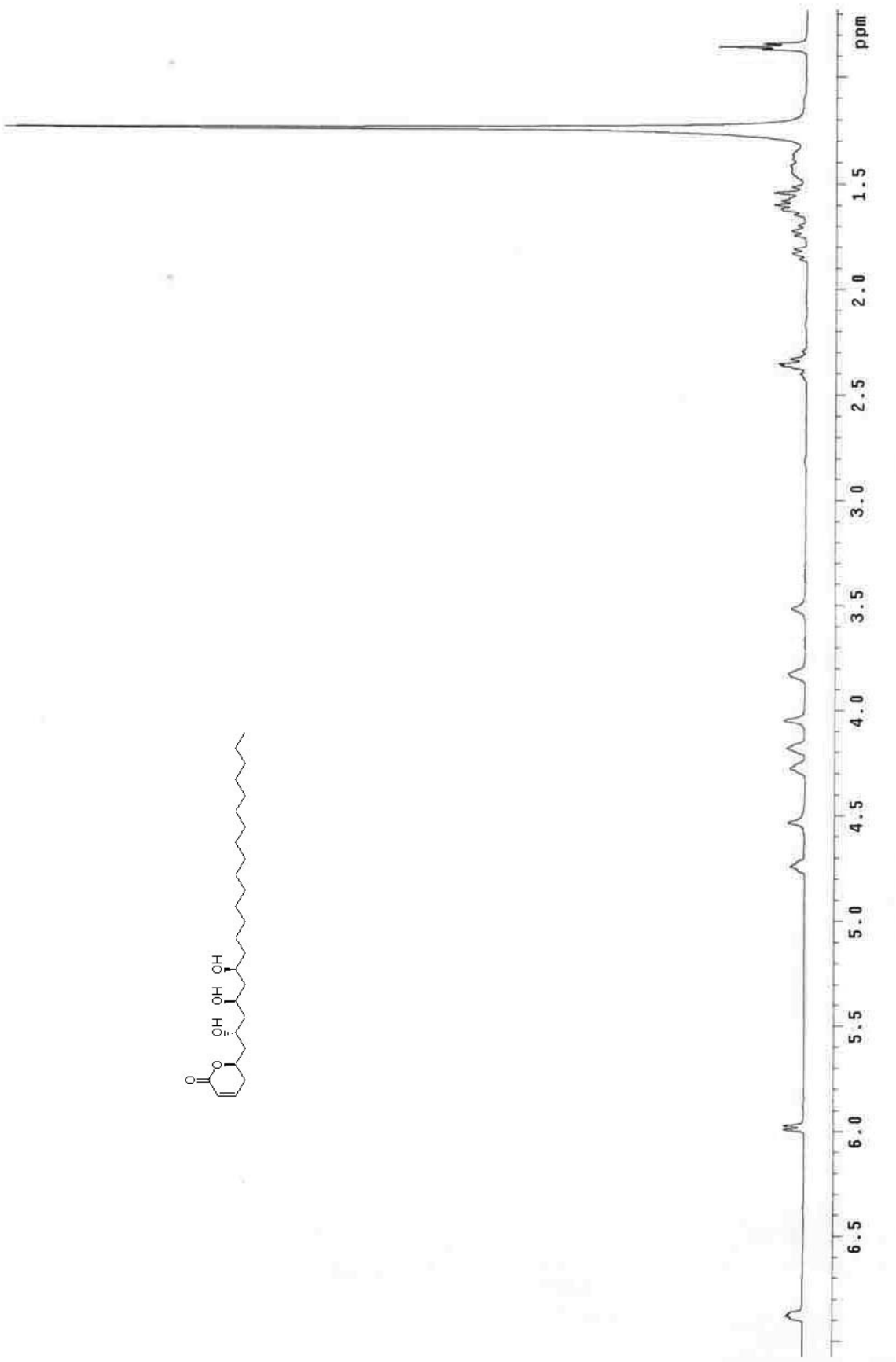
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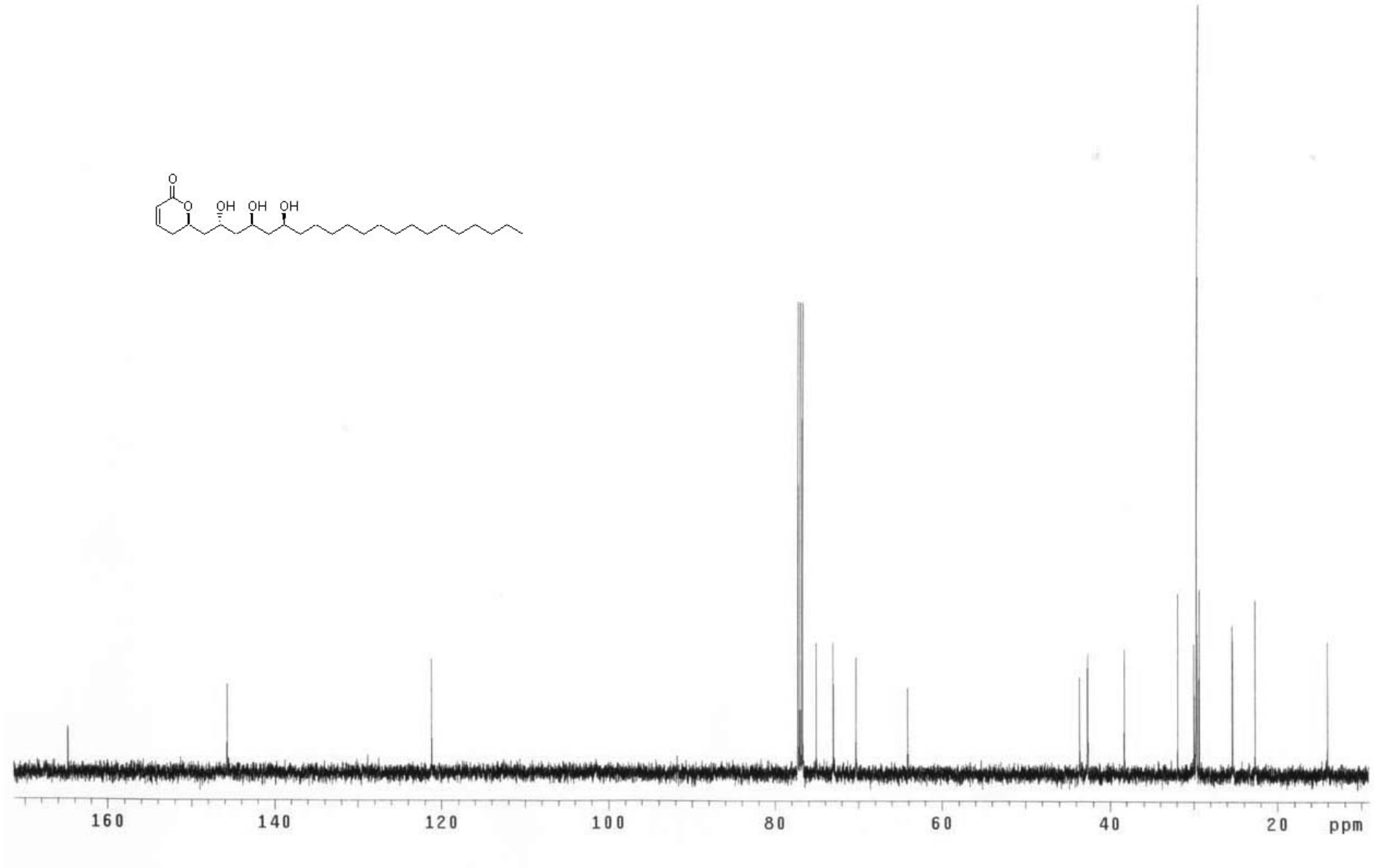
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