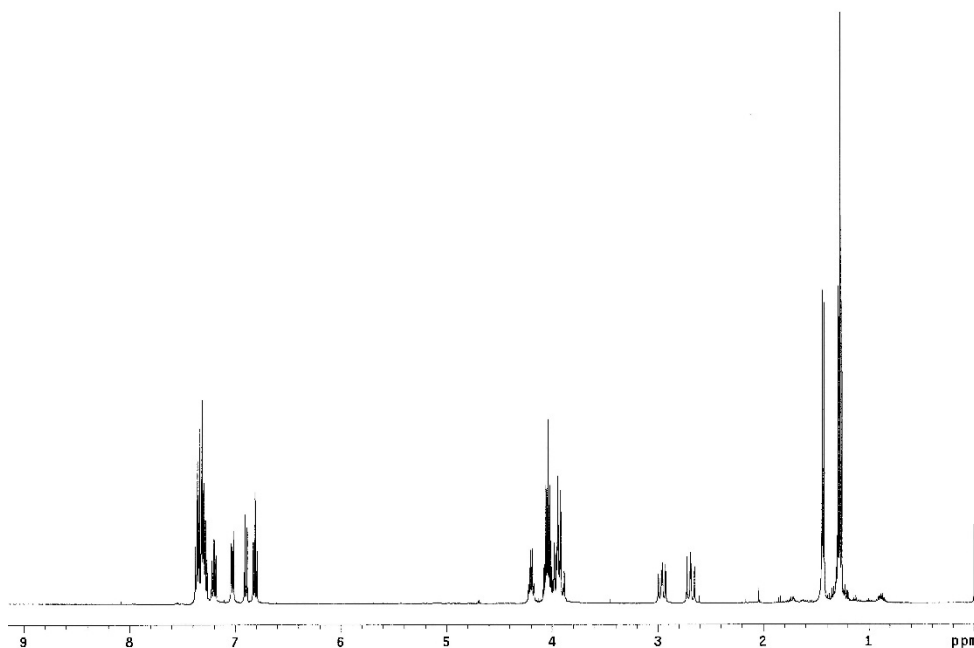
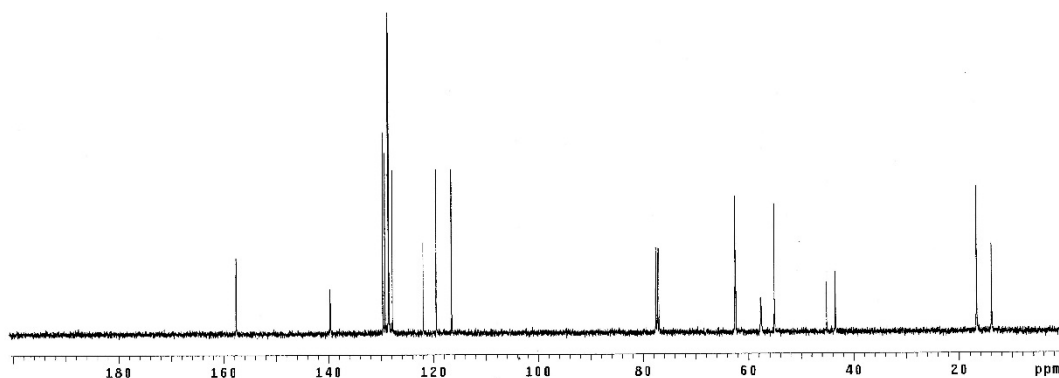


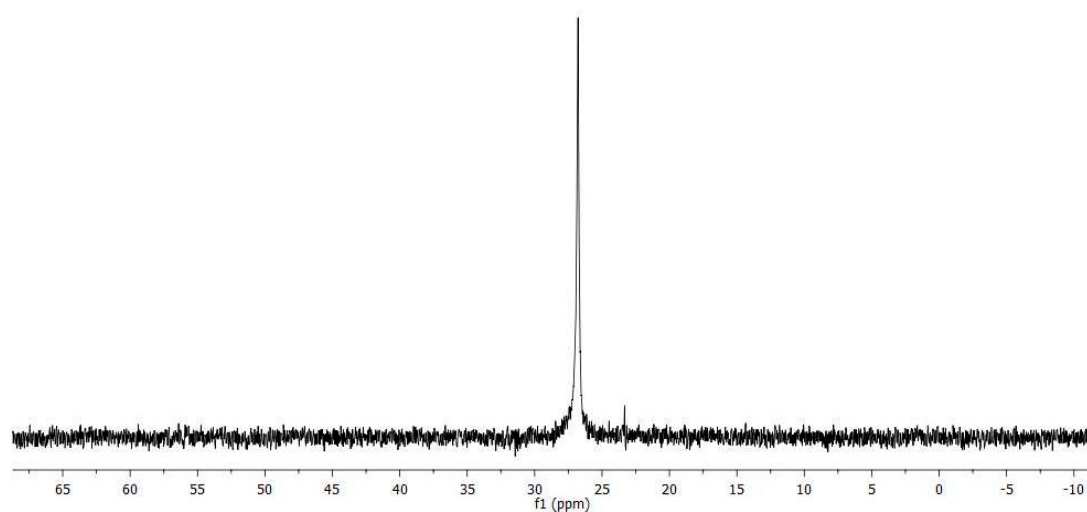
Supplementary Material



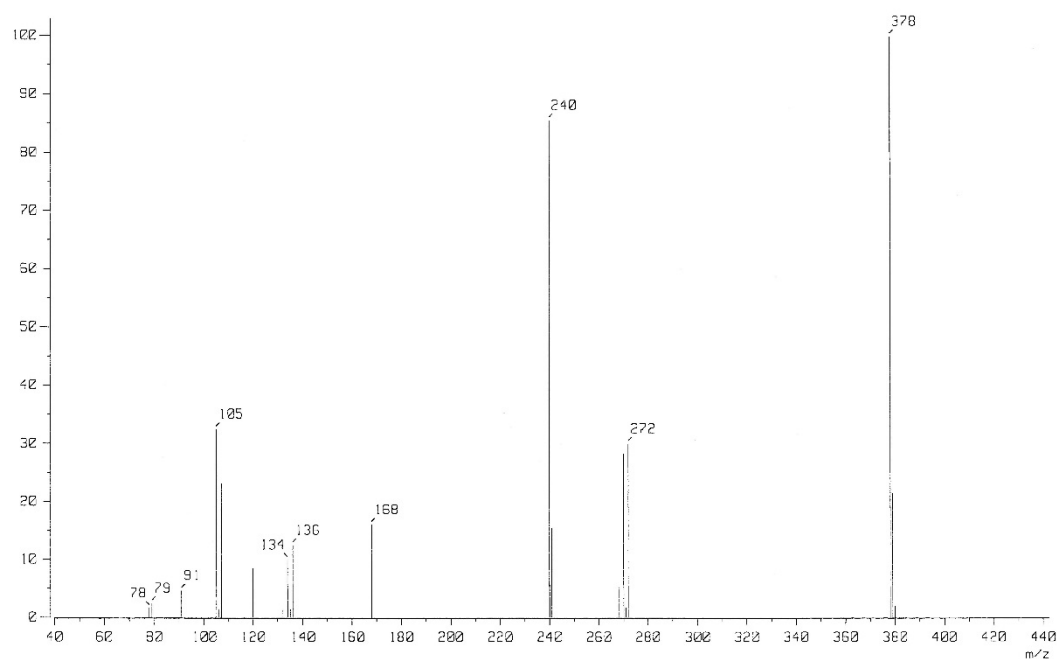
(S)-Diethyl- $\{[(2\text{-hydroxybenzyl})(1\text{-phenylethyl})\text{amino}]\text{methyl}\}$ phosphonate (**10a**). ^1H -NMR (CDCl_3 , 400 MHz): δ 1.27 (t, $J = 6.8$ Hz, 3H), 1.42 (d, $J = 7.2$ Hz, 1H), 2.67 (ABX system, $J = 15.6, 12.4$ Hz, 1H), 2.94 (ABX system, $J = 15.6, 11.6$ Hz, 1H), 3.89 (AB system, $J = 14.0$ Hz, 1H), 3.95 (AB system, $J = 14.0$ Hz, 1H), 4.00–4.07 (m, 4H), 4.19 (q, $J = 7.2$ Hz, 1H), 6.78–7.37 (m, 9H).



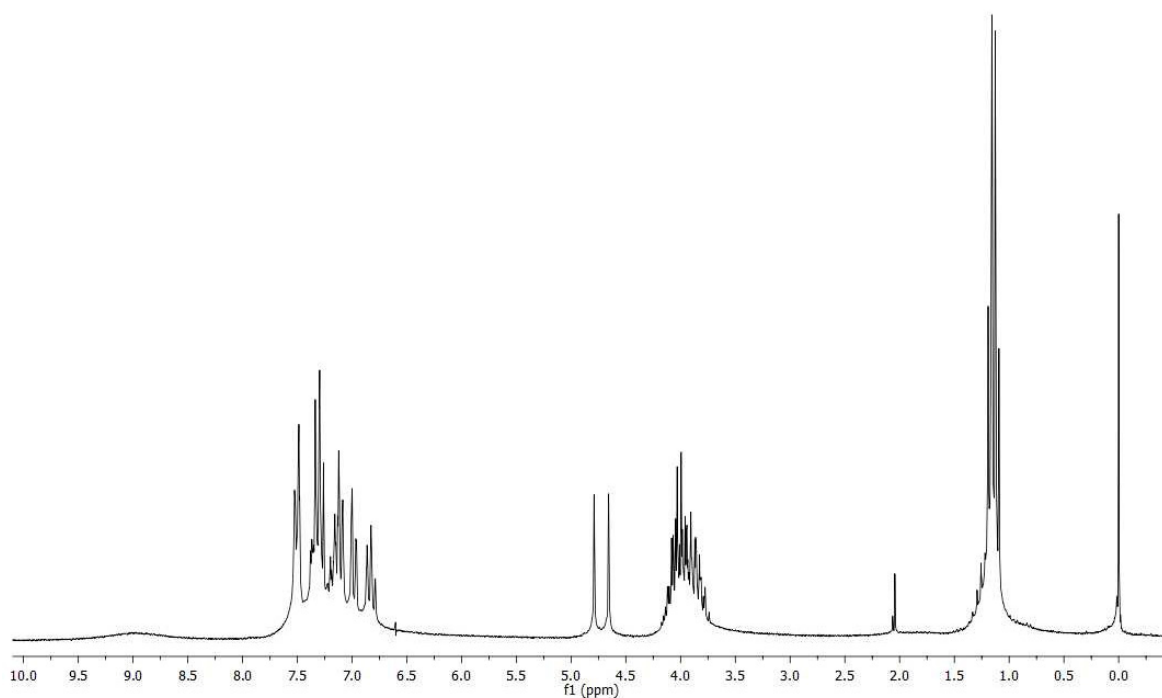
(S)-Diethyl- $\{[(2\text{-hydroxybenzyl})(1\text{-phenylethyl})\text{amino}]\text{methyl}\}$ phosphonate (**10a**). ^{13}C -NMR (CDCl_3 , 100 MHz): δ 13.6, 16.5 (d, $J_{\text{C/P}} = 5.9$ Hz), 44.2 (d, $J_{\text{C/P}} = 163.9$ Hz), 55.0 (d, $J_{\text{C/P}} = 4.4$ Hz), 57.4 (d, $J_{\text{C/P}} = 11.7$ Hz), 62.3 (d, $J_{\text{C/P}} = 5.9$ Hz), 62.4 (d, $J = 5.9$ Hz), 116.5, 119.4, 122.0, 127.8, 128.4, 128.5, 128.6, 129.2, 129.7, 139.7, 157.7.



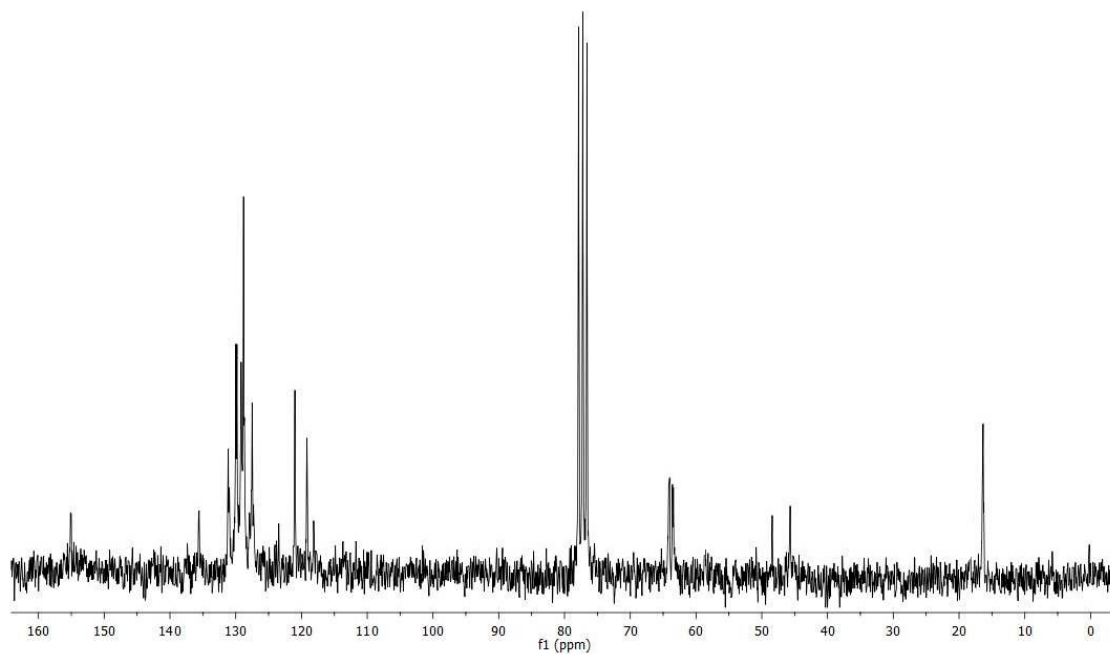
(S)-Diethyl- $\{[(2\text{-hydroxybenzyl})(1\text{-phenylethyl})\text{amino}]\text{methyl}\}$ phosphonate (**10a**). ³¹P-NMR (CDCl₃, 80.95 MHz): δ 26.78.



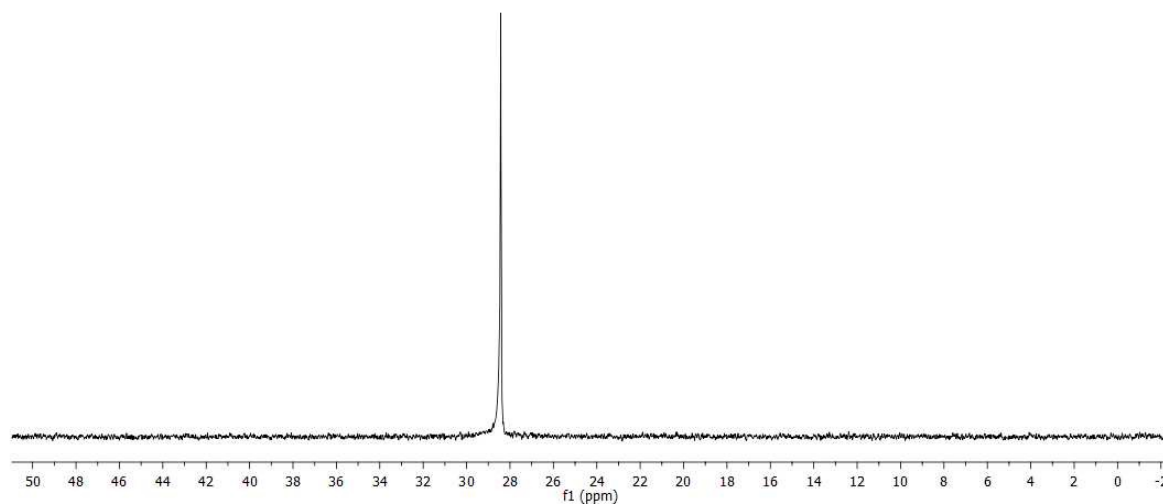
(S)-Diethyl- $\{[(2\text{-hydroxybenzyl})(1\text{-phenylethyl})\text{amino}]\text{methyl}\}$ phosphonate (**10a**). HRMS (CI⁺): found for [M + H]⁺, m/z 378.1819.



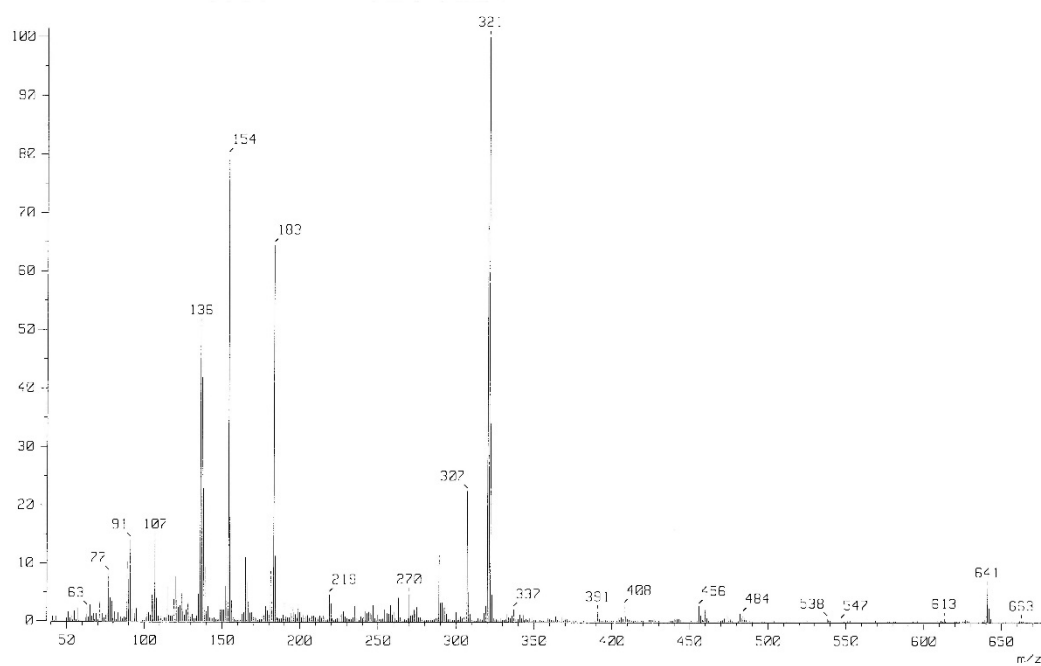
Diethyl-[(2-hydroxyphenyl)(phenyl)methyl]phosphonate (11c). ^1H -NMR (CDCl_3 , 400 MHz): δ 1.12 (t, $J = 7.0$ Hz, 3H), 1.15 (t, $J = 6.8$ Hz, 3H), 3.86–4.08 (m, 4H), 4.72 (AB system, $J_{\text{H/P}} = 26.6$ Hz, 1H), 7.00–7.52 (m, 9H), 8.89 (br, 1H).



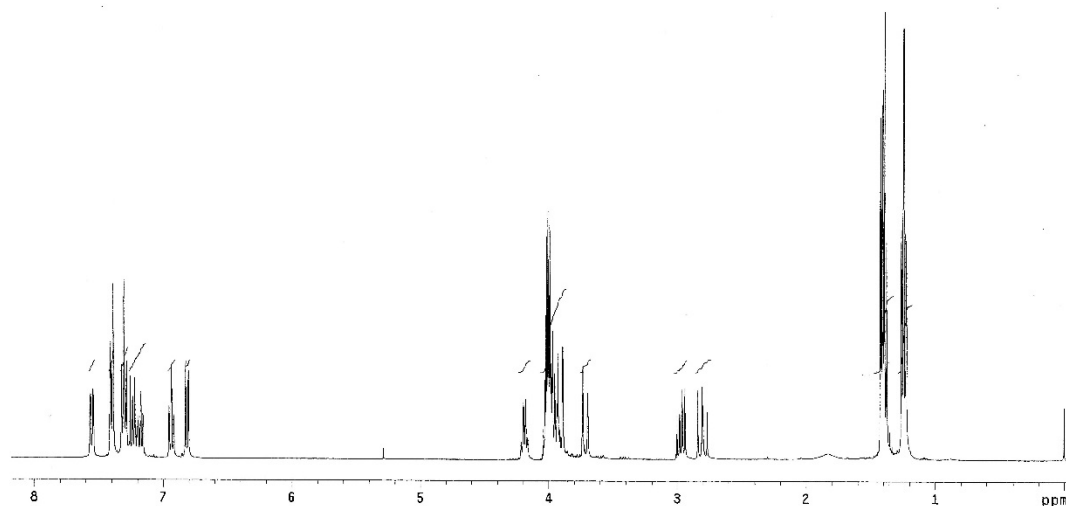
Diethyl-[(2-hydroxyphenyl)(phenyl)methyl]phosphonate (11c). ^{13}C -NMR (CDCl_3 , 100 MHz): δ 16.3, 47.0 (d, $J_{\text{C/P}} = 136.15$ Hz), 63.5 (d, $J_{\text{C/P}} = 7.0$ Hz), 64.0 (d, $J_{\text{C/P}} = 7.4$ Hz), 118.1, 119.1, 121.0, 127.3, 127.5, 128.6, 128.8, 129.1, 129.8 (d, $J_{\text{C/P}} = 8.1$ Hz), 131.0 (d, $J_{\text{C/P}} = 7.7$ Hz), 136.5 (d, $J_{\text{C/P}} = 4.35$ Hz), 155.0 (d, $J_{\text{C/P}} = 5.85$ Hz).



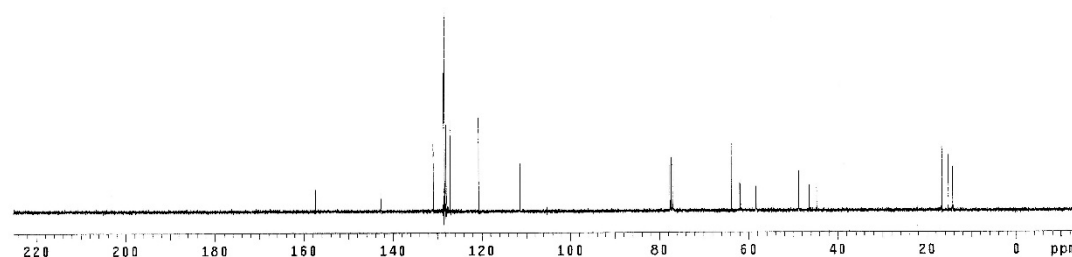
Diethyl-[(2-hydroxyphenyl)(phenyl)methyl]phosphonate (11c). ^{31}P -NMR (CDCl_3 , 80.95 MHz): δ 28.43.



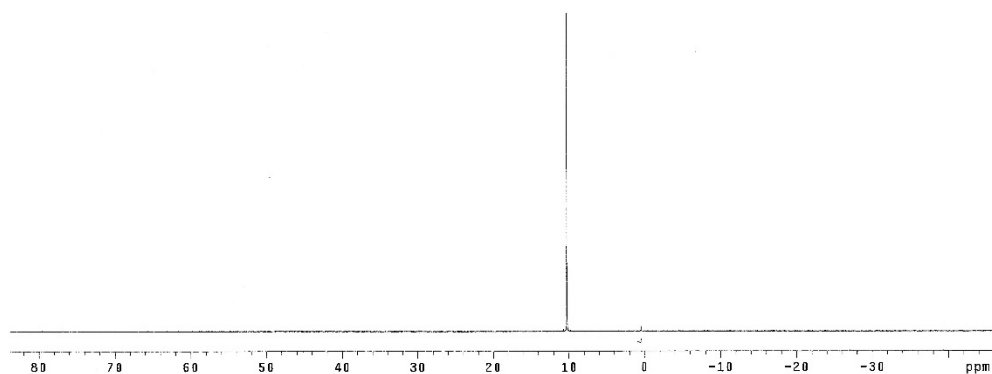
Diethyl-[(2-hydroxyphenyl)(phenyl)methyl]phosphonate (11c). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 321.1033.



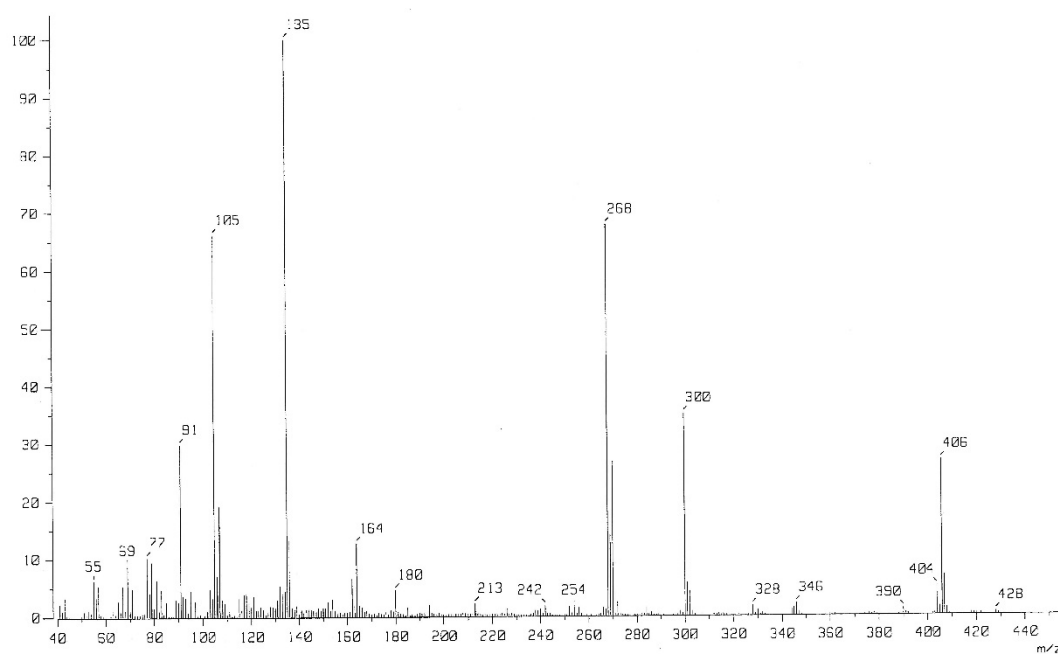
(S)-2,2,2-Triethoxy-4-(1-phenylethyl)-2,3,4,5-tetrahydro-1,4,2λ⁵-benzoxazaphosphepine (**12a**). ¹H-NMR (CDCl₃, 400 MHz): δ 1.24 (t, *J* = 6.8 Hz, 3H), 1.25 (t, *J* = 6.8 Hz, 3H), 1.39 (t, *J* = 6.8 Hz, 3H), 1.41 (d, *J* = 7.2 Hz, 3H), 2.80 (ABX system, *J*_{H/P} = 15.4, 12.6 Hz, 1H), 2.97 (ABX system, *J*_{H/P} = 15.6, 8.4 Hz, 1H), 3.71 (AB system, *J* = 14.8 Hz, 1H), 3.91 (AB system, *J* = 14.8 Hz, 1H), 3.96 (q, *J* = 7.2 Hz, 2H), 4.00 (q, *J* = 6.8 Hz, 2H), 4.01 (q, *J* = 7.0 Hz, 2H), 4.19 (q, *J* = 6.8 Hz, 1H) 6.80–7.56 (m, 9H).



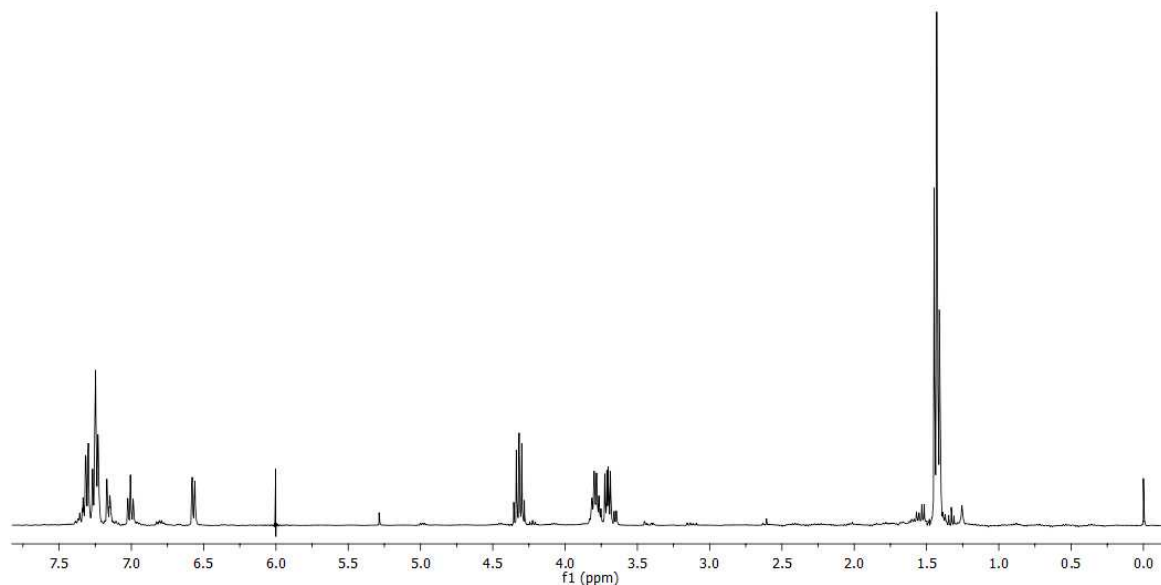
(S)-2,2,2-Triethoxy-4-(1-phenylethyl)-2,3,4,5-tetrahydro-1,4,2λ⁵-benzoxazaphosphepine (**12a**). ¹³C-NMR (CDCl₃, 100 MHz): δ 14.1, 15.1, 16.60, 16.66, 45.5 (d, *J*_{C/P} = 162.5 Hz), 48.6 (d, *J*_{C/P} = 7.3 Hz), 58.3 (d, *J*_{C/P} = 10.2 Hz), 61.7 (d, *J*_{C/P} = 7.3 Hz), 61.8 (d, *J* = 7.3 Hz), 63.7, 111.3, 120.5, 126.9, 127.8, 128.1, 128.4, 130.7, 142.6, 157.2.



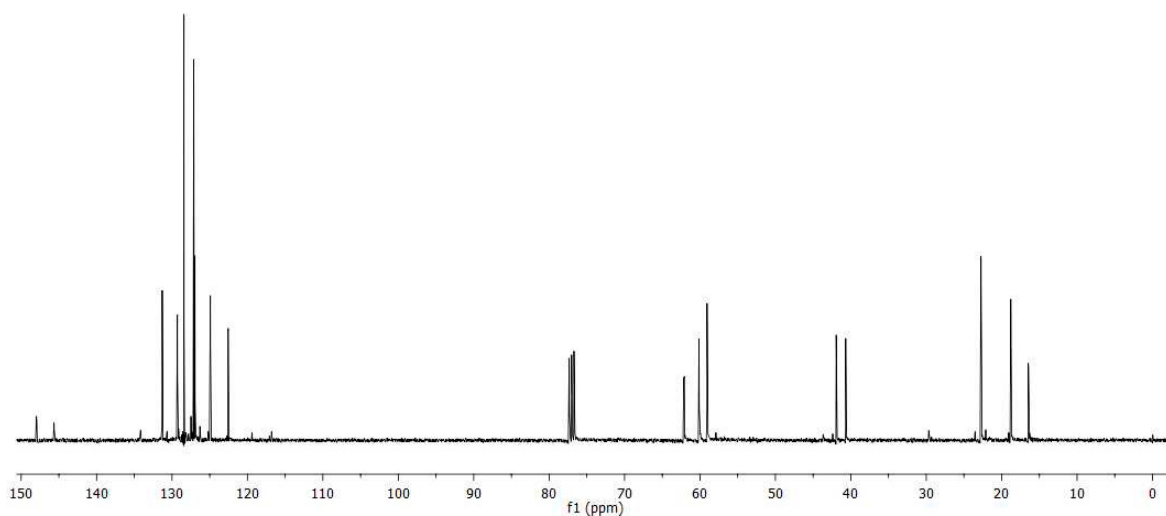
(S)-2,2,2-Triethoxy-4-(1-phenylethyl)-2,3,4,5-tetrahydro-1,4,2 λ^5 -benzoxazaphosphepine (**12a**). ^{31}P -NMR (CDCl_3 , 80.95 MHz): δ 10.24.



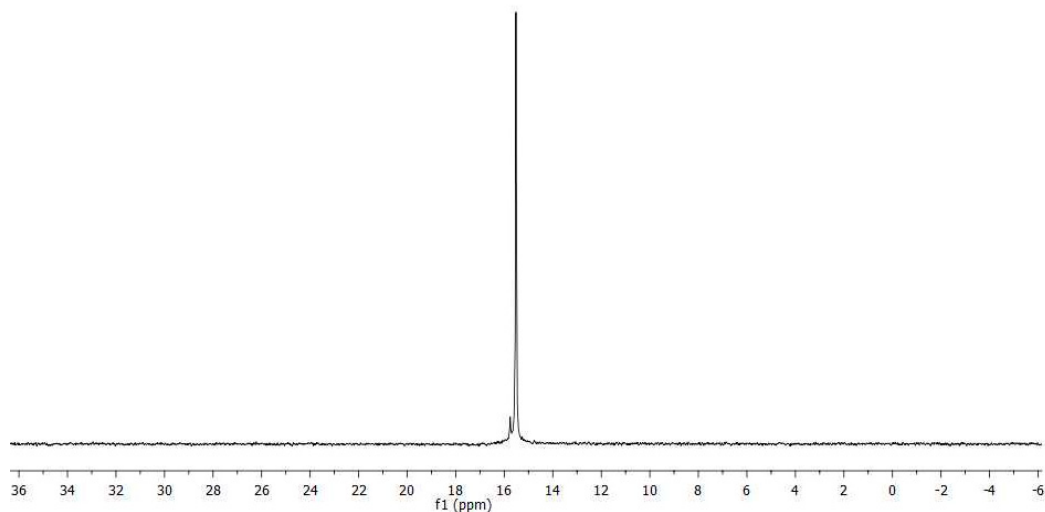
(S)-2,2,2-Triethoxy-4-(1-phenylethyl)-2,3,4,5-tetrahydro-1,4,2 λ^5 -benzoxazaphosphepine (**12a**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 406.2128.



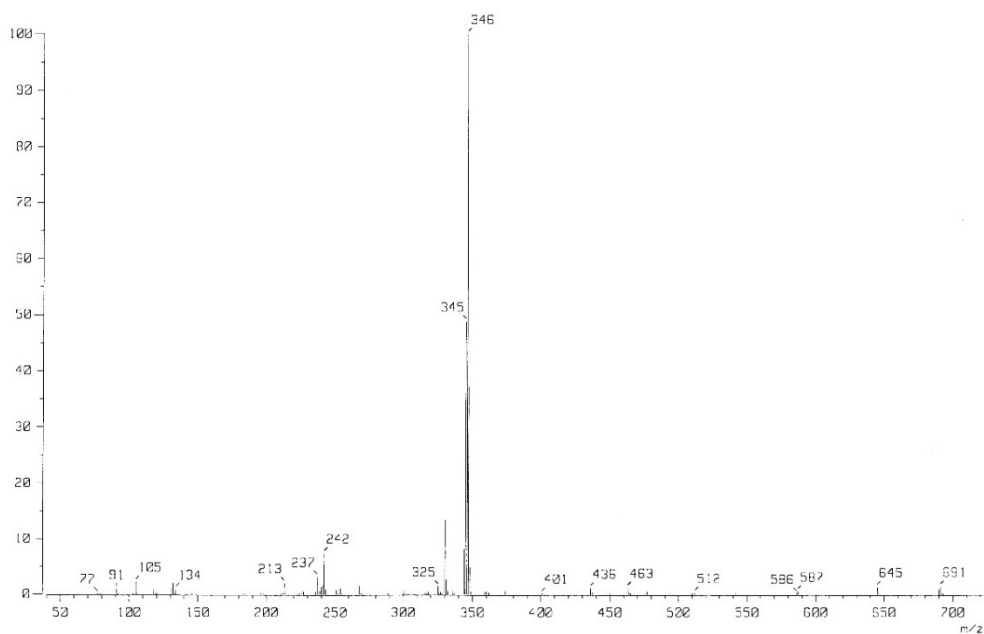
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13b**). ¹H-NMR (CDCl₃, 400 MHz): δ 1.41 (d, *J* = 6.8 Hz, 3H), 1.43 (d, *J* = 6.8 Hz, 3H), 1.43 (t, *J* = 6.8 Hz, 3H), 3.67 (ABX system, *J*_{H/P} = 16.4, 5.8 Hz, 1H), 3.74 (ABX system, *J*_{H/P} = 16.4, 6.0 Hz, 1H), 3.79 (dq, *J* = 7.2, 5.3 Hz, 2H), 4.31 (q, *J* = 7.2 Hz, 1H), 4.33 (q, *J* = 7.2 Hz, 1H), 6.56–7.35 (m, 9H).



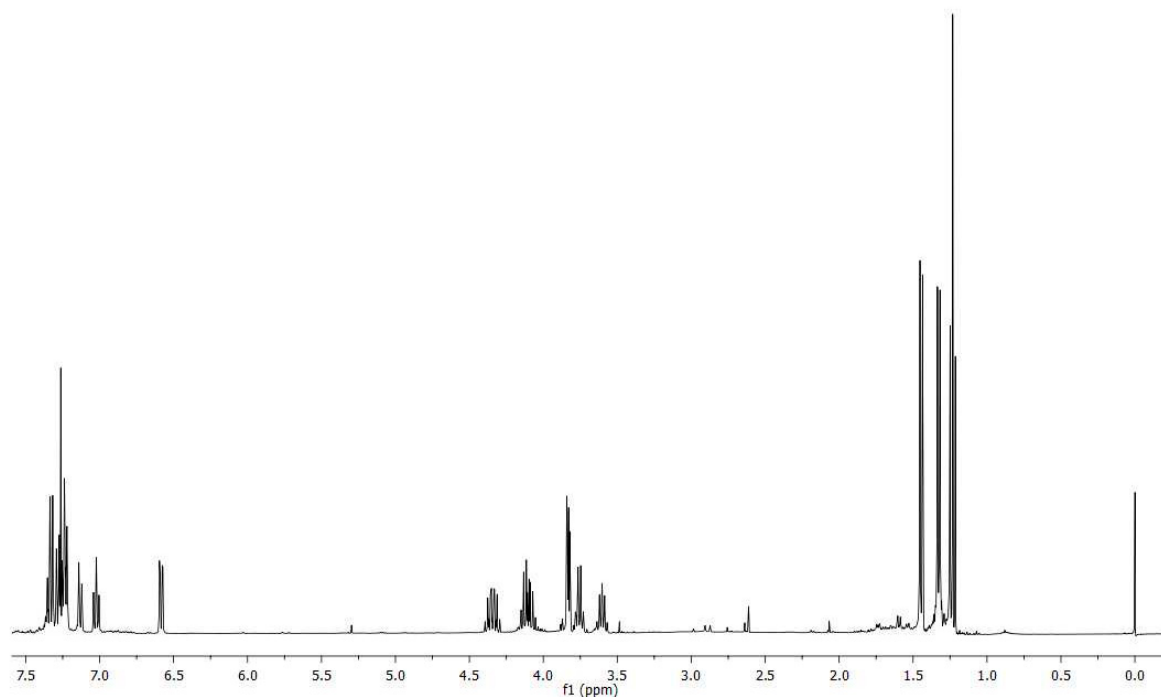
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13b**). ¹³C-NMR (CDCl₃, 100 MHz): δ 16.4, 16.5, 18.7, 22.7, 41.3 (d, *J*_{C/P} = 125.9 Hz), 59.0, 60.1, 62.1 (d, *J*_{C/P} = 8.8 Hz), 122.5, 122.6, 124.9, 126.9, 127.1, 128.4, 129.3, 131.3, 134.1, 145.6, 147.9.



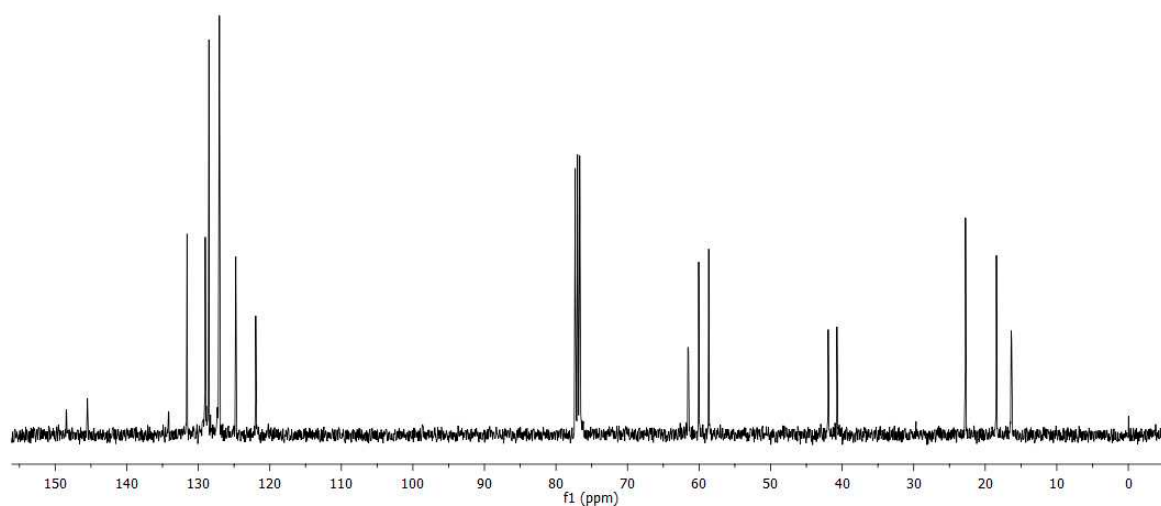
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13b**). ^{31}P -NMR (CDCl_3 , 80.95 MHz): δ 15.52.



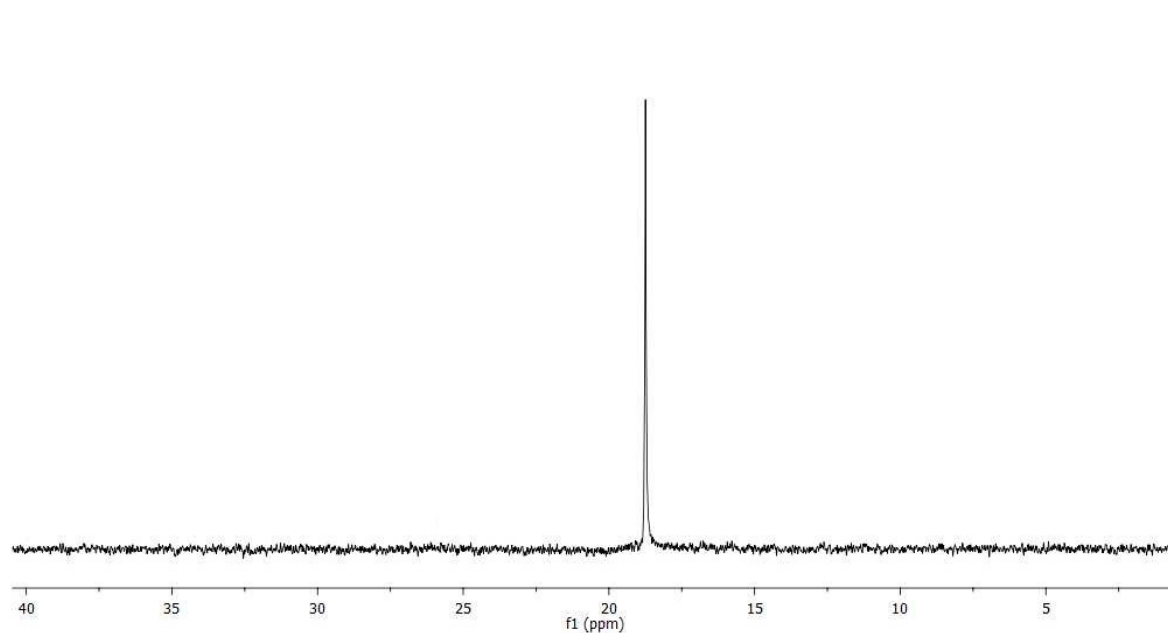
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13b**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 346.1557.



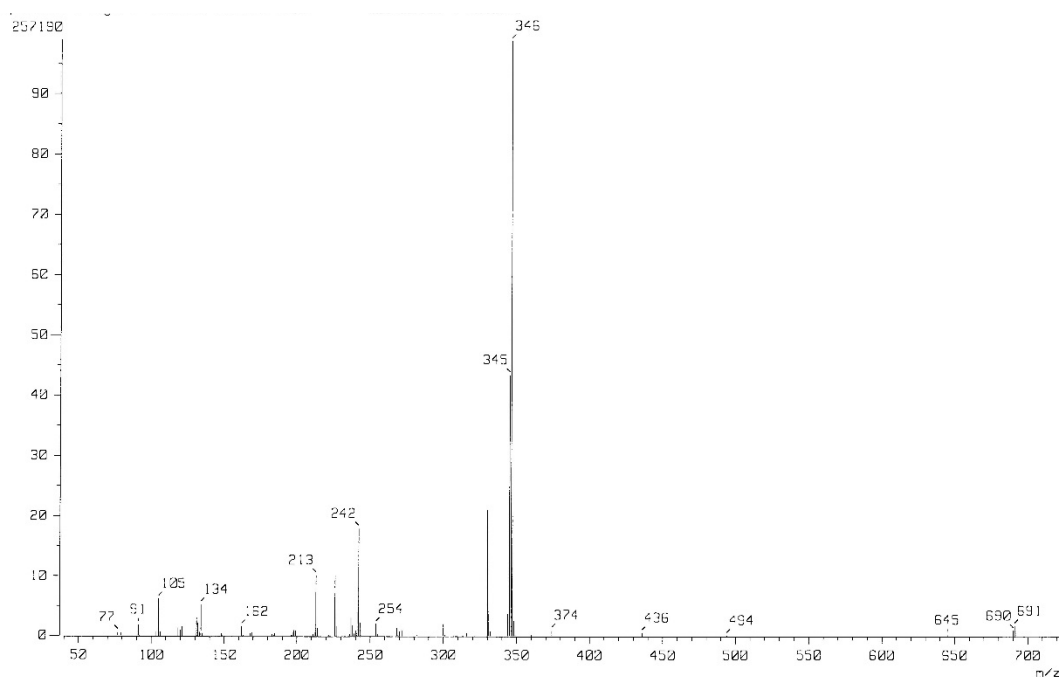
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide, (**14b**). ^1H -NMR (CDCl_3 , 400 MHz): δ 1.23 (d, $J = 7.0$ Hz, 3H), 1.32 (d, $J = 6.8$ Hz, 3H), 1.44 (t, $J = 7.2$ Hz, 3H), 3.60 (dq, $J = 6.8, 6.8$ Hz, 1H), 3.75 (q, 7.2 Hz, 1H), 3.82 (ABX system, $J_{\text{H/P}} = 16.8, 1.6$ Hz, 1H), 3.85 (ABX system, $J_{\text{H/P}} = 16.8, 3.6$ Hz, 1H), 4.05–4.15 (m, 2H), 4.29–4.39 (m, 2H), 6.57–7.35 (m, 9H).



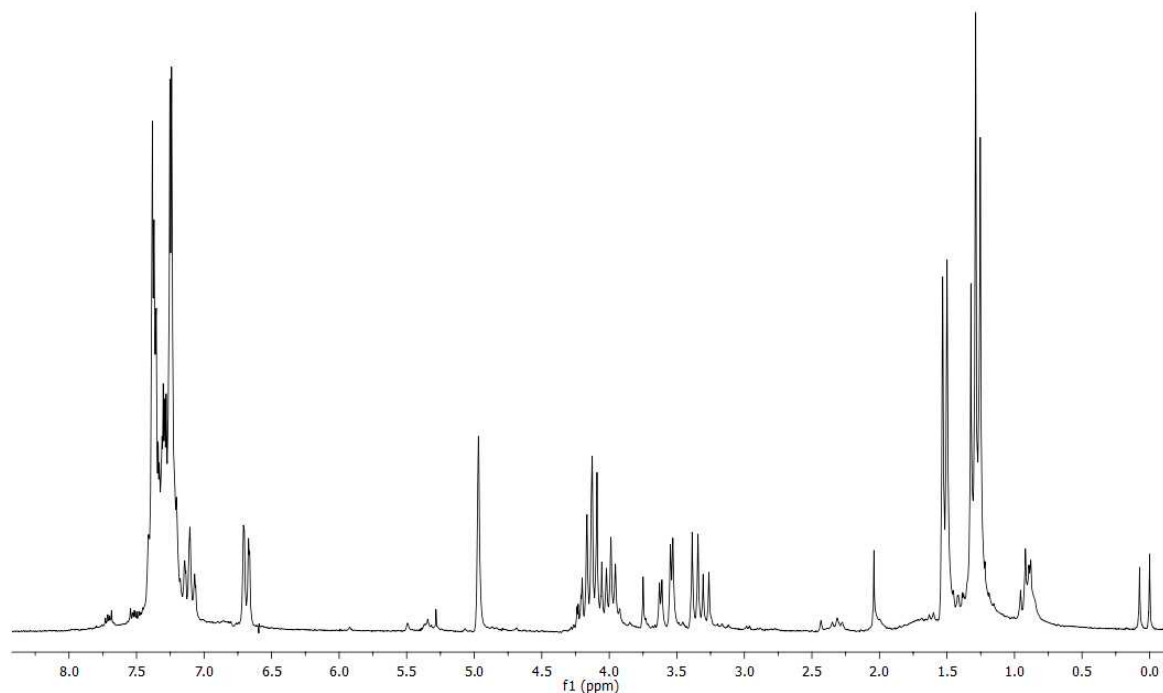
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide, (**14b**). ^{13}C -NMR (CDCl_3 , 100 MHz): δ 16.3, 16.4, 18.4, 22.7, 41.3 (d, $J_{\text{C/P}} = 123.0$ Hz), 58.6, 60.0, 61.5 (d, $J_{\text{C/P}} = 8.8$ Hz), 121.9, 122.0, 124.7, 127.0, 127.1, 128.5, 129.0, 131.5, 134.1, 145.5, 148.4.



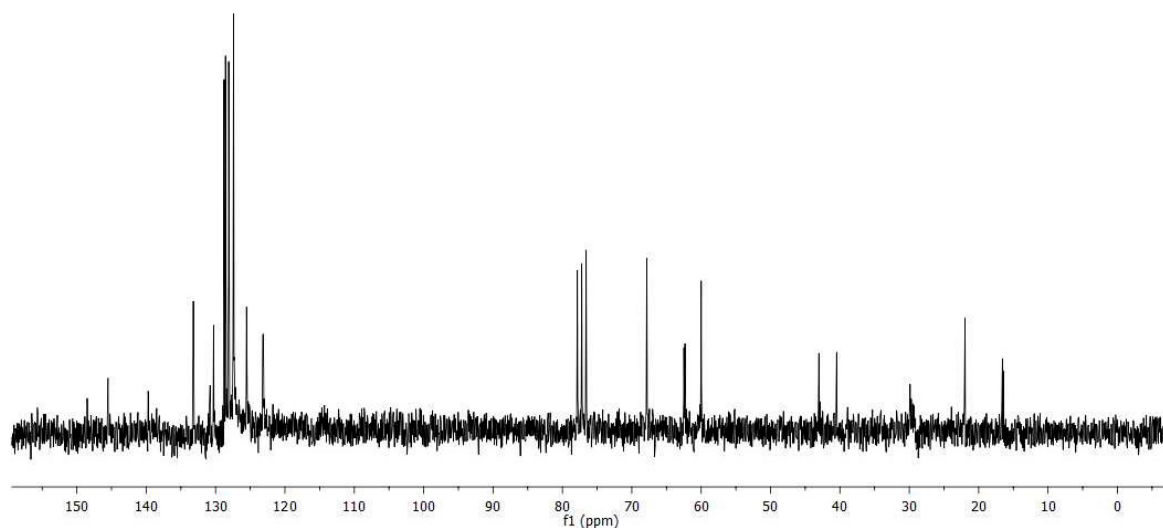
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide, (**14b**). ³¹P-NMR (CDCl₃, 80.95 MHz): δ 18.75.



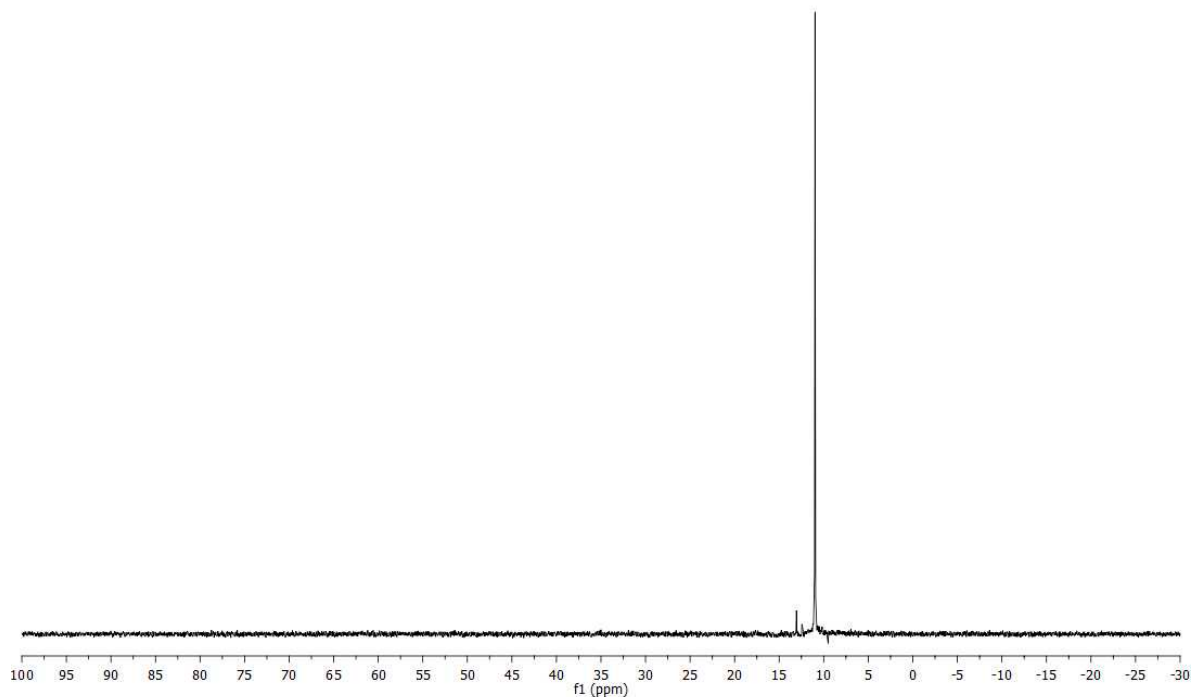
(2*R,S*)-2-Ethoxy-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**14b**). HRMS (CI⁺): found for [M + H]⁺, *m/z* 346.1553.



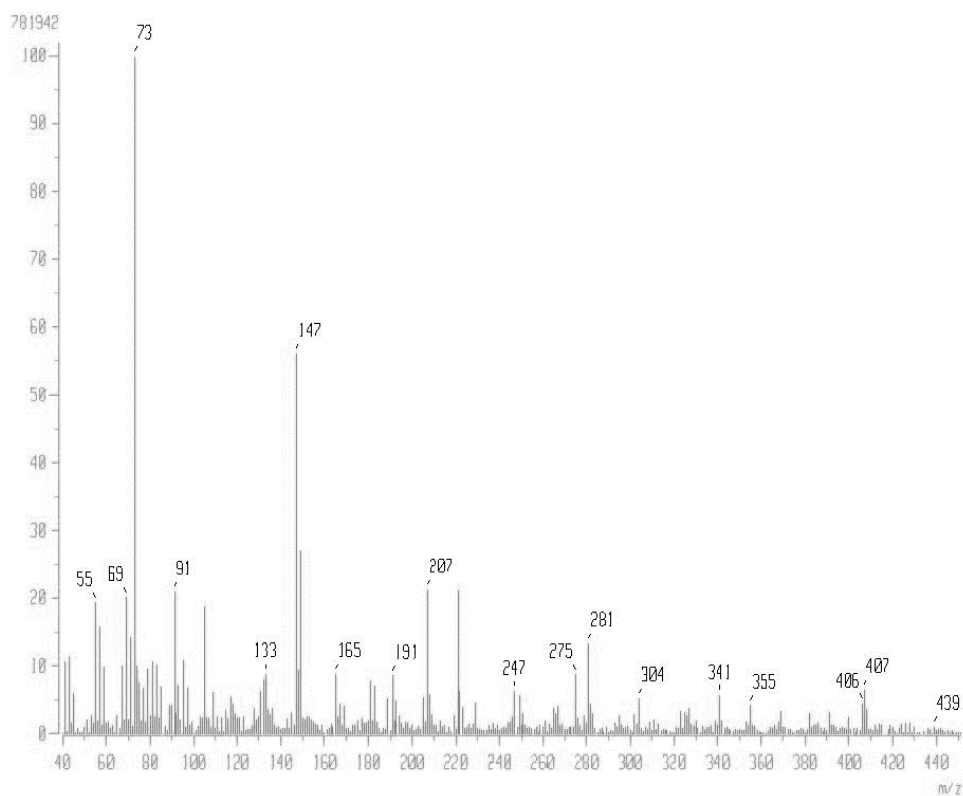
(2*S*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13c**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.28 (t, $J = 7.0$ Hz, 3H), 1.51 (d, $J = 6.6$ Hz, 3H), 3.32 (ABX system, $J_{\text{H/P}} = 16.2, 8.4$ Hz, 1H), 3.57 (ABX system, $J_{\text{H/P}} = 16.2, 3.8$ Hz, 1H), 3.99–4.23 (m, 3H), 4.96 (s, 1H), 6.67–7.71 (m, 14H).



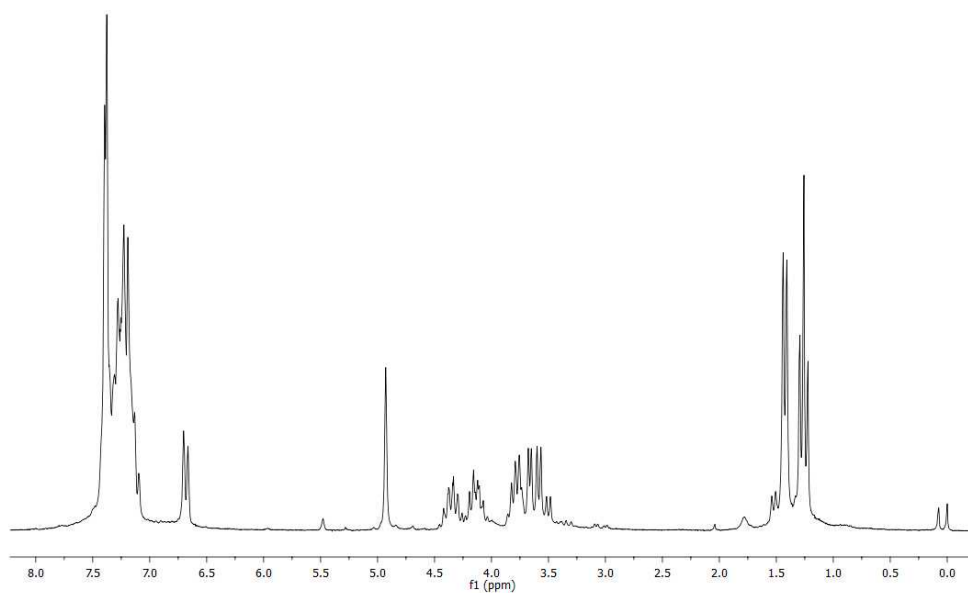
(2*S*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13c**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 16.5 (d, $J_{\text{C/P}} = 5.85$ Hz), 21.9, 40.2 (d, $J_{\text{C/P}} = 128.15$ Hz), 59.9, 62.4 (d, $J_{\text{C/P}} = 7.3$ Hz), 67.8, 123.1, 123.2, 125.5, 127.4, 127.5, 128.1, 128.5, 128.8, 130.3, 130.8, 133.2, 139.7, 145.5.



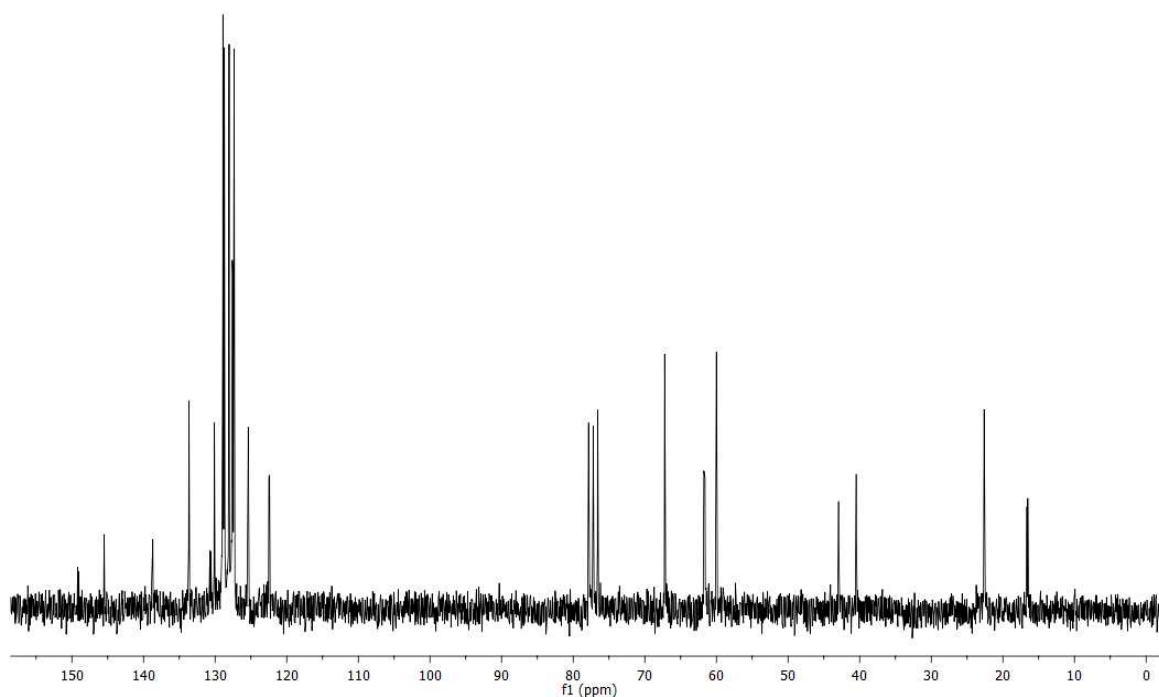
(2*S*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13c**). ³¹P-NMR (CDCl₃, 80.95 MHz): δ 10.97.



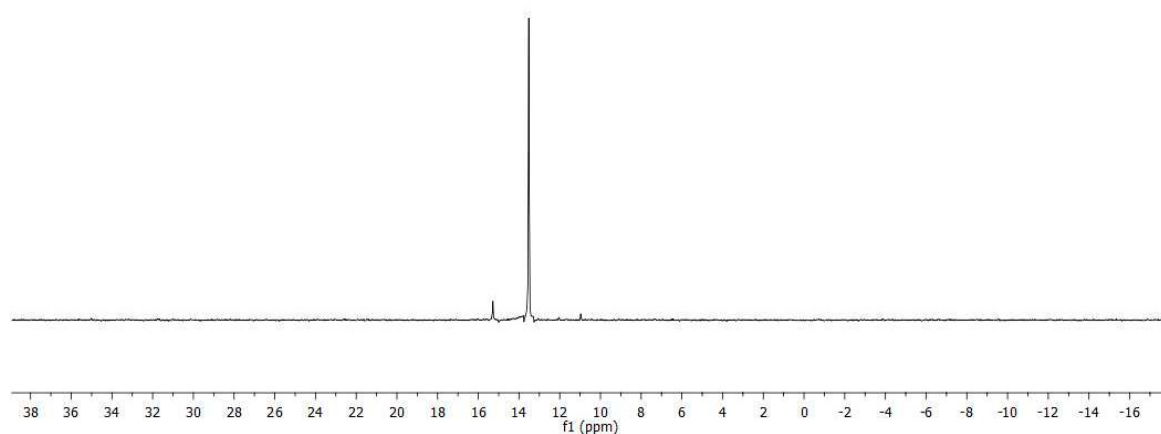
(2*S*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13c**). HRMS (CI⁺): found for [M + H]⁺, *m/z* 408.1710.



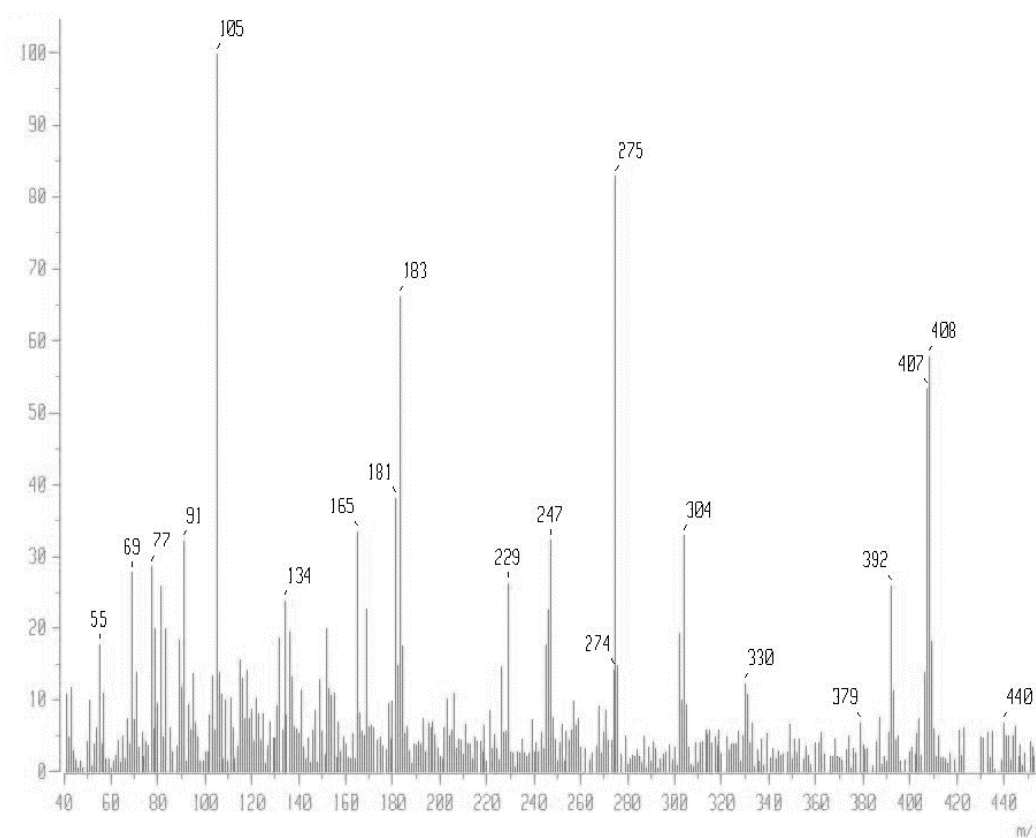
(2*R*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**14c**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.25 (t, $J = 7.0$ Hz, 3H), 1.42 (d, $J = 6.8$ Hz, 3H), 3.54 (ABX system, $J_{\text{H/P}} = 16.8, 6.8$ Hz, 1H), 3.70 (ABX system, $J_{\text{H/P}} = 16.0, 5.2$ Hz, 1H), 3.80 (q, $J = 6.8$ Hz, 1H), 4.03–4.45 (m, 2H), 4.92 (s, 1H), 6.66–7.39 (m, 14H).



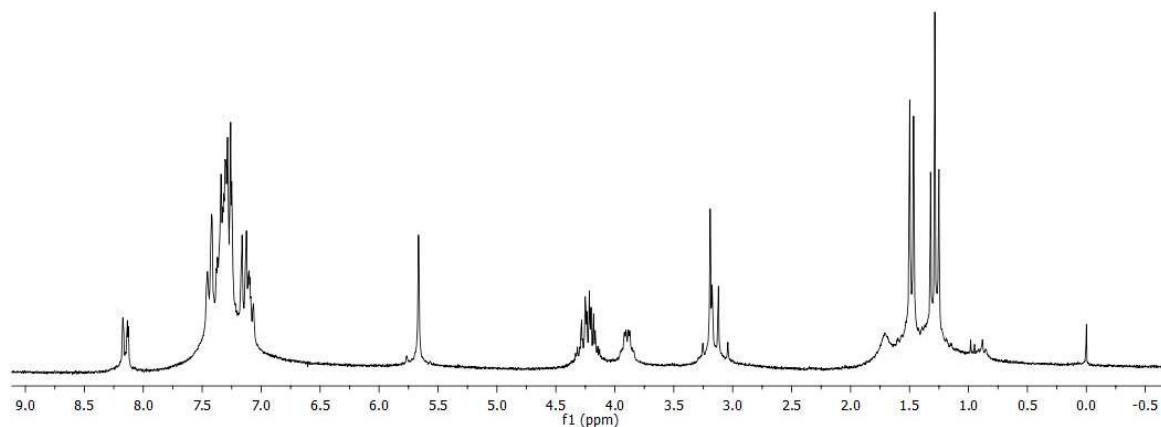
(2*R*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**14c**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 16.5 (d, $J_{\text{C/P}} = 5.95$ Hz), 22.6, 41.7 (d, $J_{\text{C/P}} = 123.3$ Hz), 59.9, 61.6 (d, $J_{\text{C/P}} = 7.95$ Hz), 67.2, 122.3, 122.4, 125.3, 127.3, 127.5, 127.6, 128.0, 128.7, 128.9, 130.0, 130.6, 130.7, 138.7, 145.4, 149.1 (d, $J_{\text{C/P}} = 7.2$ Hz).



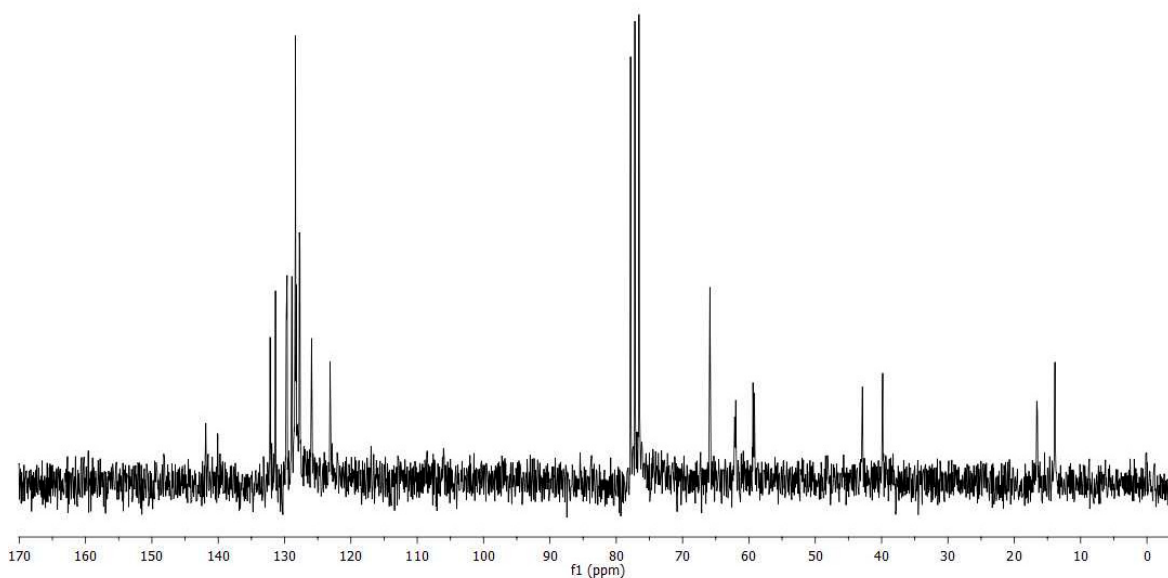
(2*R*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**14c**). ³¹P-NMR (CDCl₃, 80.95 MHz): δ 13.52.



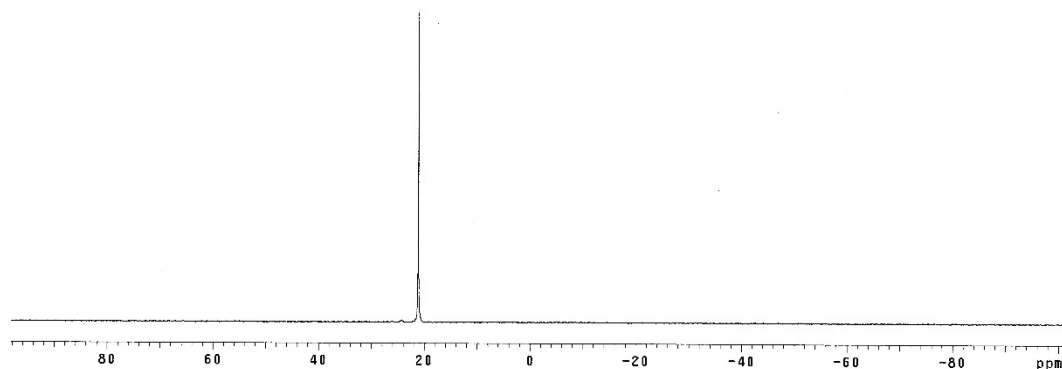
(2*R*)-2-Ethoxy-(5*S*)-5-phenyl-4-[(1*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**14c**). HRMS (CI⁺): found for [M + H]⁺, *m/z* 408.1710.



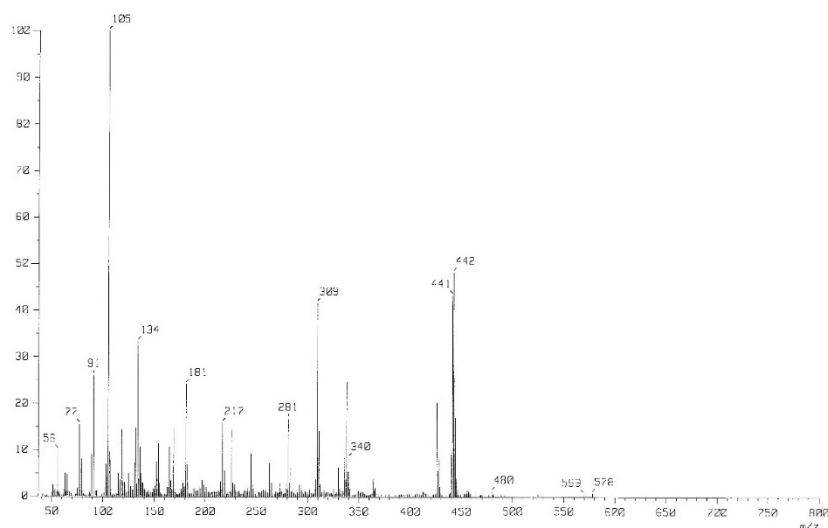
(2*R,S*)-2-Ethoxy-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13d**). ^1H -NMR (CDCl_3 , 400 MHz): δ 1.28 (t, $J = 7.0$ Hz, 3H), 1.48 (d, $J = 6.8$ Hz, 3H), 3.11 (AB system, $J = 16.4$ Hz, 1H), 3.20 (AB system, $J = 15.6$ Hz, 1H), 3.89 (dq, $J = 6.6, 3.2$ Hz, 1H), 4.22 (m, 2H), 5.66 (s, 1H), 7.07–7.44 (m, 13H).



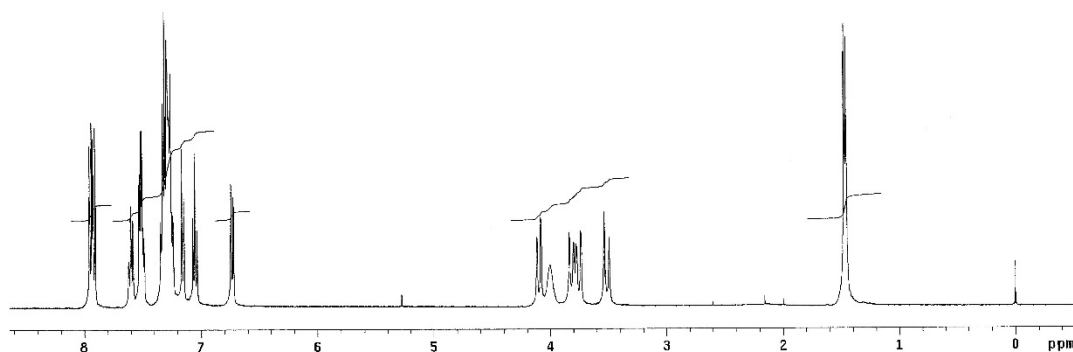
(2*R,S*)-2-Ethoxy-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13d**). ^{13}C -NMR (CDCl_3 , 100 MHz): δ 13.8, 16.5, 16.6, 41.3 (d, $J_{\text{C/P}} = 153.75$ Hz), 59.3 (d, $J_{\text{C/P}} = 11.7$ Hz), 62.0, 65.8, 105.2, 123.0, 123.1, 125.9, 127.7, 127.8, 128.2, 128.3, 128.9, 129.6, 129.7, 131.3, 131.8, 132.1, 140.0, 141.8.



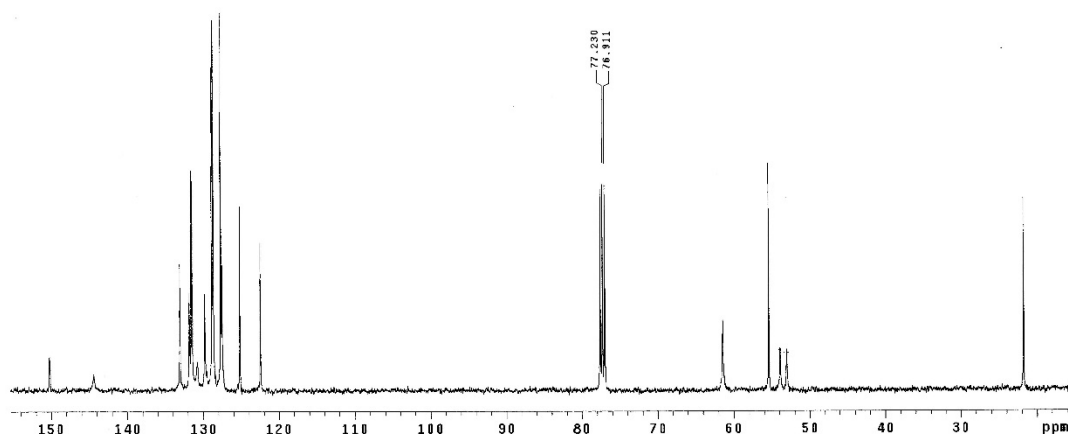
(2*R,S*)-2-Ethoxy-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13d**). ^{31}P -NMR (CDCl_3 , 80.95 MHz): δ 21.21.



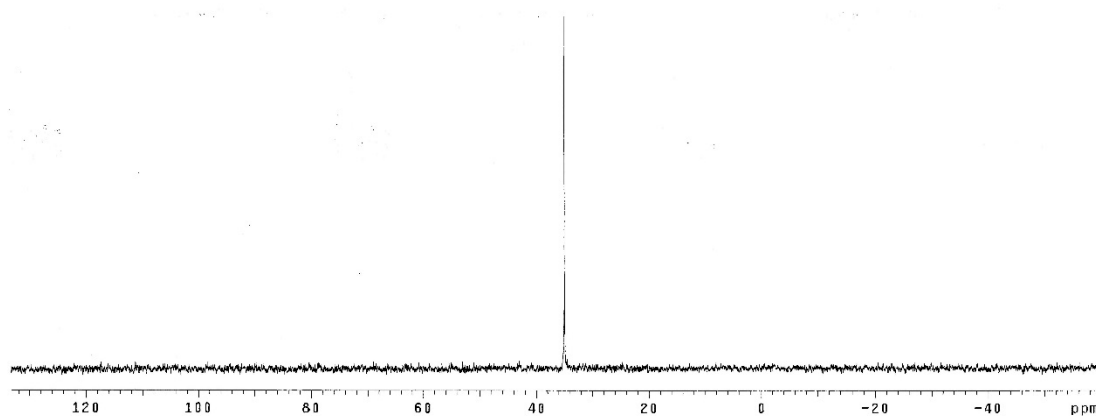
(2*R,S*)-2-Ethoxy-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**13d**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 442.1361.



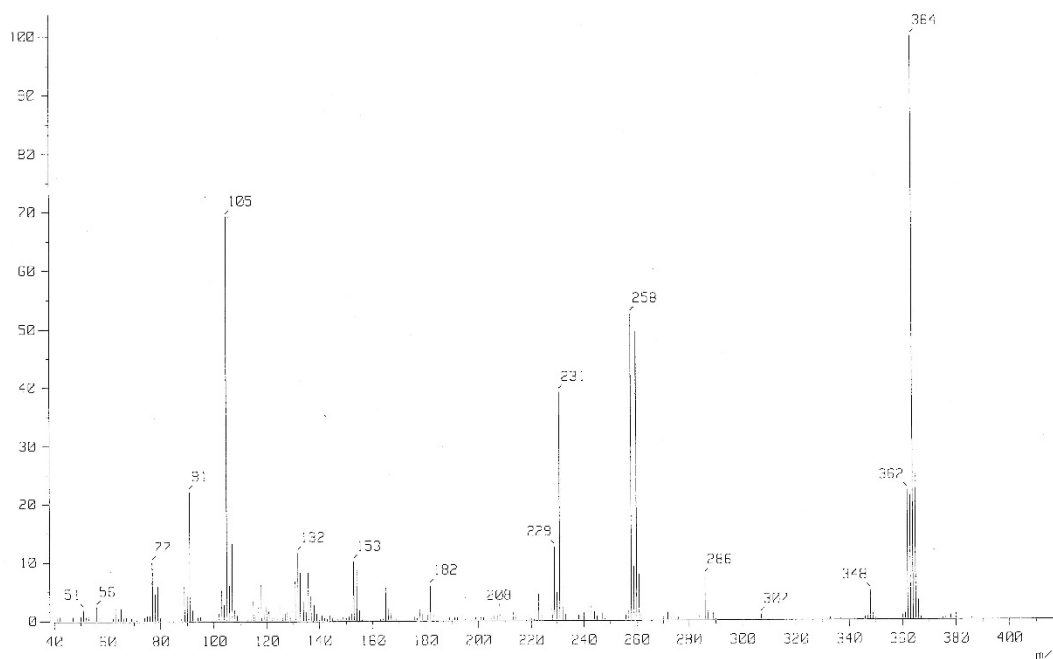
(2*S*)-2-Phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16a**). ^1H -NMR (CDCl_3 , 400 MHz): δ 1.46 (d, J = 6.4 Hz, 3H), 3.51 (AB system, J = 15.2 Hz, 1H), 3.75 (ABX system, J = 15.2, 3.2 Hz, 1H), 3.81 (AB system, J = 14.4 Hz, 1H), 3.99 (dq, J = 7.0, 4.0 Hz, 1H), 4.09 (ABX system, J = 14.8, 1.6 Hz, 1H), 6.75–8.02 (m, 14H).



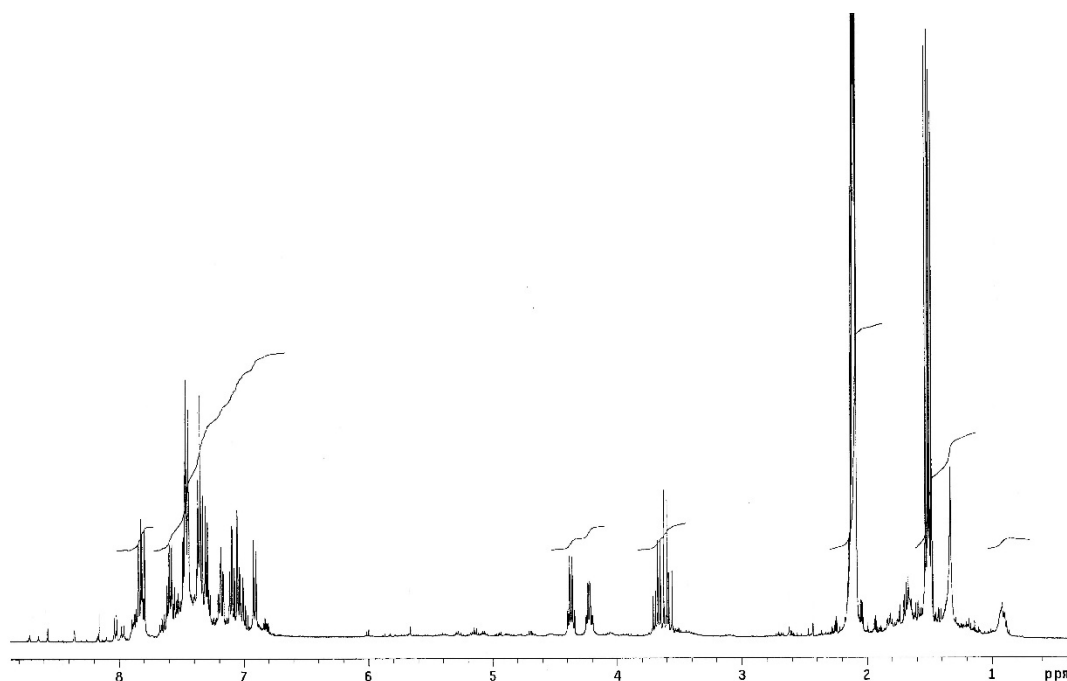
(2*S*)-2-Phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16a**). ^{13}C -NMR (CDCl_3 , 100 MHz): δ 21.7, 53.4 (d, $J_{\text{C/P}} = 89.5$ Hz), 55.3, 61.3, 122.4 (d, $J_{\text{C/P}} = 3.0$ Hz), 125.1, 127.4, 127.6, 128.6, 128.7, 128.8, 129.7, 130.7, 131.4, 131.5, 131.7, 133.0, 144.3, 150.1 (d, $J_{\text{C/P}} = 6.1$ Hz).



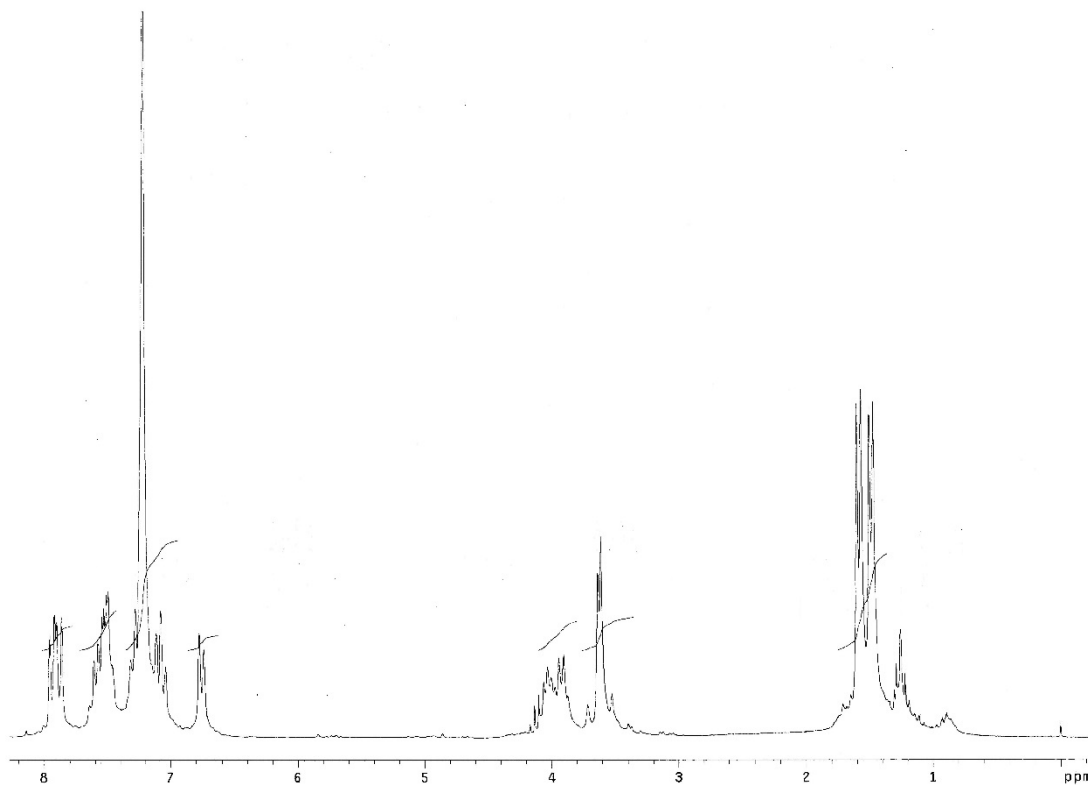
(2*S*)-2-Phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16a**). ^{31}P -NMR (CDCl_3 , 80.95 MHz): δ 34.87.



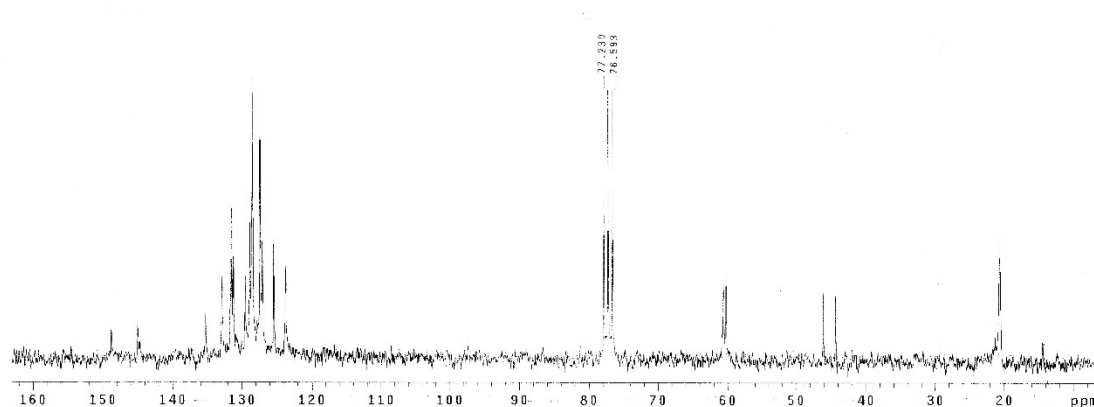
(2*S*)-2-Phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16a**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 364.1454.



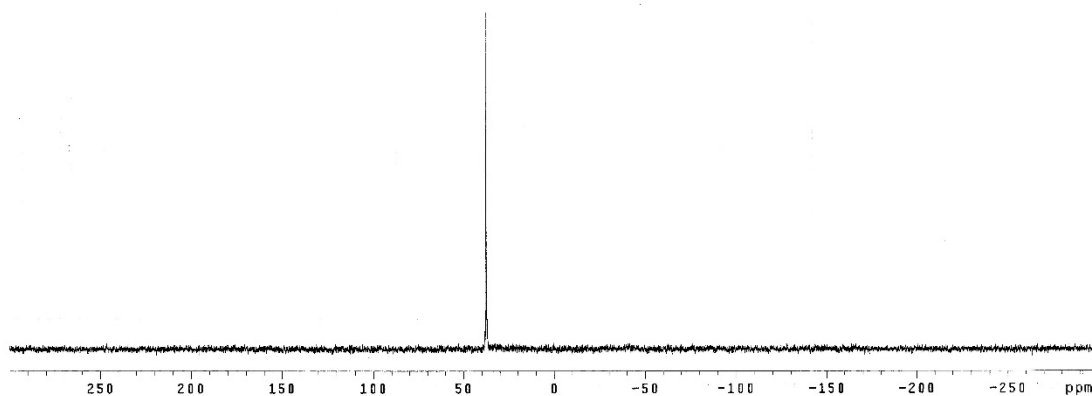
(2*R*)-2-Phenyl-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15b**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.48 (d, $J = 6.8$ Hz, 3H), 1.51 (d, $J = 7.6$ Hz, 3H), 3.58 (ABX system, $J = 15.4, 10.6$ Hz, 1H), 3.67 (ABX system, $J = 15.8, 7.8$ Hz, 1H), 4.22 (q, $J = 6.8$ Hz, 1H), 4.36 (q, $J = 7.2$ Hz, 1H), 6.90–7.84 (m, 14H).



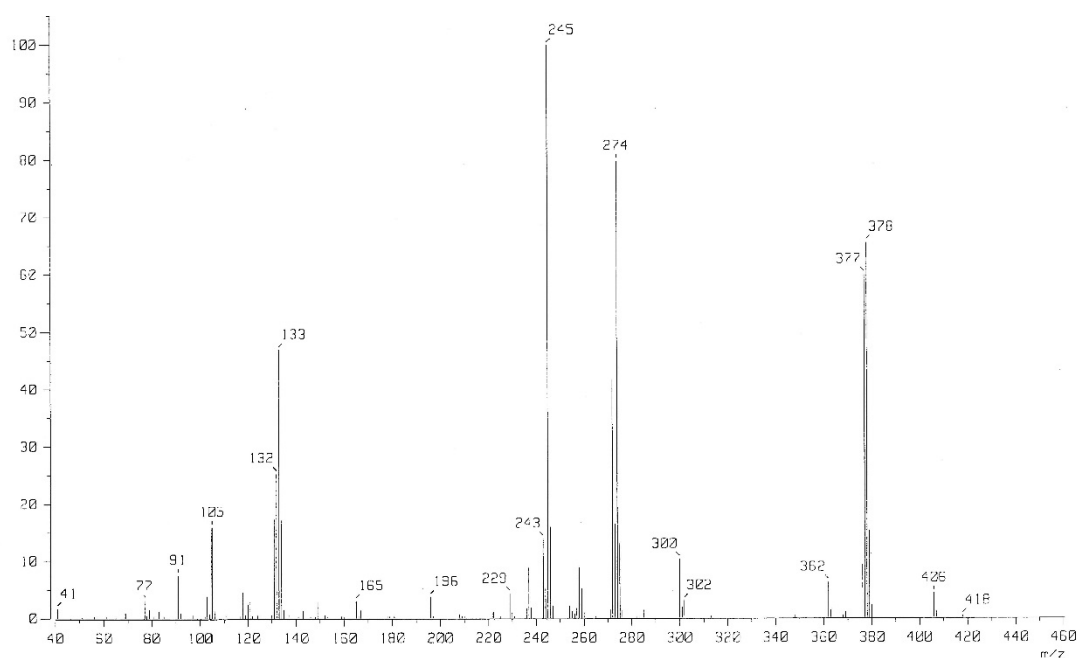
(2*S*)-2-Phenyl-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16b**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.48 (d, $J = 6.6$ Hz, 3H), 1.58 (d, $J = 7.0$ Hz, 3H), 3.56 (AB system, $J = 16$ Hz, 1H), 3.67 (AB system, $J = 16.4$ Hz, 1H), 3.91 (q, $J = 6.9$ Hz, 1H), 4.04 (q, $J = 6.5$ Hz, 1H), 6.8–7.94 (m, 14H).



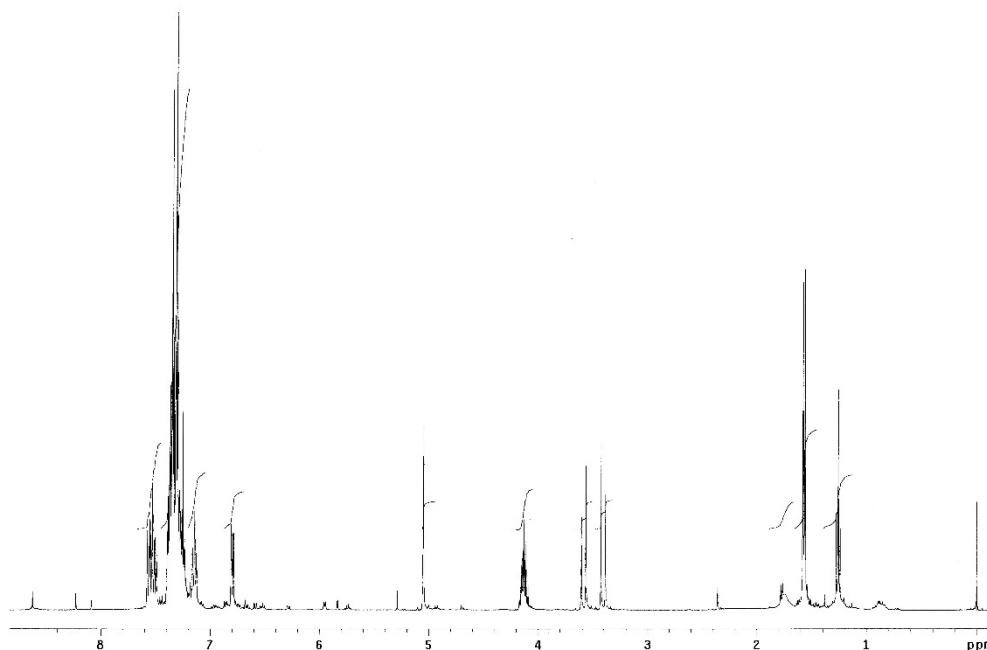
(2*S*)-2-Phenyl-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16b**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 20.5, 20.6, 45.1 (d, $J_{\text{C/P}} = 87.9$ Hz), 60.2, 60.6, 123.6, 125.3, 127.0, 127.3, 128.4, 128.5, 128.8, 129.4, 131.1, 131.5 (d, $J_{\text{C/P}} = 9.1$ Hz), 132.8, 135.2, 144.9, 148.7 (d, $J_{\text{C/P}} = 7.6$ Hz).



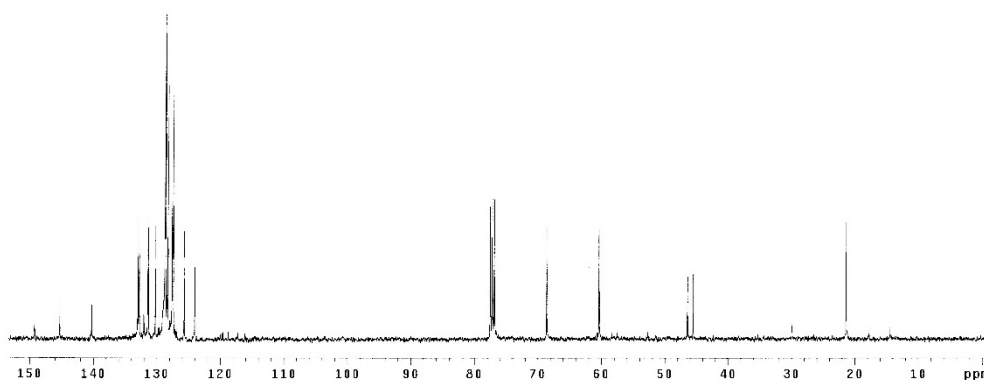
(2*S*)-2-Phenyl-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16b**). ³¹P-NMR (CDCl₃, 161.8 MHz): δ 37.23.



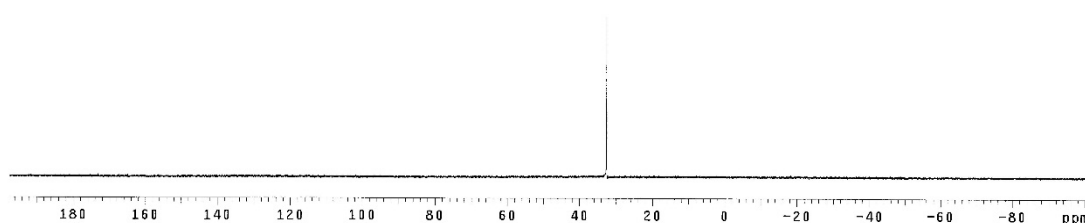
(2*S*)-2-Phenyl-(5*S*)-5-methyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16b**). HRMS (CI⁺): found for [M + H]⁺, *m/z* 378.1612.



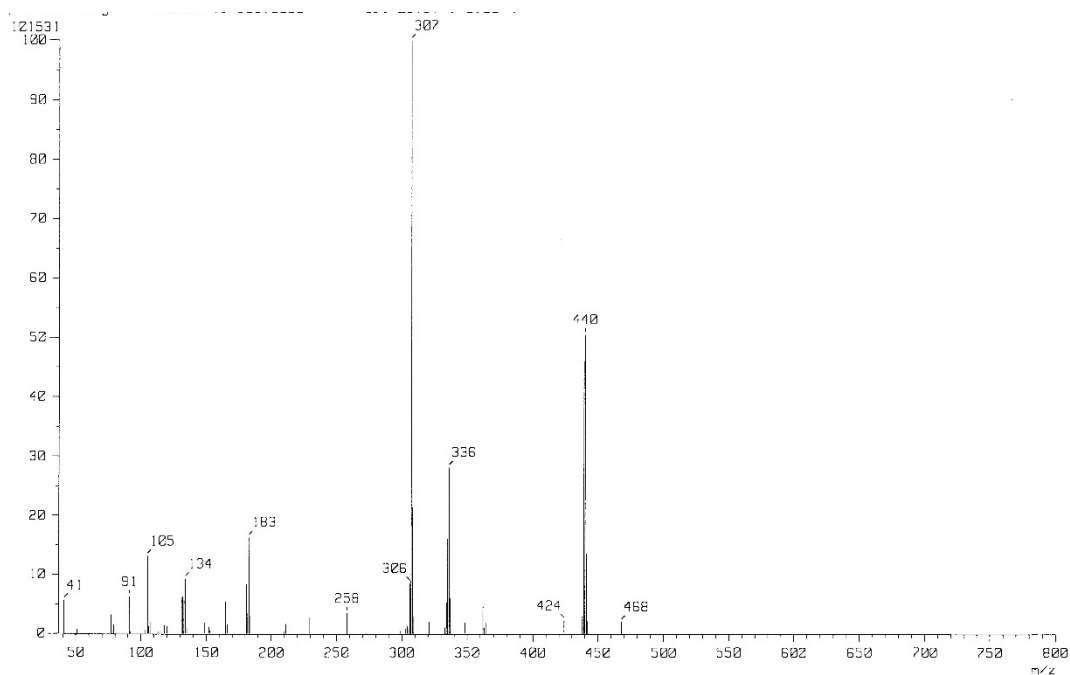
(2*R,S*)-2-phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15c**). ¹H-NMR (CDCl₃, 200 MHz): δ 1.29 (d, *J* = 6.8 Hz, 3H), 3.35 (ABX system, *J* = 16.4, 14.6 Hz, 1H), 3.49 (ABX system, *J* = 16.4, 6.4 Hz, 1H), 4.09 (dq, *J* = 6.8, 6.4 Hz, 1H), 5.29 (s, 1H), 6.70–7.59 (m, 19H).



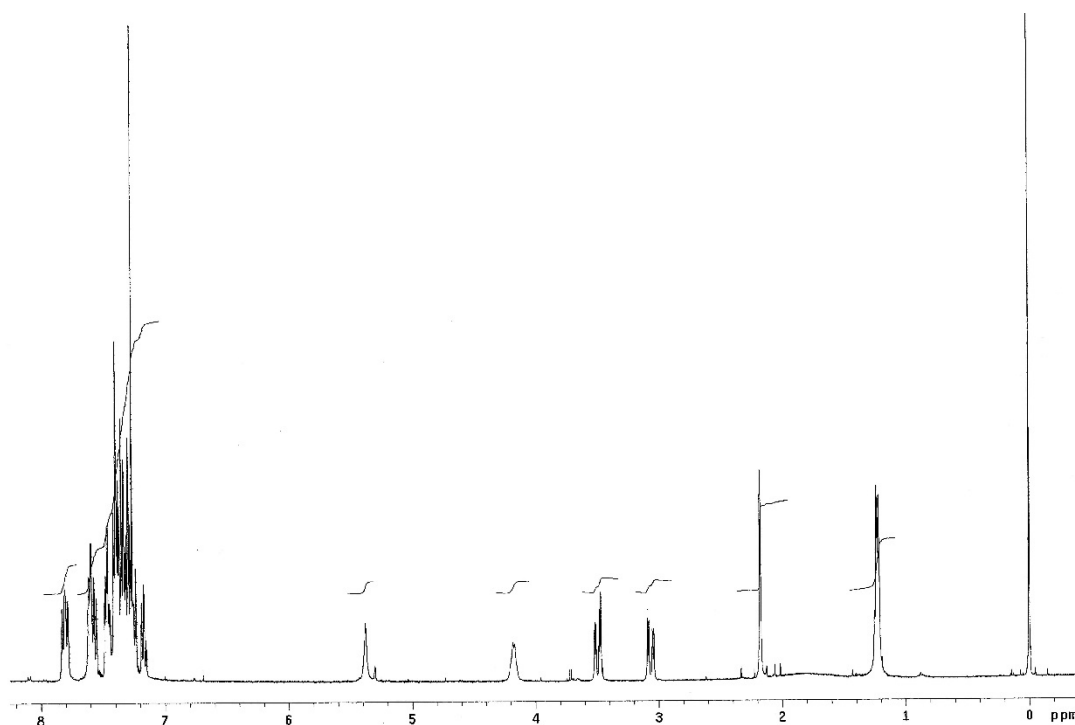
(2*R,S*)-2-phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15c**). ¹³C-NMR (CDCl₃, 50 MHz): δ 15.9, 29.8, 45.3 (d, *J*_{C/P} = 95.2), 60.0 (d, *J* = 7.3 Hz), 69.1, 123.6, 123.7, 125.8, 127.6, 127.7, 127.9, 128.5, 128.6, 128.7, 128.8, 129.4, 131.4, 131.5, 132.0, 132.8, 132.9, 142.4 (d, *J*_{C/P} = 99.5 Hz).



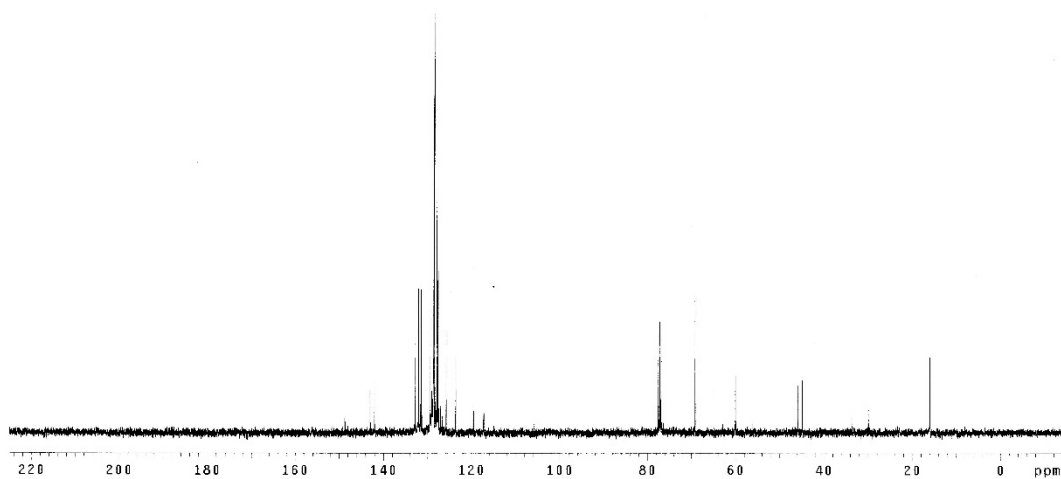
(2*R,S*)-2-phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15c**). ³¹P-NMR (CDCl₃, 161.8 MHz): δ 36.74.



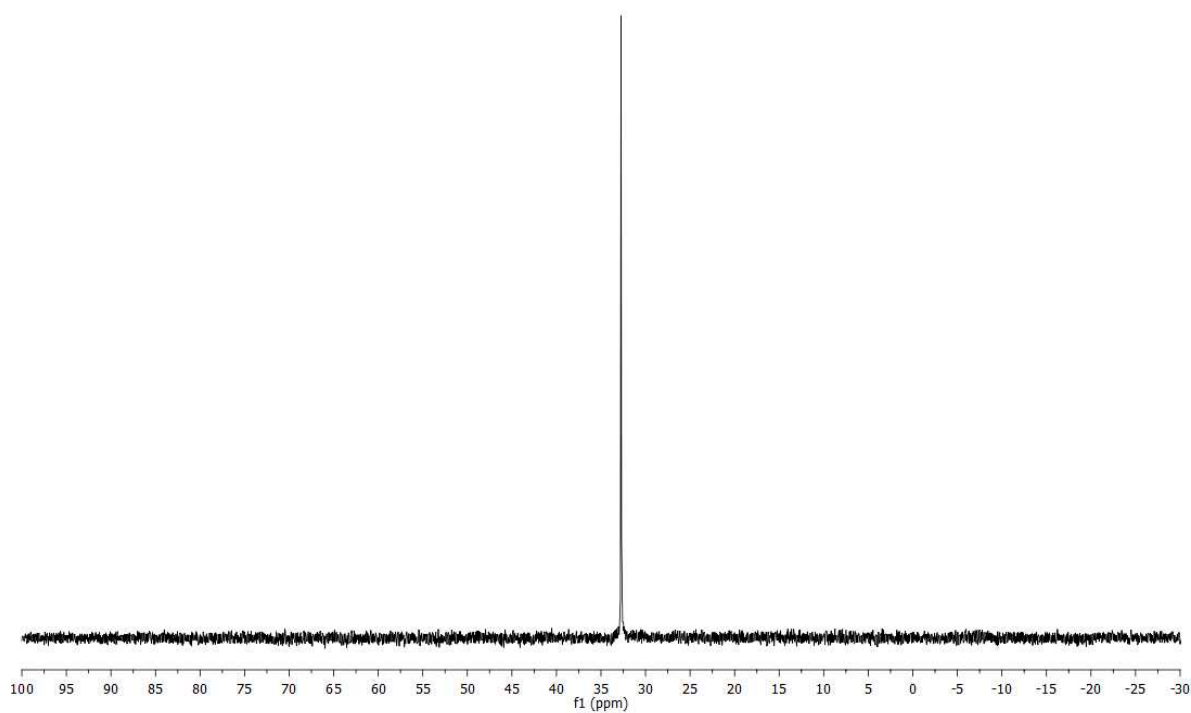
(2*R,S*)-2-phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15c**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 440.1774.



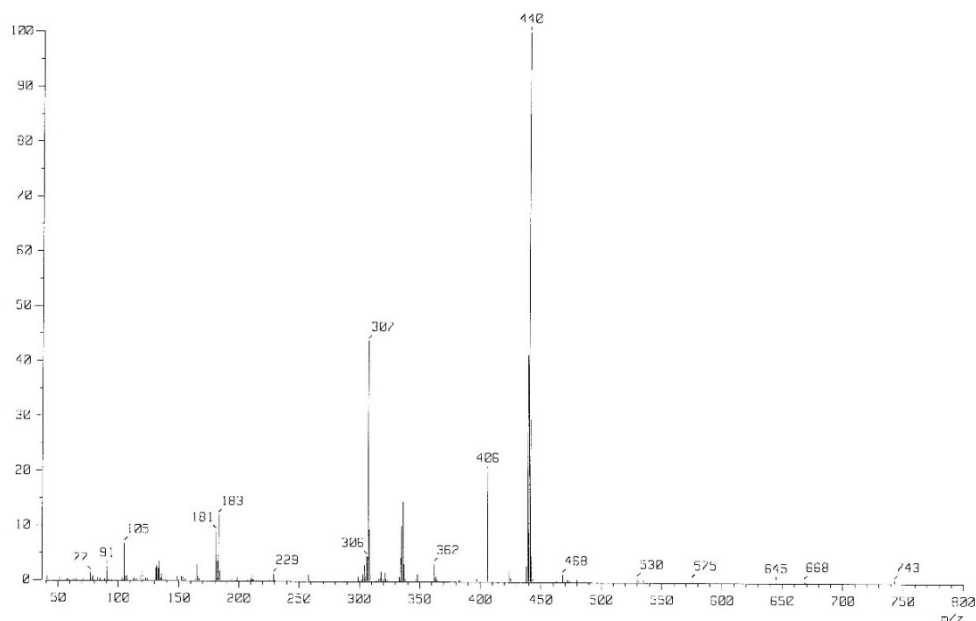
(2*R,S*)-2-Phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16c**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.56 (d, $J = 6.4$ Hz, 3H), 3.40 (AB system, $J = 16.4$ Hz, 1H), 3.58 (AB system, $J = 16.4$ Hz, 1H), 4.14 (q, $J = 6.0$ Hz, 1H), 5.05 (s, 1H), 7.12–7.57 (m, 19H).



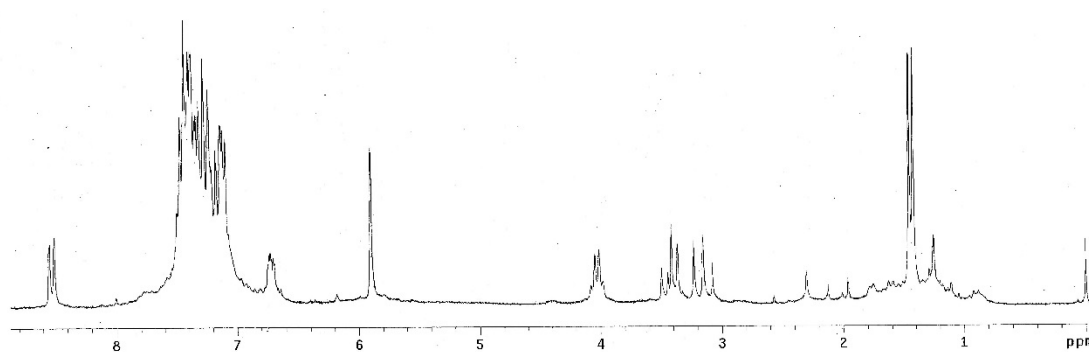
(2*R,S*)-2-Phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16c**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 21.3, 20.6, 45.9 (d, $J_{\text{C/P}} = 84.9$ Hz), 60.3, 68.5, 123.9, 125.6, 127.4, 127.5, 127.6, 128.2, 128.6, 128.7, 130.2, 131.3, 131.4, 132.7, 132.9, 149.22.



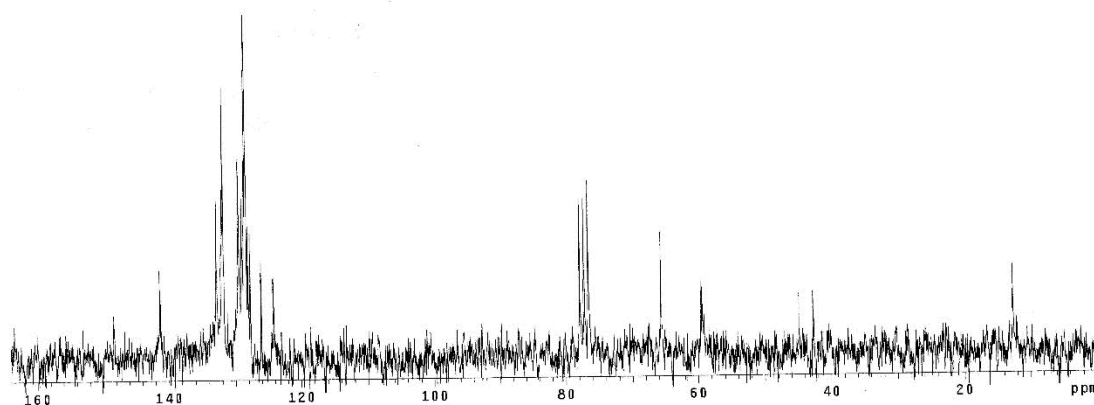
(2*R,S*)-2-Phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16c**). ^{31}P -NMR (CDCl_3 , 161.8 MHz): δ 32.57.



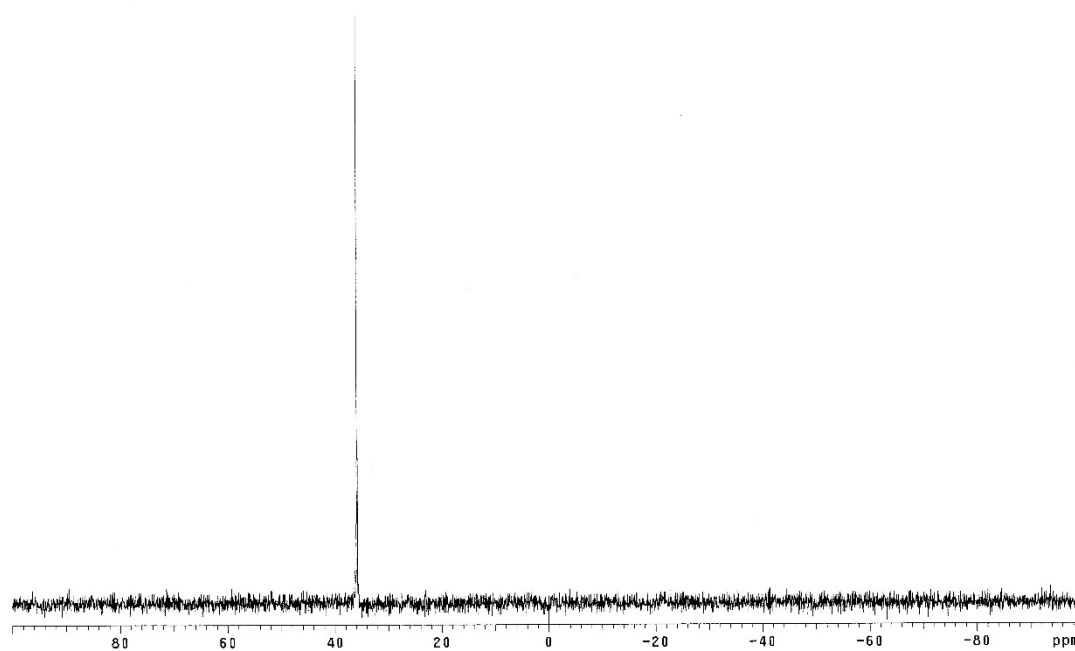
(2*R,S*)-2-Phenyl-(5*S*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16c**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 440.1783.



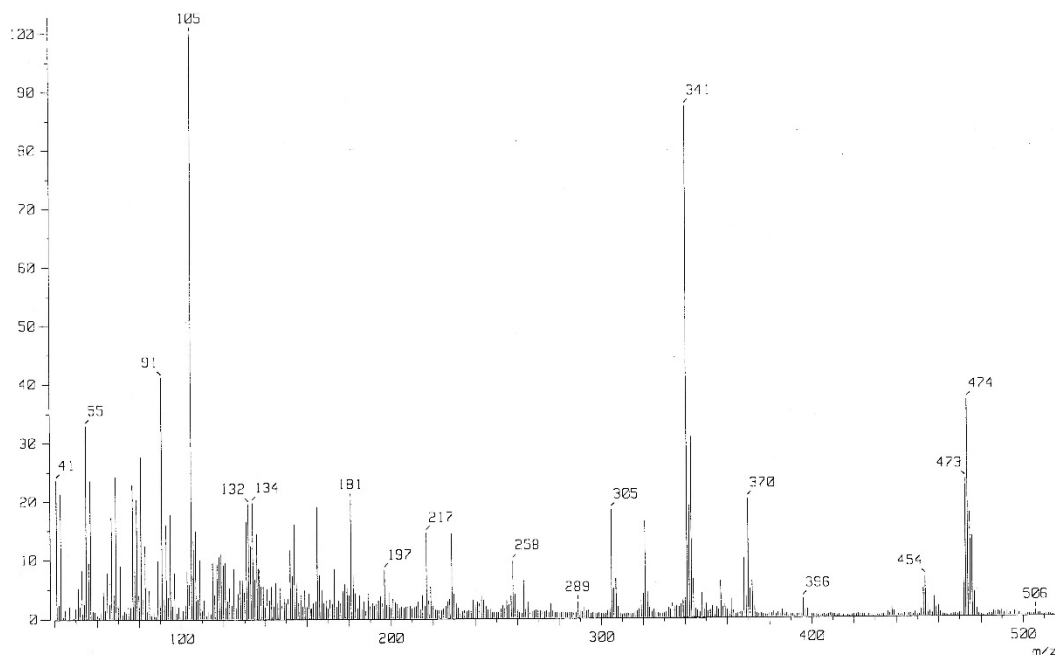
(2*R*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15d**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.44 (d, $J = 7.0$ Hz, 3H), 3.15 (ABX system, $J = 15.2, 15.2$ Hz, 1H), 3.43 (ABX system, $J = 16.1, 9.9$ Hz, 1H), 4.02 (q, $J = 6.6$ Hz, 1H), 5.90 (s, 1H), 6.70–8.54 (m, 18H).



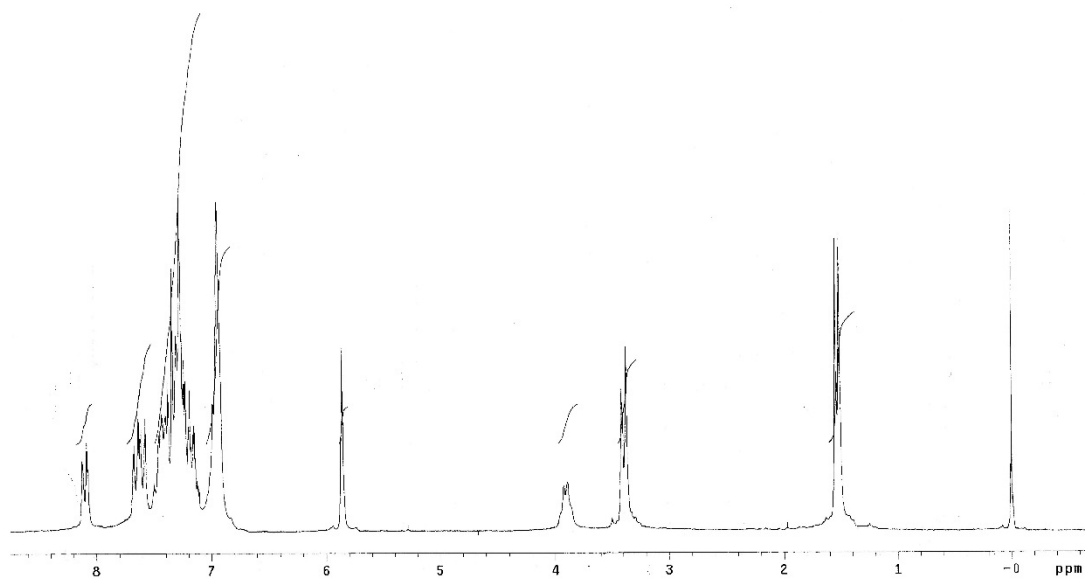
(2*R*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15d**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 12.6, 43.7 (d, $J_{\text{C/P}} = 104.9$ Hz), 59.5, 65.5, 124.2, 126.0, 127.7, 128.0, 128.3, 128.5, 128.9, 129.3, 131.7, 131.9, 132.7, 141.2, 148.3.



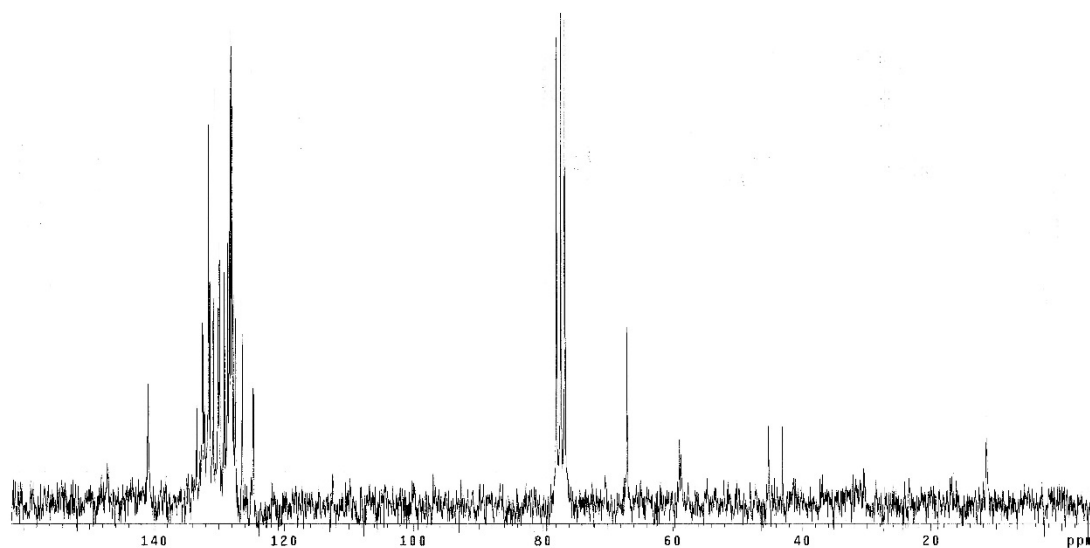
(2*R*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15d**). ^{31}P -NMR (CDCl_3 , 81 MHz): δ 38.60.



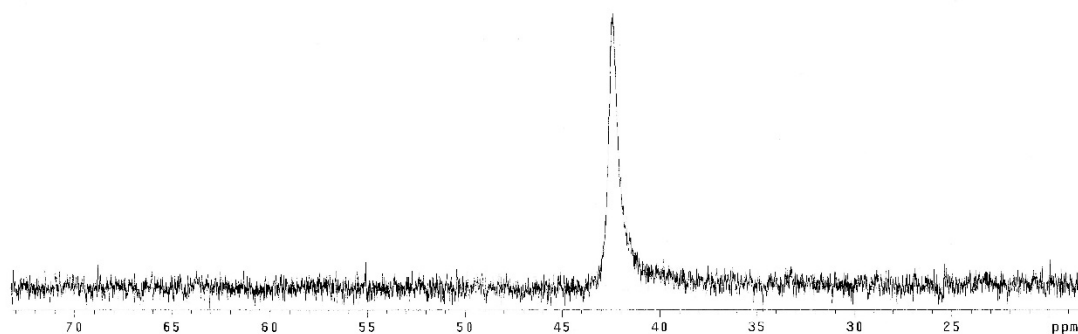
(2*R*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**15d**). HRMS (CI⁺): found for [M + H]⁺, *m/z* 474.1437.



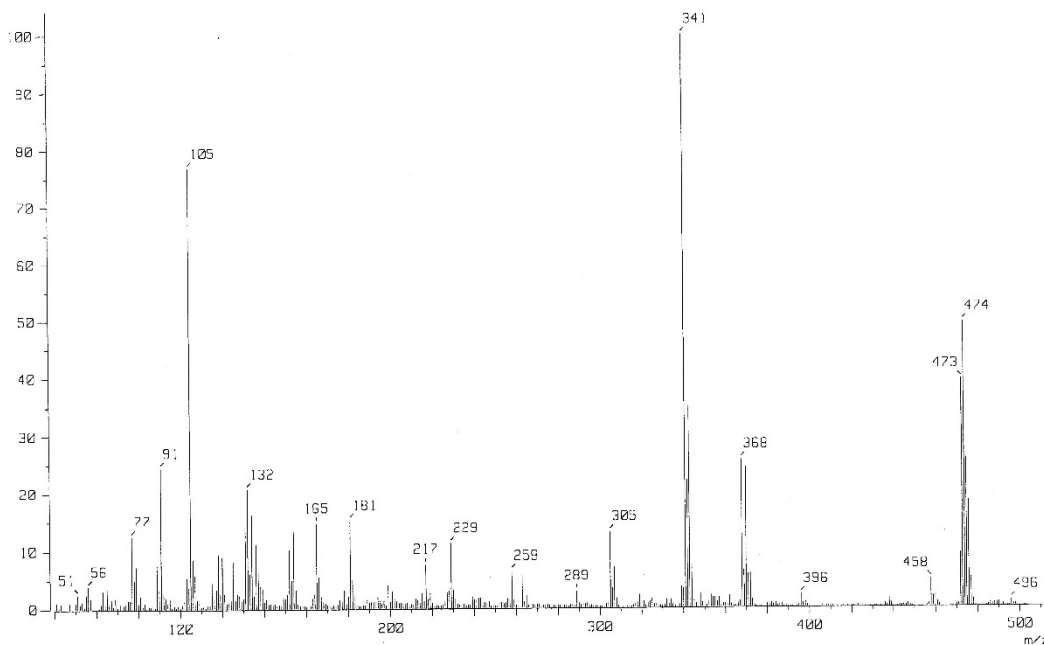
(2*S*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16d**). ¹H-NMR (CDCl₃, 400 MHz): δ 1.54 (d, *J* = 6.8 Hz, 3H), 3.37 (ABX system, *J* = 16.0, 6.4 Hz, 1H), 3.42 (ABX system, *J* = 16.0, 8.4 Hz, 1H), 3.93 (bs, 1H), 5.85 (s, 1H), 6.94–8.11 (m, 18H).



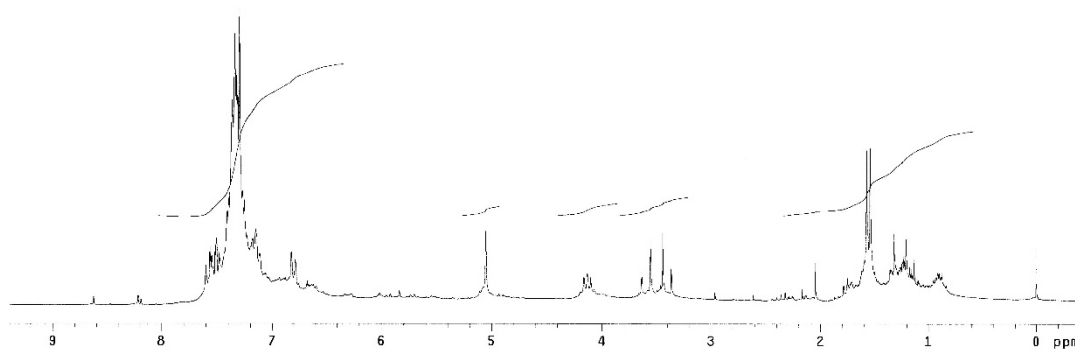
(2*S*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16d**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 11.4, 44.0 (d, $J_{\text{C/P}} = 107.9$ Hz), 58.8, 66.9, 124.7, 126.3, 127.3, 127.7, 127.9, 128.1, 128.3, 128.5, 129.0, 129.8, 130.0, 130.7, 131.2, 131.4, 132.1, 132.4, 133.3, 140.9, 147.2.



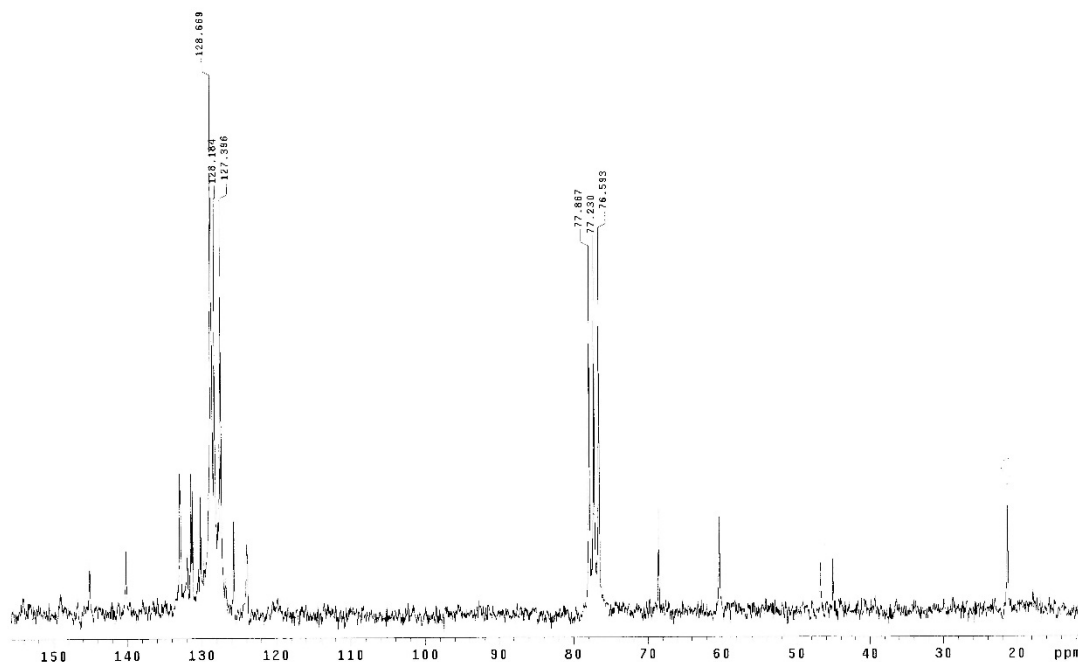
(2*S*)-2-Phenyl-(5*R*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16d**). ^{31}P -NMR (CDCl_3 , 81 MHz): δ 42.36.



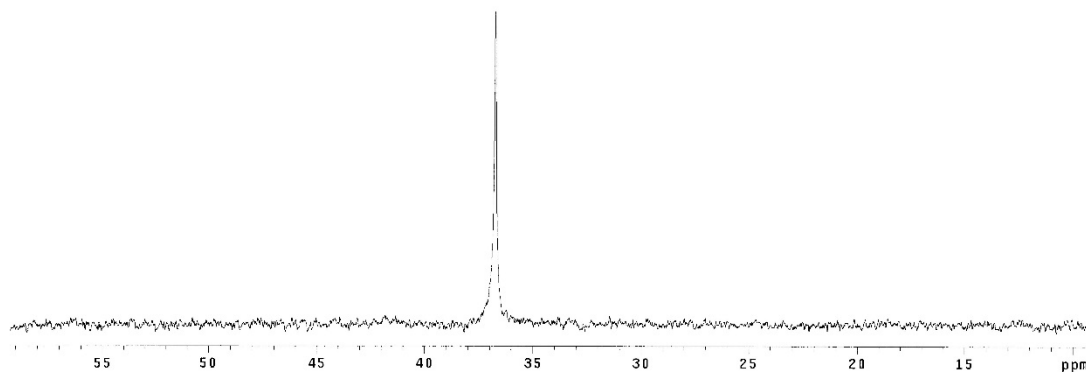
(2S)-2-Phenyl-*(5R)*-5-(2-chlorophenyl)-4-[(1*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**16d**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 474.1390.



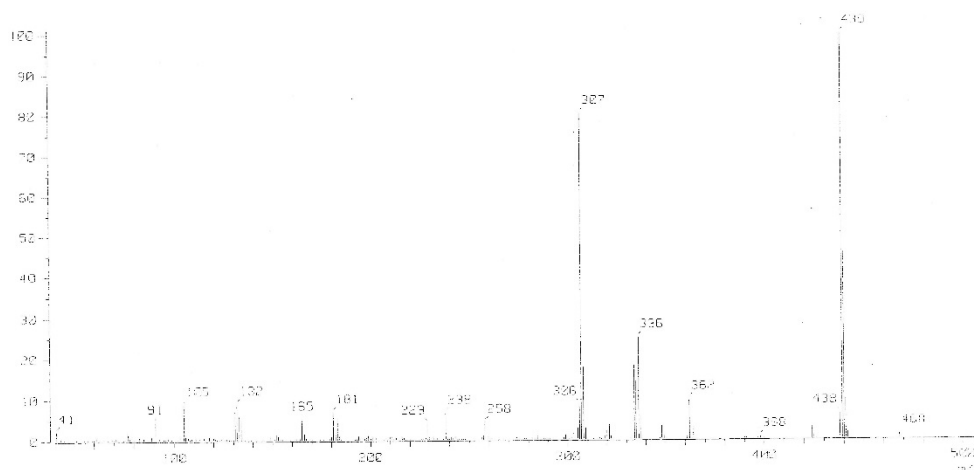
(2S)-2-Phenyl-*(5R)*-5-phenyl-4-[(1*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17c**). ^1H -NMR (CDCl_3 , 200 MHz): δ 1.30 (d, $J = 6.6$ Hz, 3H), 3.36 (ABX system, $J = 16.0, 12.2$ Hz, 1H), 3.52 (ABX system, $J = 16.1, 5.1$ Hz, 1H), 4.11 (dq, $J = 7.0, 2.2$ Hz, 1H), 5.30 (s, 1H), 6.91–7.63 (m, 19H).



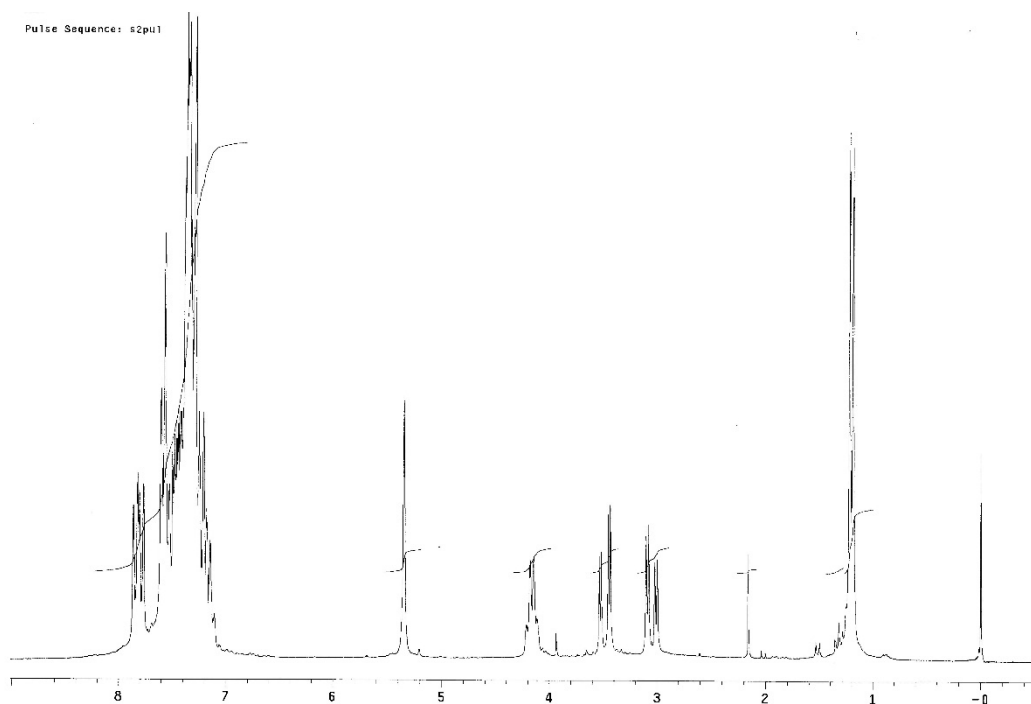
(2*S*)-2-Phenyl-(5*R*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17c**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 15.9, 45.3 (d, $J_{\text{C/P}} = 95.5$ Hz), 59.9, 69.1, 123.5, 125.7, 127.6, 127.8, 128.4, 128.6, 128.6, 129.3, 131.3, 131.5, 132.0, 132.7, 141.8, 142.7.



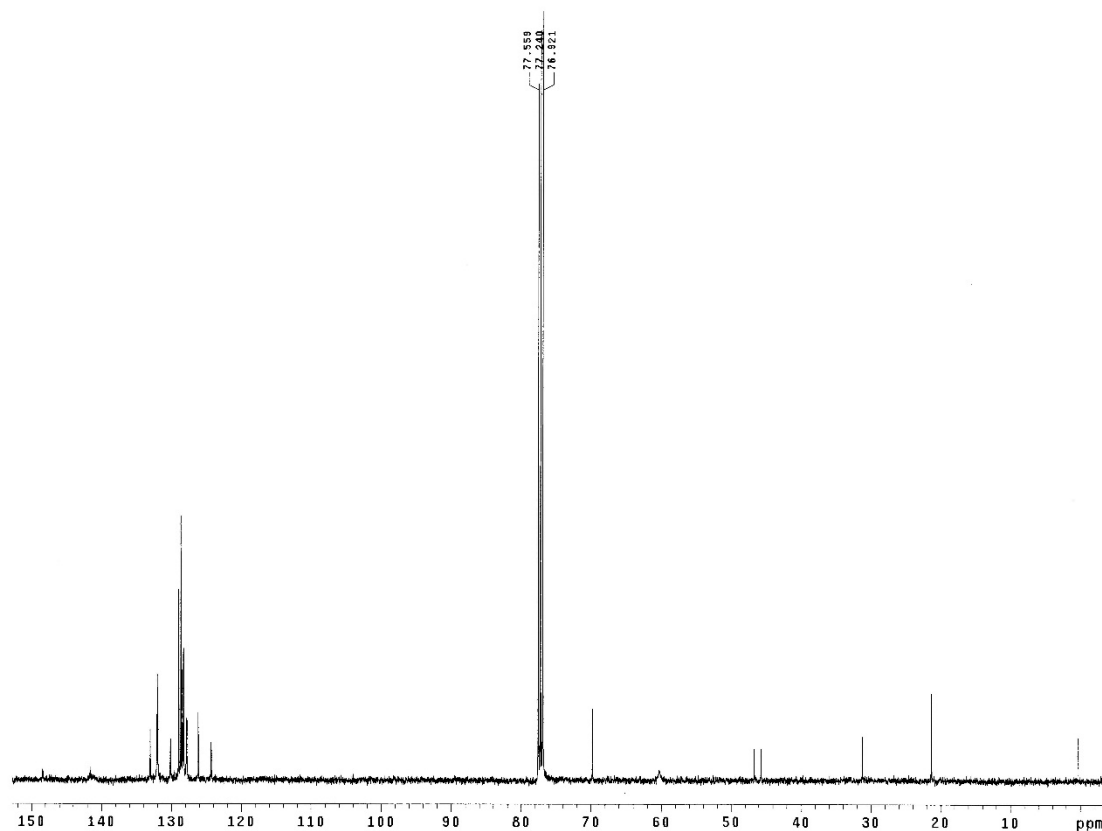
(2*S*)-2-Phenyl-(5*R*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17c**). ^{31}P -NMR (CDCl_3 , 80.95 MHz): δ 36.7.



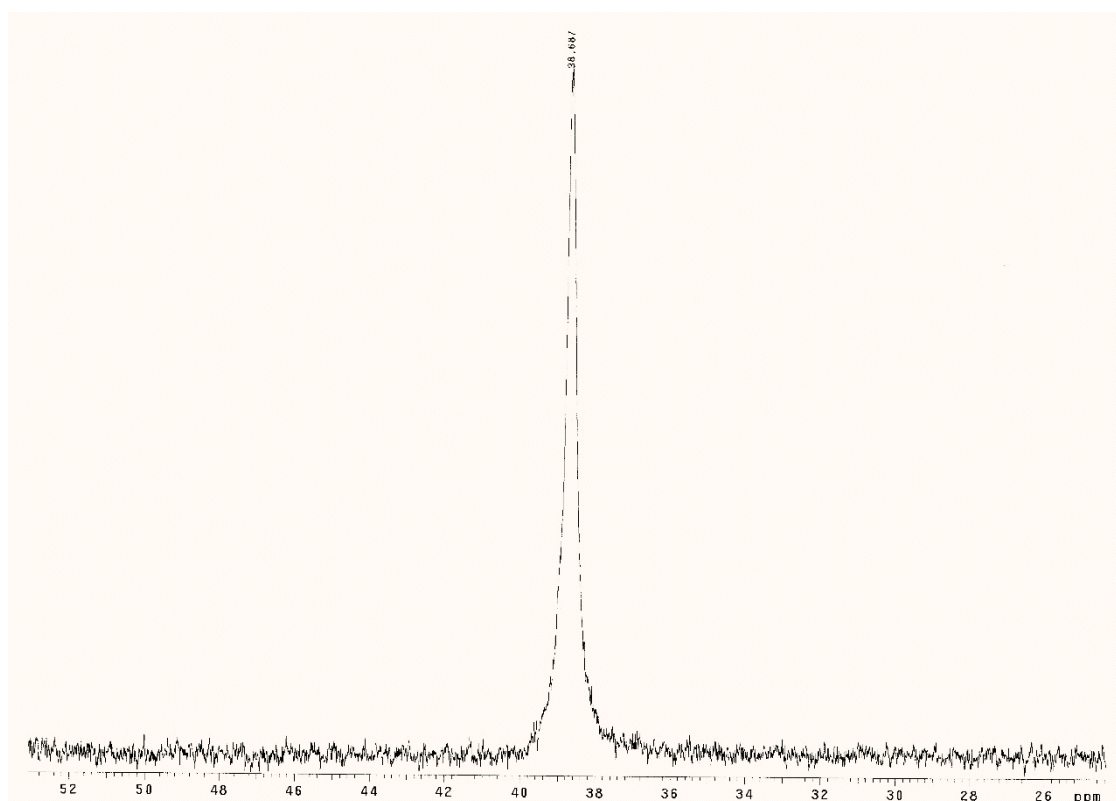
(2*S*)-2-Phenyl-(5*R*)-5-phenyl-4-[(1*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17c**). HRMS (CI⁺): found for [M]⁺, m/z 439.1772.



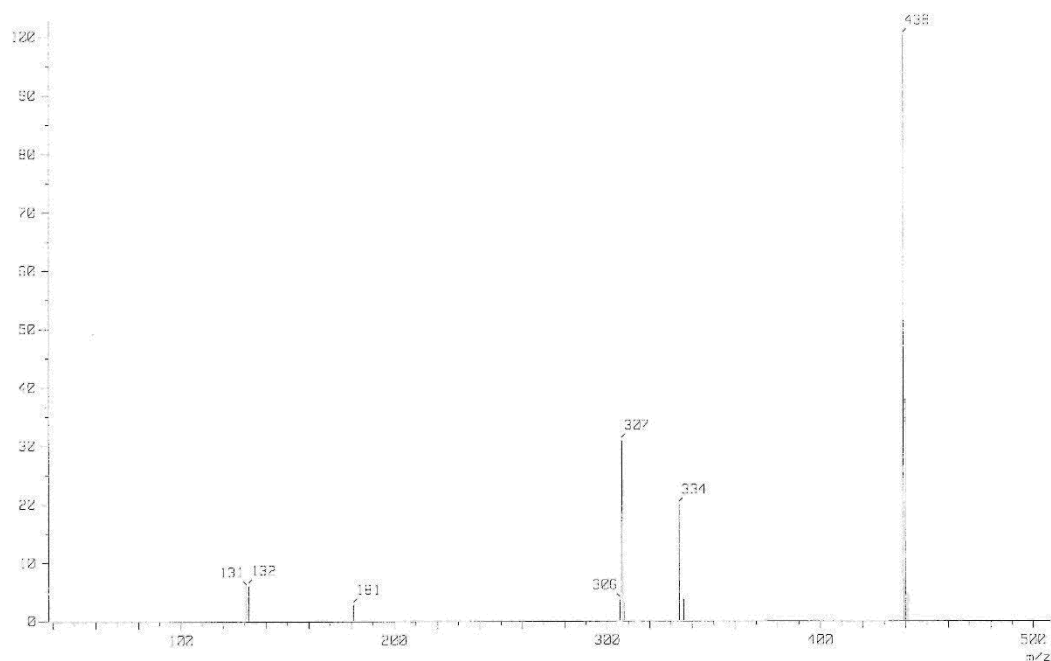
(2*R*)-2-Phenyl-(5*R*)-5-phenyl-4-[(1*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**18c**). ¹H-NMR (CDCl₃, 400 MHz): δ 1.20 (d, J = 6.6 Hz, 3H), 3.04 (ABX system, J = 16.1, 4.7 Hz, 1H), 3.48 (ABX system, J = 16.1, 3.7 Hz, 1H), 4.16 (q, J = 7.0 Hz, 1H), 5.35 (s, 1H), 7.14–7.86 (m, 19H).



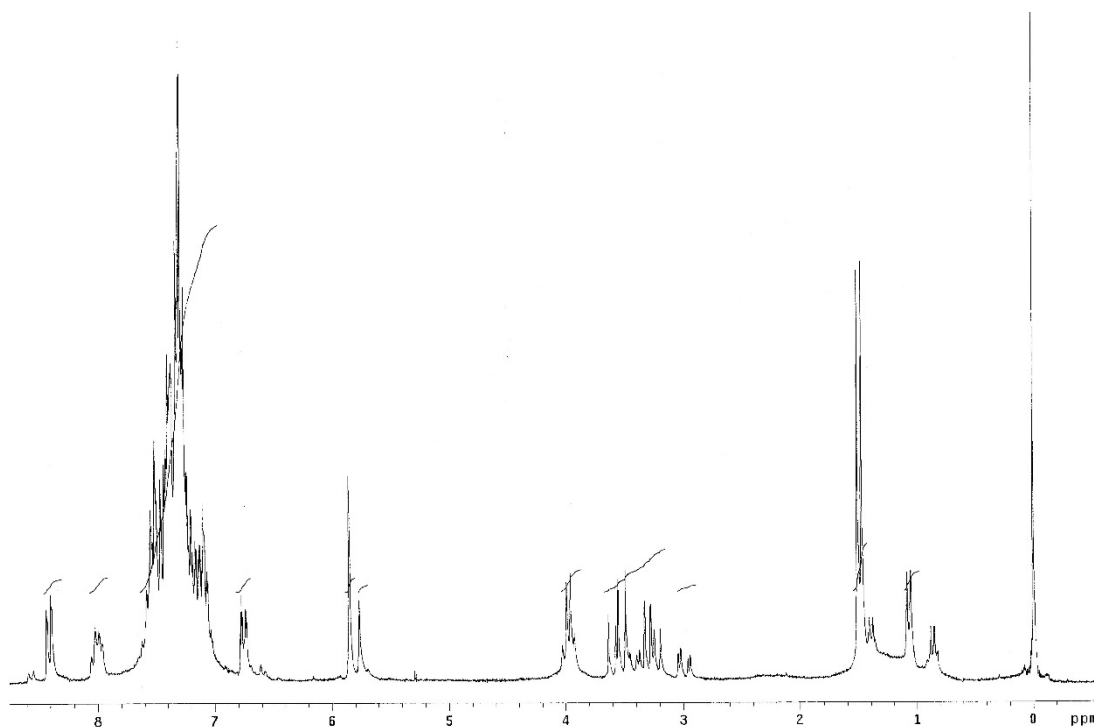
(2R)-2-Phenyl-(5*R*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**18c**). ^{13}C -NMR (CDCl_3 , 50 MHz): δ 21.3, 46.1 (d, $J_{\text{C/P}} = 98.7$ Hz), 60.3, 69.7, 124.3, 126.1, 127.7, 127.8, 128.2, 128.5, 128.6, 128.9, 130.2, 131.9, 132.0, 132.1, 133.0, 142.3, 148.0.



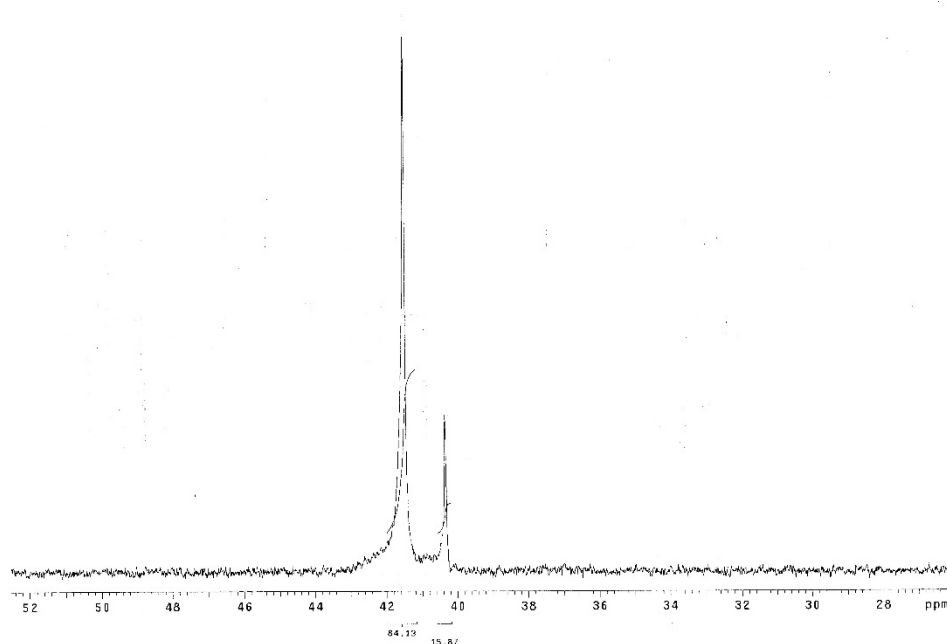
(2*R*)-2-Phenyl-(5*R*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**18c**). ^{31}P -NMR (CDCl_3 , 161.8 MHz): δ 37.84.



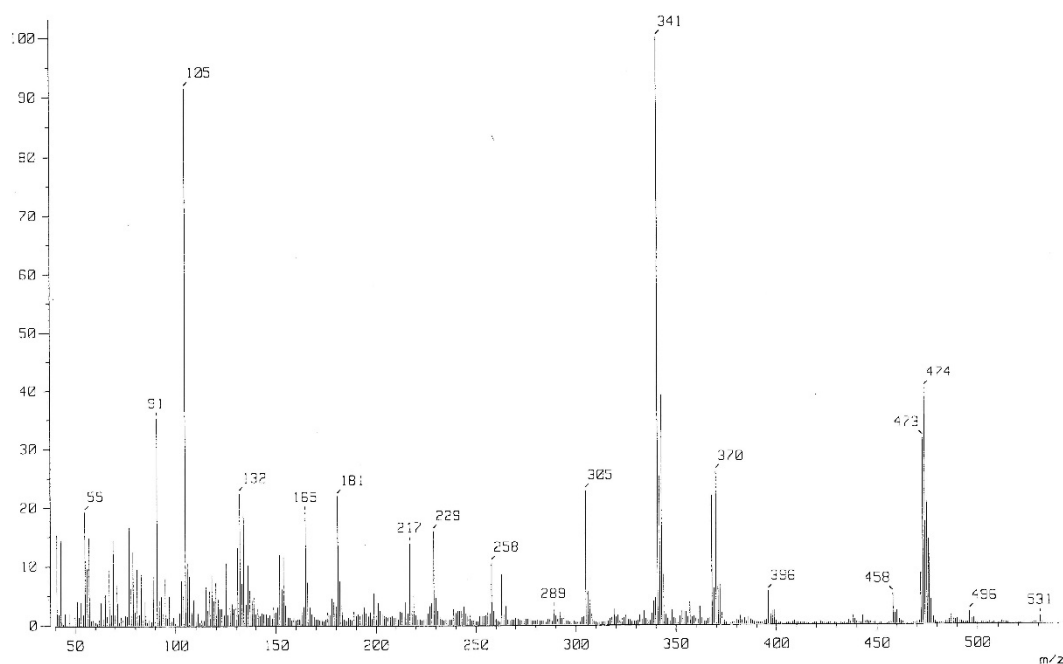
(2*R*)-2-Phenyl-(5*R*)-5-phenyl-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**18c**). HRMS (CI^+): found for $[\text{M} + \text{H}]^+$, m/z 439.1639.



(*2R,S*)-2-Phenyl-(*5S*)-5-(2-chlorophenyl)-4-[(*1'S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17d**) and (**18d**). The asterisk denotes the minor diastereoisomer. $^1\text{H-NMR}$ (CDCl_3 , 200 MHz): δ 1.06* (d, $J = 7.0$ Hz, 3H), 1.49 (d, $J = 7.0$ Hz, 3H), 2.99* (ABX system, $J = 16.2, 4.2$ Hz, 1H), 3.25 (ABX system, $J = 16.3, 5.8$ Hz, 1H), 3.42* (ABX system, $J = 16.4, 5.4$ Hz, 1H), 3.56 (ABX system, $J = 16.5, 4.4$ Hz, 1H), 3.96* (q, $J = 6.9$ Hz, 1H), 3.97 (q, $J = 6.9$ Hz, 1H), 5.76* (s, 1H), 5.85 (s, 1H), 6.72–8.45 (m, 36H).



(2*R,S*)-2-Phenyl-(5*S*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17d**) and (**18d**). ^{31}P -NMR (CDCl_3 , 81 MHz): δ 40.35*, 41.51.



(2*R,S*)-2-Phenyl-(5*S*)-5-(2-chlorophenyl)-4-[(1'*S*)-1-phenylethyl]-2,3,4,5-tetrahydro-1,4,2-benzoxazaphosphepine 2-oxide (**17d**) and (**18d**). HRMS (FAB^+): found for $[\text{M} + \text{H}]^+$, m/z 474.1389.