

**Total synthesis of (–)-(6*R*,11*R*,14*S*)-colletalol via proline catalyzed
α-aminoxylation and Yamaguchi macrolactonization**

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and Pradeep Kumar^{a*}

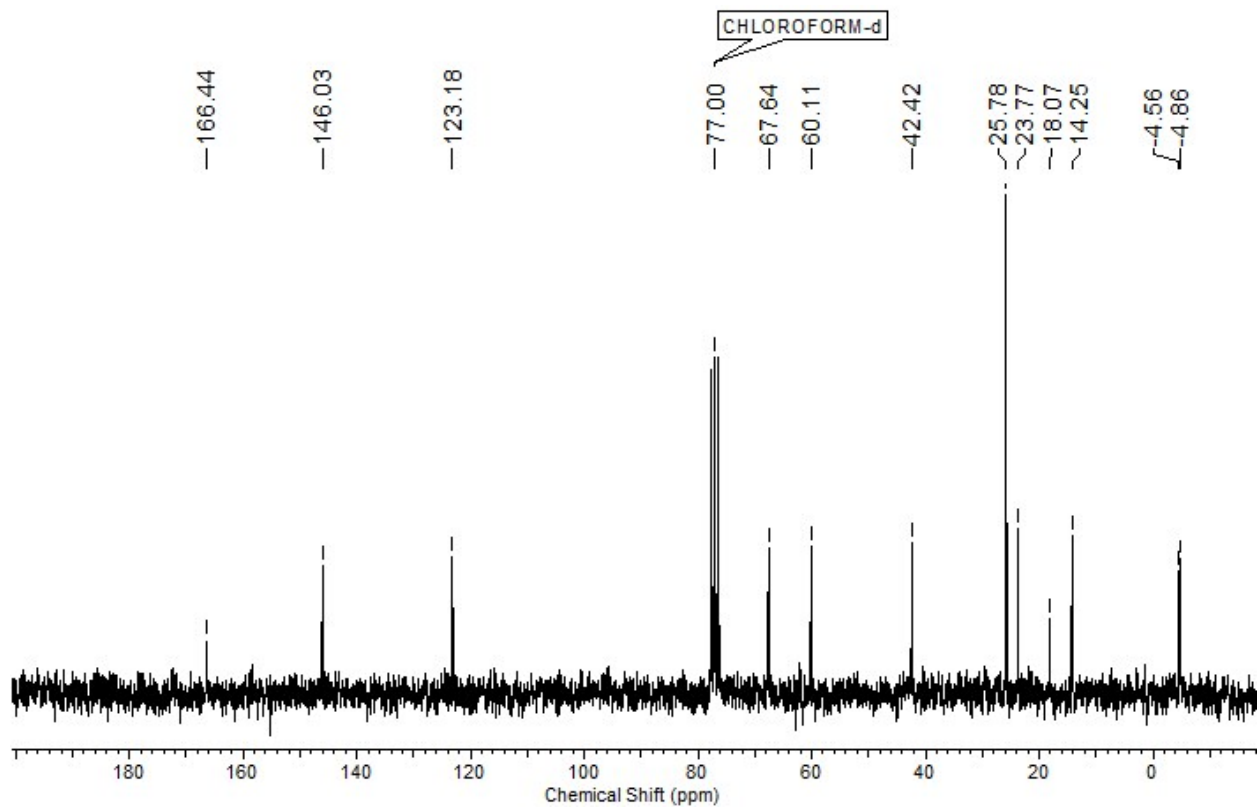
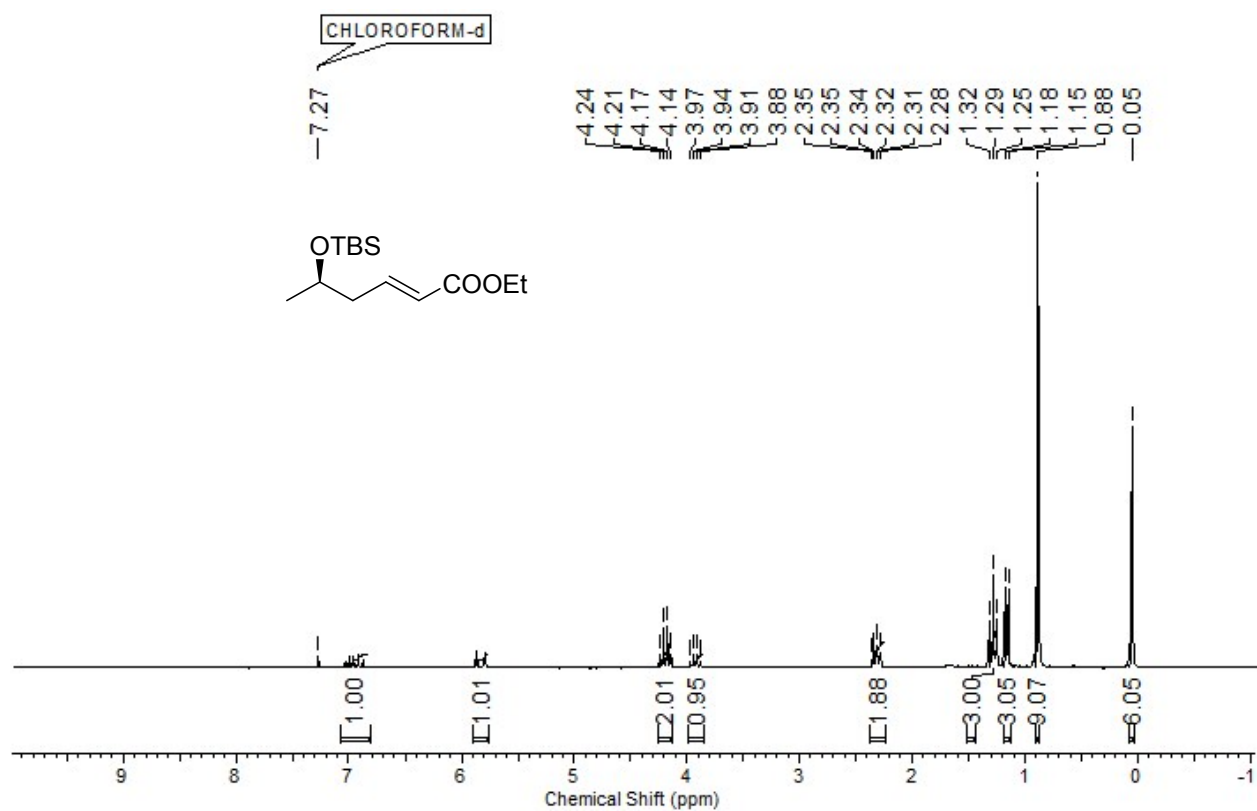
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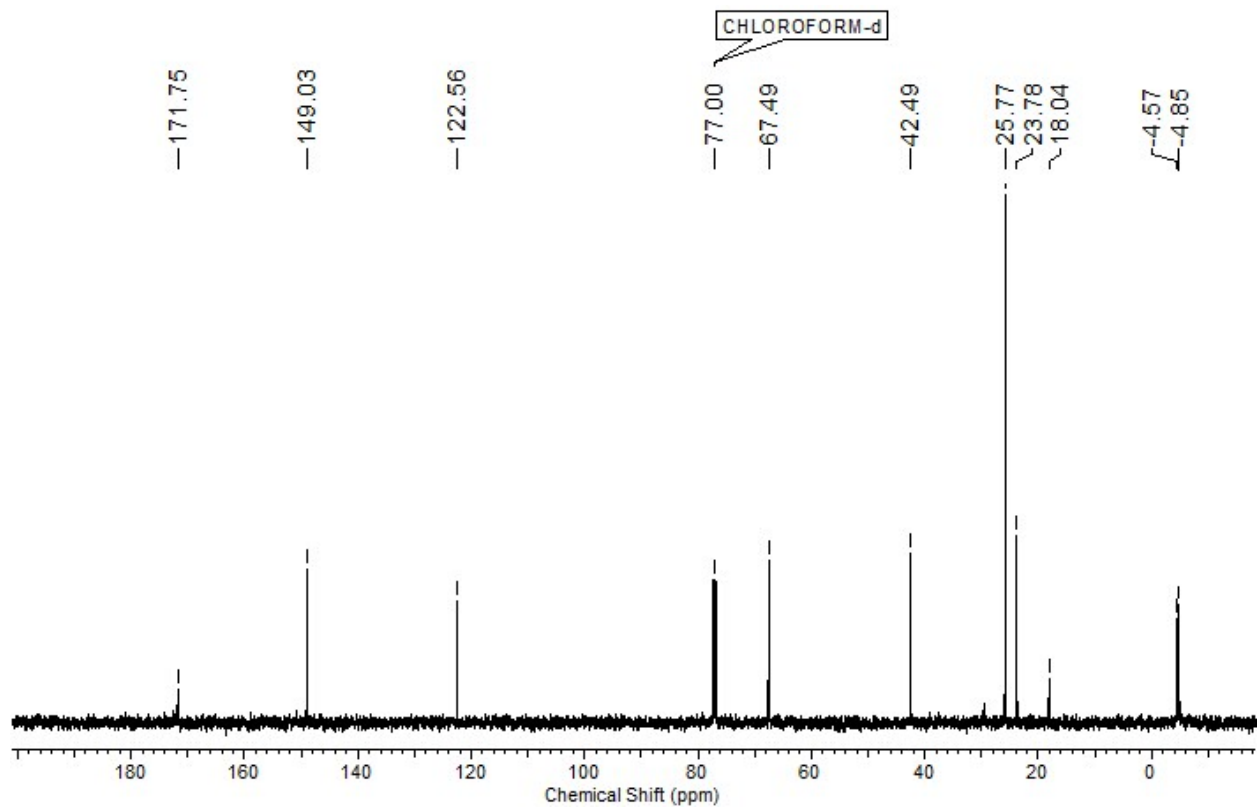
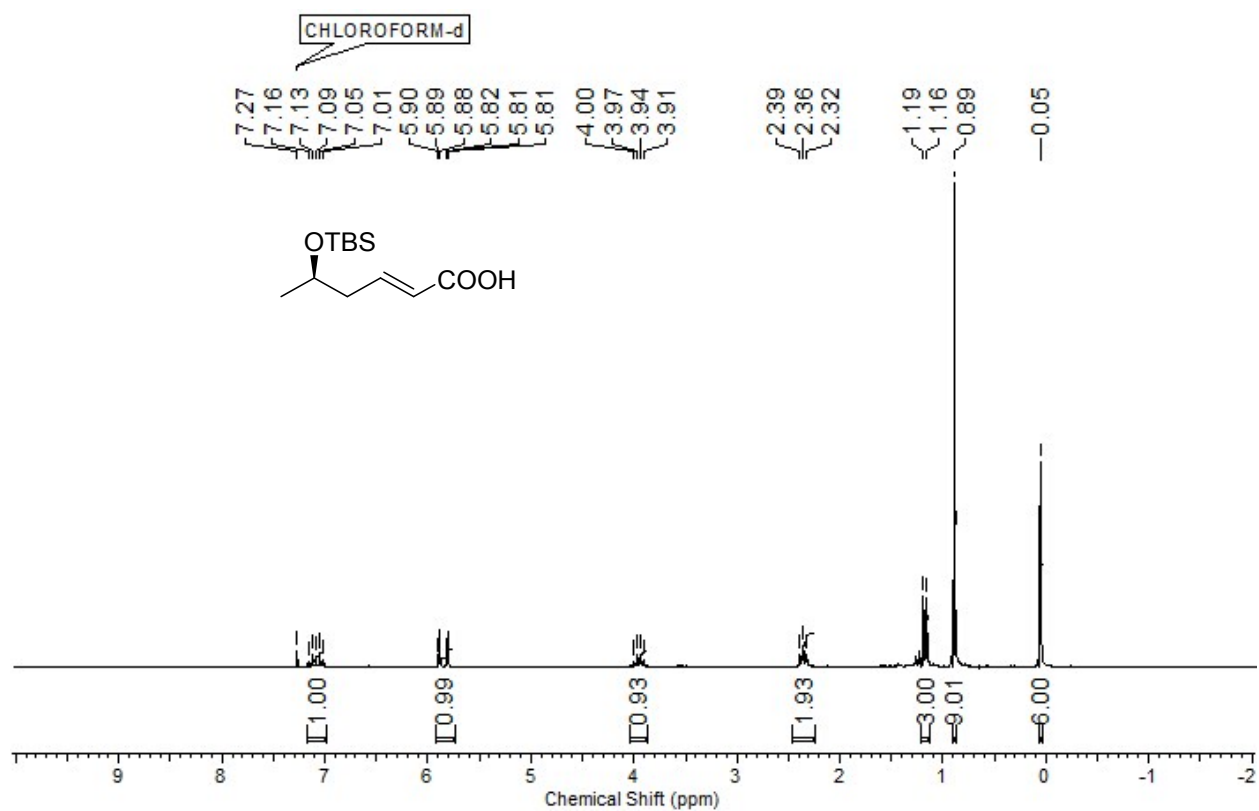
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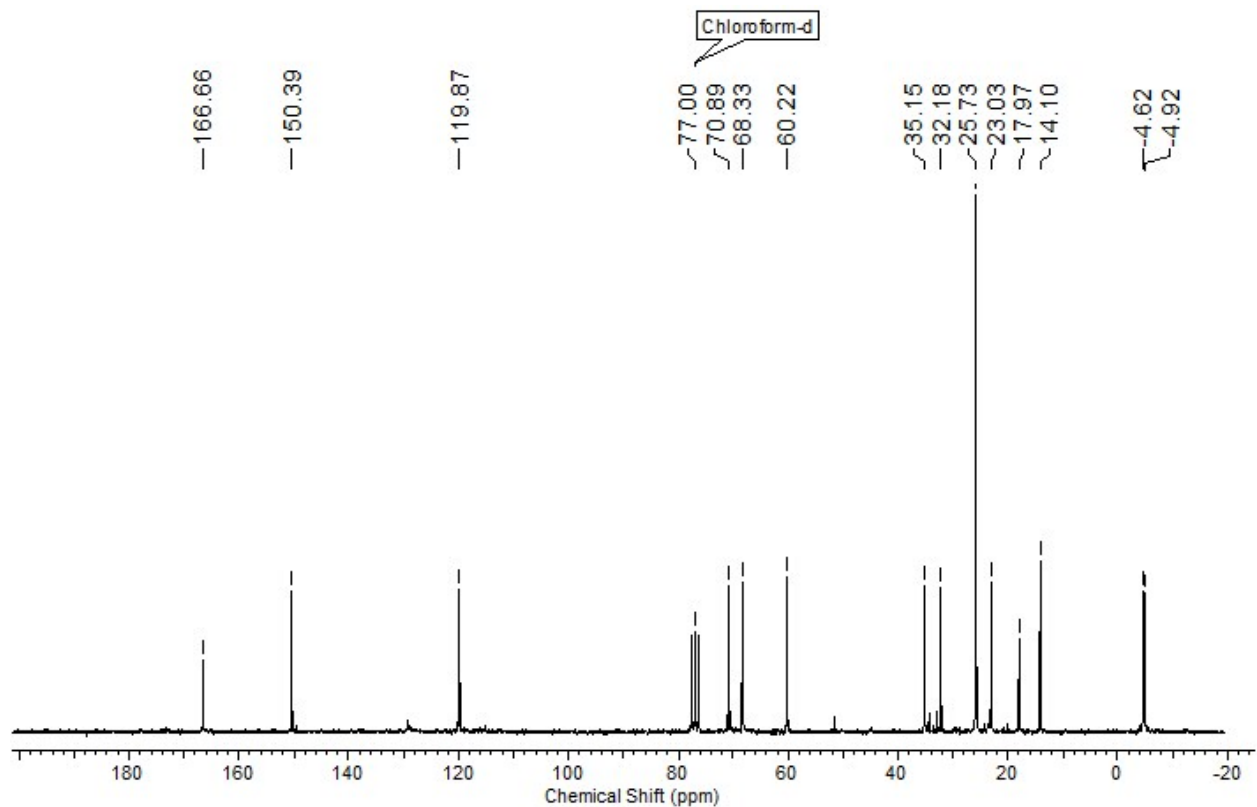
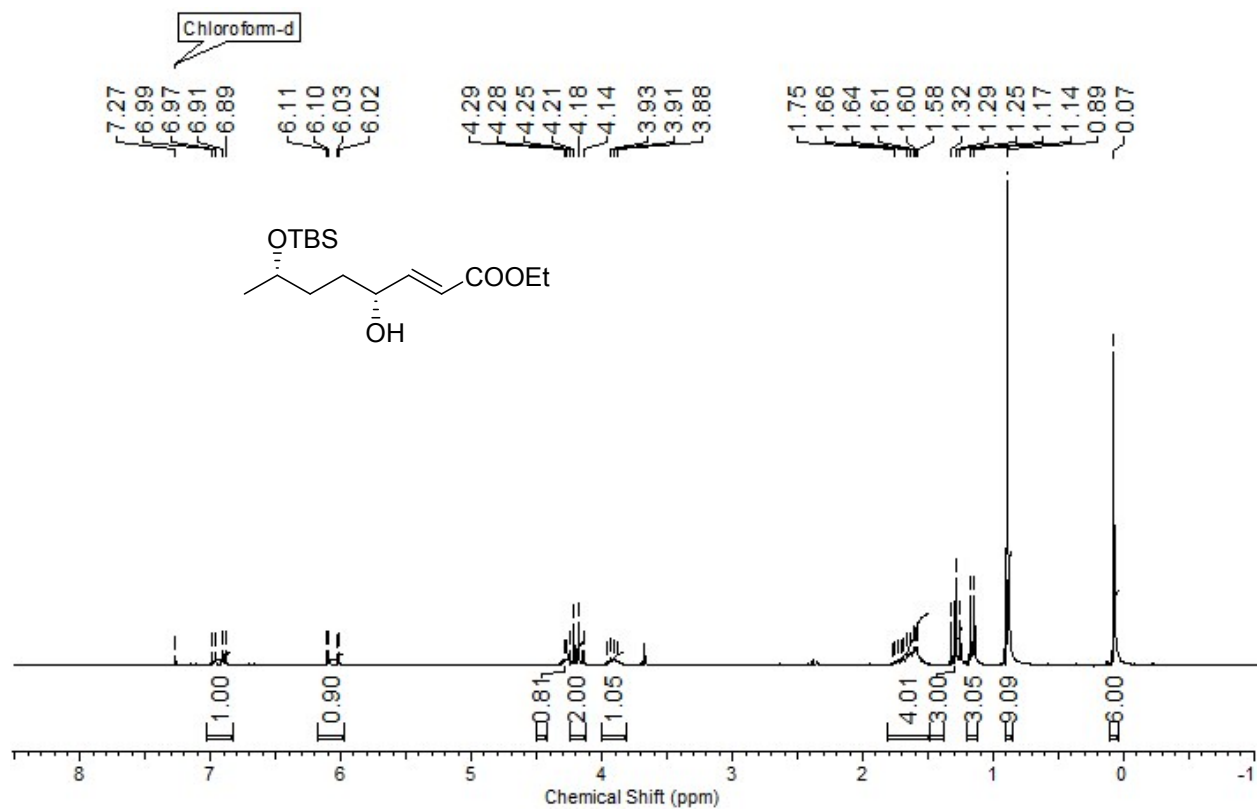
Ethyl (*R,E*)-5-((*tert*-butyldimethylsilyl)oxy)hex-2-enoate(9):



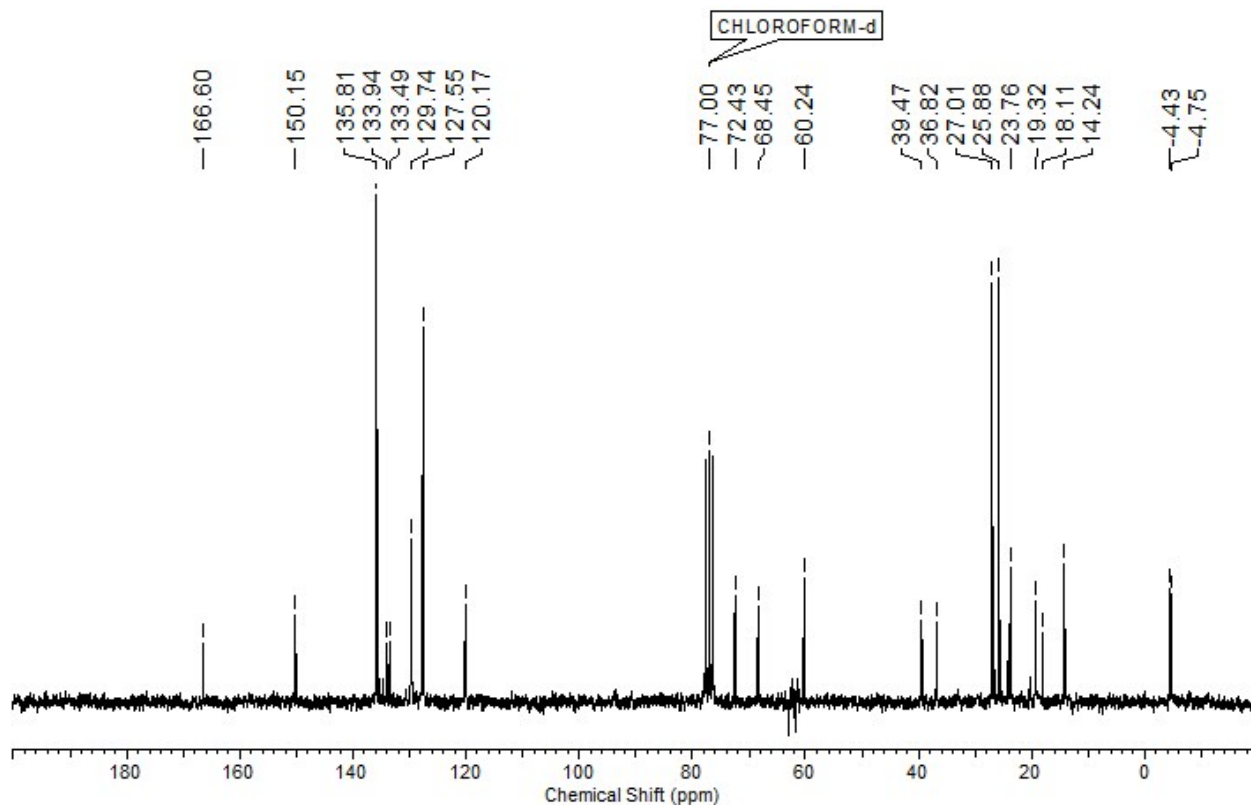
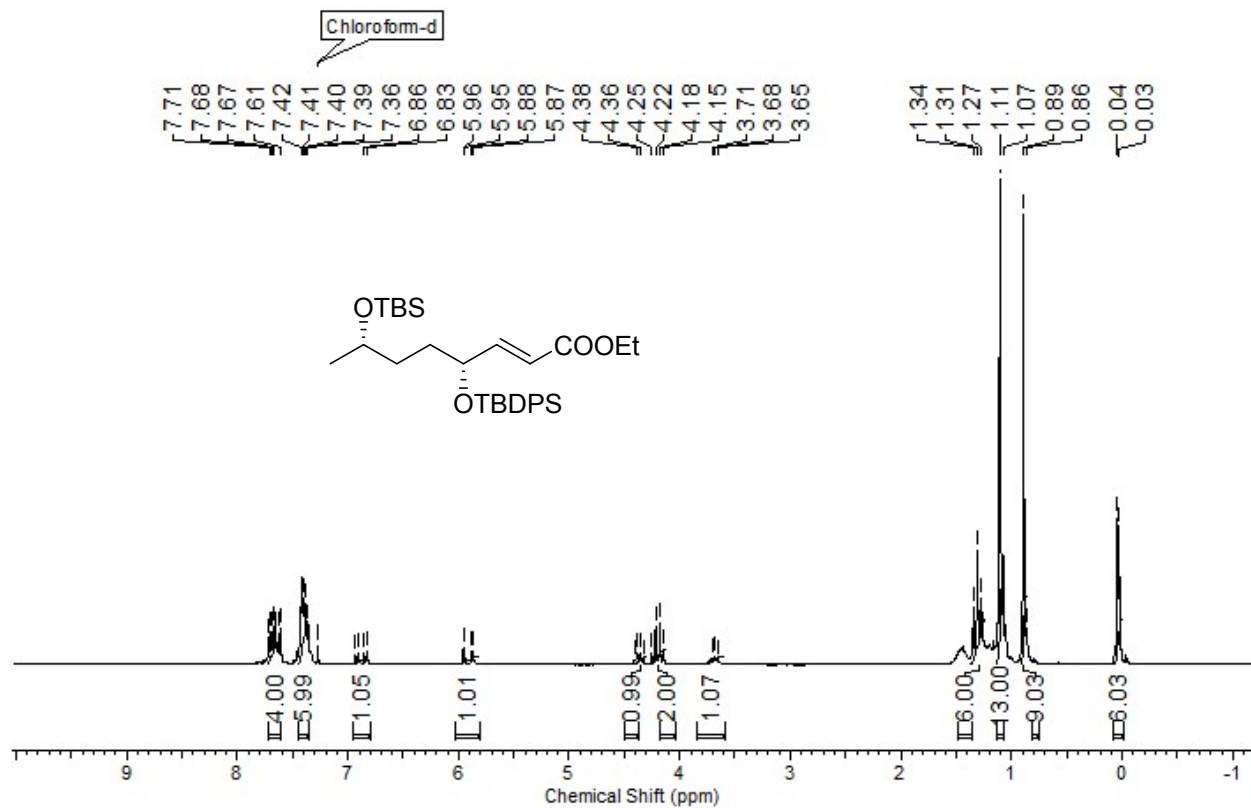
(*R,E*)-5-((*tert*-butyldimethylsilyl)oxy)hex-2-enoic acid(10) :



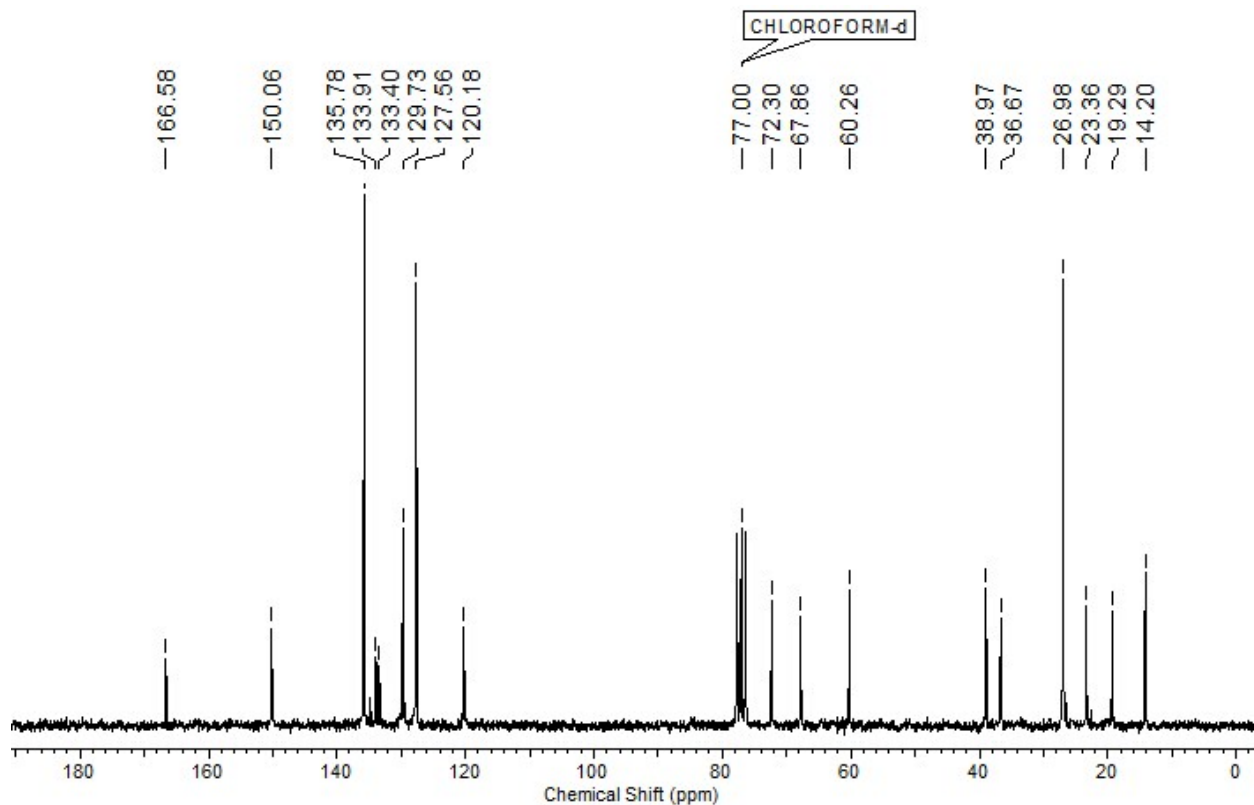
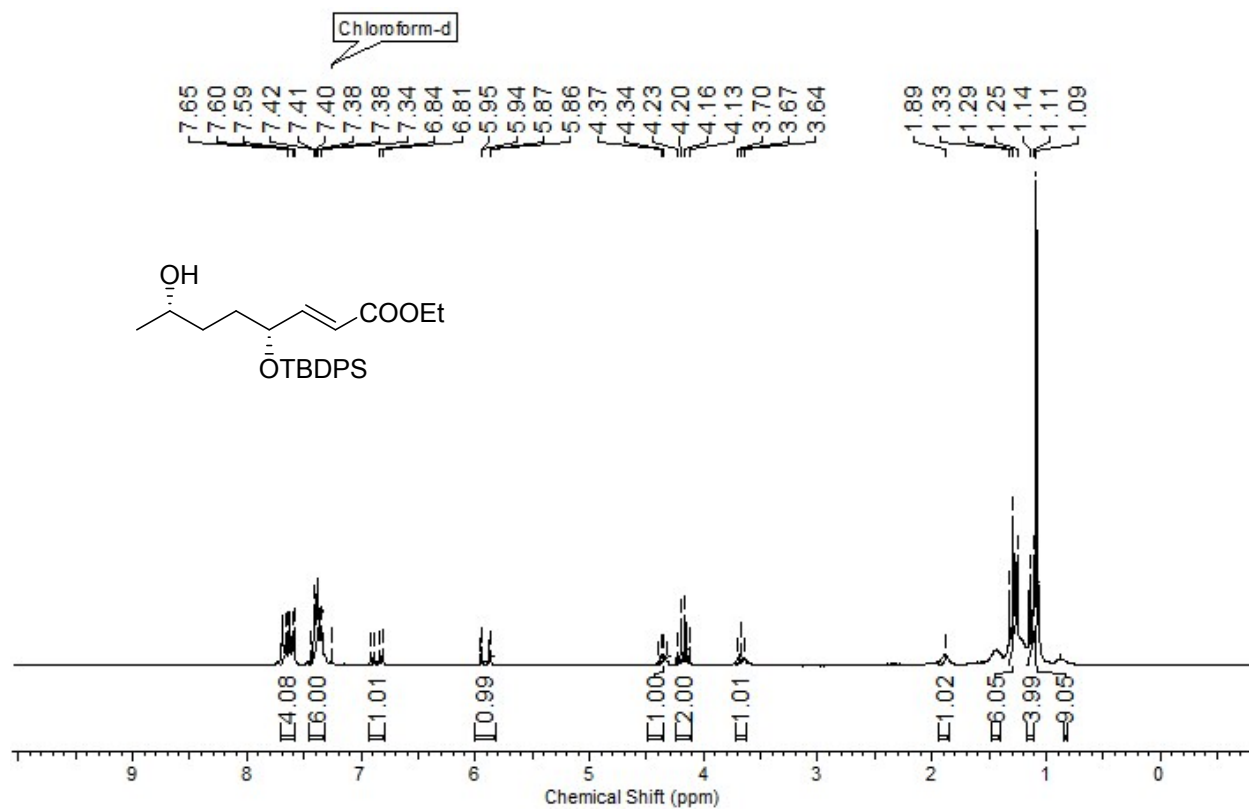
Ethyl (4*R*,7*S*,*E*)-7-((*tert*-butyldimethylsilyl)oxy)-4-hydroxyoct-2-enoate(12):



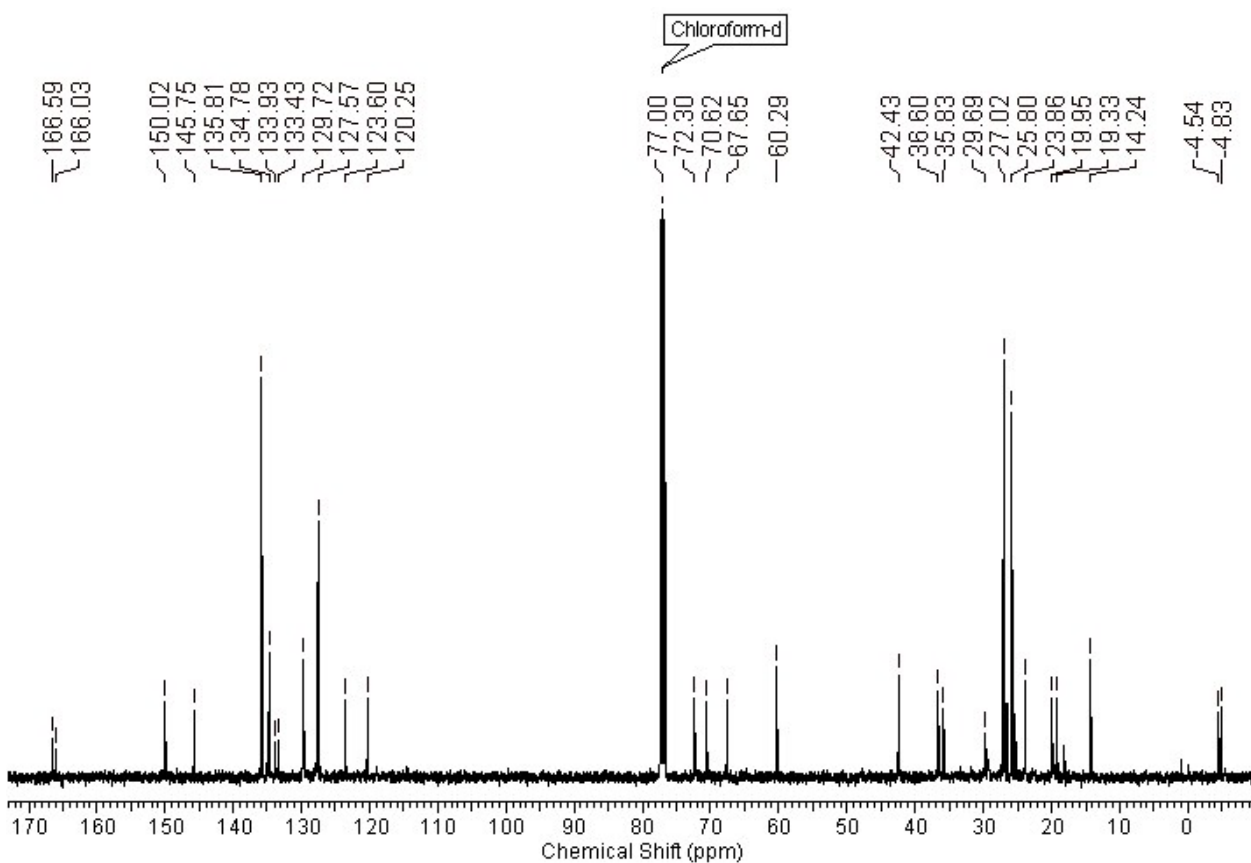
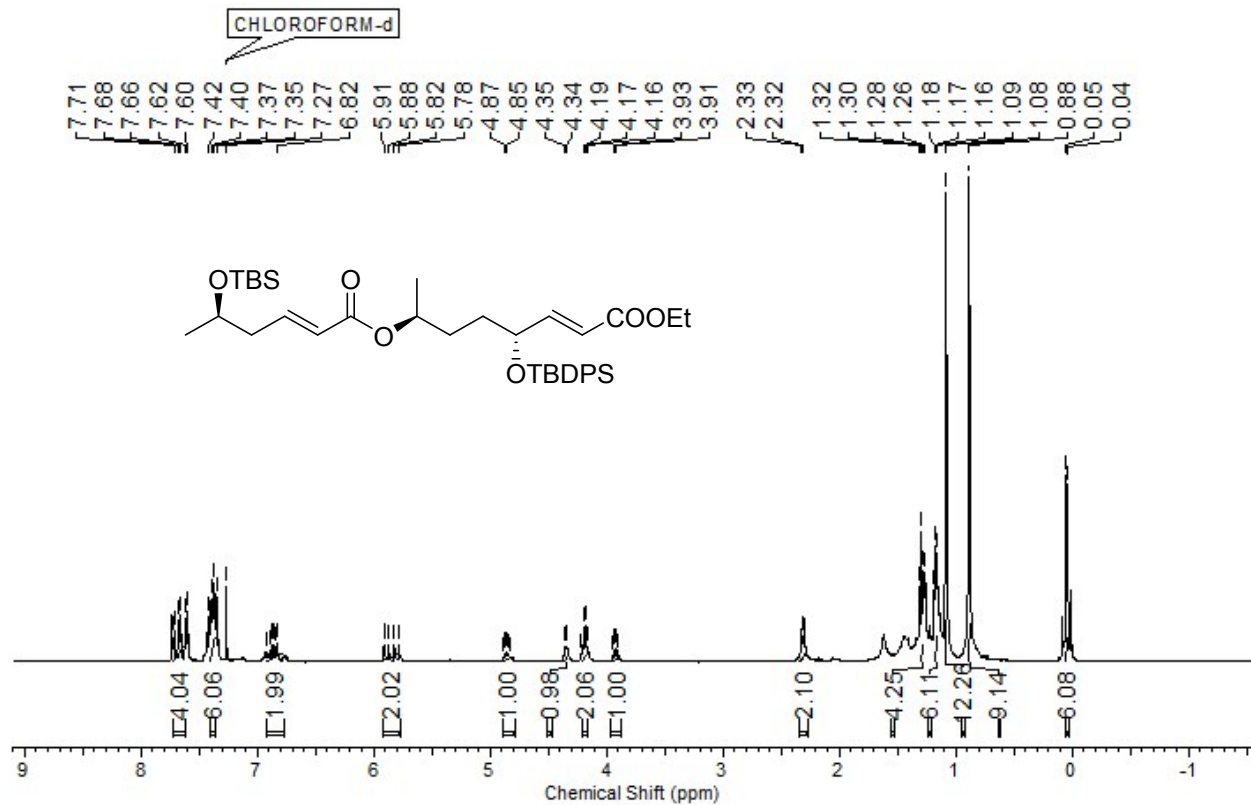
Ethyl (4*R*,7*S*,*E*)-7-((*tert*-butyldimethylsilyl)oxy)-4-((*tert*-butyldiphenylsilyl)oxy)oct-2-enoate(13):



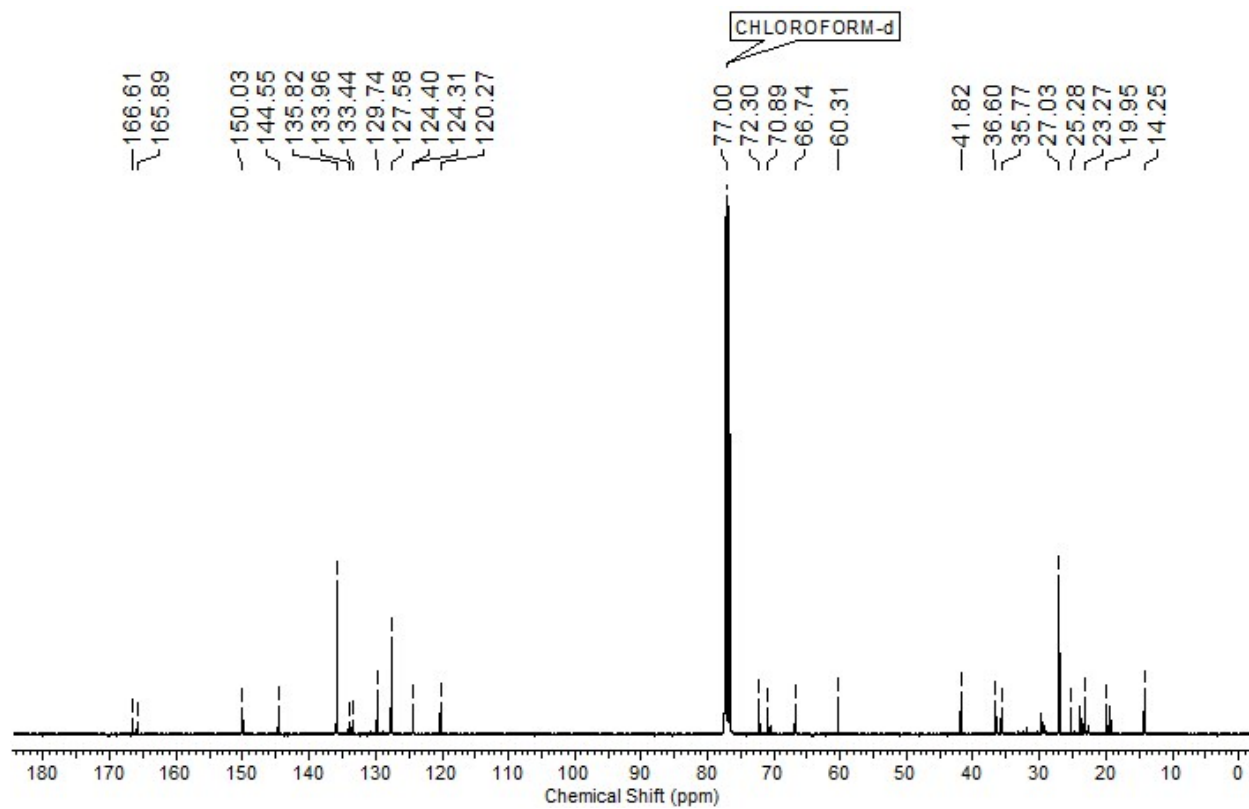
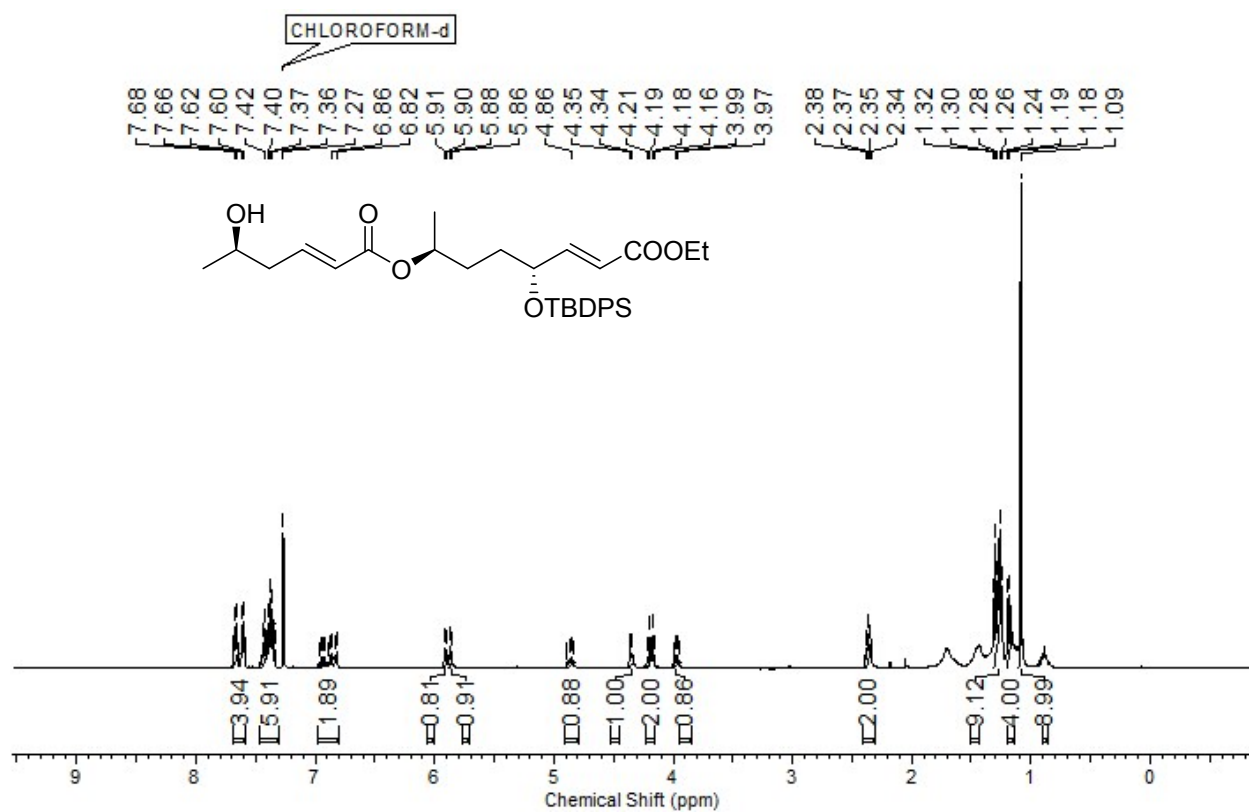
Ethyl (4*R*,7*S*,*E*)-4-((*tert*-butyldiphenylsilyl)oxy)-7-hydroxyoct-2-enoate (14):



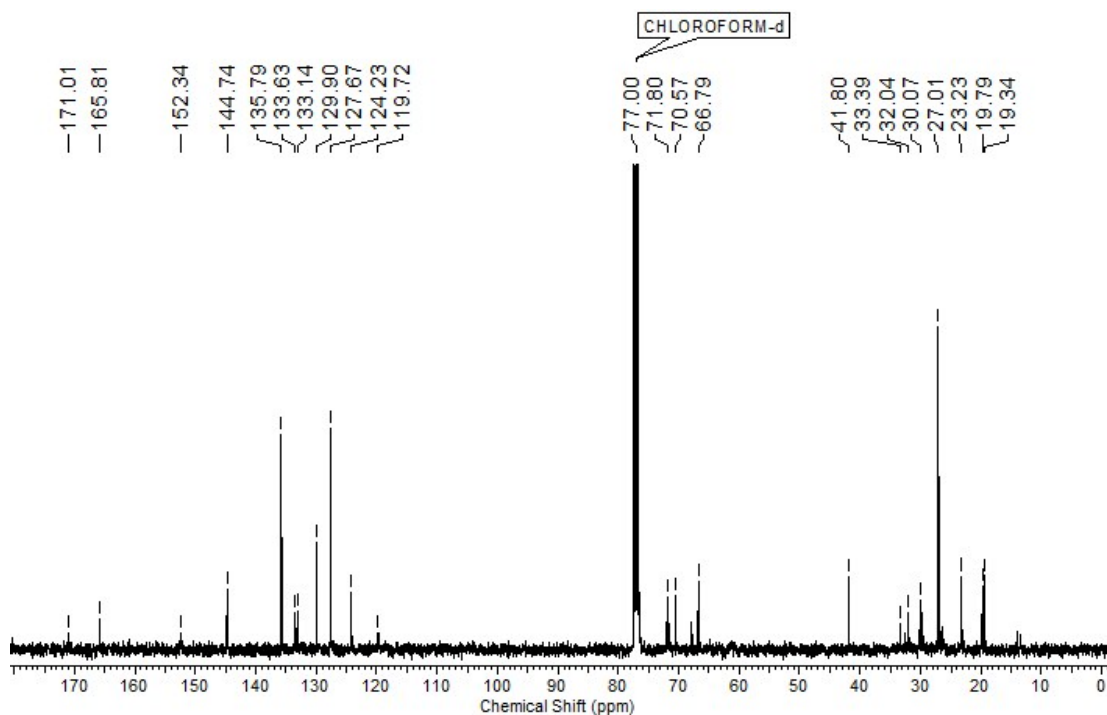
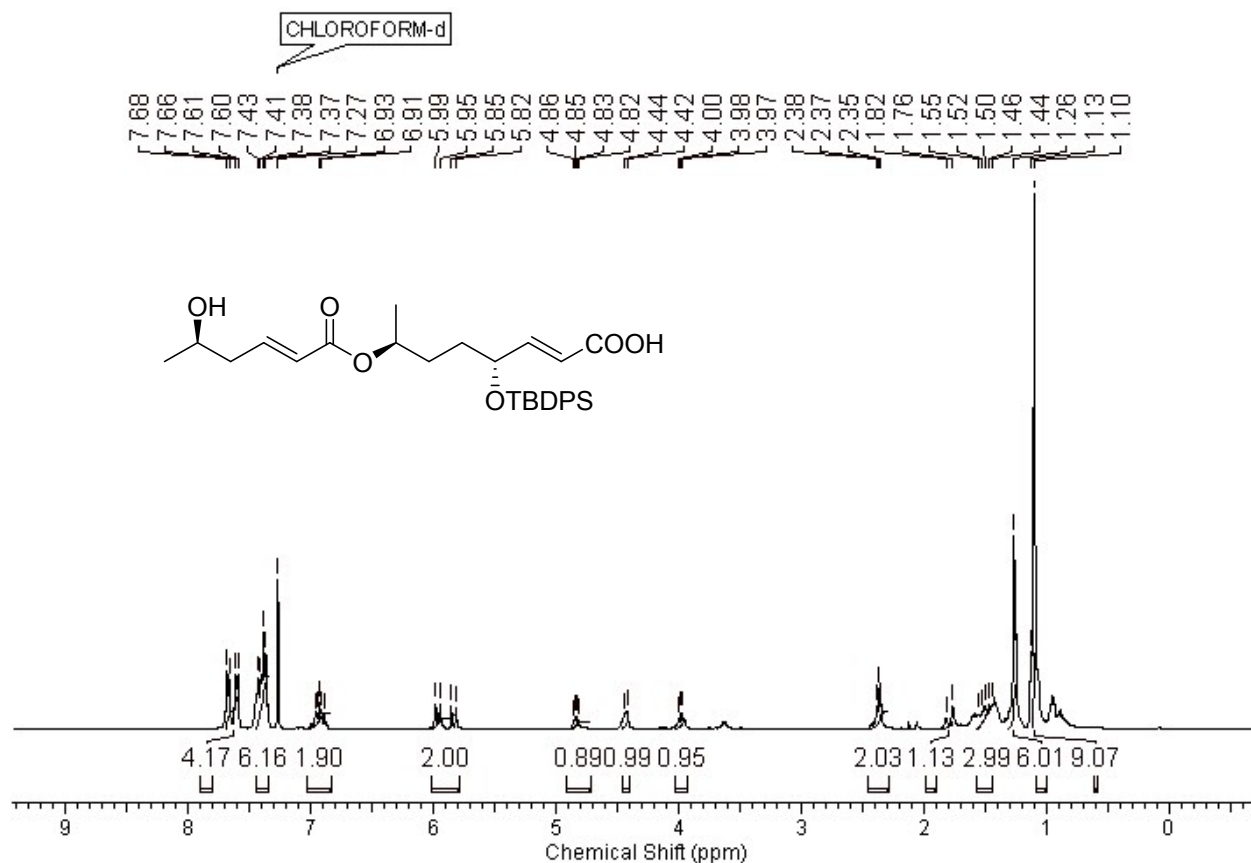
Ethyl (4*R*,7*S*,*E*)-7-(((*R*,*E*)-5-((*tert*-butyldimethylsilyl)oxy)hex-2-enyl)oxy)-4-(((*tert*-butyldiphenylsilyl)oxy)oct-2-enoate (15):



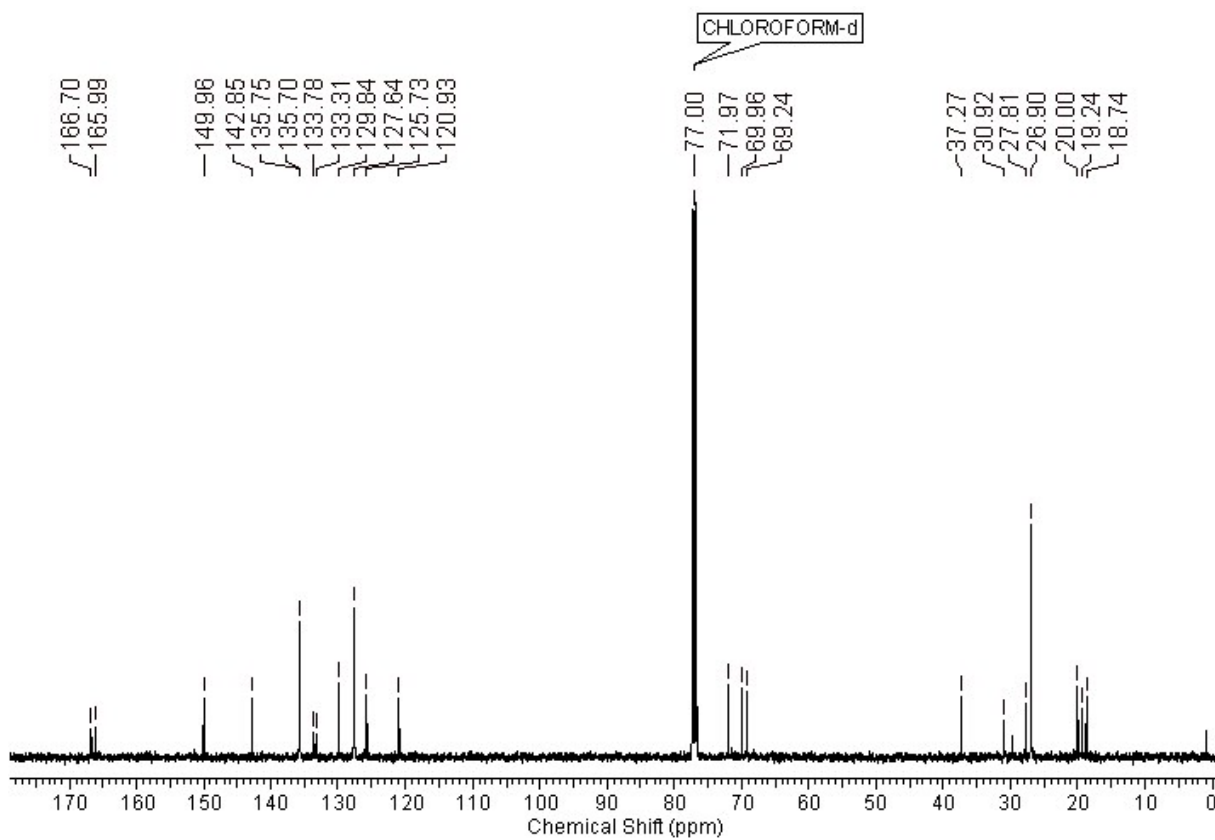
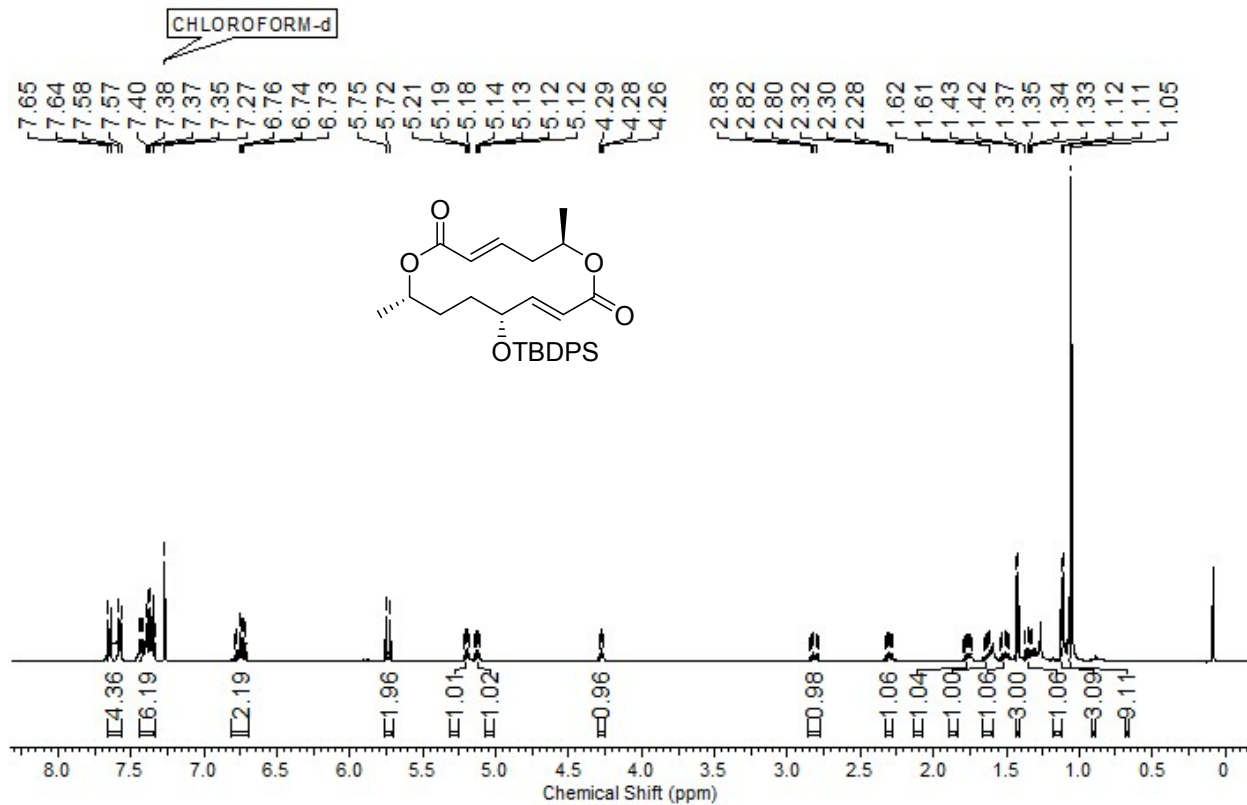
Ethyl (4*R*,7*S*,*E*)-4-((*tert*-butyldiphenylsilyloxy)-7-(((*R*,*E*)-5-hydroxyhex-2-enyl)oxy)oct-2-enoate (16):



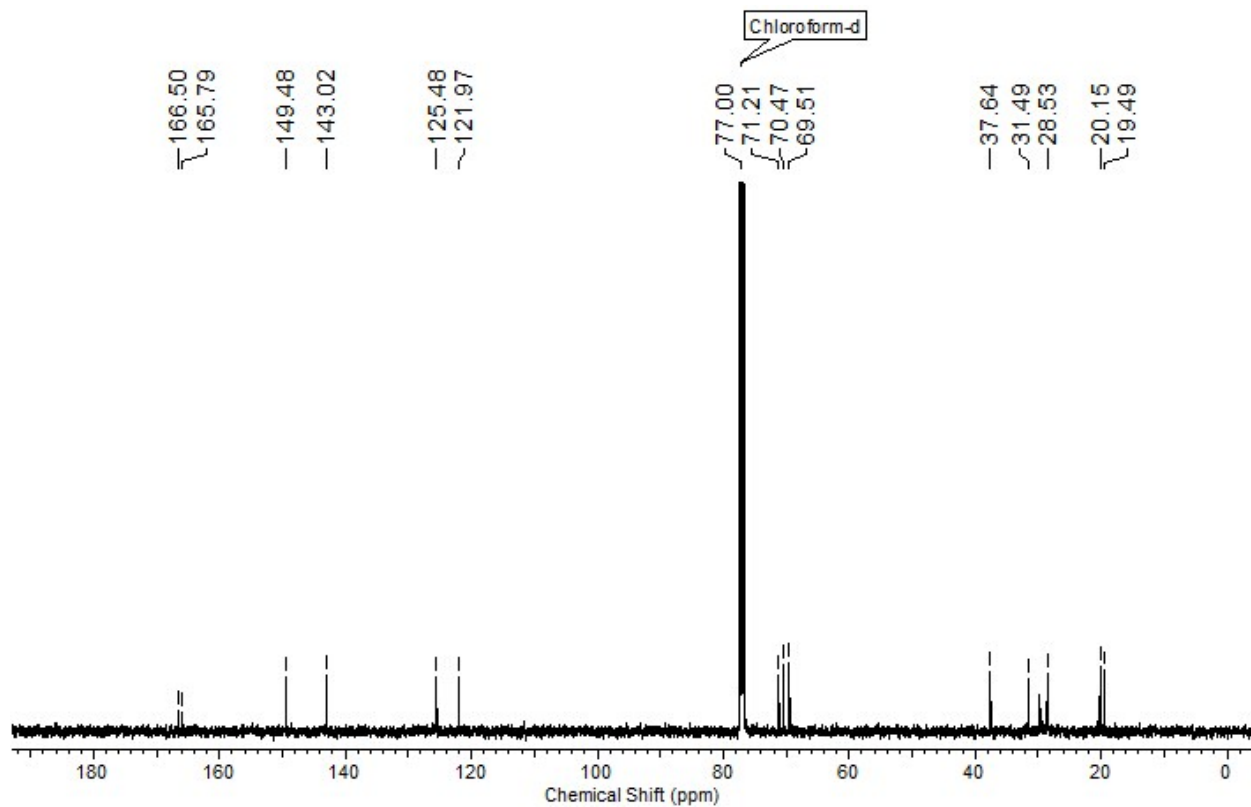
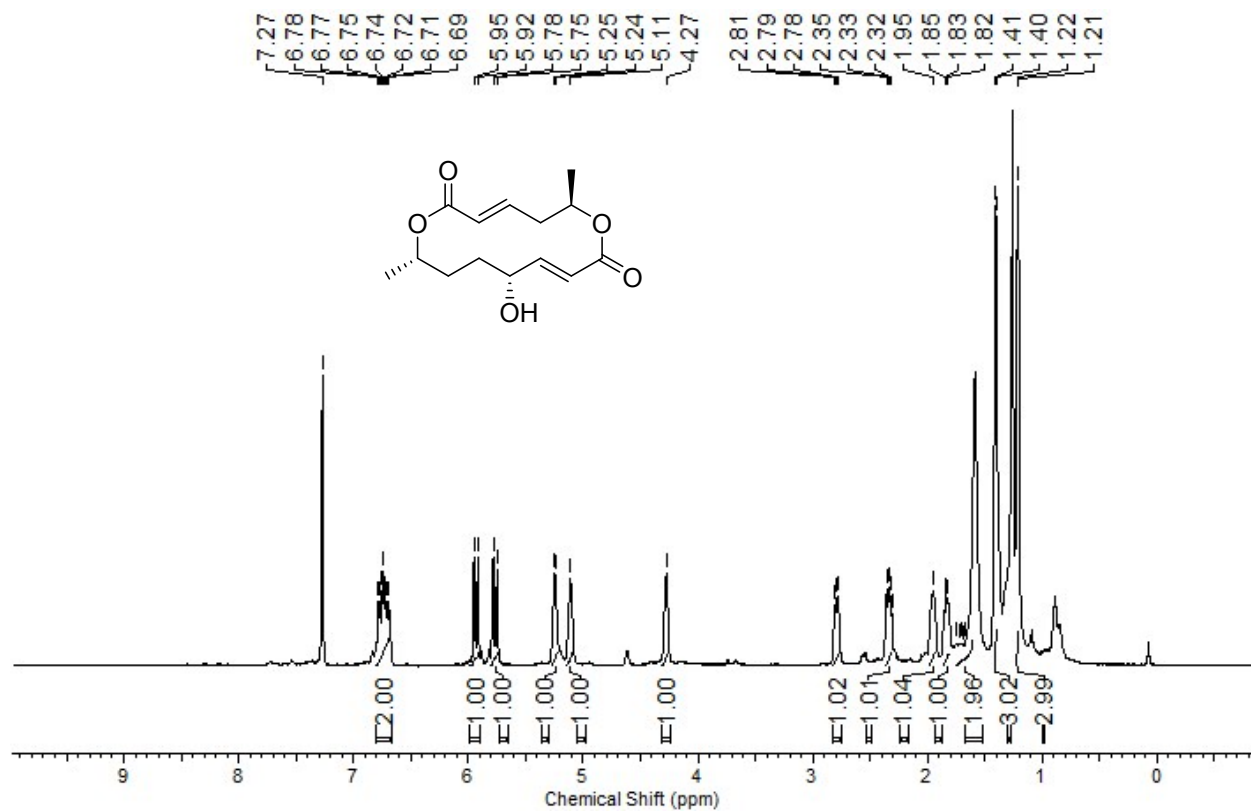
(4*R*,7*S*,*E*)-4-((*tert*-butyldiphenylsilyl)oxy)-7-(((*R*,*E*)-5-hydroxyhex-2-enyl)oxy)oct-2-enoic acid (17):



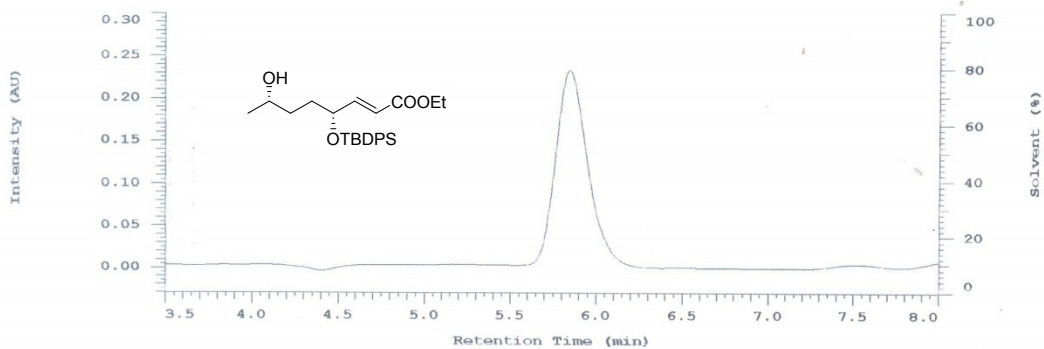
(3E,6R,9E,11R,14S)-11-((tert-butylidiphenylsilyloxy)-6,14-dimethyl-1,7-dioxacyclotetradeca-3,9-diene-2,8-dione (18):



(3E,6R,9E,11R,14S)-colletallol(3):



Chrom Type: HPLC Channel : 1

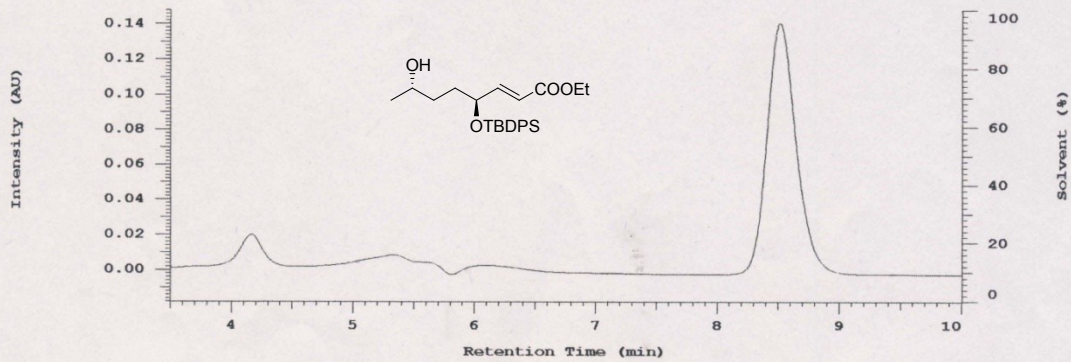


No.	RT	Height	Area	Area %
1	5.85	115115	1488123	98.689
2	7.51	1540	19763	1.311
		116655	1507886	100.000

Peak rejection level: 0

Group Leader :-Dr.Tripathi P.K.
COLUMN :Kromasil Rp-8(150 X 4.6mm)
MOBILE PHASE :-MEOH:H2O(75:25)
WAVELENGTH :- 254nm
FLOW RATE :- 1.0ml/min (1680 psi)
SAMPLE CONC :-1mg/ml Injection vol: 20ul

Chrom Type: HPLC Channel : 1

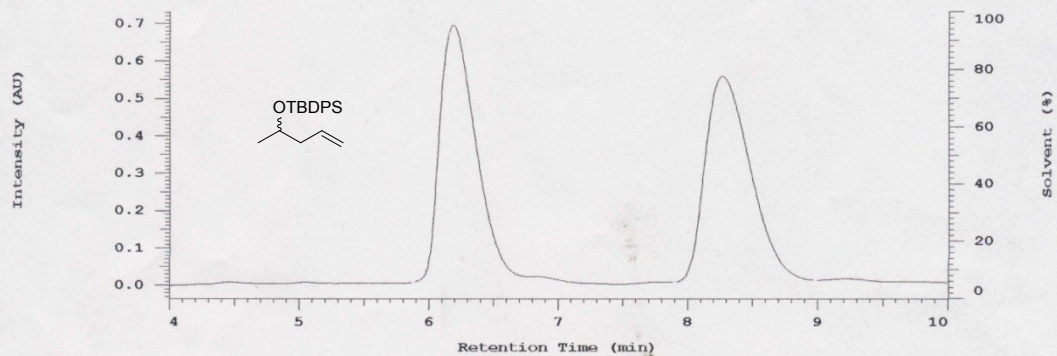


No.	RT	Height	Area	Area %
1	6.11	1018	19323	1.653
2	8.52	70705	1149817	98.347
		71723	1169140	100.000

Peak rejection level: 0

Group Leader :-Dr.Tripathi P.K.
 COLUMN :Kromasil RP-8 (150 X 4.6mm)
 MOBILE PHASE :-MEOH:H2O(75:25)
 WAVELENGTH :- 254nm
 FLOW RATE :- 1.0 ml/min (1680 psi)
 SAMPLE CONC :-1 mg/ml Injection vol: 20ul

Chrom Type: HPLC Channel : 1

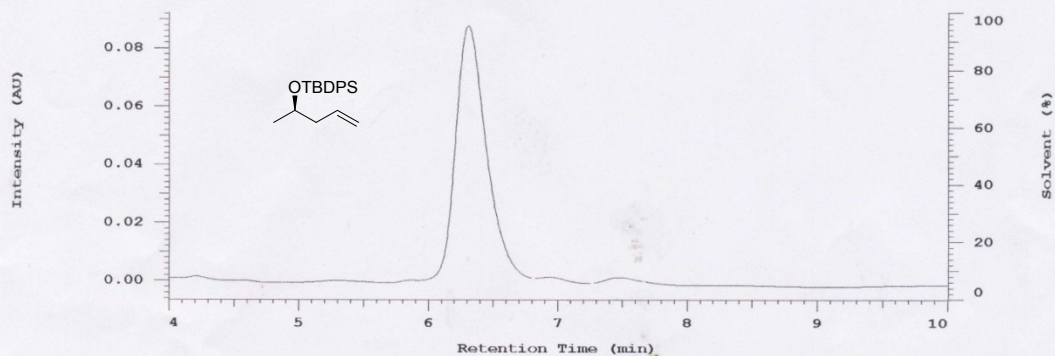


No.	RT	Height	Area	Area %
1	6.19	340626	6524750	49.582
2	8.27	273862	6634765	50.418
		614488	13159515	100.000

Peak rejection level: 0

Group Leader :-Dr.Tripathi P.K.
COLUMN :Chiralcel OJ-RH (150 X 4.6mm)
MOBILE PHASE :-MEOH:H2O(90:10)
WAVELENGTH :- 254nm
FLOW RATE :- 0.7 ml/min (740 psi)
SAMPLE CONC :-1 mg/1ml Injection vol: 2ul

Chrom Type: HPLC Channel : 1

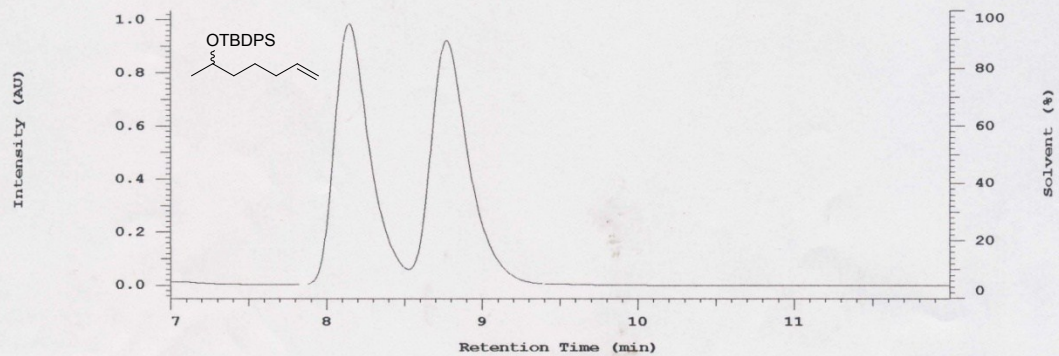


No.	RT	Height	Area	Area %
1	6.31	43592	713048	98.374
2	7.48	876	11788	1.626
		44468	724836	100.000

Peak rejection level: 0

Group Leader :-Dr.Tripathi P.K.
COLUMN :Chiralcel OJ-RH (150 X 4.6mm)
MOBILE PHASE :-MEOH:H2O(90:10)
WAVELENGTH :- 254nm
FLOW RATE :- 0.7 ml/min (740 psi)
SAMPLE CONC :-1 mg/ml Injection vol: 2ul

Chrom Type: HPLC Channel : 1

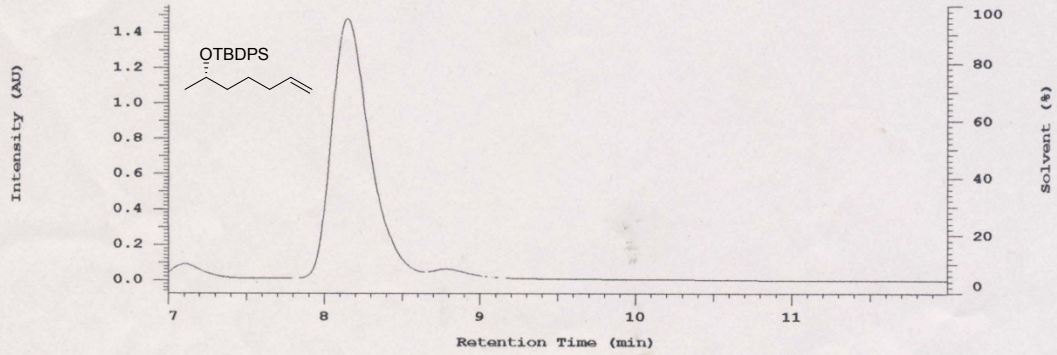


No.	RT	Height	Area	Area %
1	8.14	490017	7753344	49.671
2	8.77	458354	7855972	50.329
		948371	15609316	100.000

Peak rejection level: 0

Group Leader :-Dr.Tripathi P.K.
 COLUMN :Chiralcel OJ-RH (150 X 4.6mm)
 MOBILE PHASE :-MEOH:H2O(90:10)
 WAVELENGTH :- 230nm
 FLOW RATE :- 0.7 ml/min (740 psi)
 SAMPLE CONC :-X mg/ml Injection vol: 2ul

Chrom Type: HPLC Channel : 1



No.	RT	Height	Area	Area %
1	8.15	732649	12806862	98.749
2	8.79	13131	162284	1.251
		745780	12969146	100.000

Peak rejection level: 0

Group Leader :-Dr.Tripathi P.K.
 COLUMN :Chiralcel OJ-RH (150 X 4.6mm)
 MOBILE PHASE :-MEOH:H2O(90:10)
 WAVELENGTH :- 230nm
 FLOW RATE :- 0.7 ml/min (740 psi)
 SAMPLE CONC :-X mg/lml Injection vol: 2ul