

Supporting Information

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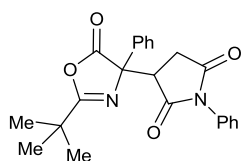
General methods.

Chemicals and solvents were either purchased *puriss p.A.* from commercial suppliers or purified by standard techniques. For thin-layer chromatography (TLC), silica gel plates Merck 60 F254 were used and compounds were visualized by irradiation with UV light and/or by treatment with a solution of phosphomolybdic acid (25 g), $\text{Ce}(\text{SO}_4)_2 \cdot \text{H}_2\text{O}$ (10 g), conc. H_2SO_4 (60 mL), and H_2O (940 mL) followed by heating or by treatment with a solution of *p*-anisaldehyde (23 mL), conc. H_2SO_4 (35 mL), acetic acid (10 mL), and ethanol (900 mL) followed by heating. Flash chromatography was performed using silica gel Merck 60 (particle size 0.040-0.063 mm), ^1H NMR, ^{19}F NMR and ^{13}C NMR spectra were recorded on Varian AS 400. Chemical shifts are given in ppm relative to tetramethylsilane (TMS) and the coupling constants J are given in Hz. The spectra were recorded in CDCl_3 as solvent at room temperature. TMS served as internal standard ($\delta = 0$ ppm) for ^1H NMR, CDCl_3 was used as internal standard ($\delta = 77.0$ ppm) for ^{13}C NMR and TFA was used as external standard for ^{19}F NMR. High-resolution mass spectra were recorded on a Bruker MicroTOF spectrometer.

General Procedure:

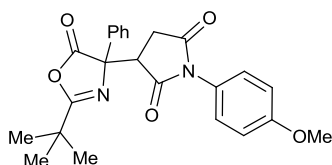
In a small flask, the desired oxazolone (0.30 mmol, 1.2 equiv), maleimide (0.25 mmol, 1.0 equiv) and catalyst $(\text{DHQD})_2\text{PYR}$ (0.025 mmol, 0.1 equiv) in toluene (1 mL) were stirred at 4°C. Next, the crude was purified by column chromatography to afford the final compound.

COMPOUNDS



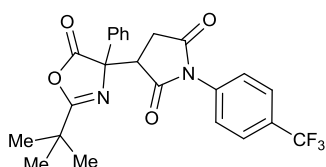
3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-phenylpyrrolidine-2,5-dione (**3a**)

Colorless oil. $^1\text{H-NMR}$ (400 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 7.66\text{--}7.62$ (m, 2H), 7.47-7.36 (m, 6H), 7.24-7.20 (m, 2H), 3.81 (dd, $J_1=4.1$ Hz, $J_2=9.2$ Hz, 1H), 2.90 (dd, $J_1=9.2$ Hz, $J_2=18.2$ Hz, 1H), 2.44 (dd, $J_1=4.1$ Hz, $J_2=18.2$ Hz, 1H), 1.34 (s, 9H). $^{13}\text{C-NMR}$ (100 MHz. CDCl_3): $\delta(\text{ppm})= 177.1, 173.5, 173.0, 172.8, 134.8, 131.6, 129.2, 129.0, 128.9, 128.8, 126.5, 126.0, 73.9, 47.1, 31.8, 26.7$. **HRMS** $[\text{M}+\text{H}]^+$: Calculated for $[\text{C}_{23}\text{H}_{23}\text{N}_2\text{O}_4]^+$: 391.1652; found: 391.1653. **HPLC** (Chiralpak IC $^{\circ}$, 1mLmin^{-1} , Hexane:IPA 80:20, 254 nm^{-1}): $t_{\text{R}}= 7.7, 9.9$ min. $[\alpha]_{\text{D}}^{25} = -30.2$ ($c=1.0$, CHCl_3 , 82% ee).



3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-methoxyphenyl)pyrrolidine-2,5-dione (**3b**)

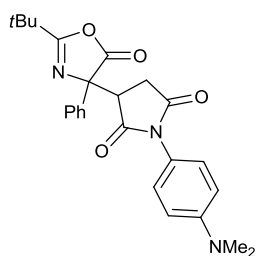
Colorless oil. $^1\text{H-NMR}$ (400 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 7.66\text{--}7.62$ (m, 2H), 7.44-7.37 (m, 3H), 7.16-7.11 (m, 2H), 6.97-6.93 (m, 2H), 3.80 (s, 3H), 3.81-3.77 (m, 1H), 2.88 (dd, $J_1=9.2$ Hz, $J_2=18.3$ Hz, 1H), 2.43 (dd, $J_1=4.1$ Hz, $J_2=18.3$ Hz, 1H), 1.34 (s, 9H). $^{13}\text{C-NMR}$ (100 MHz. CDCl_3): $\delta(\text{ppm})= 177.2, 173.8, 173.3, 172.7, 159.6, 134.9, 134.1, 129.5, 129.0, 128.9, 128.2, 127.7, 126.0, 114.5, 73.9, 55.5, 47.0, 31.8, 27.3, 26.7$. **HRMS** $[\text{M}+\text{H}]^+$: Calculated for $[\text{C}_{24}\text{H}_{25}\text{N}_2\text{O}_5]^+$: 421.1758; found: 421.1764. **HPLC** (Chiralpak IA $^{\circ}$, 1mLmin^{-1} , Hexane:IPA 85:15, 254 nm^{-1}): $t_{\text{R}}= 15.2, 17.2$ min. $[\alpha]_{\text{D}}^{25} = -39.3$ ($c=1.0$, CHCl_3 , 91% ee).



3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-(trifluoromethyl)phenyl)pyrrolidine-2,5-dione (**3c**)

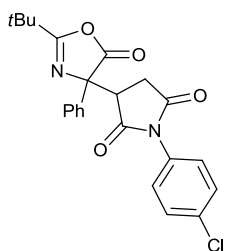
Colorless oil. $^1\text{H-NMR}$ (400 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 7.74\text{--}7.69$ (m, 2H), 7.66-7.61 (m, 2H), 7.49-7.35 (m, 5H), 3.84 (dd, $J_1=4.0$ Hz, $J_2=9.2$ Hz, 1H), 2.94 (dd, $J_1=9.2$ Hz, $J_2=18.2$ Hz, 1H), 2.46 (dd, $J_1=4.0$ Hz, $J_2=18.2$ Hz, 1H), 1.34 (s, 9H). $^{19}\text{F-NMR}$ (376 MHz.

CDCl₃): δ (ppm)= -63.2 (s, 3F). ¹³C-NMR (100 MHz, CDCl₃): δ (ppm)= 177.7, 177.0, 173.0, 172.6, 134.6, 129.7, 129.5, 129.1, 128.9, 128.2, 127.2, 127.1, 126.7, 126.5, 126.4, 126.3, 126.2, 126.0, 73.9, 47.1, 31.9, 27.0, 26.7. **HRMS [M+H]⁺**: Calculated for [C₂₄H₂₂F₃N₂O₄]⁺: 459.1526; found: 459.1521. **HPLC** (Chiralpak IB[®], 1mLmin⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): t_R= 10.3, 19.5 min. [α]_D²⁵ = -21.2 (c=0.4, CHCl₃, 52% ee).



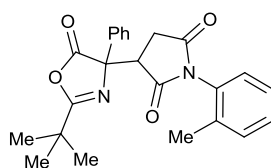
3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-(dimethylamino)phenyl)pyrrolidine-2,5-dione (**3d**)

Colorless oil. ¹H NMR (300 MHz, CDCl₃, TMS_{int}): δ (ppm)= 7.66-7.62 (m, 2H), 7.44-7.36 (m, 3H), 7.04 (d, J=9.1 Hz, 2H), 6.72 (d, J=9.1 Hz, 2H), 3.76 (dd, J₁=4.2 Hz, J₂=9.1 Hz, 1H), 2.95 (s, 6H), 2.85 (dd, J₁=9.1 Hz, J₂=18.3 Hz, 1H), 2.44 (dd, J₁=4.2 Hz, J₂=18.3 Hz, 1H), 1.34 (s, 3H). ¹³C NMR (100 MHz, CDCl₃): 178.7, 176.6, 175.7, 175.1, 152.0, 136.5, 130.7, 130.4, 130.3, 128.8, 128.6, 127.6, 113.9, 75.4, 48.5, 41.9, 33.2, 28.6, 28.2. **HRMS [M+Na]⁺**: Calculated for [C₂₅H₂₇N₃NaO₄]⁺ is 456.1894; found: 456.1887. **HPLC** (Chiralpak[®] IB, 1mLmin⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): t_R= 26.5, 29.7 min (maj.). [α]_D²⁵ = -18.5 (c=0.9, CHCl₃, 50% ee).



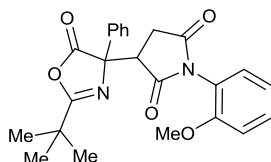
3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-chlorophenyl)pyrrolidine-2,5-dione (**3e**)

Colorless oil. ¹H NMR (300 MHz, CDCl₃, TMS_{int}): δ (ppm)= 7.63 (m, 2H), 7.43-7.40 (m, 5H), 7.19 (m, 2H), 3.81 (dd, J₁=4.0 Hz, J₂=9.1 Hz, 1H), 2.91 (dd, J₁=9.1 Hz, J₂=18.1 Hz, 1H), 2.44 (dd, J₁=4.0 Hz, J₂=18.1 Hz, 1H), 1.34 (s, 3H). ¹³C NMR (100 MHz, CDCl₃): 178.6, 174.8, 174.5, 174.4, 136.3, 136.1, 131.6, 131.1, 130.9, 130.8, 130.6, 130.5, 129.6, 129.3, 127.6, 75.4, 48.6, 33.4, 28.7, 28.3. **HRMS [M+H]⁺**: Calculated for [C₂₃H₂₂ClN₂O₄]⁺ is 425.1263; found: 425.1258. **HPLC** (Chiralpak[®] IB, 1mLmin⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): t_R= 11.6, 20.0 min (maj.). [α]_D²⁵ = -22.1 (c=1.1, CHCl₃, 77% ee).



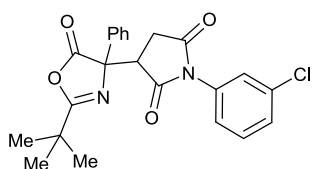
3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-*o*-tolylpyrrolidine-2,5-dione (**3f**)

Colorless oil. Mixture of diastereoisomers, d.r.=2:1 $^1\text{H-NMR}$ (400 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 7.67\text{--}7.63$ (m, 4H), 7.45-7.35 (m, 7H), 7.32-7.27 (m, 4H), 7.25-7.20 (m, 1H), 7.12-7.08 (m, 1H), 6.95-6.99 (m, 1H), 3.87 (dd, $J_1=4.7$ Hz, $J_2=9.4$ Hz, 1H), 3.85 (dd, $J_1=3.9$ Hz, $J_2=9.2$ Hz, 1H), 2.95 (dd, $J_1=9.2$ Hz, $J_2=18.2$ Hz, 1H), 2.90 (dd, $J_1=9.4$ Hz, $J_2=18.3$ Hz, 1H), 2.49-2.42 (m, 2H), 2.24 (s, 3H), 2.08 (s, 3H), 1.36 (s, 9H), 1.35 (s, 2H). $^{13}\text{C-NMR}$ (100 MHz. CDCl_3): $\delta(\text{ppm})= 177.2, 177.1, 173.5, 173.4, 173.0, 172.9, 172.8, 136.1, 135.5, 135.0, 134.8, 131.2, 131.0, 130.8, 130.6, 129.6, 129.5, 129.0, 128.9, 128.9, 128.9, 127.9, 127.0, 126.7, 126.0, 126.0, 74.0, 73.7, 47.3, 47.0, 34.5, 32.0, 31.8, 26.8, 26.7, 17.7, 17.6$. $\text{HRMS } [\text{M}+\text{H}]^+$: Calculated for $[\text{C}_{24}\text{H}_{25}\text{N}_2\text{O}_4]^+$: 405.1809; found: 405.1805. HPLC (Chiralpak IB $^{\text{®}}$, 1 mLmin^{-1} , Hexane:IPA 90:10, 254 nm^{-1}): $t_{\text{R}}= 10.0, 14.9$ min.



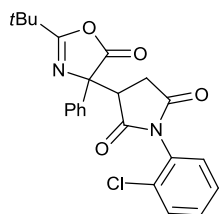
3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(2-methoxyphenyl)pyrrolidine-2,5-dione (**3g**)

Colorless oil. Mixture of diastereoisomers, d.r.=2:1 $^1\text{H-NMR}$ (400 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 7.70\text{--}7.62$ (m, 4H), 7.45-7.34 (m, 8H), 7.13-7.10 (m, 1H), 7.06-9.94 (m, 5H), 3.85 (dd, $J_1=4.2$ Hz, $J_2=9.4$ Hz, 1H), 3.83 (s, 3H), 3.81 (dd, $J_1=5.7$ Hz, $J_2=9.1$ Hz, 1H), 3.74 (s, 3H), 2.93 (dd, $J_1=9.4$ Hz, $J_2=18.2$ Hz, 1H), 2.77 (dd, $J_1=9.1$ Hz, $J_2=18.1$ Hz, 1H), 2.67 (dd, $J_1=5.7$ Hz, $J_2=18.1$ Hz, 1H), 2.44 (dd, $J_1=4.2$ Hz, $J_2=18.2$ Hz, 1H), 1.35 (s, 9H), 1.35 (s, 9H). $^{13}\text{C-NMR}$ (100 MHz. CDCl_3): $\delta(\text{ppm})= 177.2, 176.9, 173.5, 173.4, 173.0, 172.8, 172.6, 171.9, 154.6, 135.0, 130.8, 129.2, 128.9, 128.8, 126.1, 126.1, 120.9, 111.9, 73.9, 73.2, 55.7, 47.2, 31.4, 26.7$. HPLC (Chiralpak IB $^{\text{®}}$, 0.8 mLmin^{-1} , Hexane:IPA 95:5, 254 nm^{-1}): $t_{\text{R}}(\text{majoritary diastereomer})= 31.8, 38.2$ min. $\text{HRMS } [\text{M}+\text{H}]^+$: Calculated for $[\text{C}_{24}\text{H}_{25}\text{N}_2\text{O}_5]^+$: 421.1758; found: 421.1755.



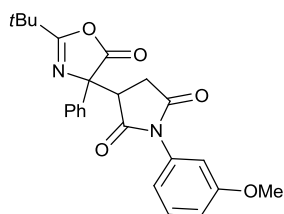
3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(3-chlorophenyl)pyrrolidine-2,5-dione (**3i**)

Colorless oil. $^1\text{H-NMR}$ (300 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 7.69\text{--}7.64$ (m, 2H), 7.47-7.38 (m, 5H), 7.31-7.28 (m, 1H), 7.22-7.16 (m, 1H), 3.84 (dd, $J_1=4.1$ Hz, $J_2=9.2$ Hz, 1H), 2.95 (dd, $J_1=9.2$ Hz, $J_2=18.3$ Hz, 1H), 2.46 (dd, $J_1=4.1$ Hz, $J_2=18.3$ Hz, 1H), 1.38 (s, 9H). $^{13}\text{C-NMR}$ (100 MHz. CDCl_3): $\delta(\text{ppm})= 183.1, 177.7, 173.8, 170.5, 135.9, 134.9, 132.5, 130.3, 130.1, 129.7, 129.6, 129.4, 129.4, 129.1, 129.0, 128.9, 127.1, 126.8, 126.0, 125.0, 124.7, 69.9, 47.9, 31.9, 27.0, 26.7$. **HPLC** (Chiralpak IB[®], 1 mLmin⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): $t_{\text{R}}= 10.0, 14.2$ min. **HRMS** [$\text{M}+\text{H}$]⁺: Calculated for $[\text{C}_{23}\text{H}_{22}\text{ClN}_2\text{O}_4]^+$: 425.1263; found: 425.1259. $[\alpha]_{\text{D}}^{25} = -43.0$ ($c=0.9$, CHCl_3 , 70% ee).



3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(2-chlorophenyl)pyrrolidine-2,5-dione (**3h**)

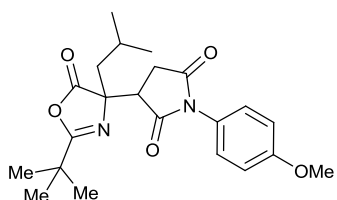
Colorless oil. $^1\text{H NMR}$ (300 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 8.36$ (d, $J=7.2$ Hz, 2H), 7.56-7.45 (m, 3H), 7.41-7.36 (m, 1H), 7.32-7.27 (m, 1H), 6.88 (dd, $J_1=8.3$ Hz, $J_2=2.5$ Hz, 1H), 6.73-6.69 (m, 1H), 6.64-6.63 (m, 1H), 4.06-4.00 (dd, $J_1=9.0$ Hz, $J_2=6.4$ Hz, 1H), 3.28-3.09 (m, 2H), 1.35 (s, 3H). $^{13}\text{C NMR}$ (100 MHz. CDCl_3): 184.5, 178.8, 174.8, 172.1, 132.5, 131.6, 131.5, 131.1, 131.0, 130.8, 129.9, 129.7, 129.6, 129.3, 128.0, 127.3, 71.4, 49.5, 33.5, 28.5, 27.7. **HRMS** [$\text{M}+\text{H}_2\text{O}$]⁺: Calculated for $[\text{C}_{23}\text{H}_{24}\text{ClN}_2\text{O}_5]^+$ is 443.1368; found: 443.1356. **HPLC** (Chiralpak[®] IB, 1mLmin⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): $t_{\text{R}}= 15.0, 17.9$ min (maj.). $[\alpha]_{\text{D}}^{25} = -15.2$ (CHCl_3 , $c=1.25$, 56% ee).



3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(2-methoxyphenyl)pyrrolidine-2,5-dione (**3j**)

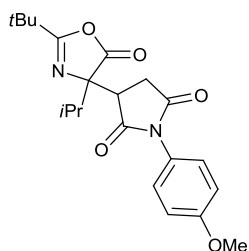
Colorless oil. $^1\text{H NMR}$ (300 MHz. CDCl_3 , TMS_{int}): $\delta(\text{ppm})= 8.36$ (d, $J=7.2$ Hz, 2H), 7.56-7.45 (m, 3H), 7.41-7.36 (m, 1H), 7.32-7.27 (m, 1H), 6.88 (dd, $J_1=8.3$ Hz, $J_2=2.5$ Hz, 1H), 6.73-6.69 (m, 1H), 6.64-6.63 (m, 1H), 4.06-4.00 (dd, $J_1=9.0$ Hz, $J_2=6.4$ Hz, 1H), 3.73 (s, 3H), 3.28-3.09 (m, 2H), 1.17 (s, 3H). $^{13}\text{C-NMR}$ (100 MHz. CDCl_3): $\delta(\text{ppm})= 180.9, 178.7, 178.2, 174.8, 134.1, 131.4, 130.3, 130.3, 120.1, 116.4, 113.5,$

56.8, 45.8, 42.0, 34.6, 32.3, 31.1, 27.7, 27.6. **HRMS** $[M+H]^+$: Calculated for $[C_{23}H_{22}ClN_2O_4]^+$ is 425.1758; found: 425.1752. **HPLC** (Chiralpak[®] IB, 1 mL min⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): t_R = 15.1, 17.9 min (maj.). $[\alpha]_D^{25} = -4.9$ (CHCl₃, c=0.36, 84% ee).



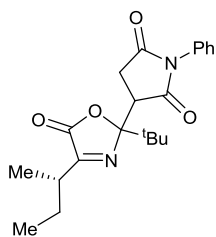
3-(2-*tert*-Butyl-4-isobutyl-5-oxo-4,5-dihydrooxazol-4-yl)-1-(4-methoxyphenyl)pyrrolidine-2,5-dione (**3k**)

Colorless oil. **¹H-NMR** (400 MHz, CDCl₃, TMS_{int}): δ (ppm)= 7.08-7.03 (m, 2H), 6.96-6.92 (m, 2H), 3.90 (dd, $J_1=6.5$ Hz, $J_2=8.6$ Hz, 1H), 3.80 (s, 3H), 3.11-3.06 (m, 2H), 2.55-2.51 (m, 2H), 2.31-2.20 (m, 1H), 1.11 (s, 9H), 1.05-1.00 (m, 6H). **¹³C-NMR** (100 MHz, CDCl₃): δ (ppm)= 173.7, 173.4, 165.2, 163.4, 159.6, 127.6, 123.9, 114.5, 108.6, 73.4, 55.4, 44.0, 39.9, 36.7, 33.0, 26.2, 26.0, 22.8, 22.7. **HPLC** (Chiralpak IB[®], 1 mL min⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): t_R = 18.0, 43.5 min. **HRMS** $[M+H]^+$: Calculated for $[C_{22}H_{29}N_2O_5]^+$: 401.2071; found: 401.2075. $[\alpha]_D^{25} = -13.7$ (c=1.0, CHCl₃, 81% ee).



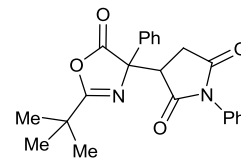
3-(2-(*tert*-Butyl)-4-isopropyl-5-oxo-4,5-dihydrooxazol-4-yl)-1-(4-methoxyphenyl)pyrrolidine-2,5-dione (**3l**)

Colorless oil. **¹H NMR** (400 MHz, CDCl₃, TMS_{int}): δ (ppm)= 7.04 (d, $J=8.8$ Hz, 2H), 6.93 (d, $J=8.9$ Hz, 2H), 3.83-3.78 (m: s+dd, 4H), 3.40 (dd, $J_1=17.7$ Hz, $J_2=6.6$ Hz, 1H), 3.09 (dd, $J_1=17.7$ Hz, $J_2=9.3$ Hz, 1H), 3.00 (h, $J=6.9$ Hz, 1H), 1.22 (d, $J=6.8$ Hz, 3H), 1.19 (d, $J=6.8$ Hz, 3H), 1.09 (s, 3H). **¹³C NMR** (100 MHz, CDCl₃): 175.1, 175.1, 172.9, 160.8, 128.6, 125.1, 115.8, 109.2, 78.4, 56.7, 44.5, 40.9, 34.3, 30.9, 29.3, 26.9, 20.6, 20.5. **HRMS** $[M+H]^+$: Calculated for $[C_{21}H_{27}N_2O_5]^+$ is 387.1914; found: 387.1914. **HPLC** (Chiralpak[®] IB, 1 mL min⁻¹, Hexane:IPA 90:10, 254 nm⁻¹): t_R = 12.9, 16.9 min (maj.). $[\alpha]_D^{25} = -8.1$ (CHCl₃, c=1.1, 86% ee).



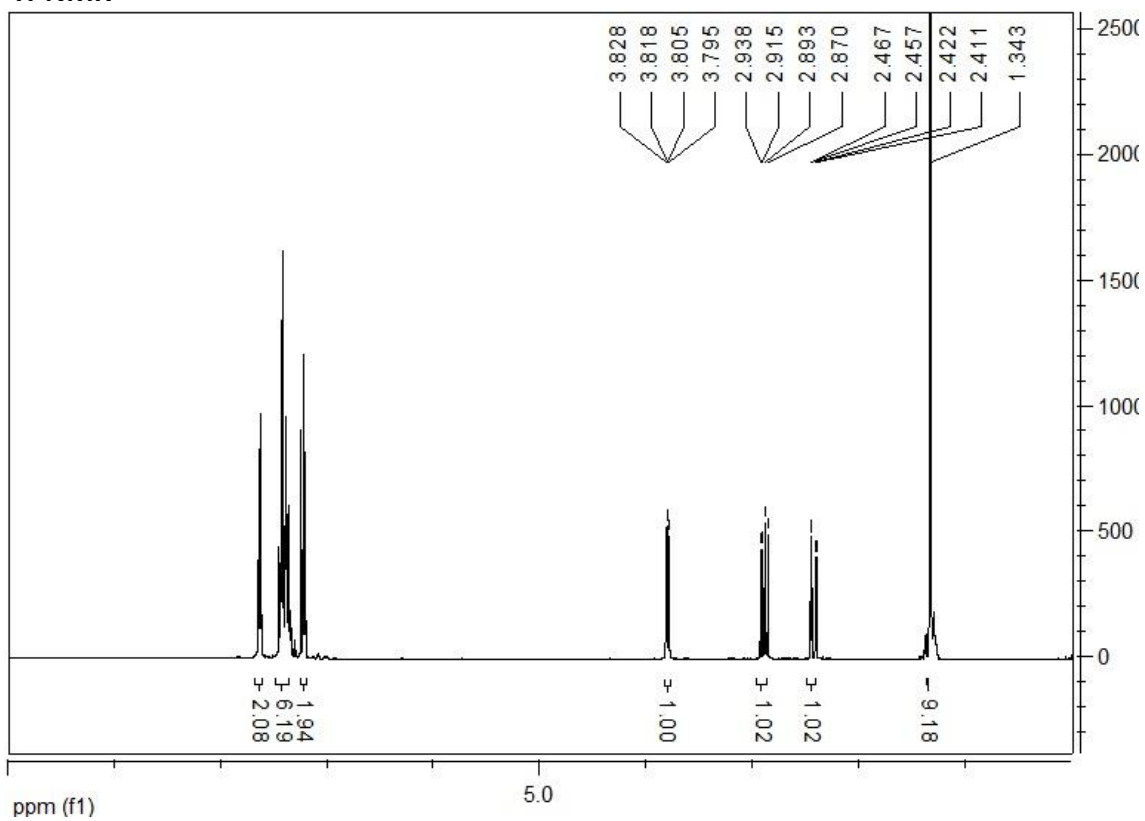
3-(4-sec-Butyl-2-tert-butyl-5-oxo-2,5-dihydrooxazol-2-yl)-1-phenylpyrrolidine-2,5-dione (4m)

White solid. Mixture of diastereoisomers, d.r.=1,6:1. **¹H-NMR** (400 MHz, CDCl₃, TMS_{int}): δ(ppm)= 7.45-7.33 (m, 6H), 7.16-7.10 (m, 4H), 3.95-3.88 (m, 2H), 3.08-3.03 (m, 4H), 2.85-2.75 (m, 2H), 1.95-1.78 (m, 2H), 1.62-1.50 (m, 2H), 1.27-1.23 (m, 6H), 1.10-1.08 (m, 18H), 1.00-0.94 (m, 6H). **¹³C-NMR** (100 MHz, CDCl₃): δ(ppm)=173.6, 173.5, 173.0, 172.9, 167.2, 164.5, 164.4, 131.4, 129.1, 129.1, 128.7, 126.4, 126.2, 108.2, 108.0, 44.1, 44.0, 39.8, 35.0, 34.7, 32.9, 26.4, 26.1, 25.6, 25.6, 16.4, 16.2, 11.8, 11.7. **HRMS [M+H]⁺**: Calculated for [C₂₁H₂₇N₂O₄]⁺: 371.1965; found: 371.1970.

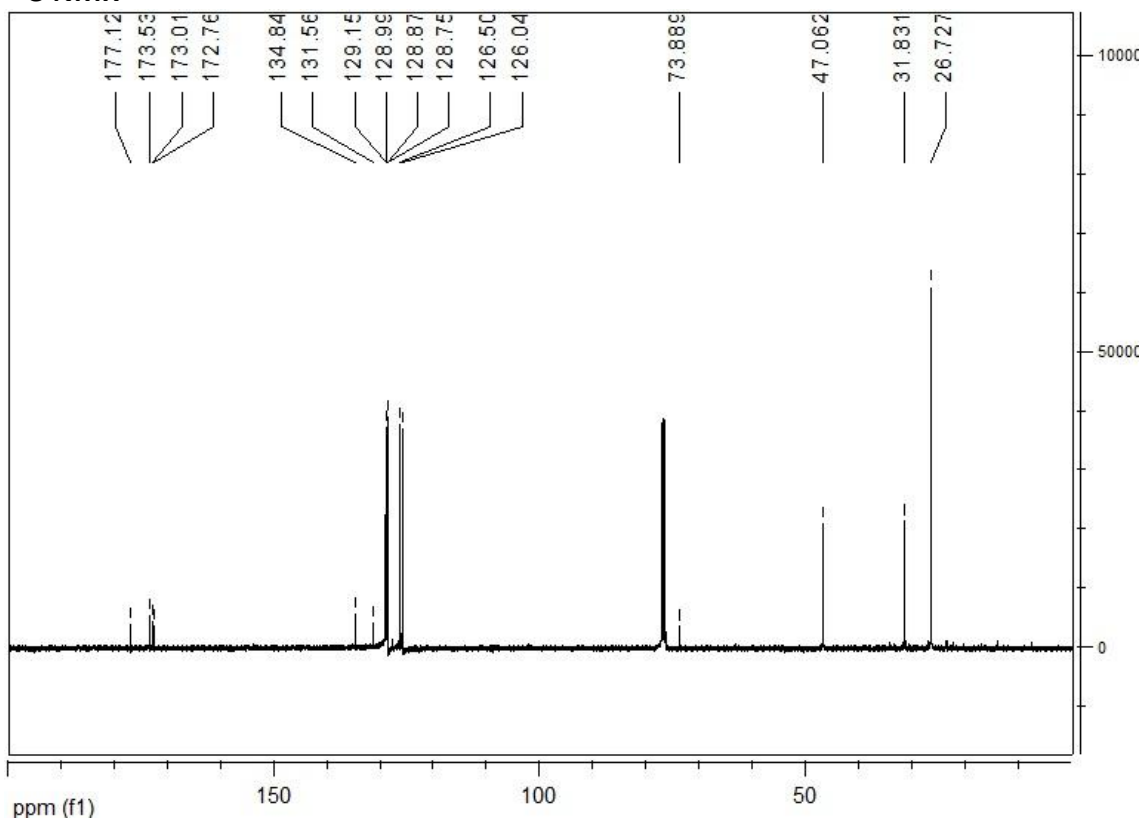


3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-phenylpyrrolidine-2,5-dione (**3a**)

¹H-NMR

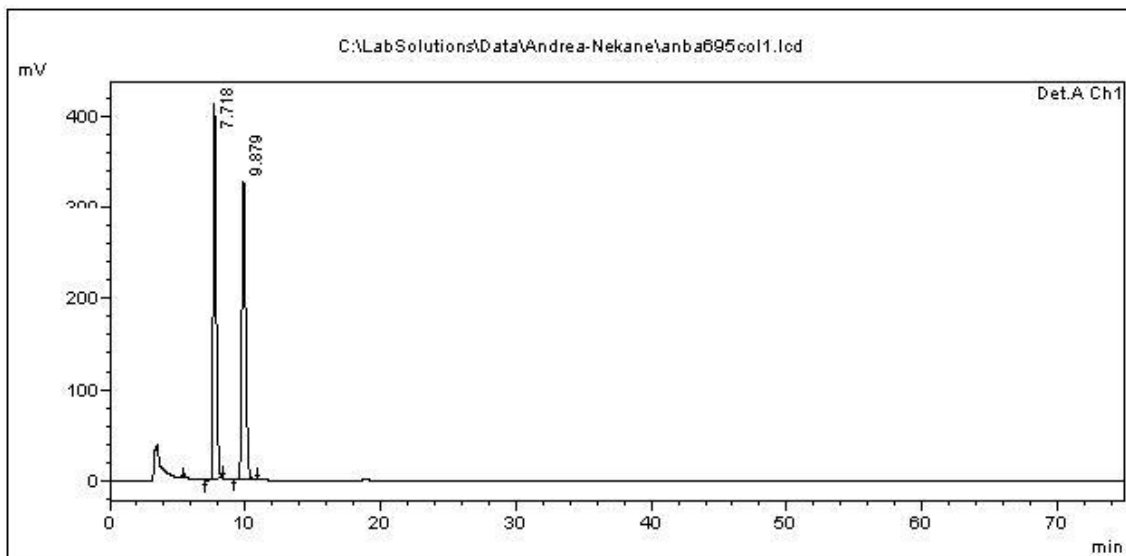


¹³C-NMR



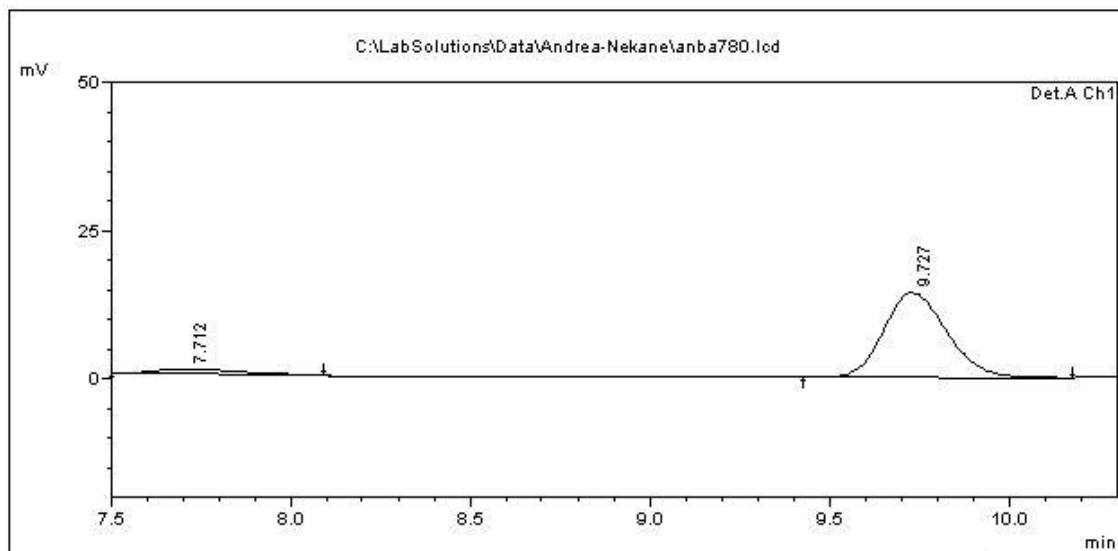
HPLC

Racemic:

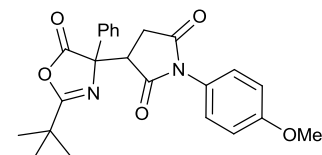


Peak#	Ret. Time	Area	Height	Area %	Height %
1	7.718	6305089	411632	49.977	55.728
2	9.879	6310974	327011	50.023	44.272
Total		12616063	738643	100.000	100.000

Chiral:

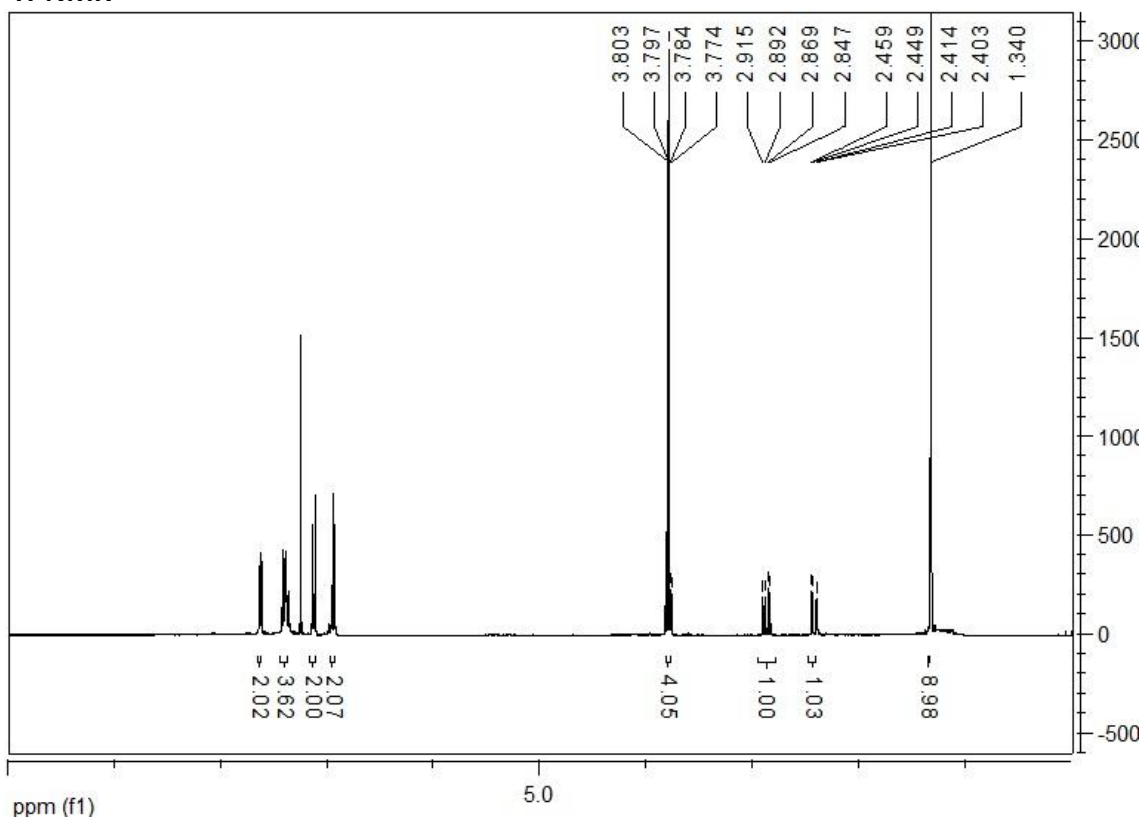


Peak#	Ret. Time	Area	Area %
1	7.712	12548	6.814
2	9.727	171616	93.186
Total		184164	100.000

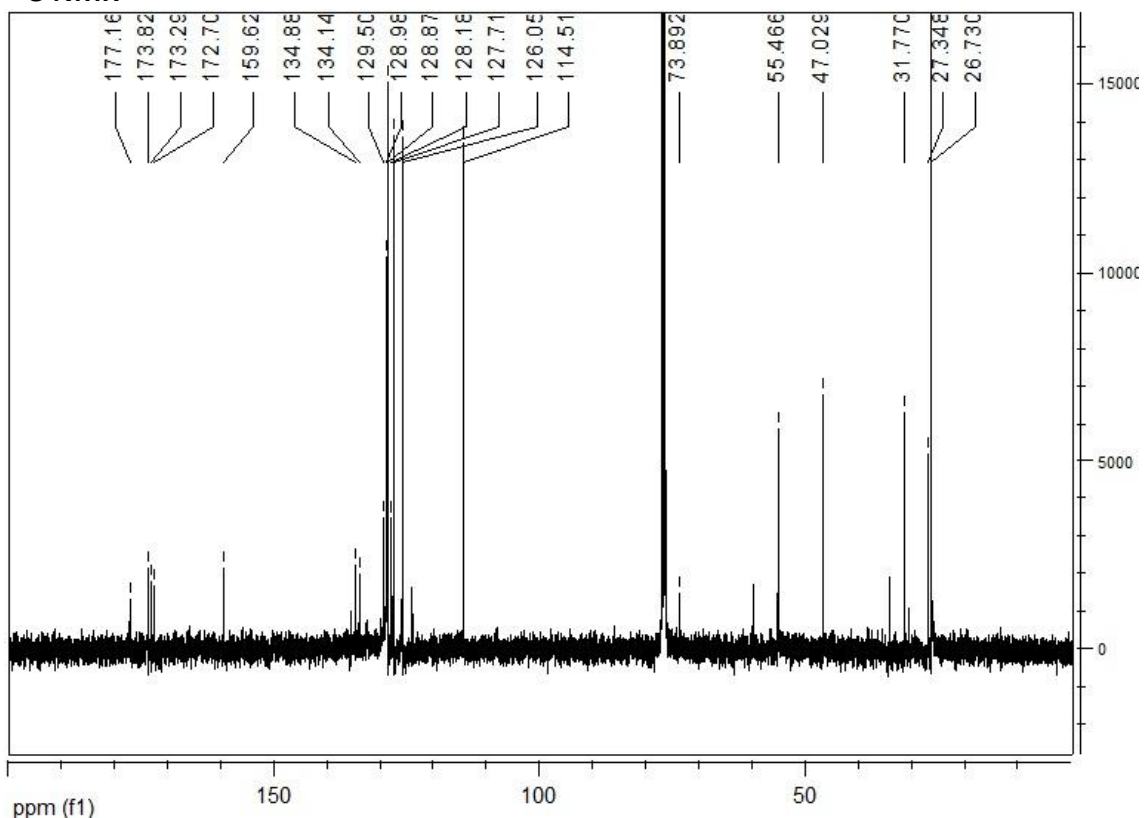


3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-methoxyphenyl)pyrrolidine-2,5-dione (**3b**)

¹H-NMR

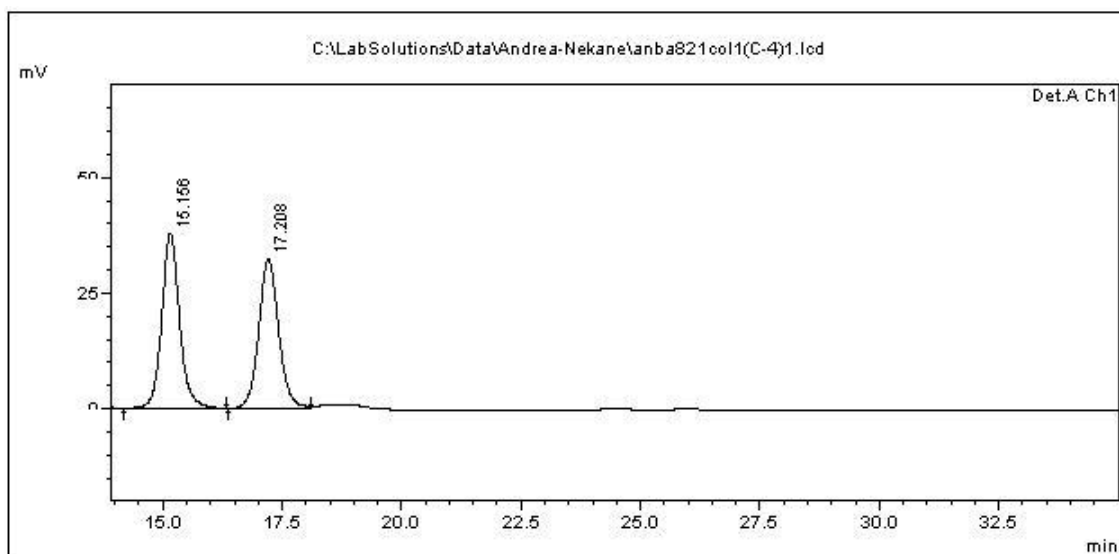


¹³C-NMR



HPLC:

Racemic:

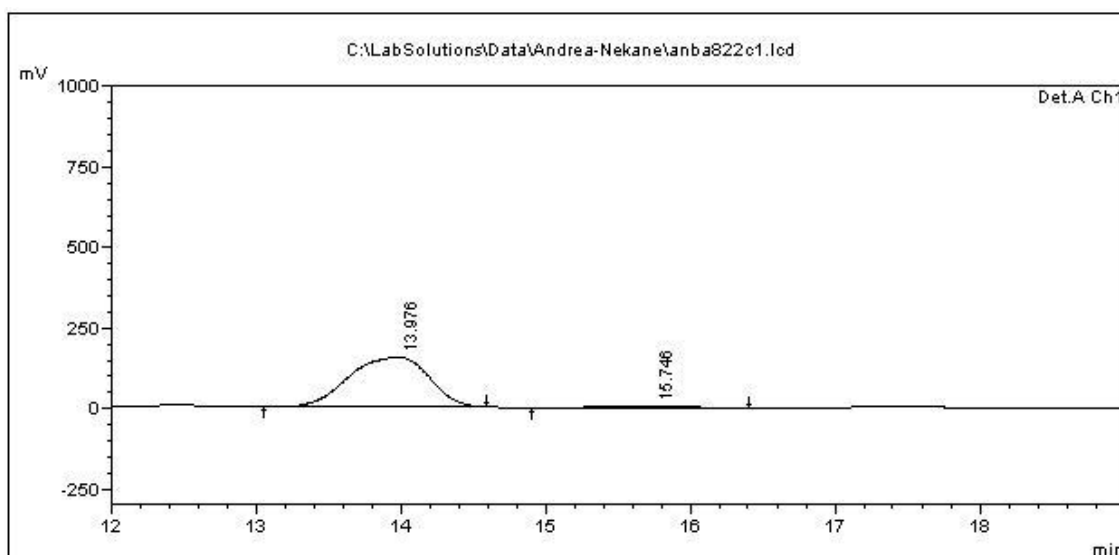


PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Area %
1	15.156	977067	50.999
2	17.208	938772	49.001
Total		1915839	100.000

Chiral:

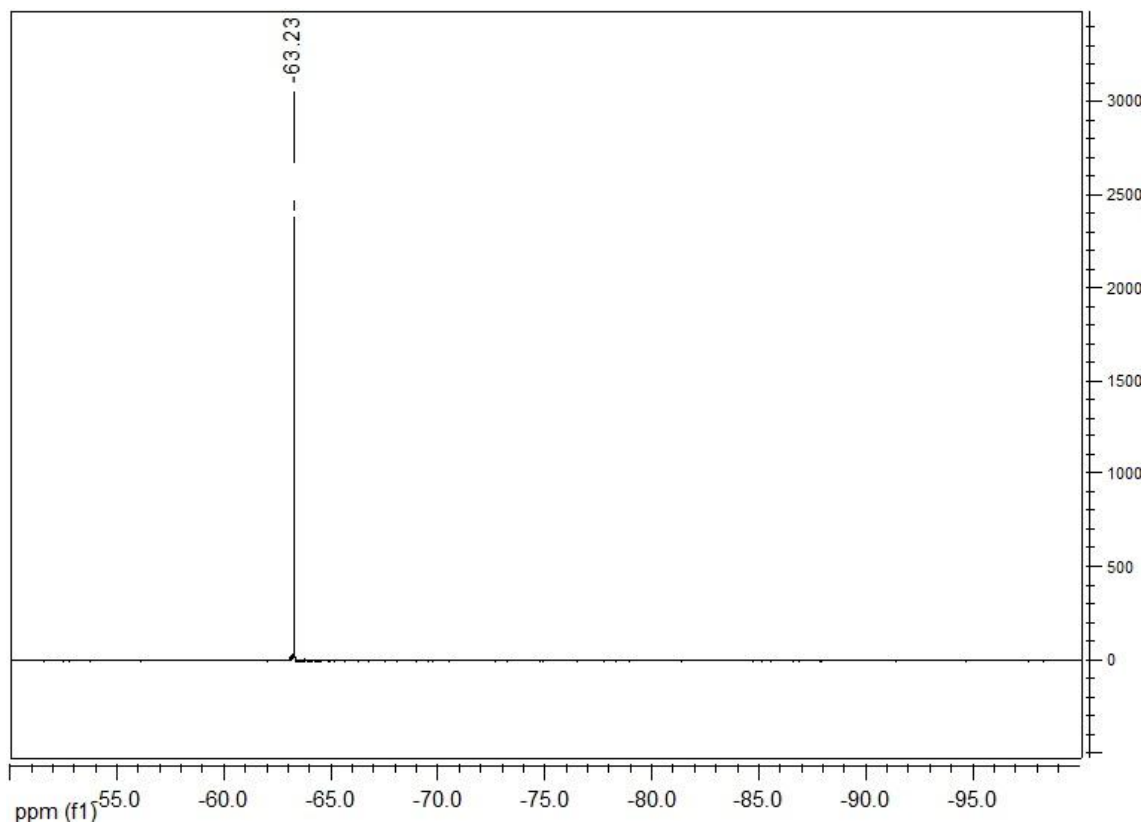


PeakTable

Detector A Ch1 254nm

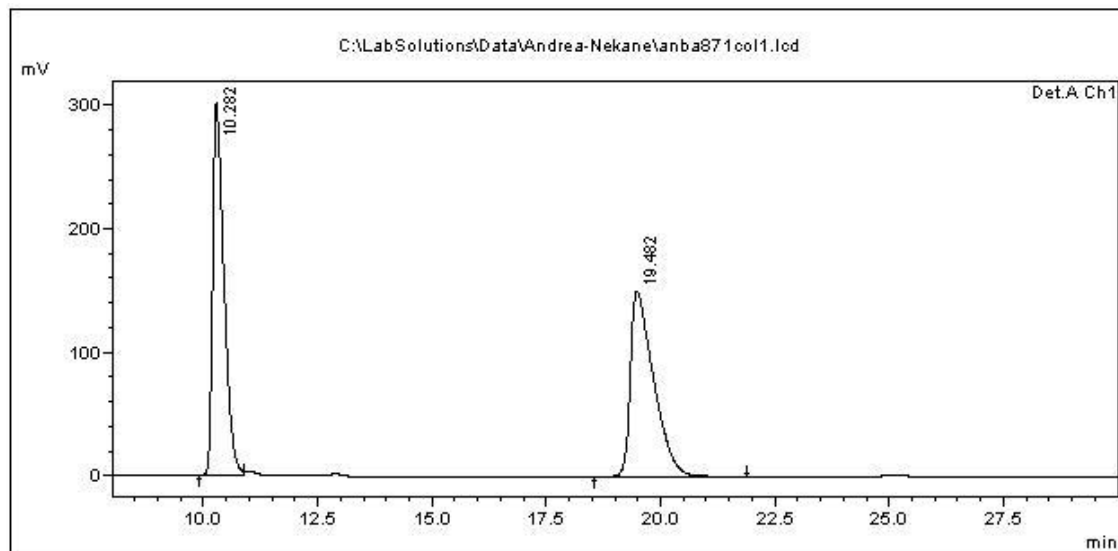
Peak#	Ret. Time	Area	Area %
1	13.976	5964446	95.720
2	15.746	266714	4.280
Total		6231160	100.000

¹⁹F-NMR



HPLC:

Racemic:

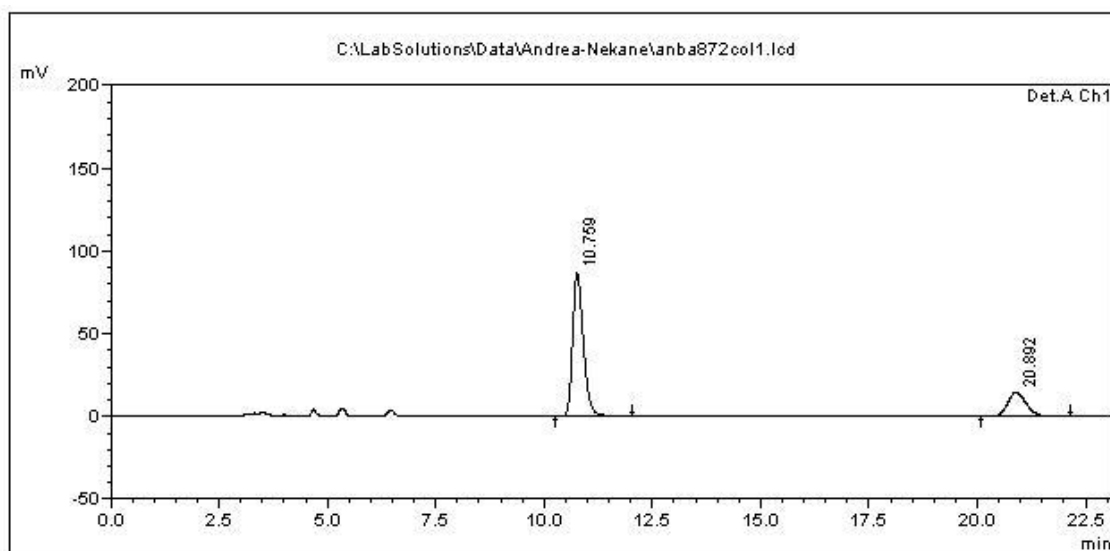


PeakTable

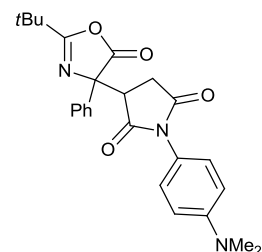
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Area %
1	10.282	5202654	49.569
2	19.482	5293090	50.431
Total		10495744	100.000

Chiral:

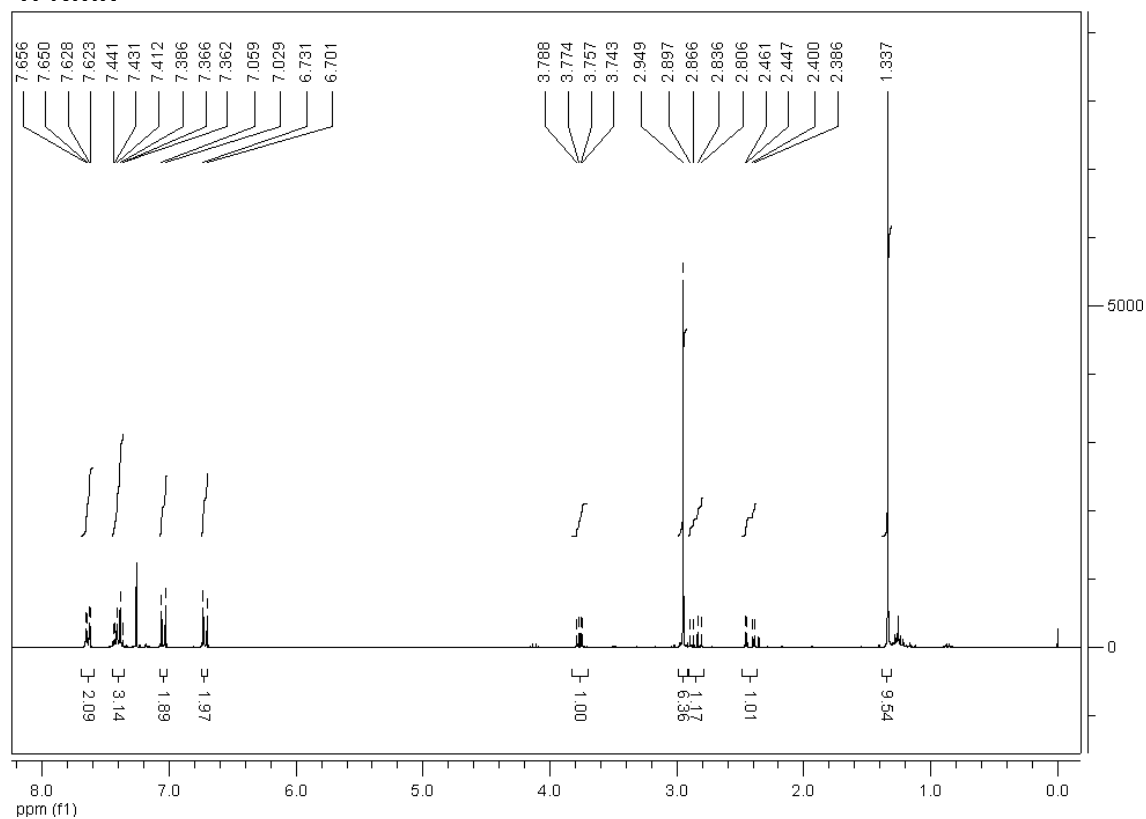


Peak#	Ret. Time	Area	Area %
1	10.759	1490864	76.774
2	20.892	451025	23.226
Total		1941889	100.000

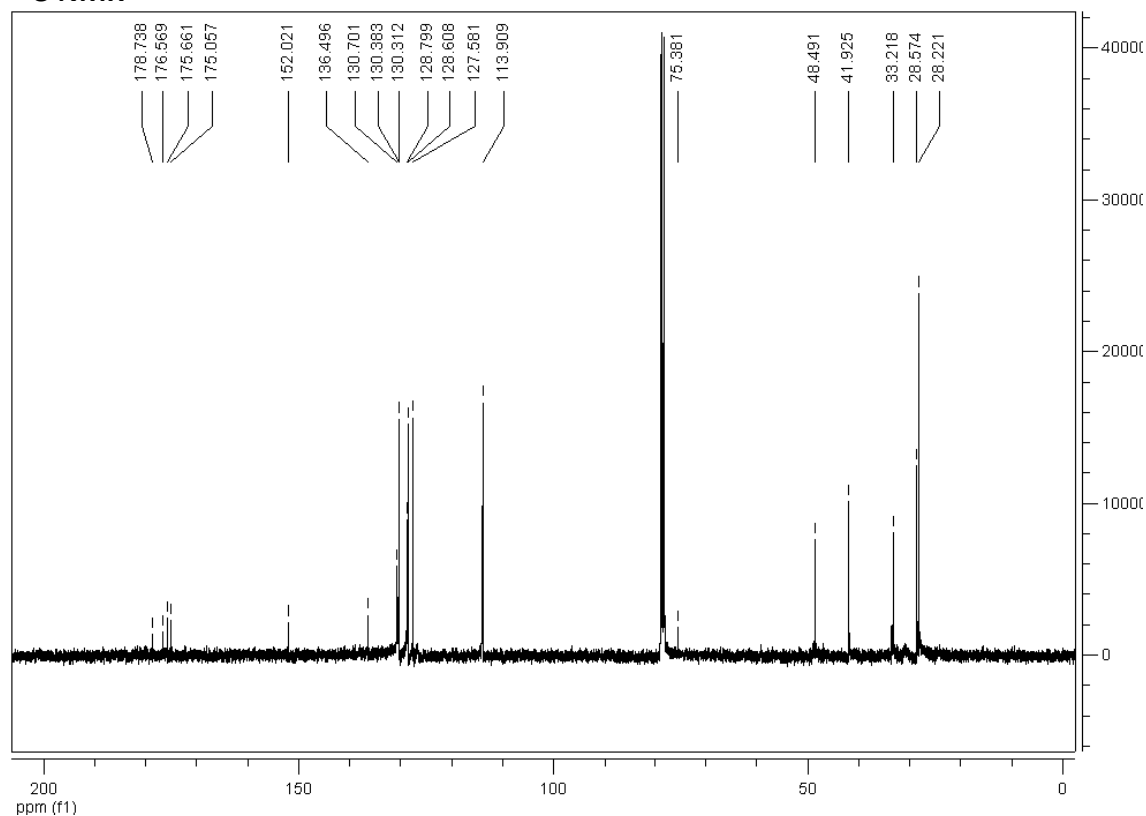


3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-(dimethylamino)phenyl)pyrrolidine-2,5-dione (**3d**)

¹H-NMR

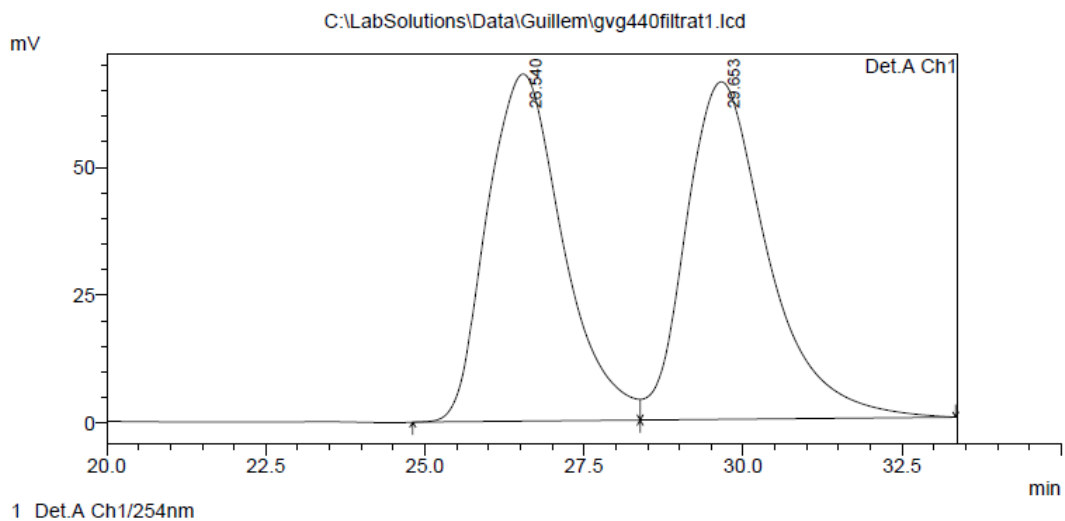


¹³C-NMR



HPLC:

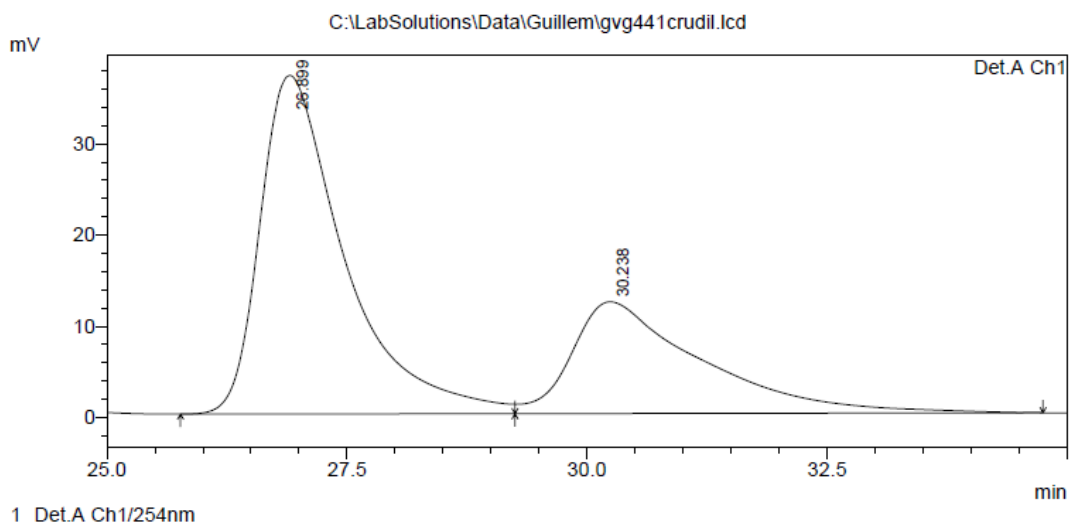
Racemic:



PeakTable

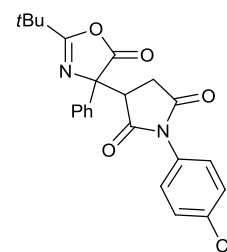
Peak#	Ret. Time	Area	Height	Area %	Height %
1	26.540	5616614	67799	48.742	50.698
2	29.653	5906632	65933	51.258	49.302
Total		11523246	133732	100.000	100.000

Chiral:



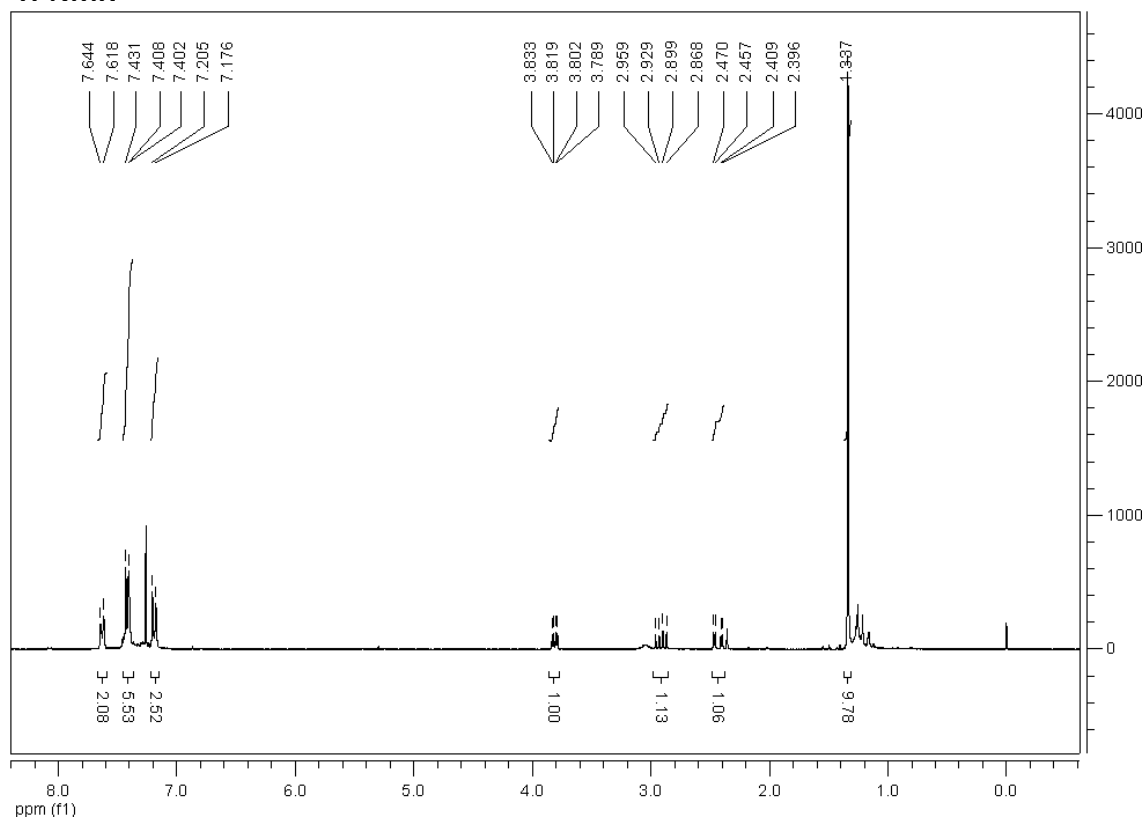
PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	26.899	2272789	37118	66.420	75.194
2	30.238	1149034	12245	33.580	24.806
Total		3421823	49363	100.000	100.000

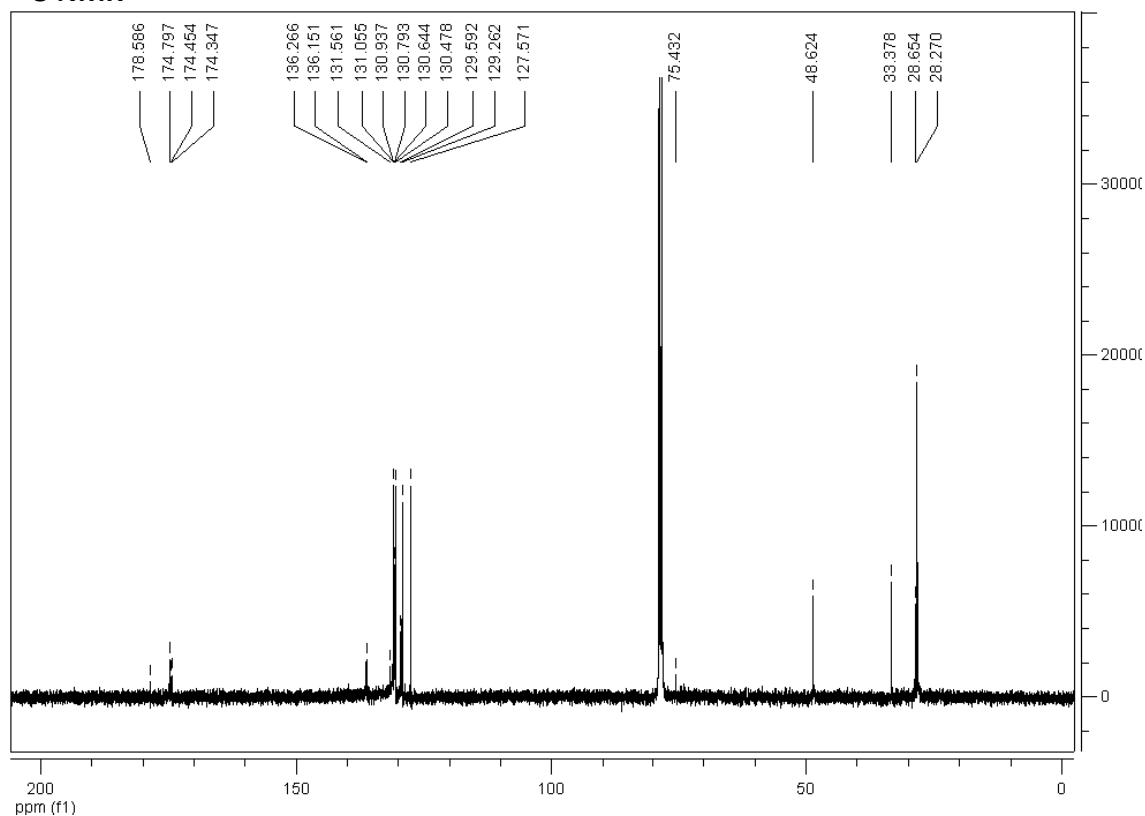


3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(4-chlorophenyl)pyrrolidine-2,5-dione (**3e**)

¹H-NMR

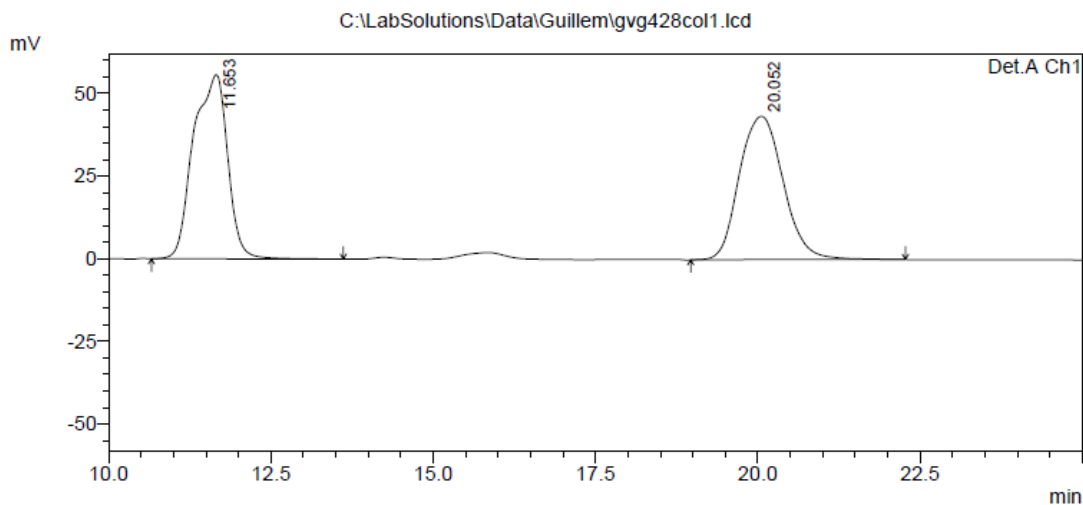


¹³C-NMR



HPLC:

Racemic:



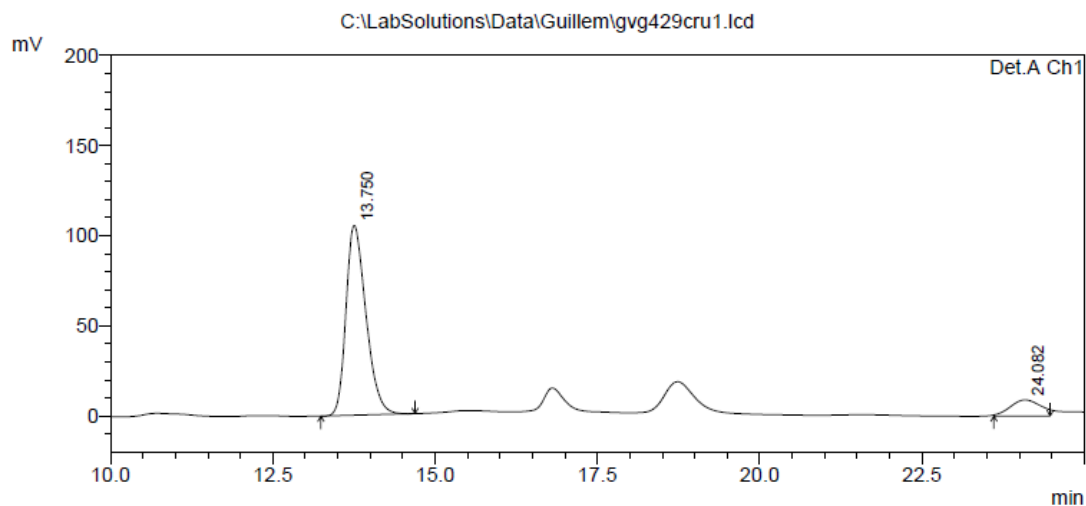
1 Det.A Ch1/254nm

PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	11.653	2034951	55783	49.977	56.283
2	20.052	2036830	43328	50.023	43.717
Total		4071780	99110	100.000	100.000

Chiral:

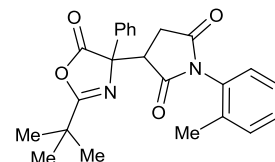


1 Det.A Ch1/254nm

PeakTable

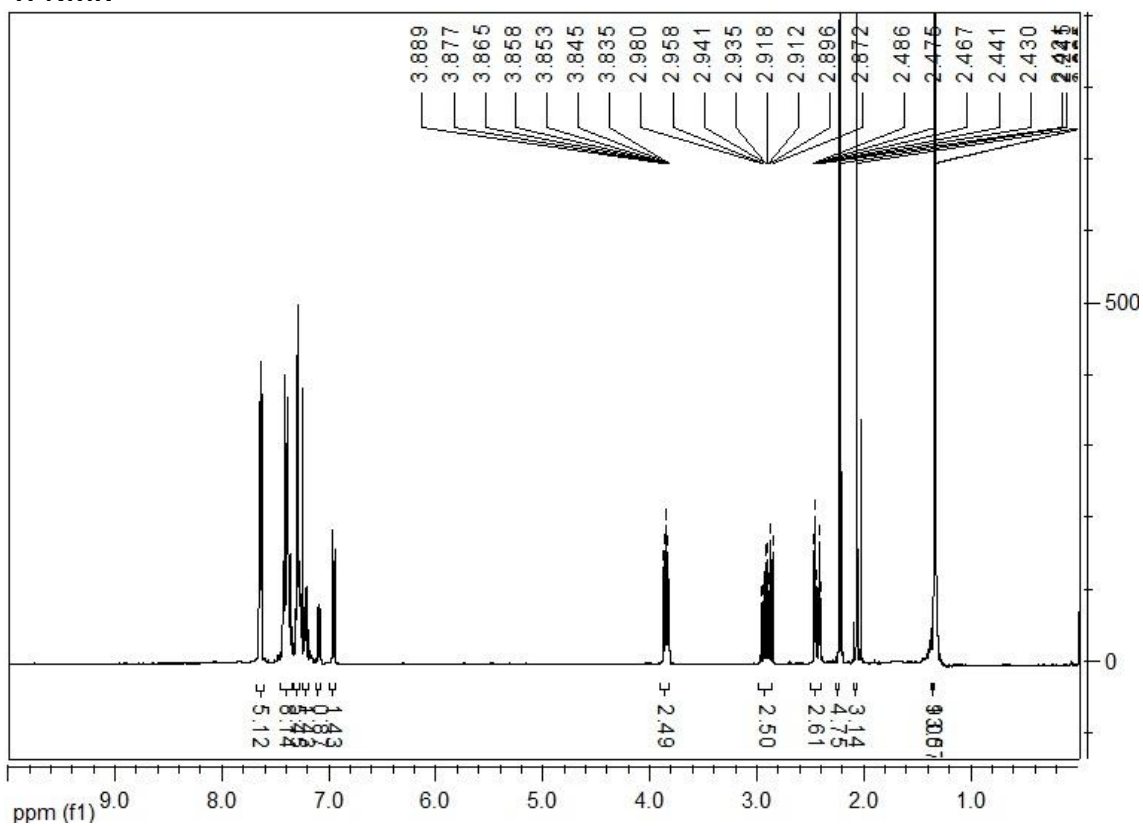
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	13.750	2257284	105225	88.724	92.226
2	24.082	286891	8870	11.276	7.774
Total		2544176	114095	100.000	100.000

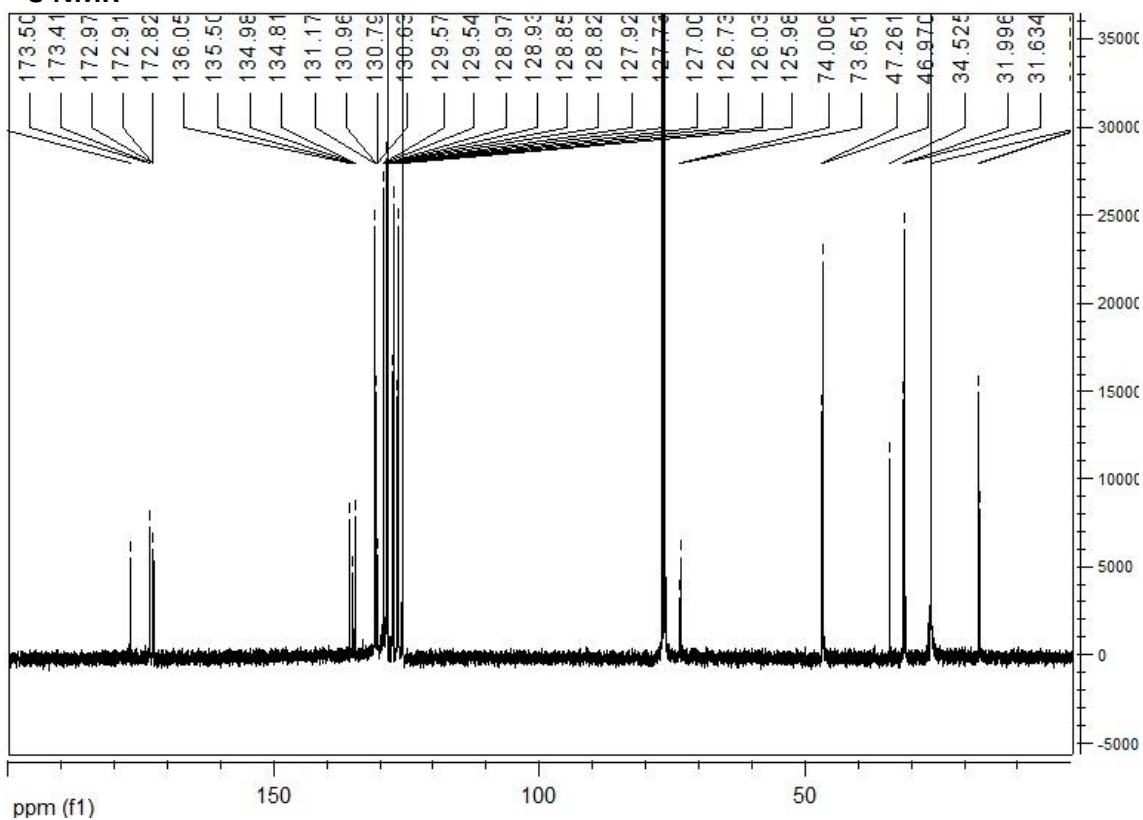


3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-*o*-tolylpyrrolidine-2,5-dione (**3f**)

¹H-NMR

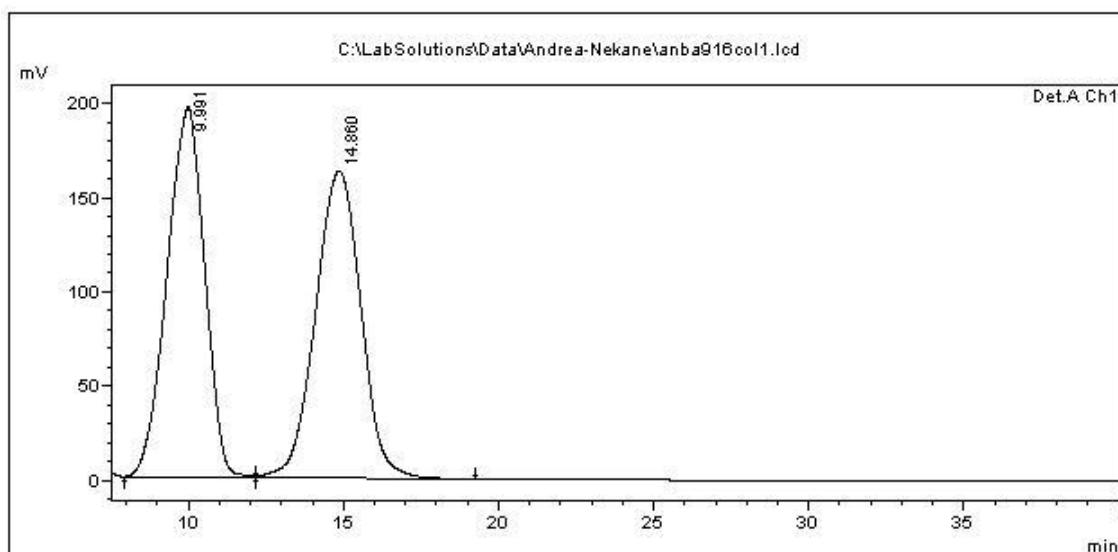


¹³C-NMR



HPLC

Racemic:

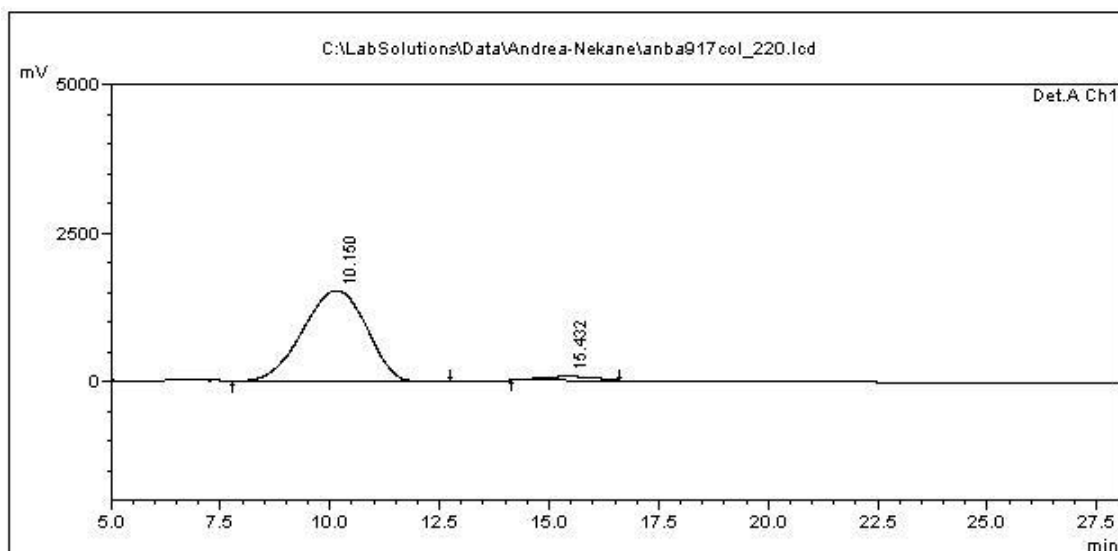


PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Area %
1	9.991	16549924	49.892
2	14.860	16621398	50.108
Total		33171322	100.000

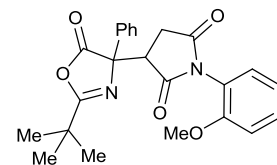
Chiral:



PeakTable

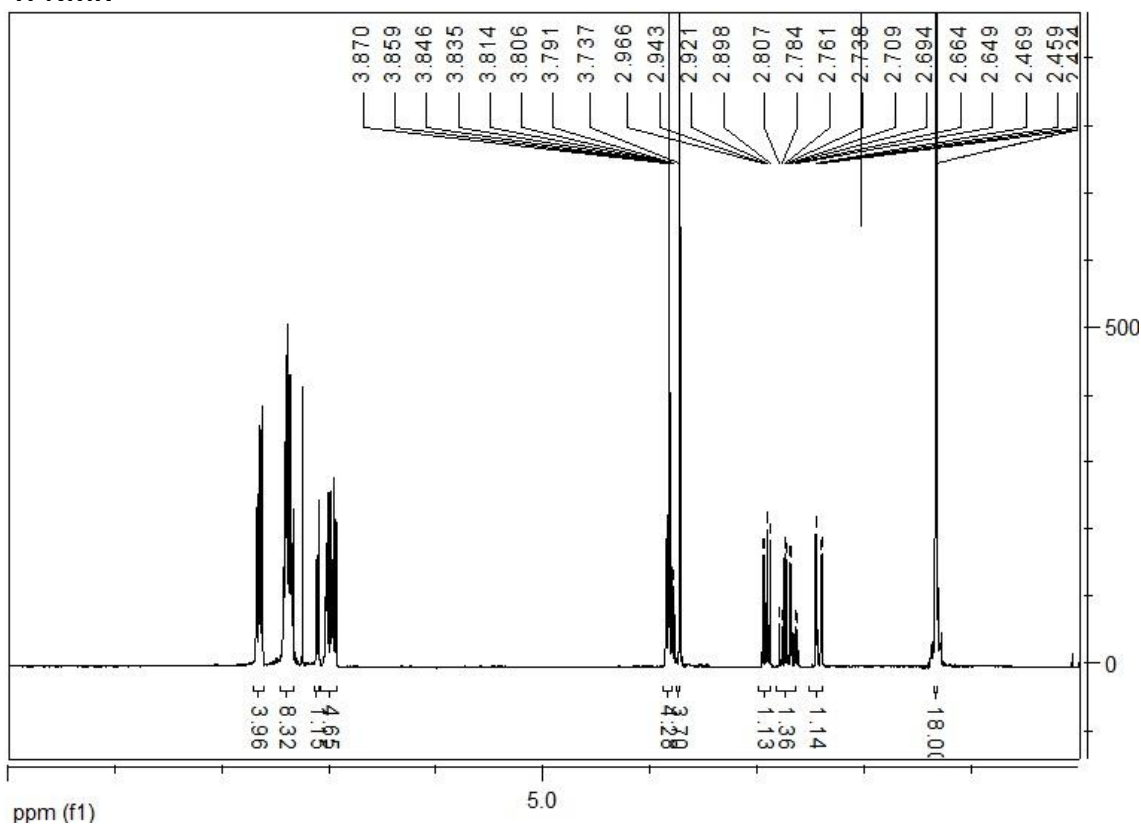
Detector A Ch1 220nm

Peak#	Ret. Time	Area	Area %
1	10.150	156291279	96.543
2	15.432	5596091	3.457
Total		161887370	100.000

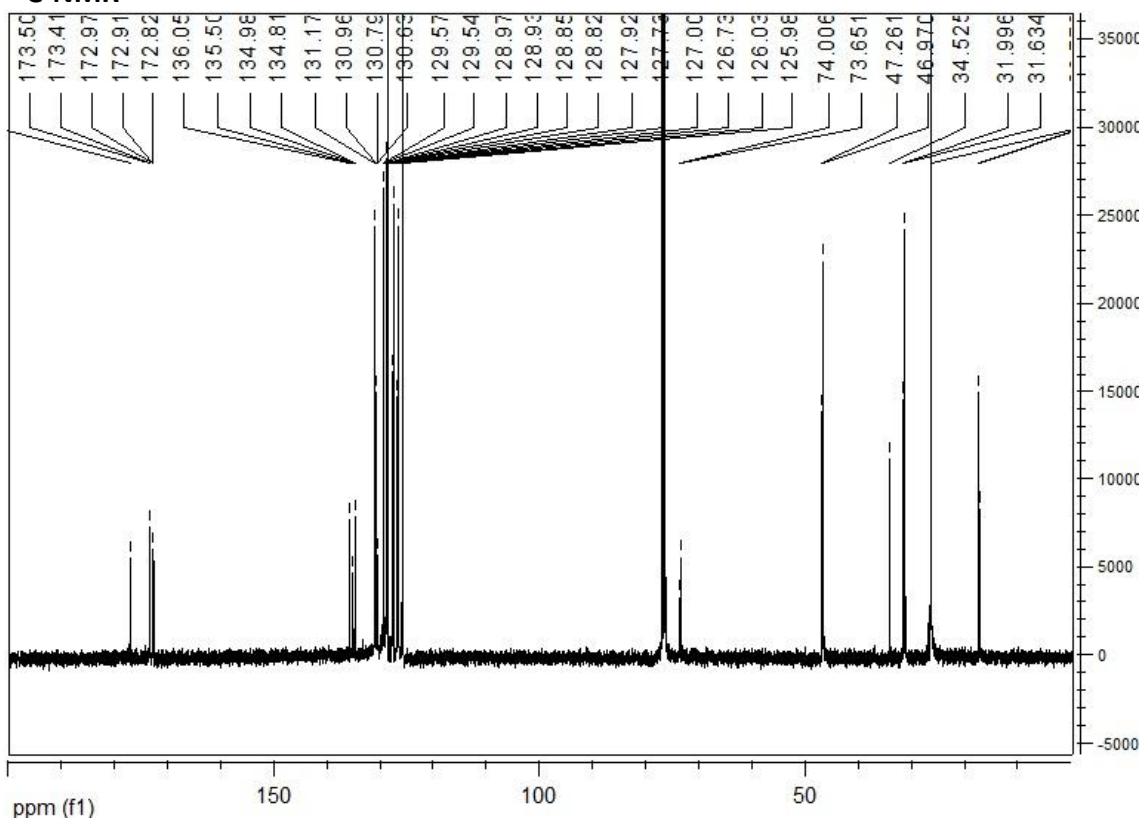


3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(2-methoxyphenyl)pyrrolidine-2,5-dione (**3g**)

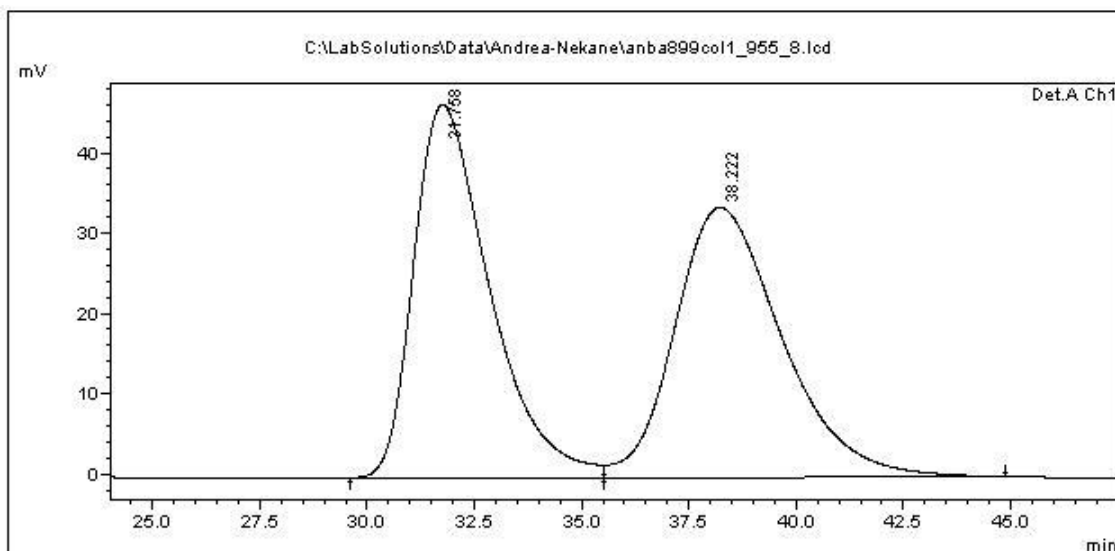
¹H-NMR



¹³C-NMR



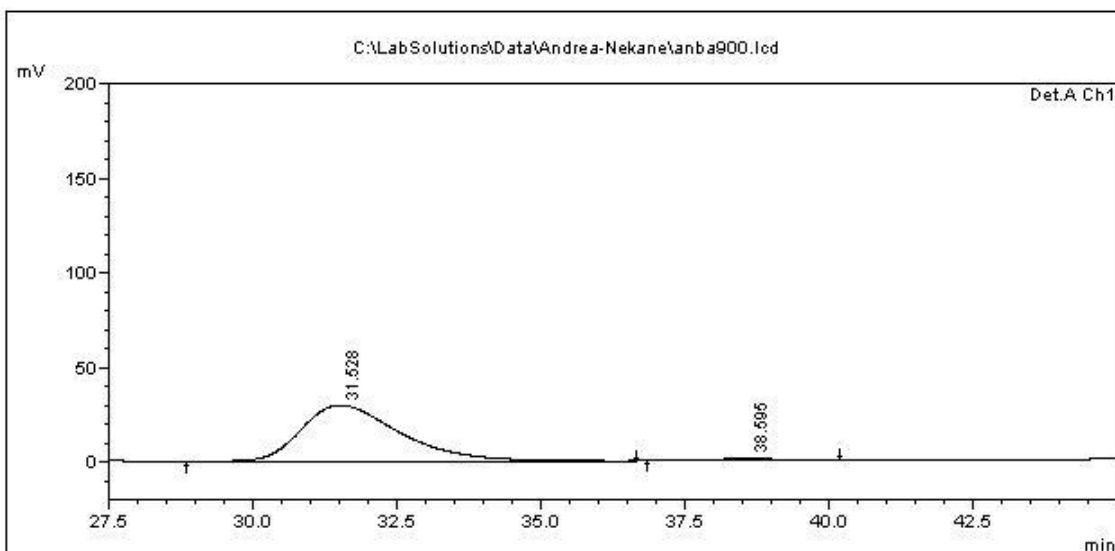
HPLC
Racemic:



PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Area %
1	31.758	5709153	49.523
2	38.222	5819225	50.477
Total		11528378	100.000

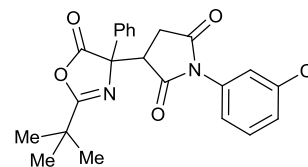


PeakTable

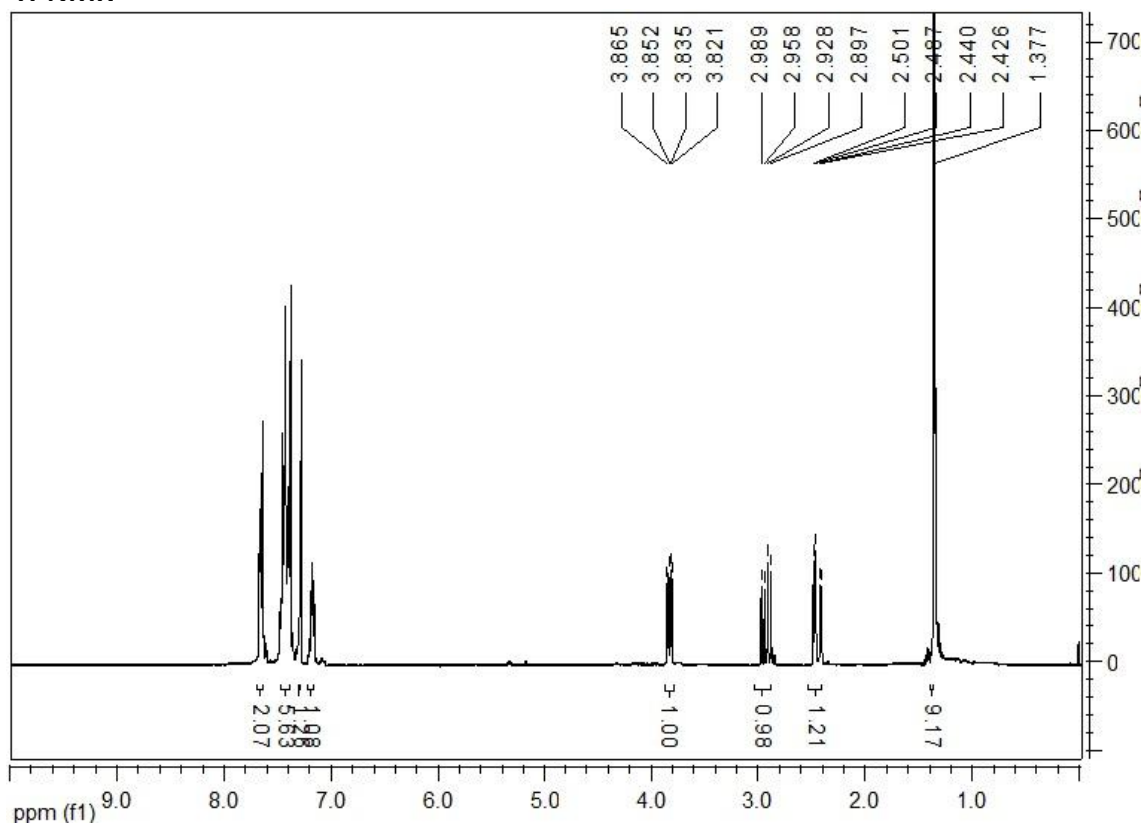
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Area %
1	31.528	3694459	97.542
2	38.595	93111	2.458
Total		3787570	100.000

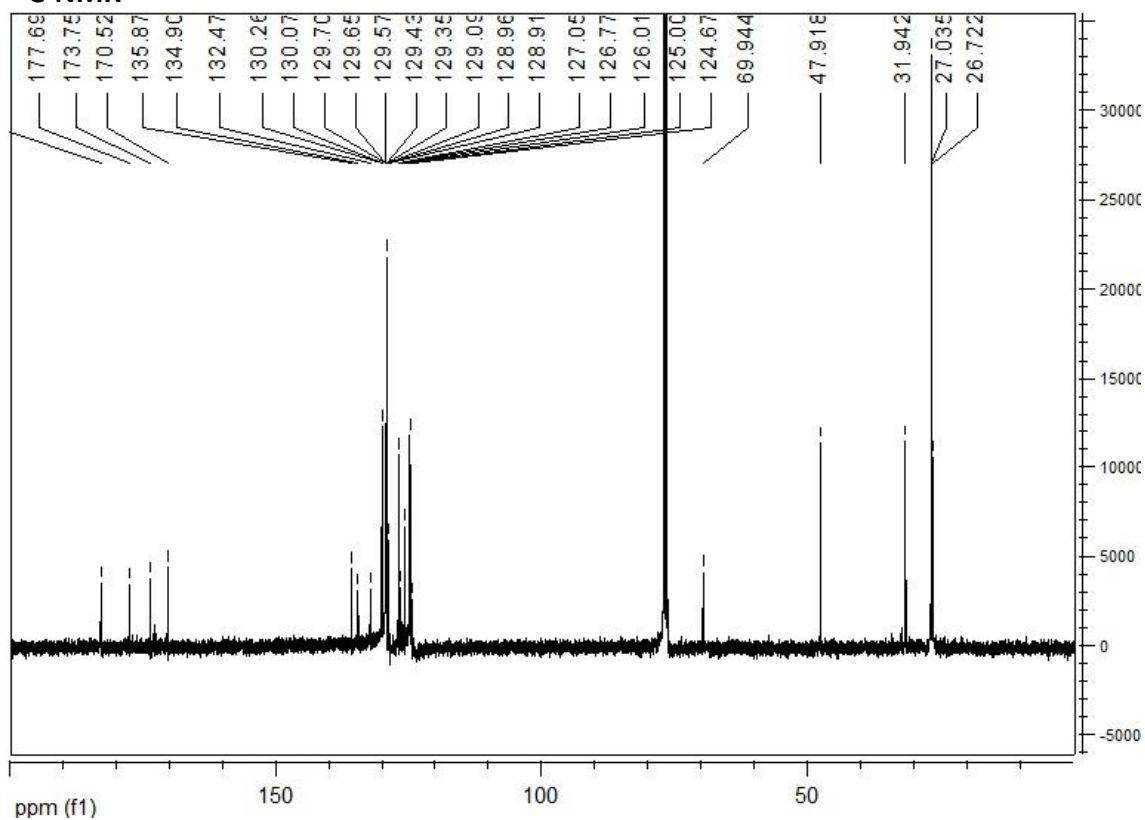
3-(2-*tert*-Butyl-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(3-chlorophenyl)pyrrolidine-2,5-dione (**3i**)



¹H-NMR

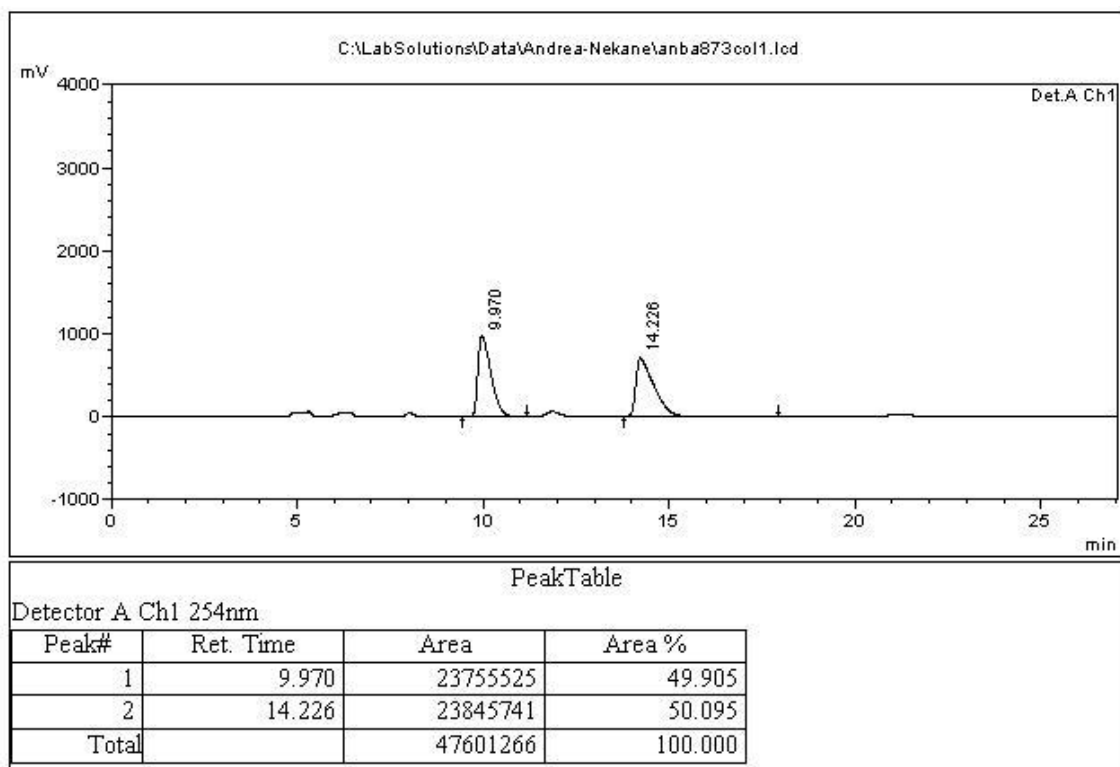


¹³C-NMR

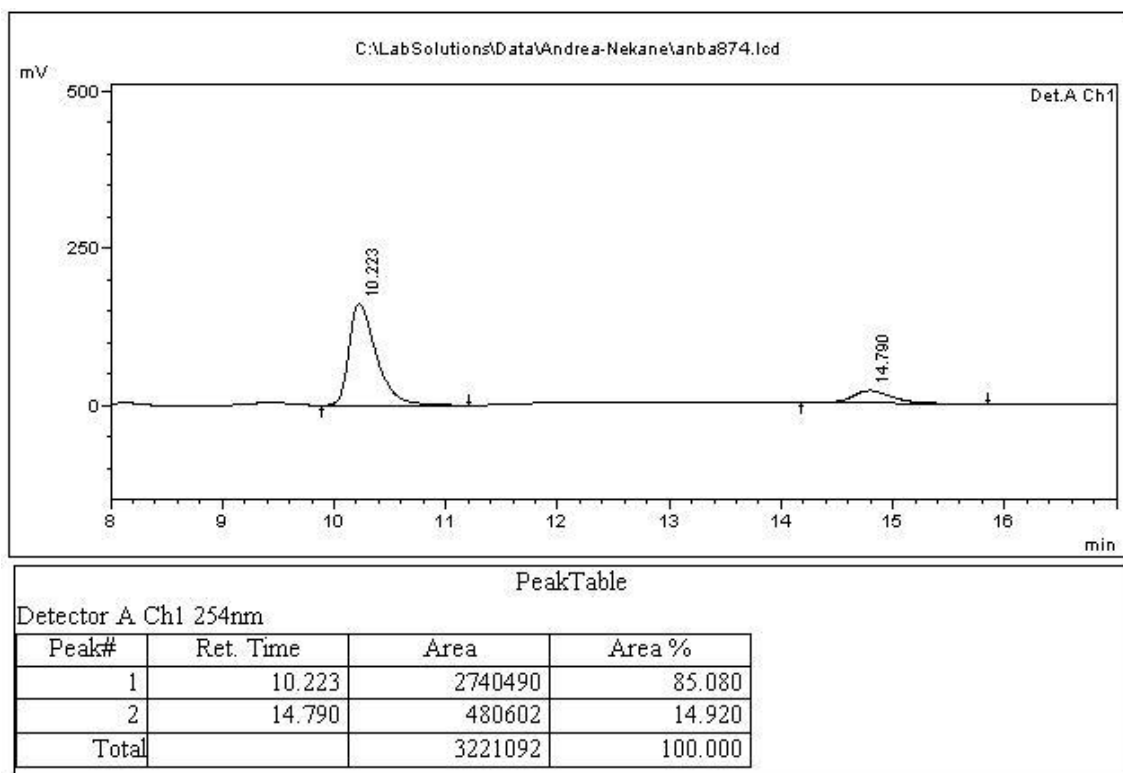


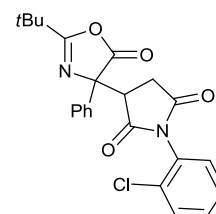
HPLC

Racemic:



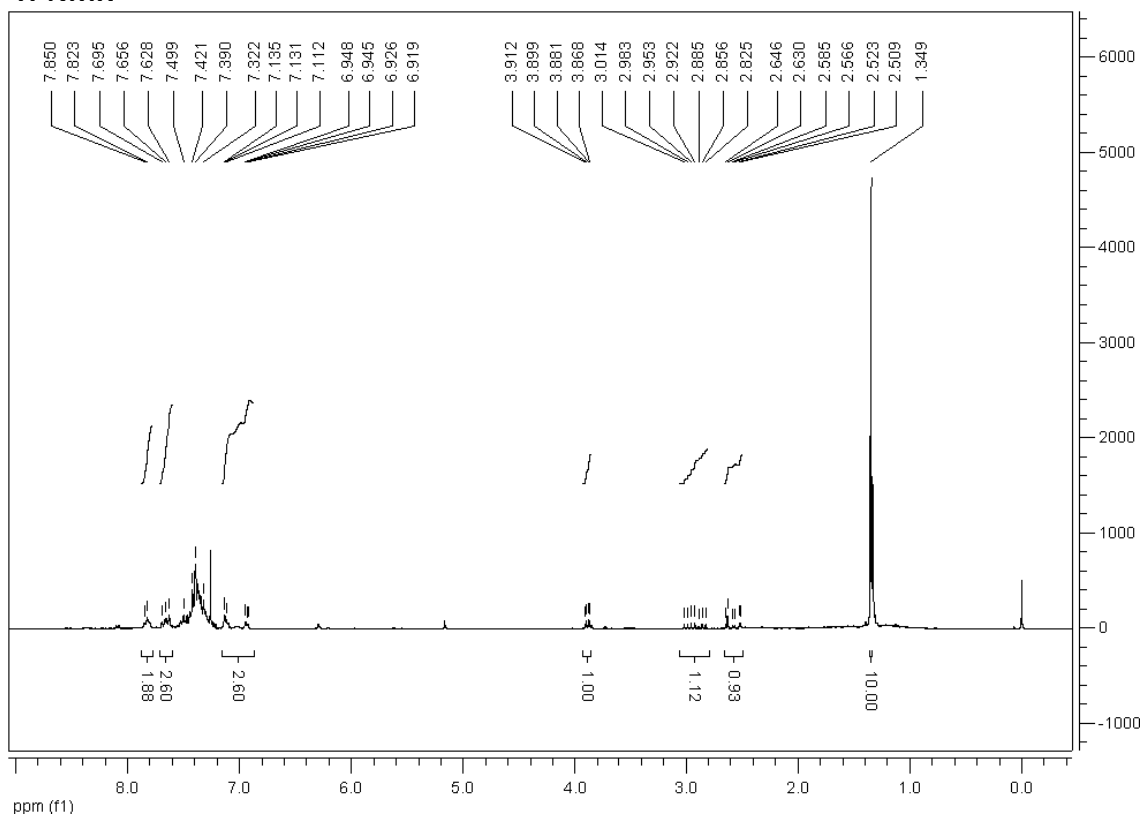
Chiral:



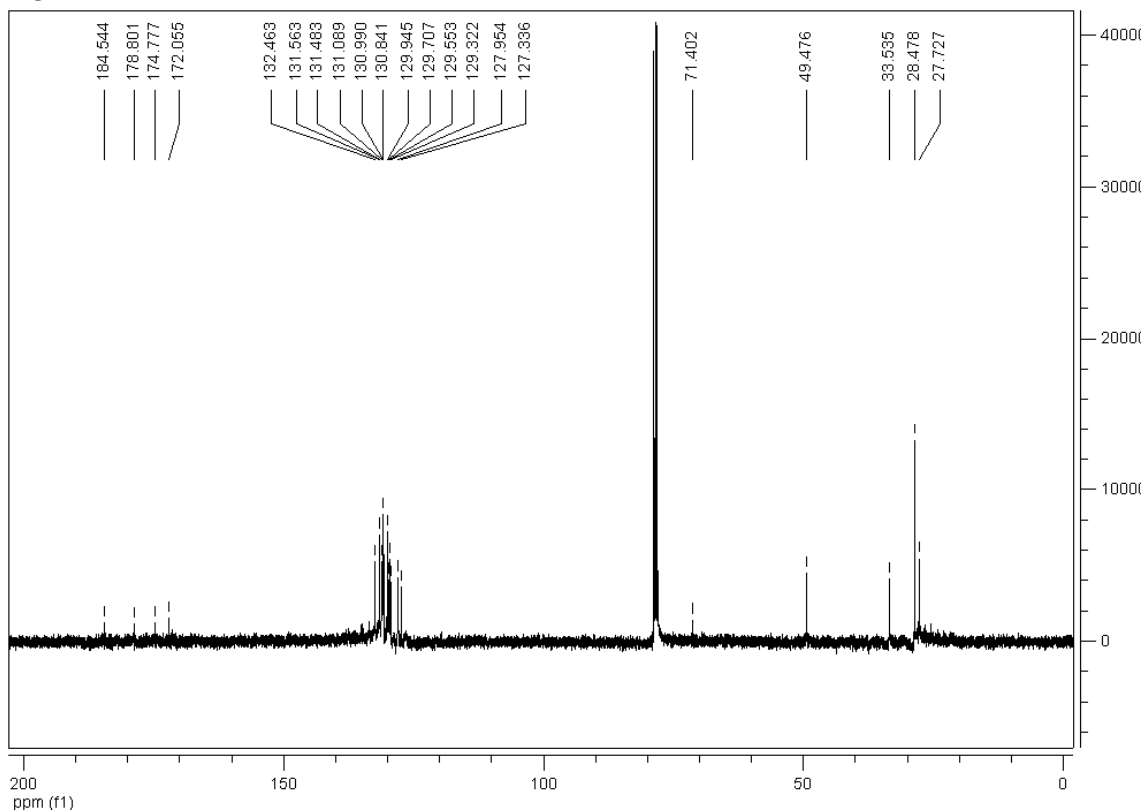


3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(2-chlorophenyl)pyrrolidine-2,5-dione (**3h**)

¹H-NMR

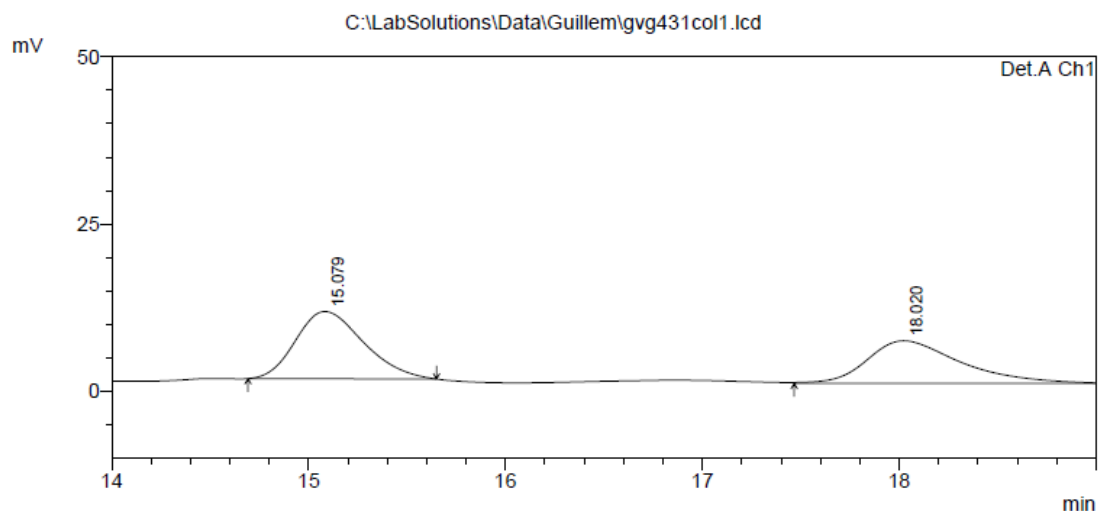


¹³C-NMR



HPLC

Racemic:

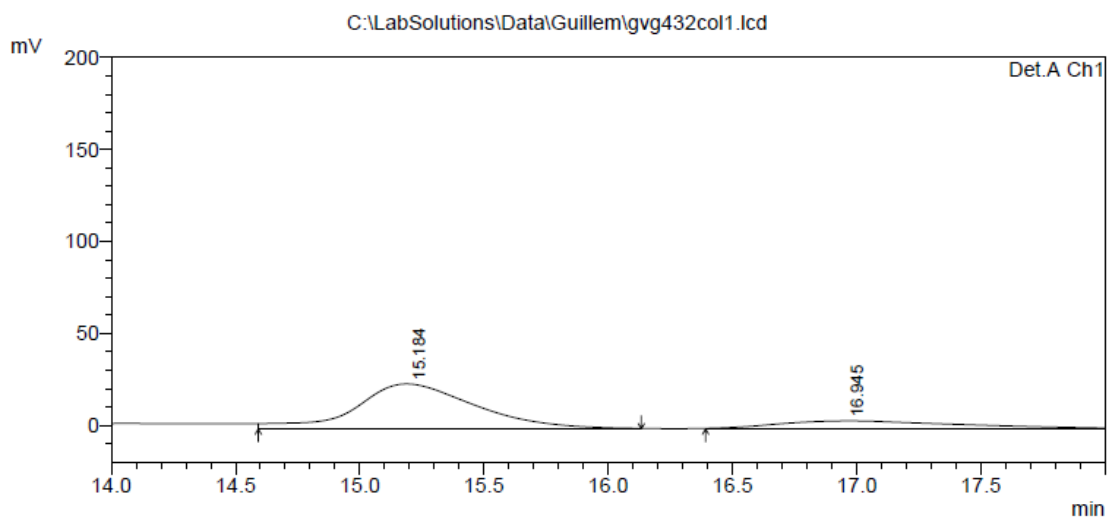


PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	15.079	241477	10067	53.341	61.263
2	18.020	211225	6366	46.659	38.737
Total		452702	16433	100.000	100.000

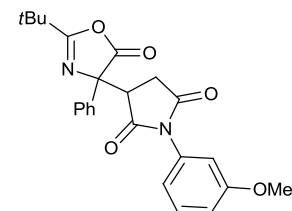
Chiral:



PeakTable

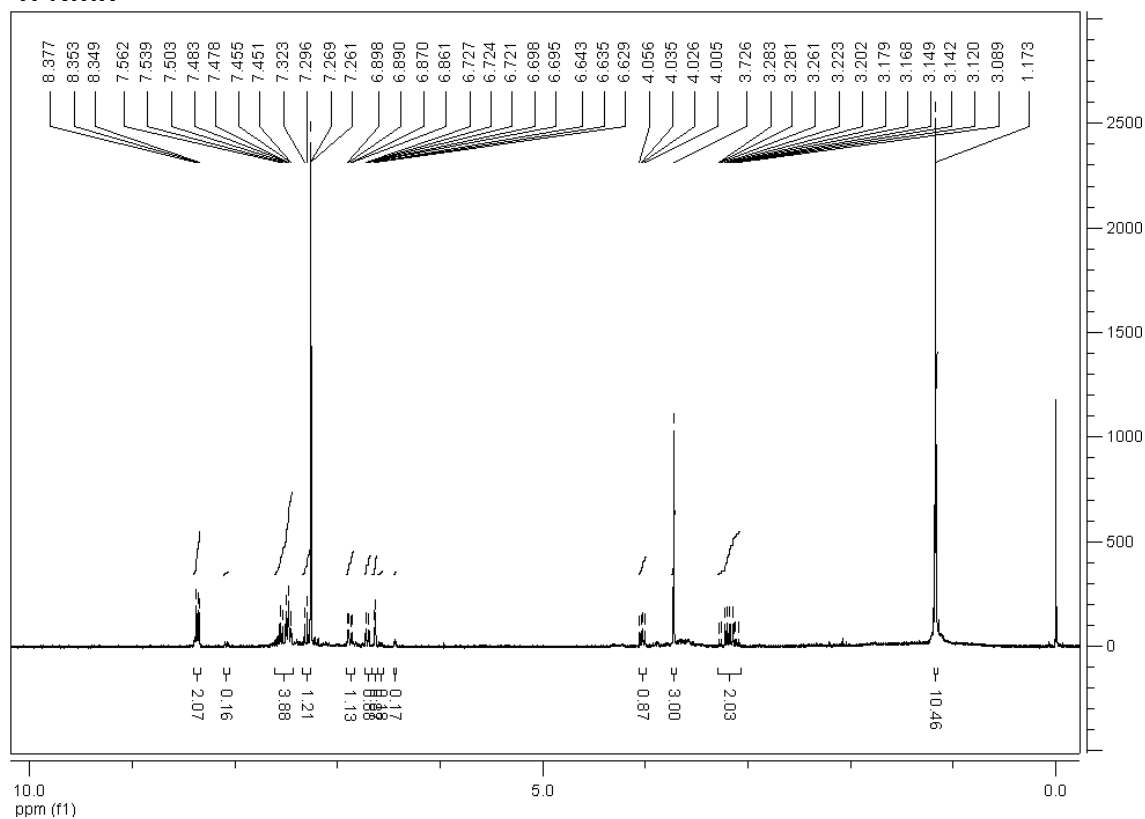
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	15.184	824603	24435	78.299	84.952
2	16.945	228544	4328	21.701	15.048
Total		1053147	28763	100.000	100.000

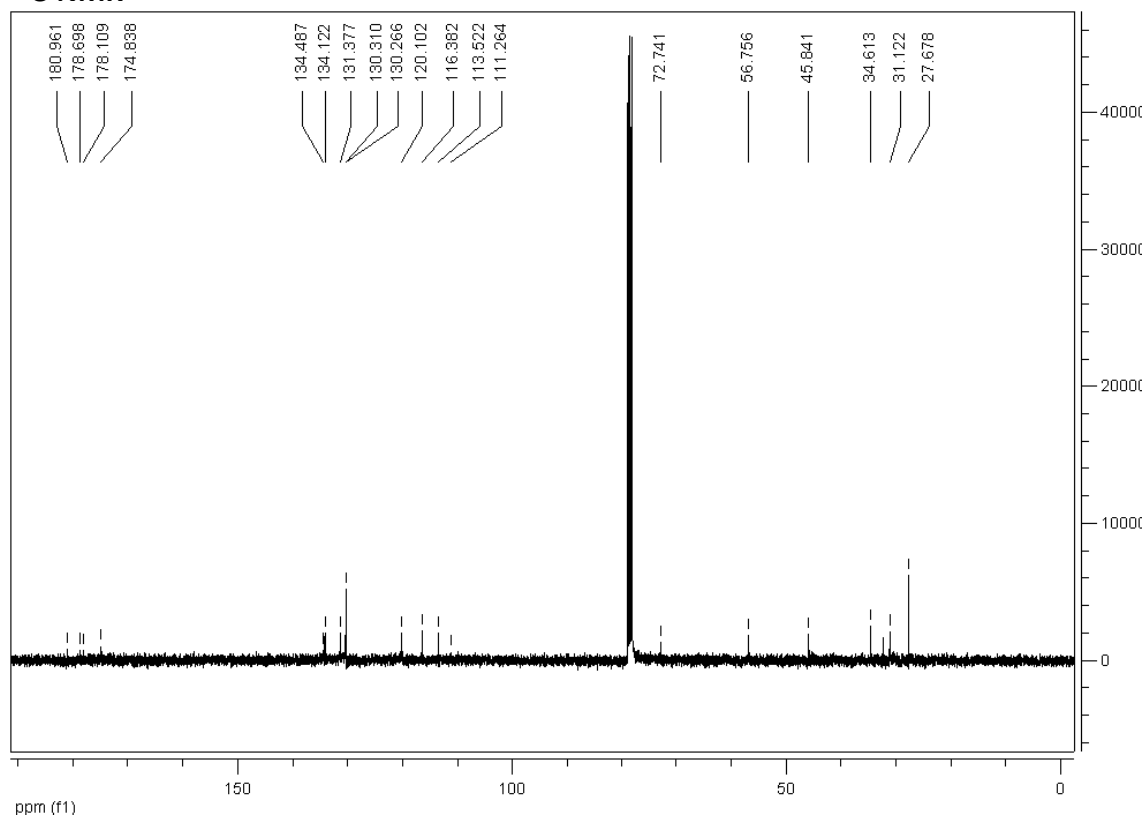


3-(2-(*tert*-Butyl)-5-oxo-4-phenyl-4,5-dihydrooxazol-4-yl)-1-(2-chlorophenyl)pyrrolidine-2,5-dione (**3j**)

¹H-NMR

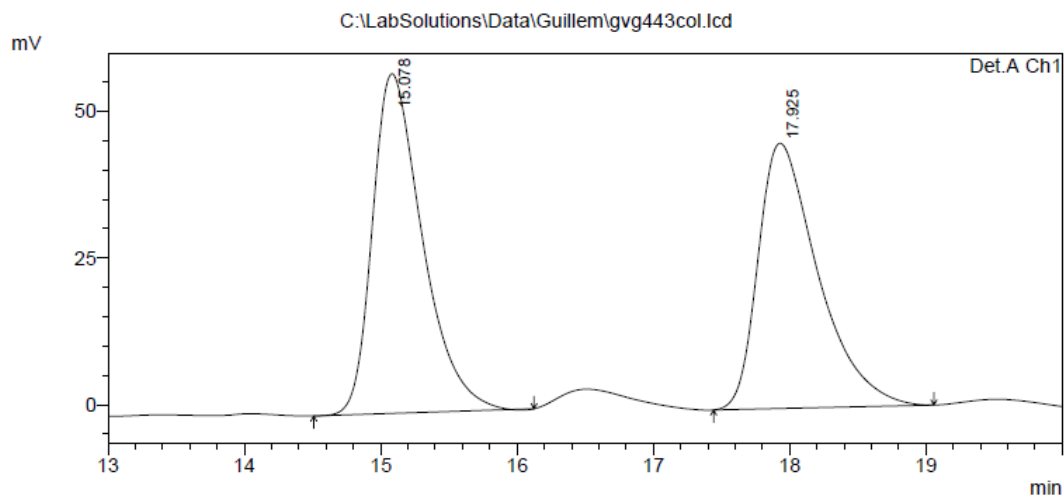


¹³C-NMR



HPLC

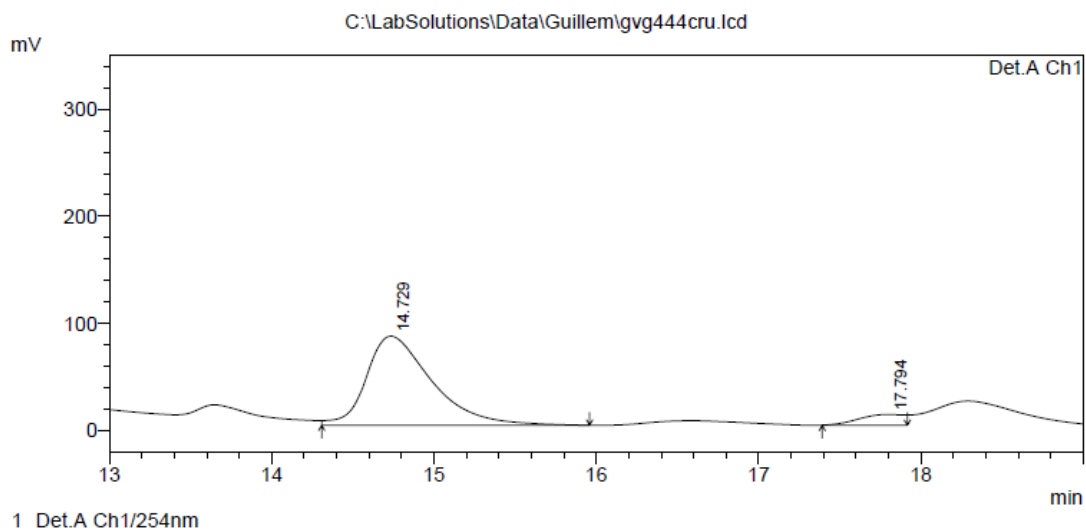
Racemic:



PeakTable

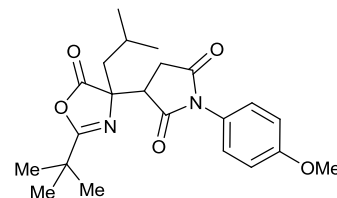
Peak#	Ret. Time	Area	Height	Area %	Height %
1	15.078	1475842	57929	51.624	56.170
2	17.925	1382967	45202	48.376	43.830
Total		2858810	103132	100.000	100.000

Chiral:



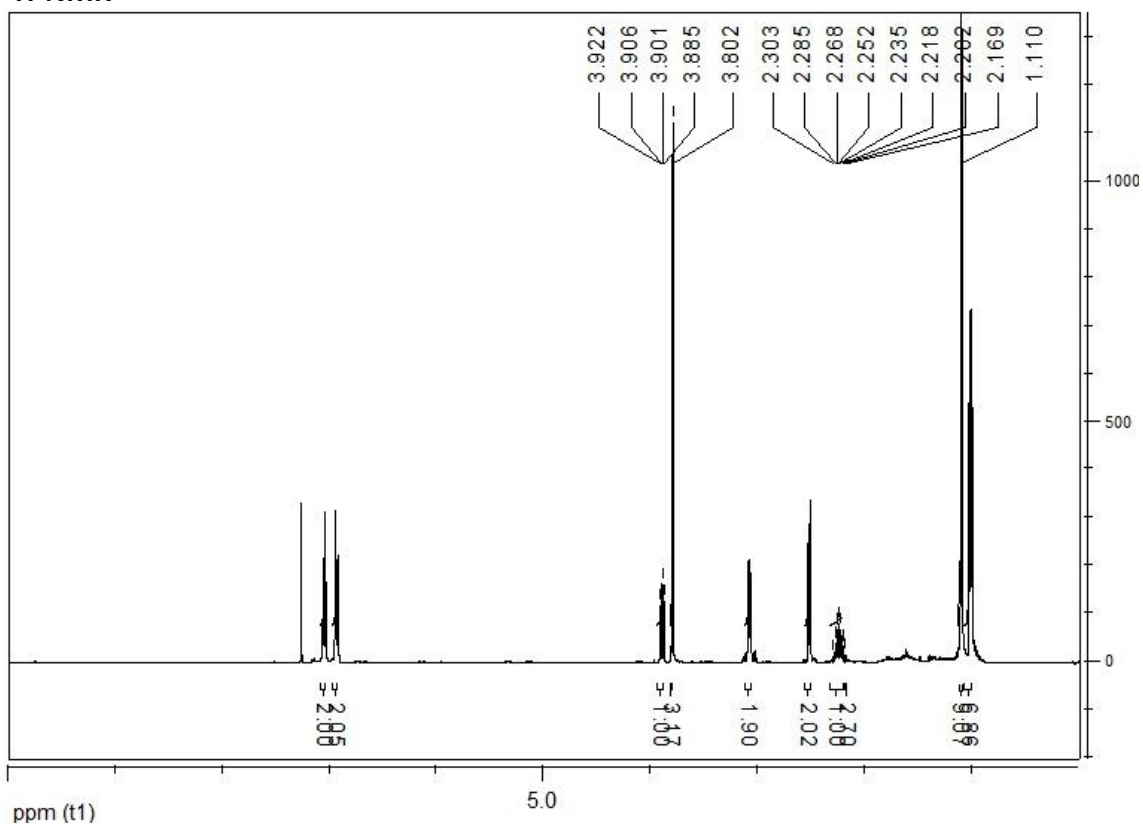
PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	14.729	2326004	83231	92.045	89.103
2	17.794	201032	10179	7.955	10.897
Total		2527036	93410	100.000	100.000

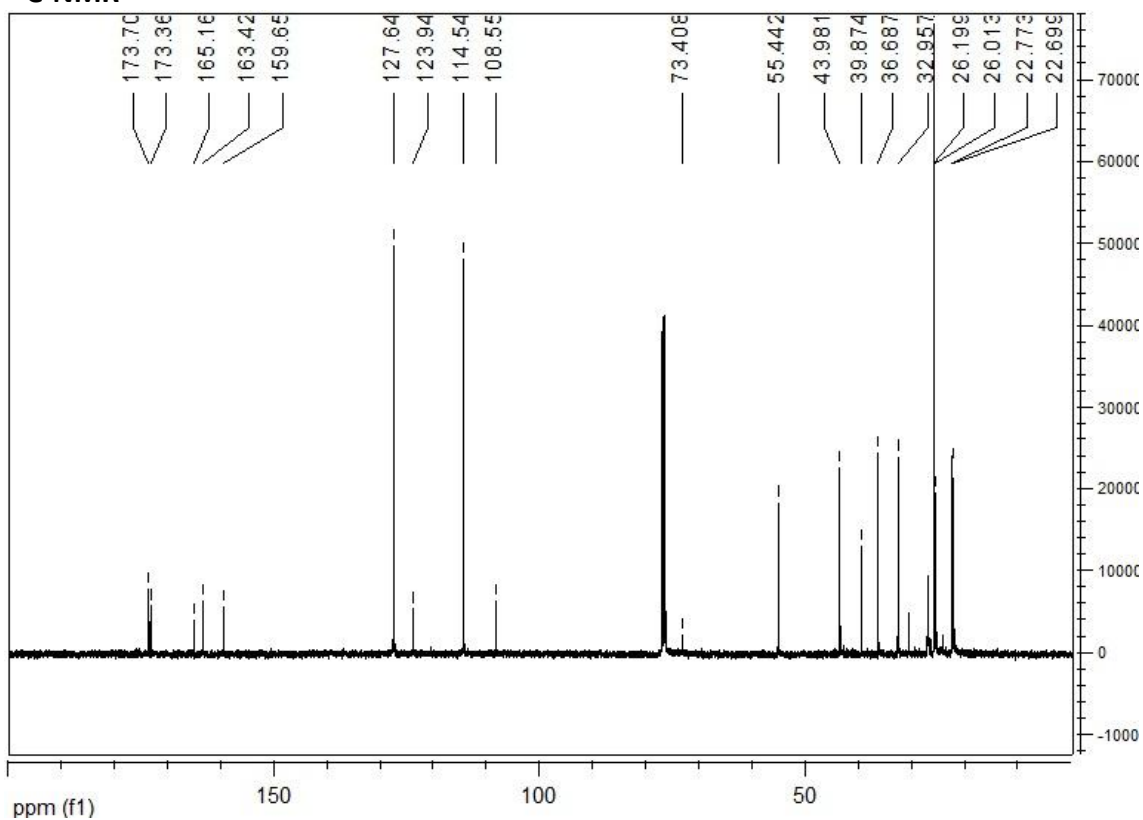


3-(2-*tert*-Butyl-4-isobutyl-5-oxo-4,5-dihydrooxazol-4-yl)-1-(4-methoxyphenyl)pyrrolidine-2,5-dione (**3k**)

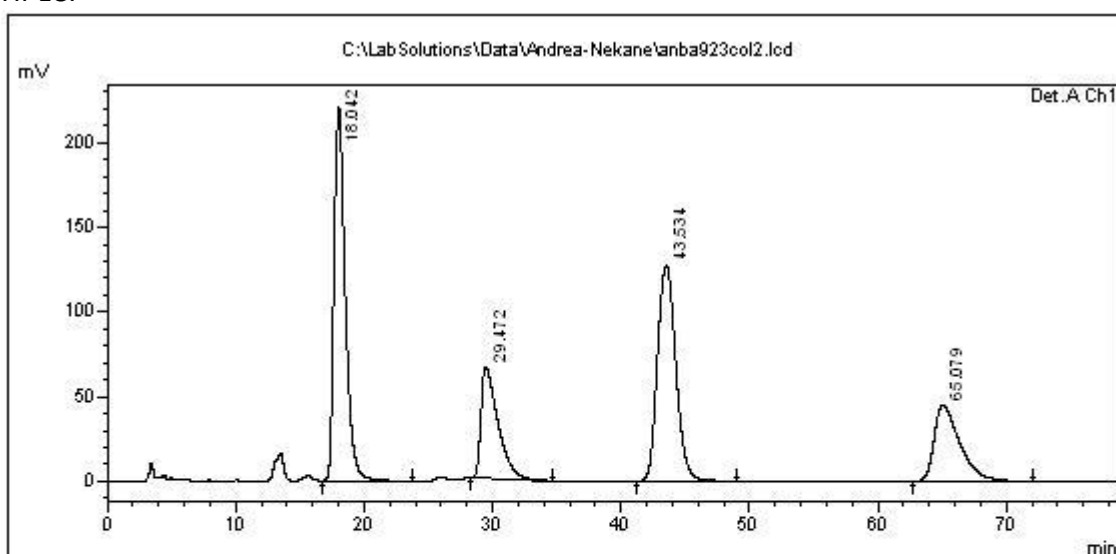
¹H-NMR



¹³C-NMR



HPLC:

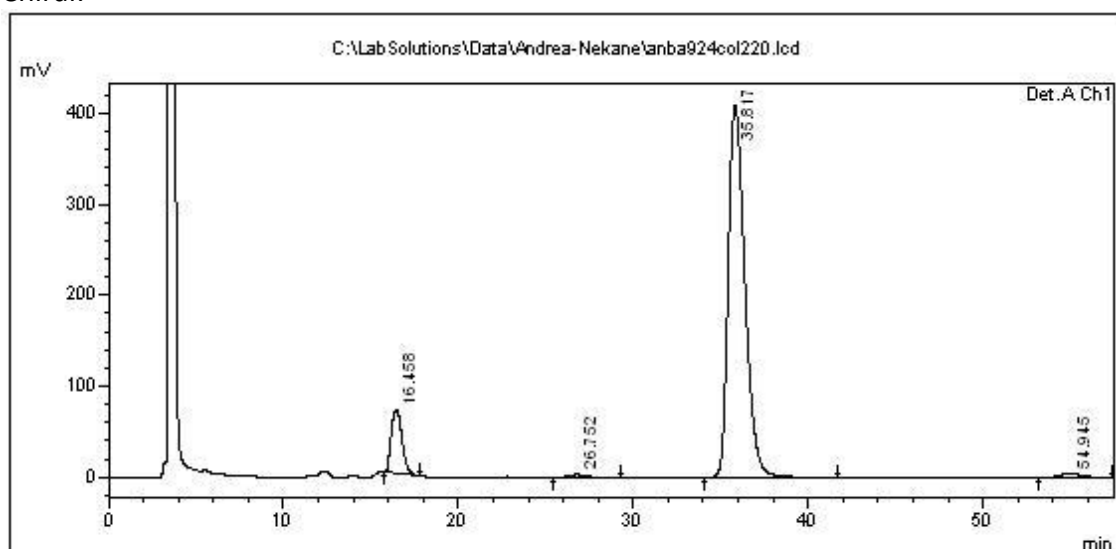


PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Area %
1	18.042	13416726	34.884
2	29.472	6037895	15.699
3	43.534	12712920	33.054
4	65.079	6293454	16.363
Total		38460995	100.000

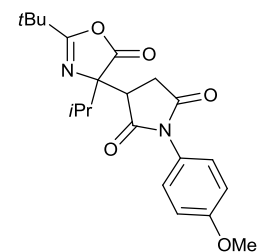
Chiral:



PeakTable

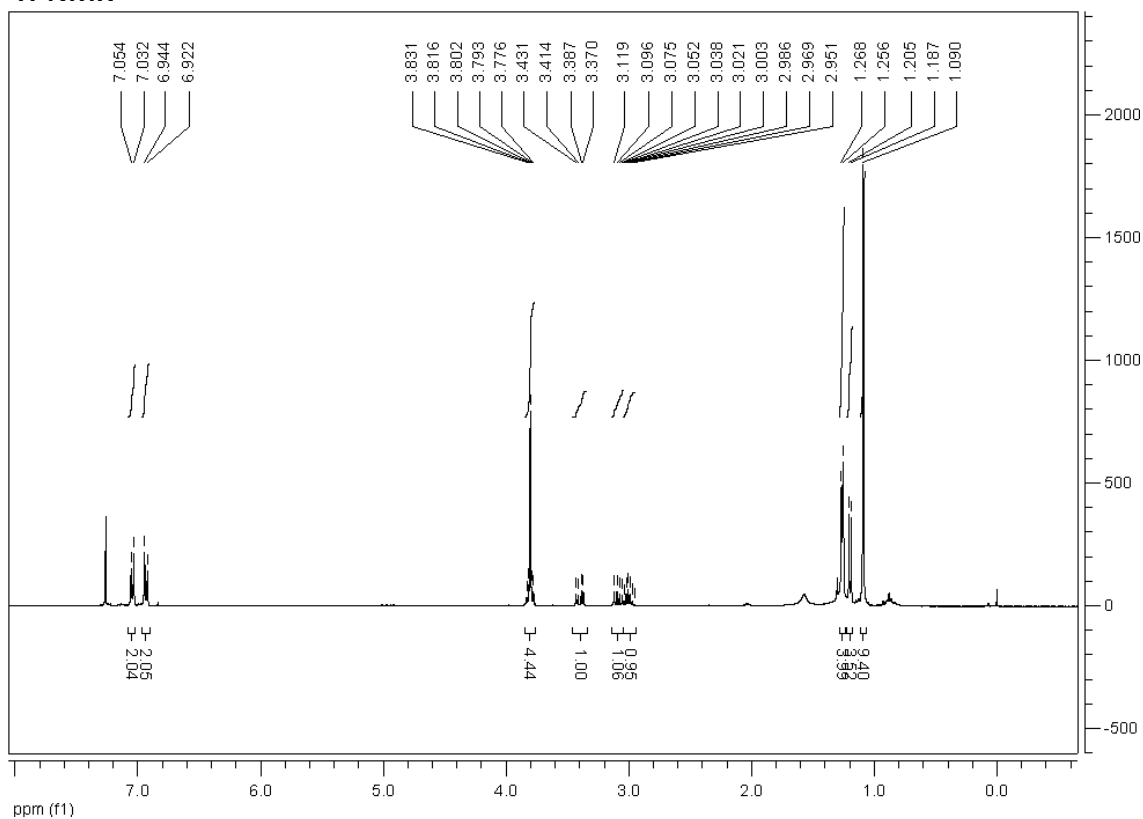
Detector A Ch1 220nm

Peak#	Ret. Time	Area	Area %
1	16.458	3047723	9.886
2	26.752	236838	0.768
3	35.817	27119423	87.970
4	54.945	424120	1.376
Total		30828104	100.000

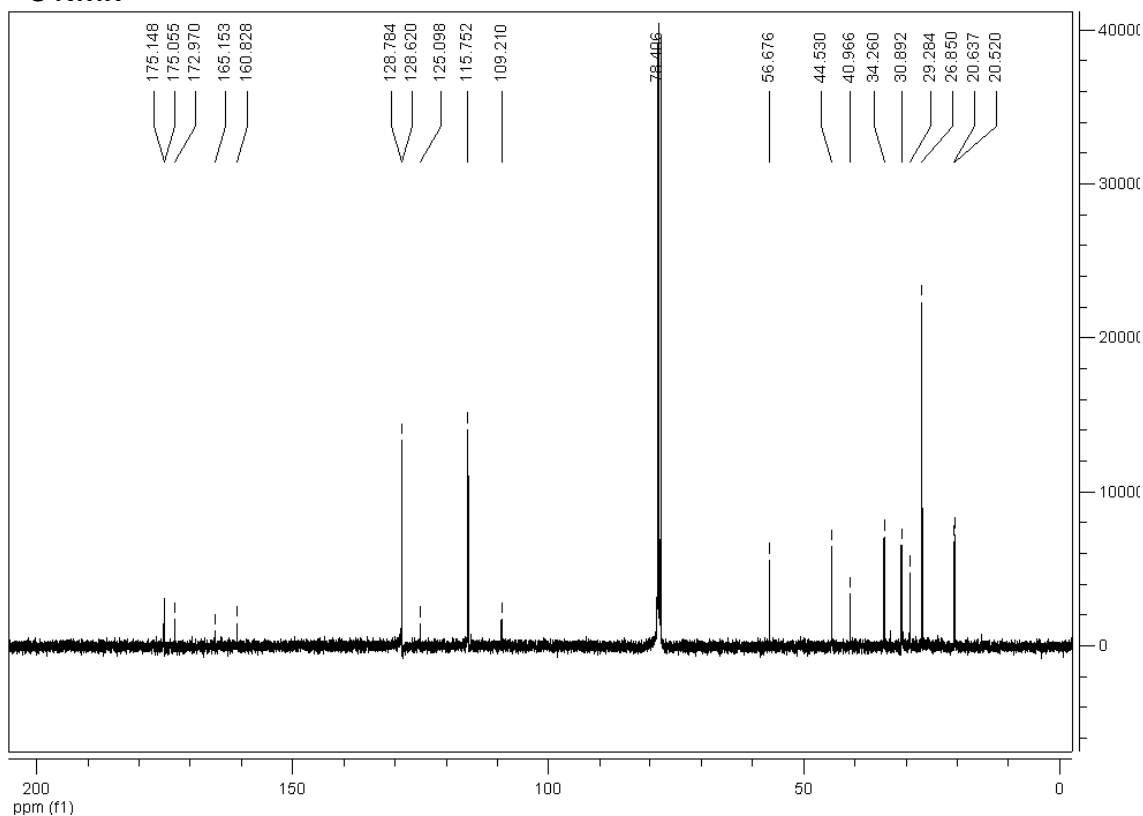


3-(2-(*tert*-Butyl)-4-isopropyl-5-oxo-4,5-dihydrooxazol-4-yl)-1-(4-methoxyphenyl)pyrrolidine-2,5-dione (**3I**)

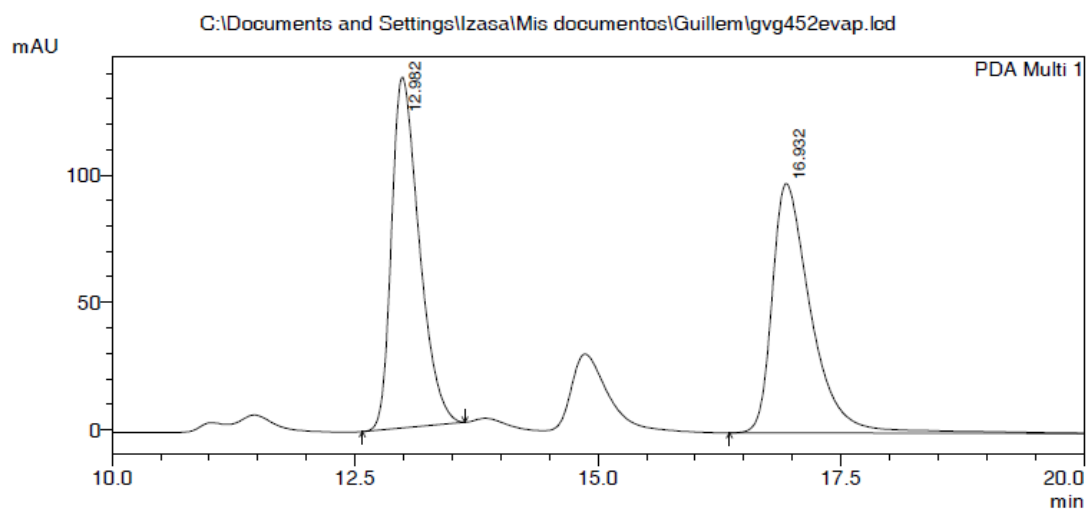
¹H-NMR



¹³C-NMR



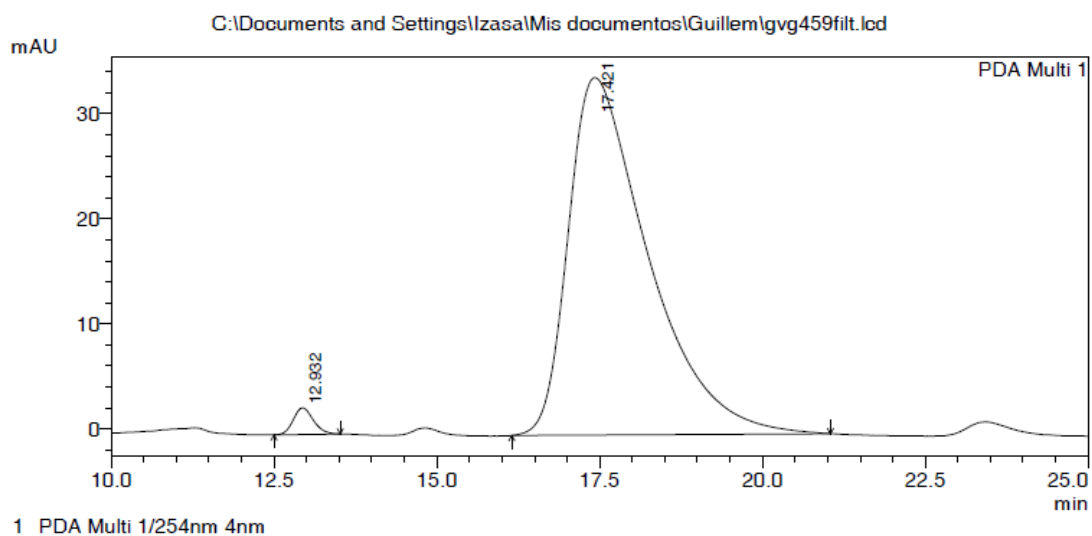
HPLC:



PeakTable

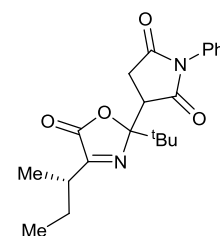
Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.982	2735078	137919	49.824	58.448
2	16.932	2754452	98051	50.176	41.552
Total		5489530	235969	100.000	100.000

Chiral:



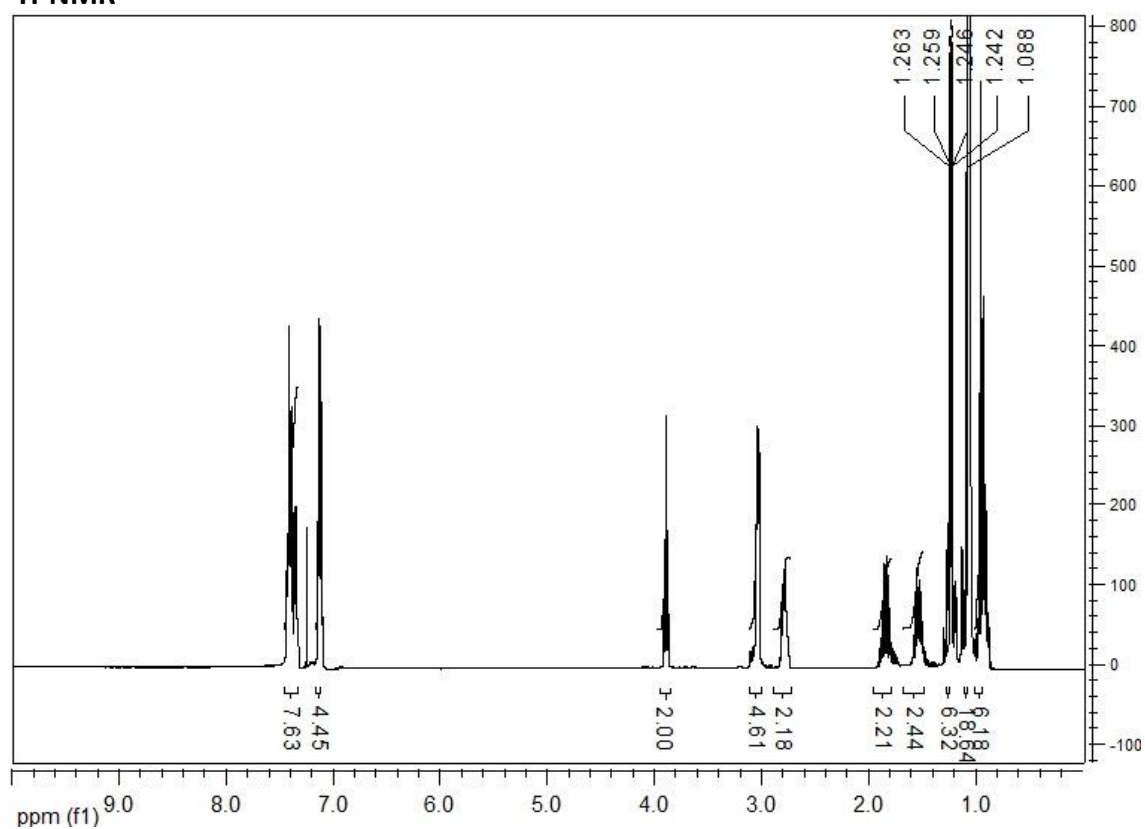
PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.932	54115	2530	1.830	6.928
2	17.421	2902537	33983	98.170	93.072
Total		2956653	36512	100.000	100.000



3-(4-*sec*-Butyl-2-*tert*-butyl-5-oxo-2,5-dihydrooxazol-2-yl)-1-phenylpyrrolidine-2,5-dione (**4m**)

¹H-NMR



¹³C-NMR

