Supplementary Material (ESI) for Chemical Communications
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Cyclopropenyllithiums as a New Source of 1,1-Bismetalated Cyclopropyl Derivatives

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General

All reactions were carried out under argon using standard Schlenk techniques. ^{1}H and ^{13}C NMR spectra were recorded on a Bruker Avance 300 or Avance 500 instruments in $CDCl_3$. Chemical shifts are given as ppm relative to the residual solvent peak (chloroform-d_1:7.26 ppm/77.0 ppm). Column chromatography purification was performed on Merck silica gel 60 (230-400 mesh ASTM). THF and Diethyl Ether were dried with sodium/benzophenone and distilled. Yields refer to isolated yields of compounds. Methyllithium (1.6M solution in diethyl ether), *t*-Butyllithum (1.7M solution in pentane), zinc bromide and copper (I) cyanide were purchased from Aldrich Chemicals Co Inc and used without further purification.

General Procedure for the allylmetalation of cyclopropenyllithium coming from tribromocyclopropane*:*

To a solution of the appropriate tribromocyclopropane (1 mmol) in dry diethyl ether (15 ml) at –78 ^{o}C *t*BuLi was added dropwise (4 mmol, 2.35 ml, 1.7 M). The reaction mixture was warmed to –10 ^{o}C for 1 h. Then, the reaction mixture was cooled to –30 ^{o}C and allylmagnesium bromide (2 mmol, 1.3 M in diethyl ether) was added followed by a zinc bromide solution (2 mmol, 1 M in diethyl ether). The reaction solution was warmed to –10 ^{o}C for 30 min. The reaction was quenched with 1M HCl. The aqueous layer was washed with diethyl ether (3 x 15 ml), the organic layers were combined and washed with saturated $NaHCO_3$ (1 x 20 ml), brine (20 ml) and dried over $MgSO_4$.

1-allyl-1-butyl-cyclopropane 5: The reaction was performed with 1,1,2-tribromo-2-butylcyclopropane following the general allylmetalation procedure. Purification on silica gel (hexane as eluent) gave **5** in 81% yield as colorless oil. ^{1}H NMR ($CDCl_3$, 300 MHz): 5.84-5.73 (m, 1H), 5.03-4.95 (m, 2H), 1.98-1.96 (d, J = 6, 2H), 1.31-1.19 (m, 6H), 0.85 (t, J = 9, 3H), 0.27-0.91 (m, 4H) ^{13}C NMR ($CDCl_3$, 75 MHz): 136.8, 115.7, 40.35, 35.97, 29.75, 28.75, 22.96, 19.07, 14.07, 11.20.

1-allyl-cyclopropyl-benzene 6: The reaction was performed with 1,1,2-tribromo-2-phenylcyclopropane following the general allylmetalation procedure. Purification on silica gel (hexane as eluent) gave **6** in 75% yield as colorless oil. ^{1}H NMR (CDCl$_3$, 300 MHz): 7.29-7.29 (m, 4H), 7.20-7.18 (m, 1H), 5.80-5.74 (m, 1H), 4.97-4.93 (m, 2H), 2.37 (d, *J* = 3.6, 2H), 0.92-0.83 (m, 2H), 0.77-0.71 (m, 2H). ^{13}C NMR (CDCl$_3$, 75 MHz): 12.8, 14.2, 28.4, 43.9, 60.4, 116.2, 125.9, 128.0, 128.6, 136.1.

1-butyl-1-(1-methyl-allyl)-cyclopropane 7: To a mixture of 1,1,2-tribromo-2-butylcyclopropane (1 mmol) in diethyl ether (15 ml) at -78 °C, *t*-BuLi (4 mmol, 1.7 M) was added dropwise. The solution was heated to -10 °C for 1 h. The mixture was cooled to -30 °C and crotylmagnesium bromide (2.5 mmol, 1.3 M) was added followed by a zinc bromide solution (2.5 mmol, 1 M in diethyl ether). The mixture was warmed to -10 °C for 1 h. The reaction was quenched by 1M HCl. The aqueous layer was washed with diethyl ether (3 x 15 ml), saturated NaHCO$_3$ (1 x 20 ml), brine (20 ml) and dried over MgSO$_4$. The organic layers were combined and evaporated. Purification on silica gel (hexane as eluent) gave **7** in 65% yield as colorless oil. ^{1}H NMR (CDCl$_3$, 300 MHz): 5.81-5.74 (m, 1H), 4.98-4.94 (m, 2H), 1.92-1.89 (m, 1H), 1.30-1.22 (m, 6H), 0.99 (s, 3H), 0.89-0.86 (t, 3H), 0.31-0.23 (m, 4H). ^{13}C NMR (CDCl$_3$, 75 MHz): 9.3, 9.8, 14.2, 16.2, 22.7, 29.3, 30.3, 42.3, 113.4, 142.5.

1-allyl-1-butyl-2,2-diiodo-cyclopropane 8: The reaction was performed with 1,1,2-tribromo-2-butylcyclopropane following the general allylmetalation procedure. Once the formation of the bismetalated cyclopropyl derivative was completed, a solution of iodine (4 mmol) in THF (4 ml) was added at -10 °C and the mixture was warmed to r.t. for 30 min. Purification on silica gel (hexane as eluent) gave **8** in 68% yield as colorless oil. ^{1}H NMR (CDCl$_3$, 300 MHz): 5.90-5.78 (m, 1H), 5.18-5.10 (m, 2H), 2.45-2.40 (dd, *J* = 7.2, *J* = 7.2, 1H), 2.26-2.19 (dd, *J* = 7.2, *J* = 7.2, 1H), 1.61-1.56 (m, 2H), 1.54-1.50 (m, 2H), 1.34-1.1.30 (m, 4H), 0.92-0.87 (t, *J* = 7.2, 3H) ^{13}C NMR (CDCl$_3$, 75 MHz) -43.3, 14.1, 22.7, 27.7, 29.2, 32.1, 36.5, 37.9, 42.5, 117.5, 134.4.

(2-allyl-2-butyl-cyclopropylidenemethyl)-benzene 9: The reaction was performed with 1,1,2-tribromo-2-butylcyclopropane following the general allylmetalation procedure. Once the formation of the bismetalated cyclopropyl derivative was completed, $BF_3{\cdot}OEt_2$ (1.5 mmol) was added followed by benzylidenemalonate (1.5 mmol) at -15 °C and the reaction mixture was gradually warmed to room temperature over night. Purification on silica gel (hexane as eluent) gave **9** with a E:Z ratio of 15:85 in 60% yield as colorless oil. ^{1}H NMR ($CDCl_3$, 300 MHz): 7.30-7.27 (m, 4H), 7.16-7.10 (m, 1H), 6.61-6.60 (t, J = 1.8, 1H), 5.66-5.53 (m, 1H), 4.99-4.88 (m, 2H), 2.46-2.32 (m, 1H), 2.31-2.29 (m, 1H), 1.26-1.2 (m, 6H), 0.99-0.98 (d, J = 3, 2H), 0.85-0.8 (t, 3H) ^{13}C NMR ($CDCl_3$, 75 MHz): 11.20, 15.91, 21.03, 22.89, 27.77, 28.55, 34.63, 39.69, 115.4, 116.4, 126.0, 126.3, 128.8, 129.0, 135.1, 135.6.

1-(2-allyl-2-butyl-cyclopropylidenemethyl)-4-methyl-benzene 10: The reaction was performed with 1,1,2-tribromo-2-butylcyclopropane following the general allylmetalation procedure. Once the formation of the bismetalated cyclopropyl derivative was completed, toluenaldehyde (4 mmol) was added at -15 °C and the reaction mixture was gradually warmed to room temperature over night. Purification on silica gel (hexane as eluent) gave **10** with a E:Z ratio of 1:2 in 53% yield as colorless oil. ^{1}H NMR ($CDCl_3$, 300 MHz): 7.42 (d, J = 8.1, 1H), 7.25-7.22 (d, J = 6.3, 2H), 7.19-7.10 (m, 0.5H), 6.71 (t, 1H), 6.66 (t, 1H), 5.92-5.60 (m, 1.5H), 5.08-4.93 (m, 3.5H), 2.50-2.43 (dd, J = 8.1, J = 7.8, 1H), 2.32 (s, 6H), 2.22-2.17 (m, 1H), 1.50-1.20 (m, 12H), 1.02 (d, J = 1.8, 2H), 0.90-0.87 (t, 6H) ^{13}C NMR ($CDCl_3$, 75 MHz): 11.20, 15.91, 21.03, 22.89, 27.77, 28.55, 34.63, 39.69, 115.4, 116.4, 126.0, 126.3, 128.8, 129.0, 135.1, 135.6.

1,1,2-triallyl-2-butylcyclopropane 11: The reaction was performed with 1,1,2-tribromo-2-butylcyclopropane following the general allylmetalation procedure. Once the formation of the bismetalated cyclopropyl derivative was completed, the mixture was cooled to -78 °C and copper cyanide was added (4 mmol), the mixture was then warmed to -20 °C for 30 min. Once the transmetalation was complete allyl bromide was added (4 mmol) and the mixture was stirred for additional 12 h at room temperature. The reaction was quenched by NH_4OH:NH_4Cl 1:2. Purification on silica gel (hexane as eluent) gave **11** in 60% yield as colorless oil. ^{1}H NMR ($CDCl_3$, 300 MHz): 5.78-5.70 (m, 3H), 5.05-4.98 (m, 6H), 2.33-2.10 (m, 6H), 1.34-1.24 (m, 6H), 0.89-0.85 (t, J = 6, 3H), 0.25-0.21 (q, J = 6, J = 9, 2H) ^{13}C NMR ($CDCl_3$, 75 MHz) 137.3, 137.2, 137.1, 115.9, 115.6, 36.7, 36.5, 36.3, 31.8, 28.9, 28.2, 27.5, 23.3, 23.1

2-allyl-2-butyl-cyclopropanecarboxylic acid 15: to a solution of 1-butylcyclopropenecarboxylic acid (1 mmol) in diethyl ether (15 ml), MeLi (2.2 mmol, 1.6 M) was added dropwise at -78 ^{o}C. The solution was warmed to room temperature for 1 h. The mixture was cooled again to -50 ^{o}C and allylmagnesium bromide (2.2 mmol, 1.3 M) was added followed by a solution of zinc bromide (2.2 mmol, 1 M in diethyl ether). The reaction mixture was warmed to room temperature for 30 min. The reaction was quenched by 1M HCl. The aqueous layer was washed with diethyl ether (3 x 15 ml), the organic layers were combined and washed with saturated $NaHCO_3$ (1 x 20 ml), brine (20 ml) and dried over $MgSO_4$. Purification on silica gel (hexane:ethyl acetate 1:2 as eluent) gave **15** as a unique diastereoisomer in 50% yield. ^{1}H NMR ($CDCl_3$, 200 MHz): 5 0.87 (t, J = 5.3, 3H), 0.96 (dd, J = 7.9, 4.5, 1H), 1.13 – 1.37 (m, 11H), 1.52 (dd, J = 7.9, 5.5, 1H), 2.08-2.37 (m, 2H), 5.00 – 5.09 (m, 2H),5.64 – 5.84 (m, 1H), 1.50-12.0 (bs, 1H); ^{13}C NMR ($CDCl_3$, 50 MHz): 14.0, 21.3, 22.6, 25.5, 26.0, 29.3 (overlapped two peaks), 31.8, 33.5, 37.0, I 16.5, 135.7, 179.4.

General Procedure for allylmetalation of 1-hexyl-3-hydroxymethylcyclopropene: MeLi (2.2 mmol, 1.6M) was added dropwise to a mixture of the alcohol (1 mmol) in diethyl ether (15 ml) at -78 ^{o}C. The solution was warmed to room temperature for 1 h. Then the reaction mixture was cooled again to -50 ^{o}C and allylmagnesium bromide (2.2 mmol, 1.7 ml, 1.3 M) was added followed by a solution of zinc bromide (2.2 mmol, 22 ml, 1 M in diethyl ether). The reaction mixture was stirred for 4 h at -50 ^{o}C. The reaction was quenched by 1M HCl. The aqueous layer was washed with diethyl ether (3 x 15 ml), the organic layers were combined and washed with saturated $NaHCO_3$ (1 x 20 ml), brine (20 ml) and dried over $MgSO_4$.

(2-allyl-2-butyl-cyclopropyl)-methanol 16: The general procedure followed. The organic layers were combined and evaporated. Purification on silica gel (hexane:ethyl acetate 1:25 as eluent) gave **16** in 72% yield as a colorless oil, as unique isomer. ^{1}H NMR ($CDCl_3$, 300 MHz): 5.91-5.69 (m, 1H), 5.05-4.97 (m, 2H), 3.72-3.53 (m, 2H), 2.10-2.01 (dd, J = 9, J = 12, 1H), 1.89-1.82 (dd, J = 6, J = 6, 1H), 1.4-1.35 (m, 6H), 0.87 (t, 3H), 0.55-0.51 (q, 1H), 0.16-0.13 (t, 1H) ^{13}C NMR ($CDCl_3$, 75 MHz): 1.00, 14.11, 16.19, 23.02, 25.7, 29.02, 29.68, 30.44, 41.46, 63.40, 116.2, 136.2.

((1S,2R)-2-allyl-2-butyl-1-phenylcyclopropyl)methanol 17:

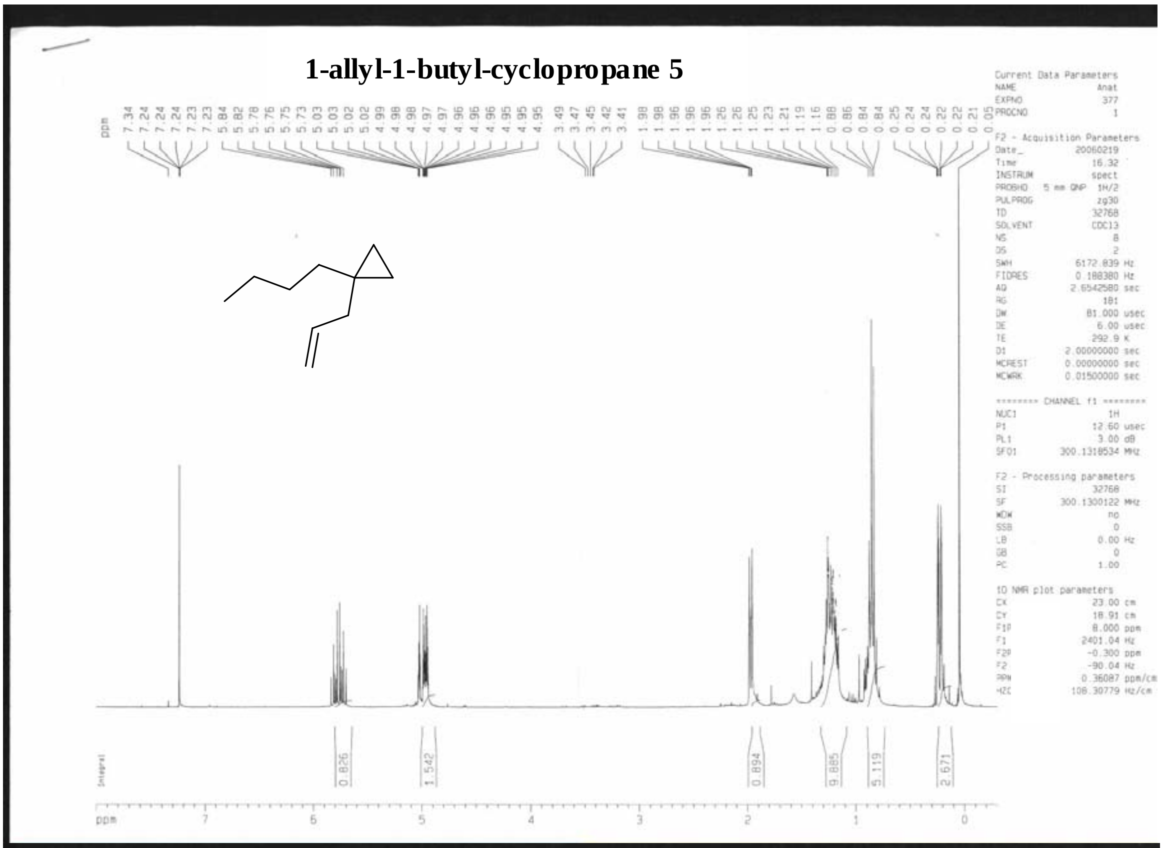
The general procedure followed. The organic layers were combined and evaporated. Purification on silica gel (hexane:ethyl acetate 1:25 as eluent) gave **17** in 60% yield as yellow oil, with d.r. 4:1. ^{1}H NMR ($CDCl_3$, 300 MHz): 7.34-7.13 (m, 7H), 5.71-5.58 (m, 1H), 4.90-4.80 (m, 2H), 3.94-3.90 (d, 1H), 3.6-3.53 (d, 1H), 2.08-1.97 (m, 2H), 1.77-1.69 (m, 2H), 1.47-1.07 (m, 8H), 0.93-0.83 (m, 6H), 0.69-0.67 (m, 3H). ^{13}C NMR ($CDCl_3$, 75 MHz): 141.0, 137.0, 136.5, 130.4, 128.3, 128.2, 126.6, 126.4, 116.1, 115.9, 68.5, 68.4, 39.0, 38.3, 35.9, 33.7, 31.4, 29.7, 29.2, 28.6, 23.0, 22.8, 22.1, 14.1.

(2-allyl-2-butyl-3,3-diiodo-cyclopropyl)-methanol 18: The general procedure was followed. When the allylmetalation reaction was over, iodine (5 mmol) in THF (8 ml) was added at -20 ^{o}C and the mixture is stirred at this temperature for additional 45 min. Purification on silica gel (hexane:ethyl acetate 1:25 as eluent) gave **18** in 50% yield as a yellow oil. ^{1}H-NMR ($CDCl_3$, 300 MHz): 5.81-5.72 (m, 1H), 5.15-5.07 (m, 2H), 3.63-3.49 (m, 2H), 2.4 (dd, J = 12, 1H), 2.2 (dd, J = 6, J = 12, 1H), 1.5-1.1 (m, 7H), 0.85 (t, 3H).

(2-allyl-2-butyl-3-iodo-cyclopropyl)-methanol 20: The general procedure was followed. When the allylmetalation reaction was over, iodine (2.2 mmol) in THF (5 ml) was added at -20 ^{o}C and the mixture was stirred at this temperature for additional 30 min. Purification on silica gel (hexane:ethyl acetate 1:25 as eluent) gave **20** in 55% yield as a yellow oil. ^{1}H NMR ($CDCl_3$, 300 MHz): 6.00-5.72 (m, 1H), 5.14-5.04 (m, 2H), 3.72-3.66 (dd, J = 6, J = 12, 1H), 3.58-3.52 (dd, J = 6, J = 12, 1H), 2.37 (d, J = 6, 1H), 2.31-2.24 (m, 1H), 2.06-1.99 (m, 1H), 1.55-1.47 (m, 2H), 1.36-1.15 (m, 6H), 0.81 (t, 3H).

(1R,2S)-1-allyl-1-butyl-2-((2-methoxypropan-2-yloxy)methyl)cyclopropane 21: *n*-BuLi (1.2 mmol, 1.6M) was added dropwise to a mixture of (1 mmol) in diethyl ether (15 ml) at -78 ^{o}C. The solution was warmed to -60 ^{0}C for 20 min. Then the mixture was warmed to -50 ^{0}C, and allylmagnesium bromide (1.2 mmol, 0.93 ml, 1.3 M) was added followed by a solution of zinc bromide (1.2 mmol, 1 M in diethyl ether). The reaction mixture was warmed to -30 ^{0}C for 3.5 hours. The reaction was quenched by 1 M $NaHCO_3$. The aqueous layer was washed with diethyl ether (3 x 15 ml), the organic layers were combined and washed with saturated $NaHCO_3$ (1 x 20 ml), brine (20 ml) and dried over K_2CO_3. Purification on alumina (pentane:ether 100:1 as eluent) gave **21** in 90% yield as a yellow oil. ^{1}H NMR ($CDCl_3$, 300 MHz): 5.78-5.64 (m, 1H), 5.01-4.90 (m, 2H), 3.42-3.40 (dd, *J*=6 *J*=9, 1H), 3.26-3.23 (dd, *J*=6 *J*=9, 1H), 0.07-0.04 (t, *J*=6, 1H).. ^{13}C NMR ($CDCl_3$, 75 MHz): 141.0, 137.0, 136.5, 130.4, 128.3, 128.2, 126.6, 126.4, 116.1, 115.9, 68.5, 68.4, 39.0, 38.3, 35.9, 33.7, 31.4, 29.7, 29.2, 28.6, 23.0, 22.8, 22.1, 14.1.

NMRs



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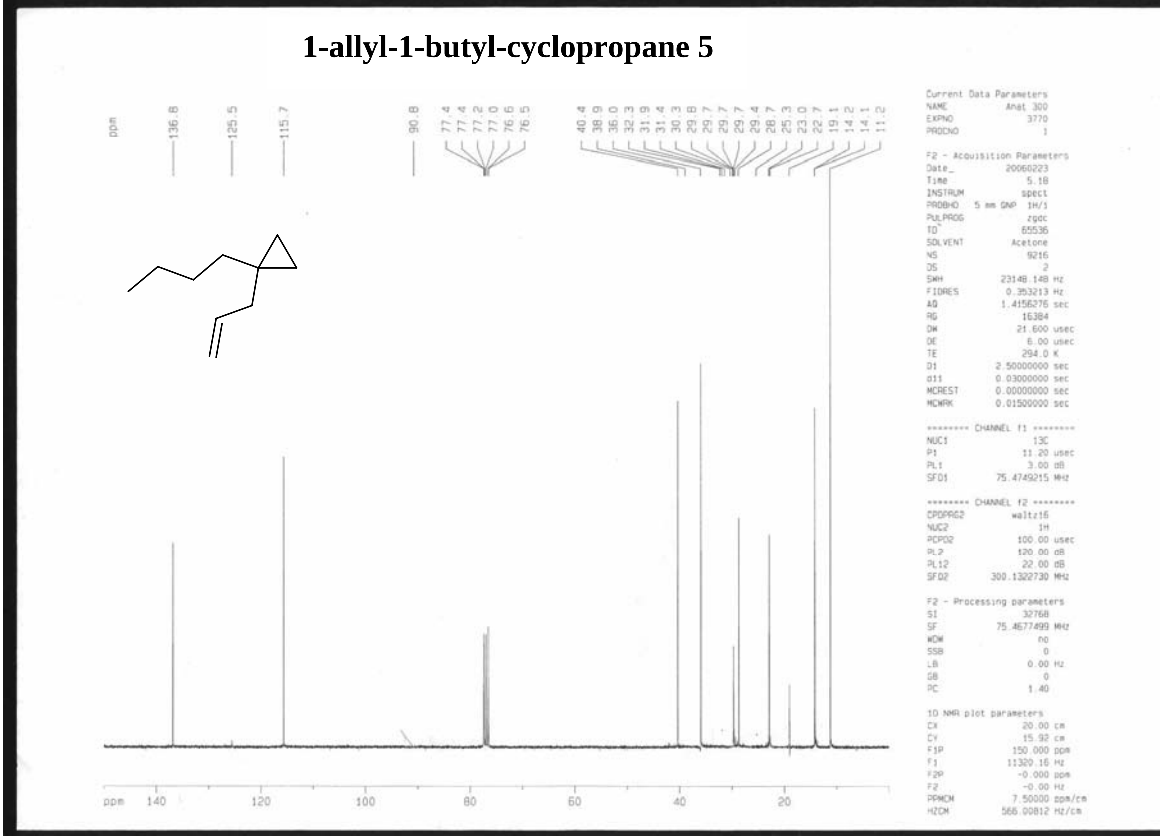

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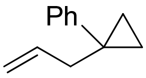
1-allyl-cyclopropyl-benzene 6



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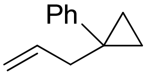

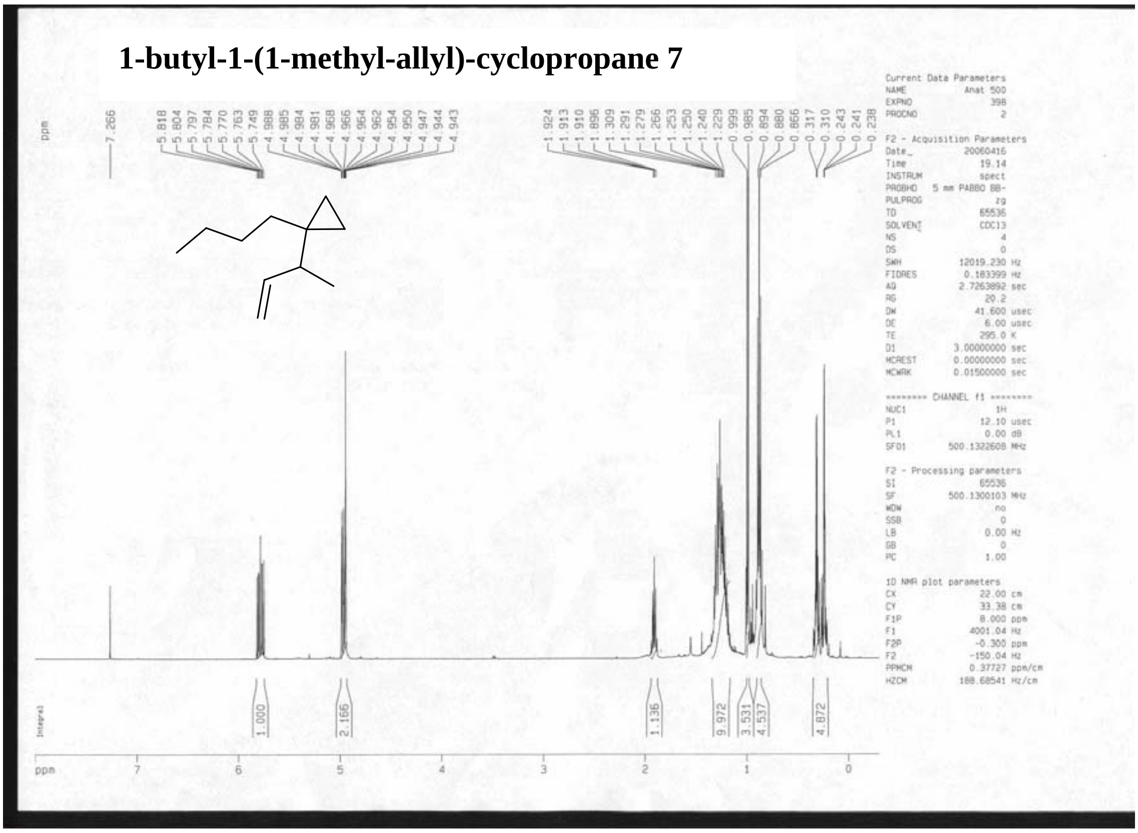

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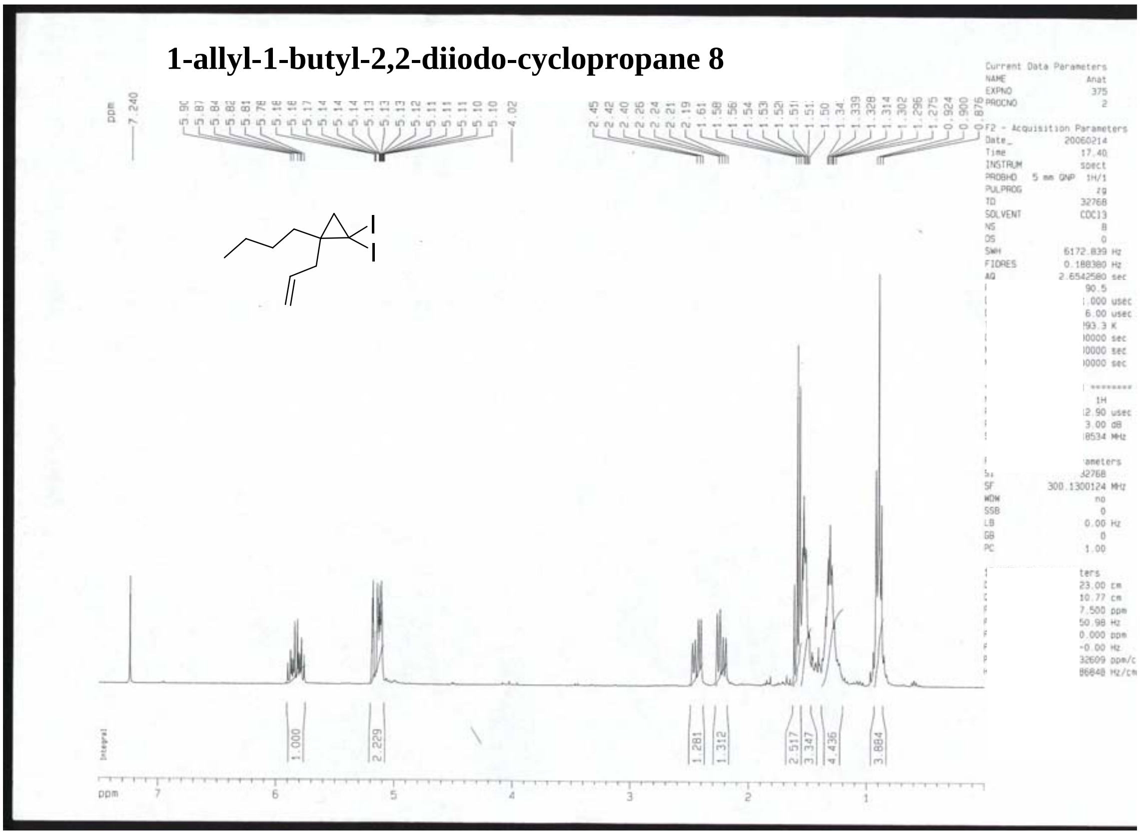
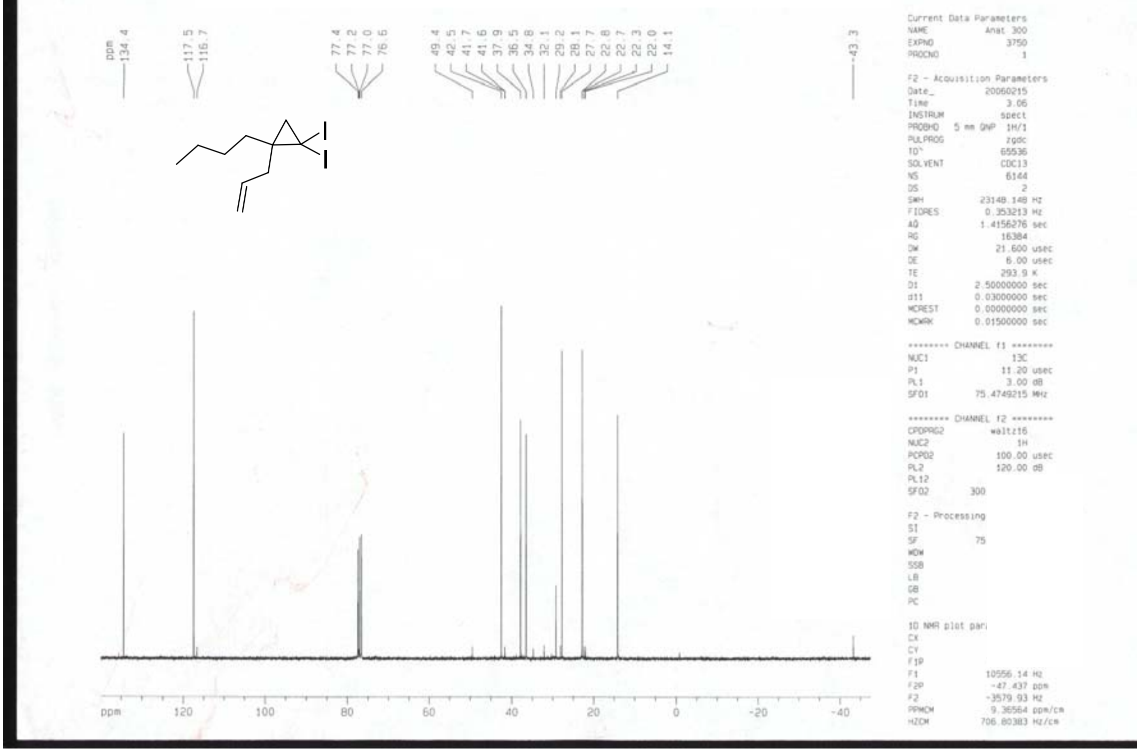


1-allyl-1-butyl-2,2-diiodo-cyclopropane 8

1-allyl-1-butyl-2,2-diiodo-cyclopropane 8



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1D NMR plot par
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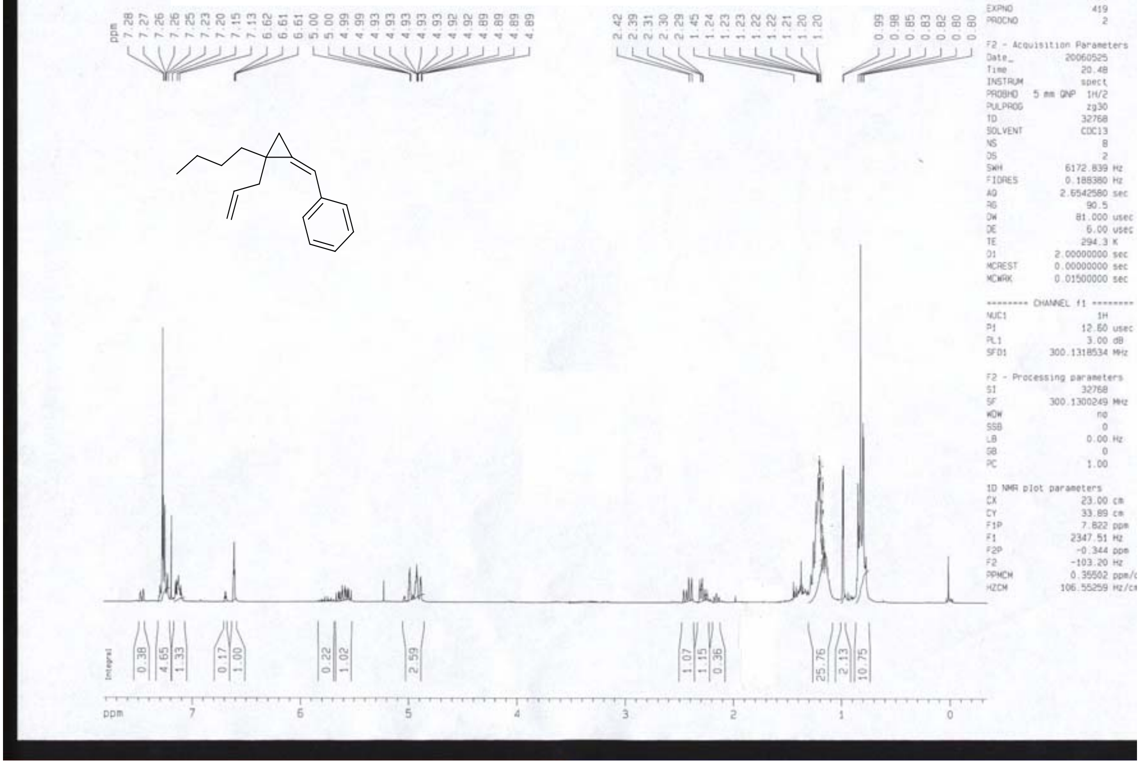
(2-allyl-2-butyl-cyclopropylidenemethyl)-benzene 9



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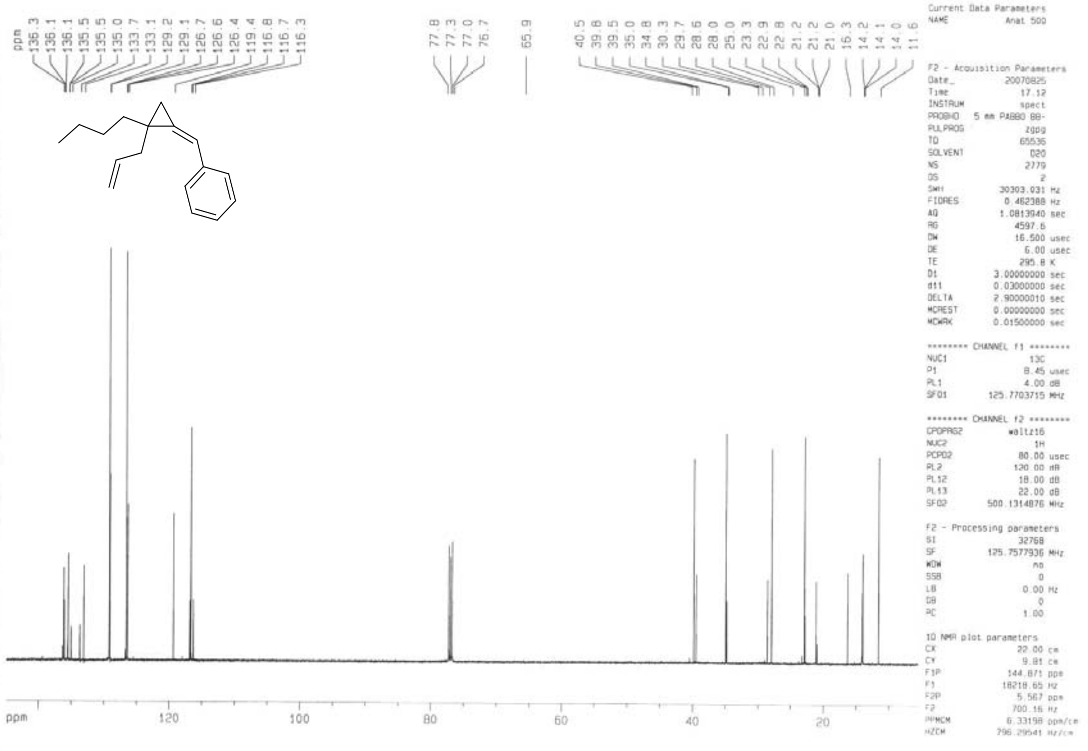
(2-allyl-2-butyl-cyclopropylidenemethyl)-benzene 9



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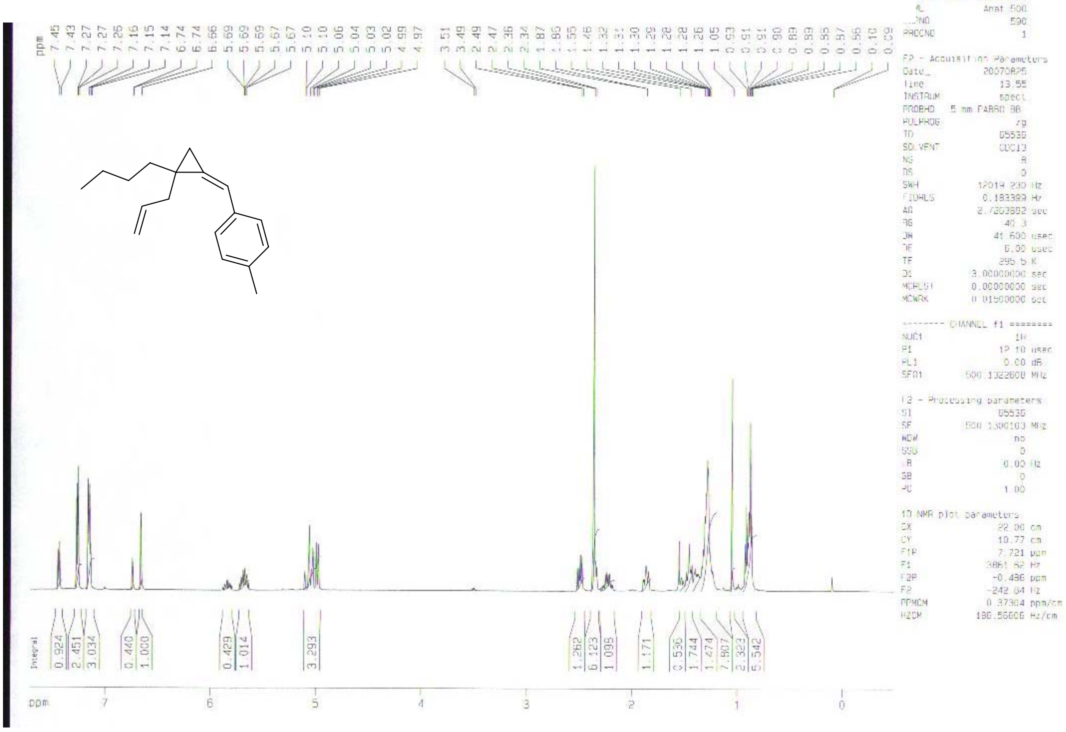
1-(2-allyl-2-butyl-cyclopropylidenemethyl)-4-methyl-benzene 10



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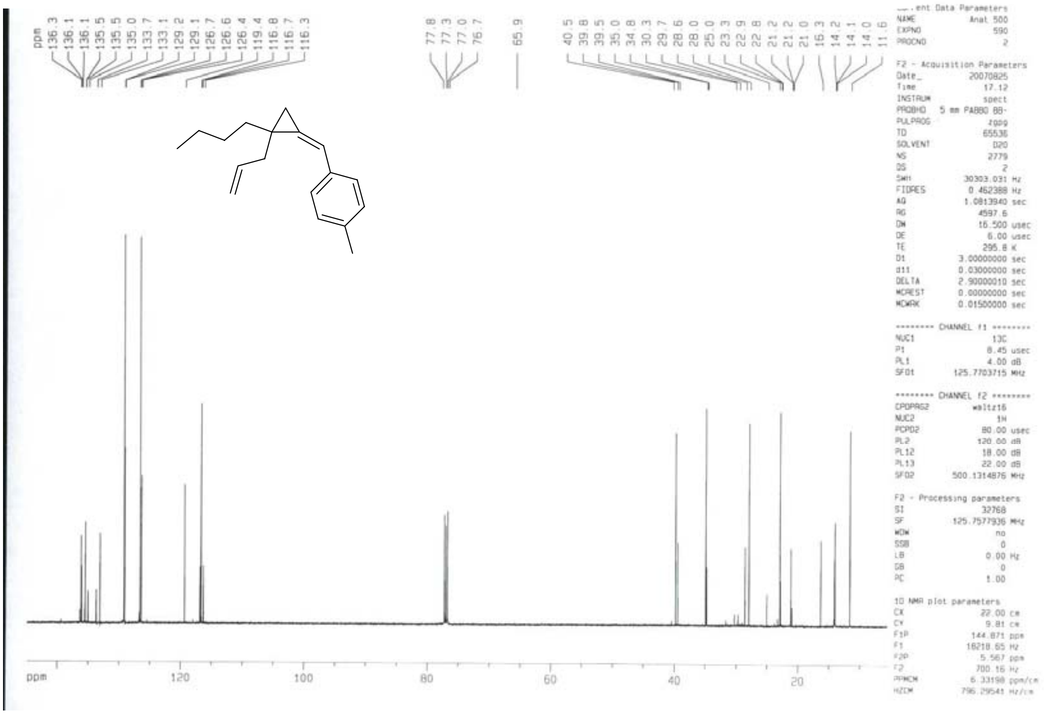
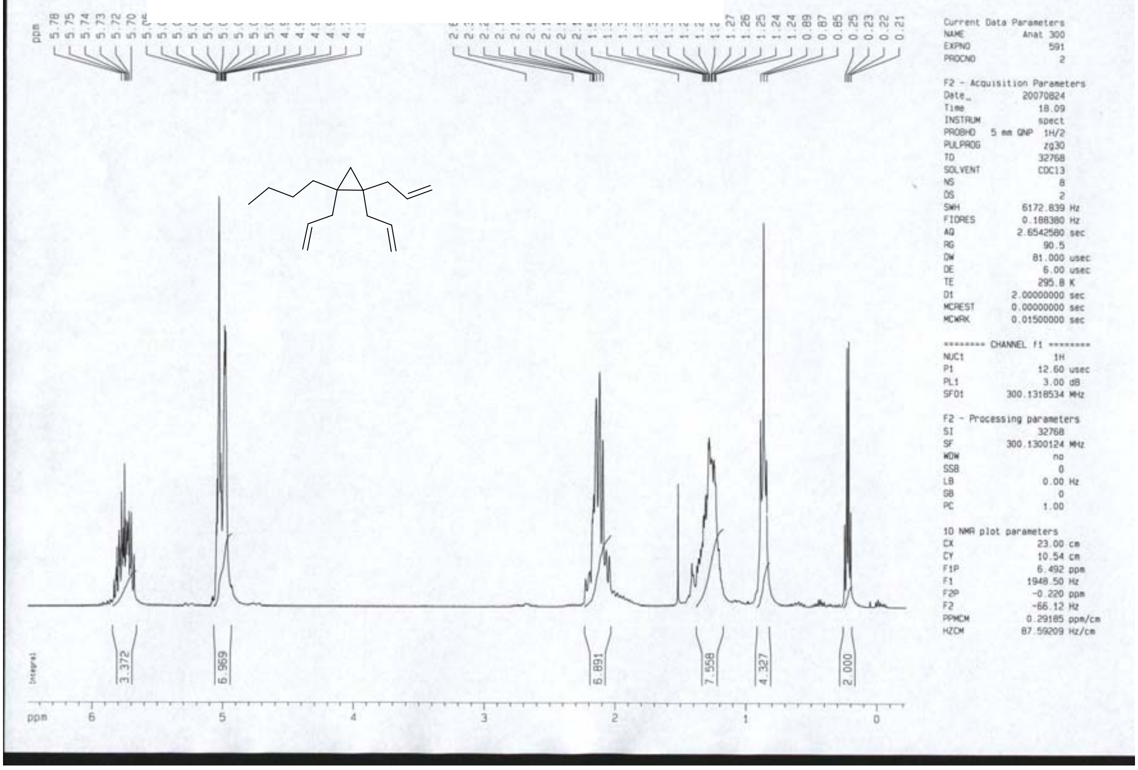
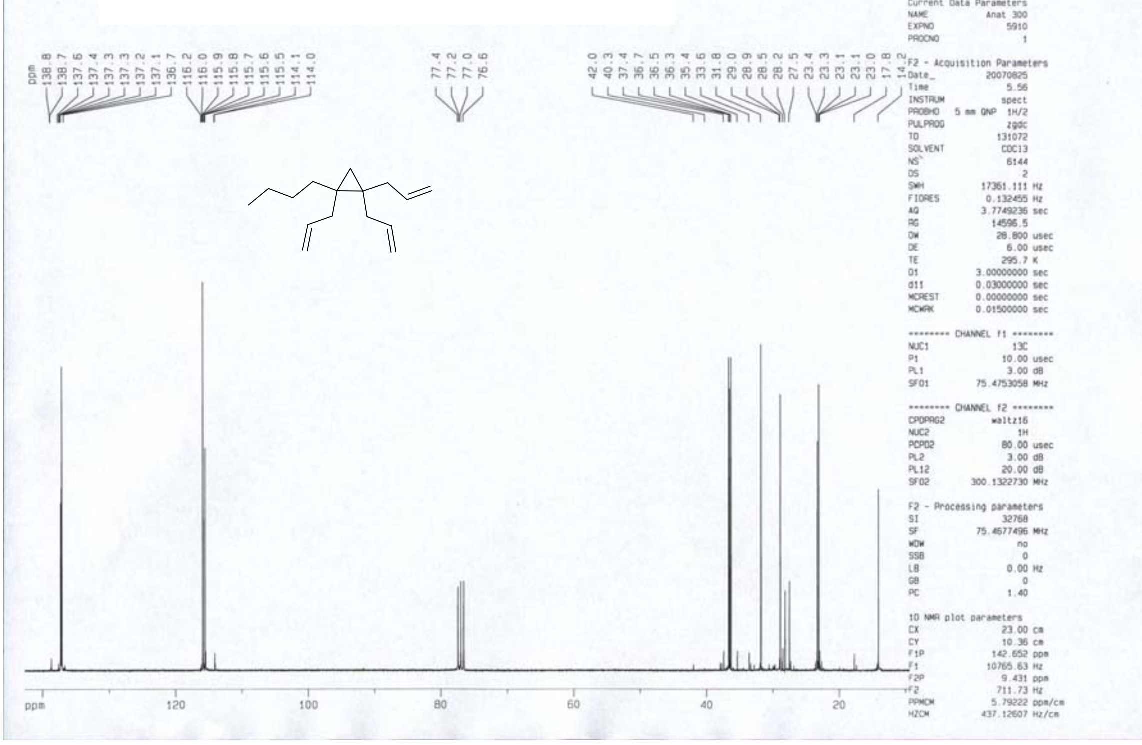


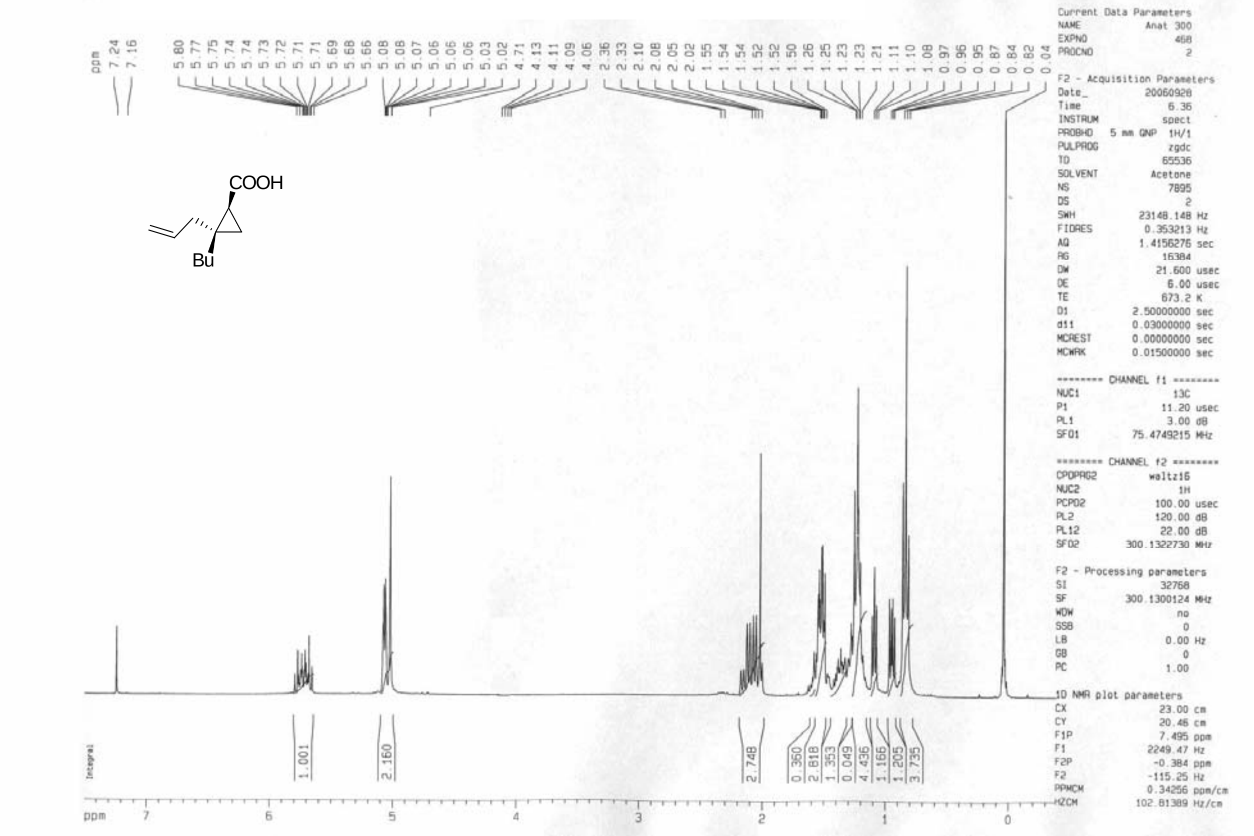
1,1,2-triallyl-2-butylcyclopropane 11



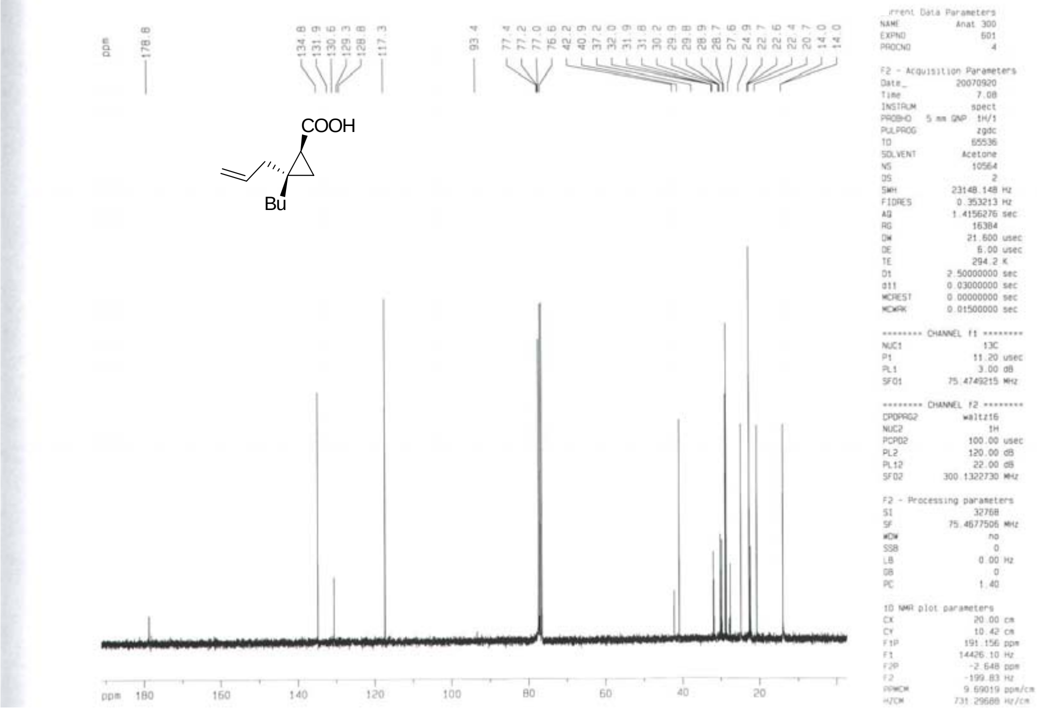
1,1,2-triallyl-2-butylcyclopropane 11



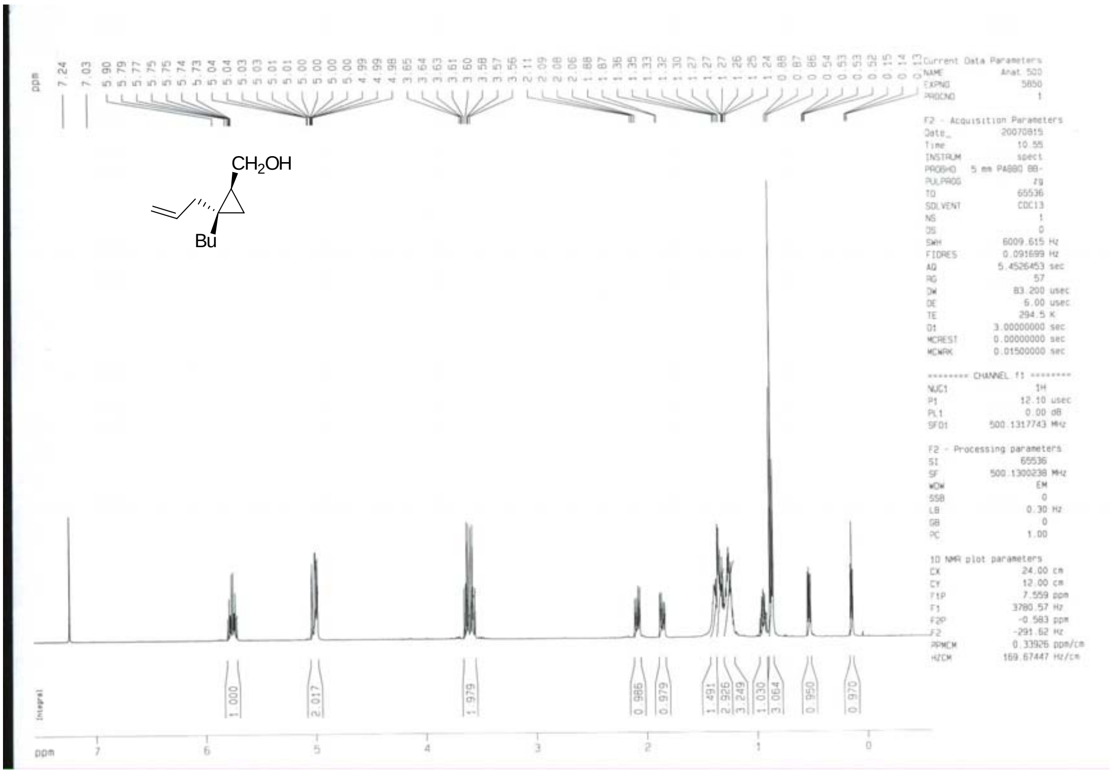
2-allyl-2-butyl-cyclopropanecarboxylic acid 15



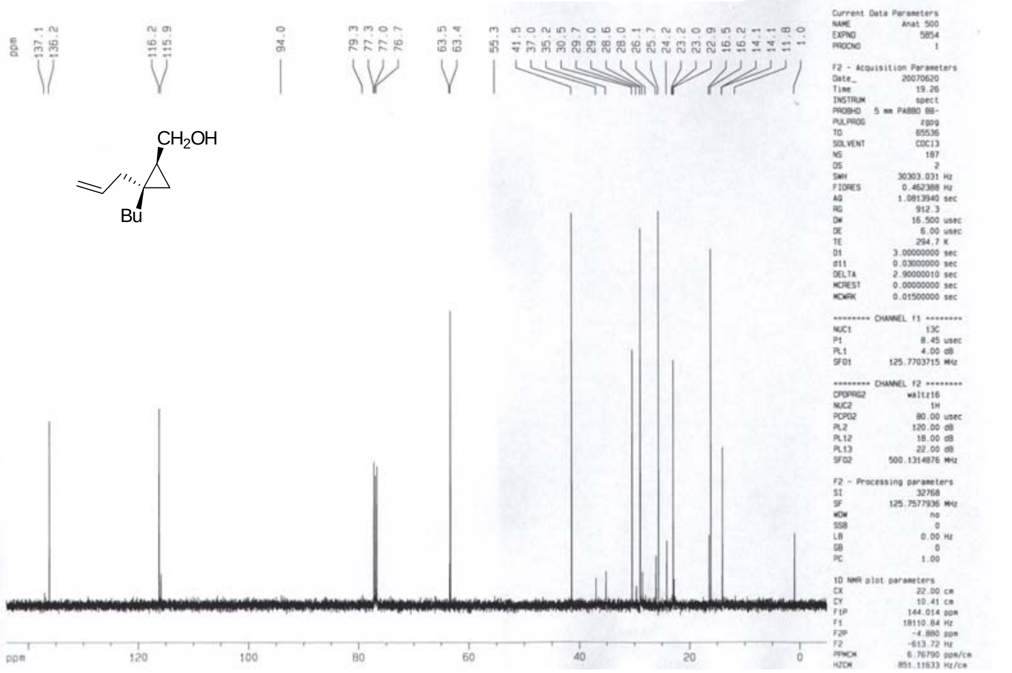
2-allyl-2-butyl-cyclopropanecarboxylic acid 15



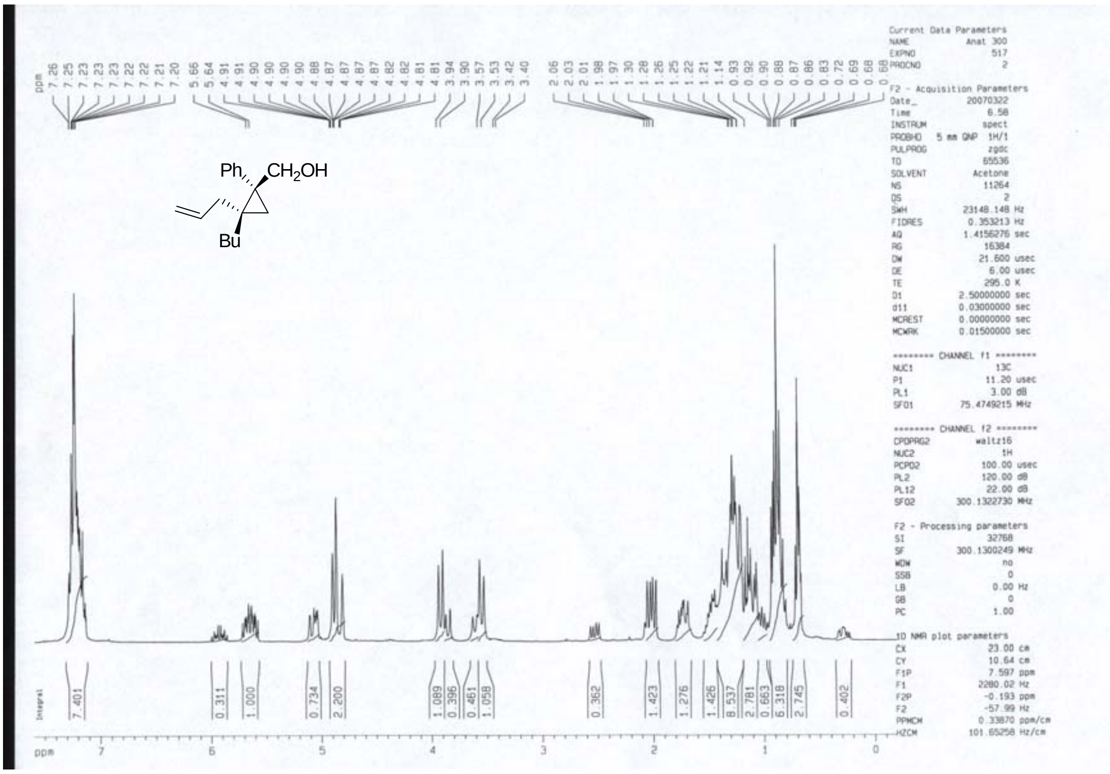
(2-allyl-2-butyl-cyclopropyl)-methanol 16



(2-allyl-2-butyl-cyclopropyl)-methanol 16



((1S,2R)-2-allyl-2-butyl-1-phenylcyclopropyl)methanol 17



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Current Data Parameters
NAME            Anat 300
EXPNO                517
PROCNO                 2

F2 - Acquisition Parameters
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Time                6.58
INSTRUM            spect
PROBHD   5 mm QNP  1H/1
PULPROG             zgdc
TD                 65536
SOLVENT          Acetone
NS                 11264
DS                     2
SWH          23148.148 Hz
FIDRES        0.353213 Hz
AQ           1.4156276 sec
RG                 16384
DW                21.600 usec
DE                  6.00 usec
TE                 295.0 K
D1          2.50000000 sec
d11         0.03000000 sec
MCREST      0.00000000 sec
MCWRK       0.01500000 sec

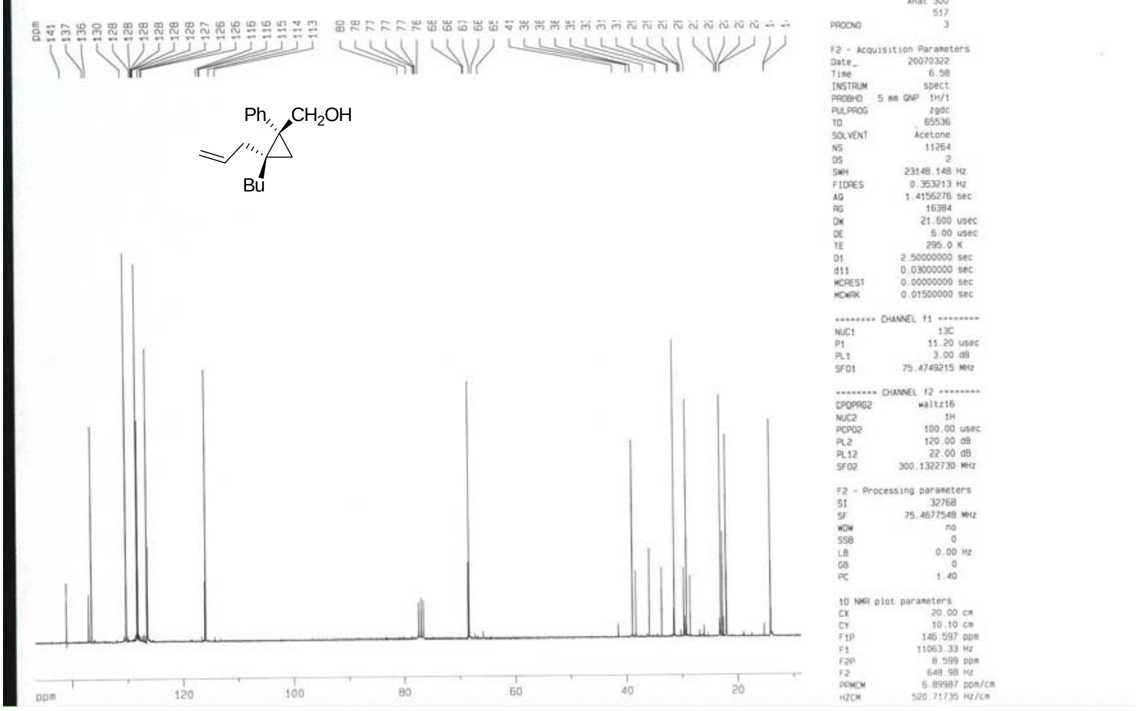
======== CHANNEL f1 ========
NUC1                 13C
P1                 11.20 usec
PL1                 3.00 dB
SFO1          75.4749215 MHz

======== CHANNEL f2 ========
CPDPRG2          waltz16
NUC2                  1H
PCPD2             100.00 usec
PL2               120.00 dB
PL12               22.00 dB
SFO2         300.1322730 MHz

F2 - Processing parameters
SI                 32768
SF           300.1300249 MHz
WDW                   no
SSB                    0
LB                  0.00 Hz
GB                     0
PC                  1.00

1D NMR plot parameters
CX                 23.00 cm
CY                 10.64 cm
F1P                7.597 ppm
F1               2280.02 Hz
F2P               -0.193 ppm
F2                -57.99 Hz
PPMCM            0.33870 ppm/cm
HZCM           101.65258 Hz/cm
```

((1S,2R)-2-allyl-2-butyl-1-phenylcyclopropyl)methanol 17



```
Parameters
                Anat 300
                     517
PROCNO                 3

F2 - Acquisition Parameters
Date_           20070322
Time                6.58
INSTRUM            spect
PROBHD   5 mm QNP  1H/1
PULPROG             zgdc
TD                 65536
SOLVENT          Acetone
NS                 11264
DS                     2
SWH          23148.148 Hz
FIDRES        0.353213 Hz
AQ           1.4156276 sec
RG                 16384
DW                21.600 usec
DE                  6.00 usec
TE                 295.0 K
D1          2.50000000 sec
d11         0.03000000 sec
MCREST      0.00000000 sec
MCWRK       0.01500000 sec

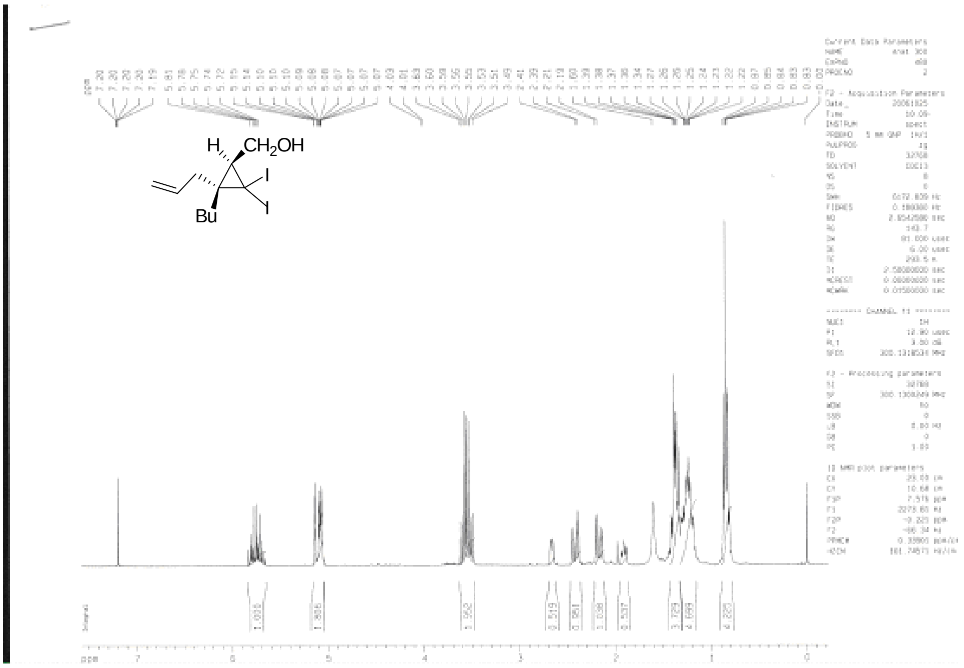
======== CHANNEL f1 ========
NUC1                 13C
P1                 11.20 usec
PL1                 3.00 dB
SFO1          75.4749215 MHz

======== CHANNEL f2 ========
CPDPRG2          waltz16
NUC2                  1H
PCPD2             100.00 usec
PL2               120.00 dB
PL12               22.00 dB
SFO2         300.1322730 MHz

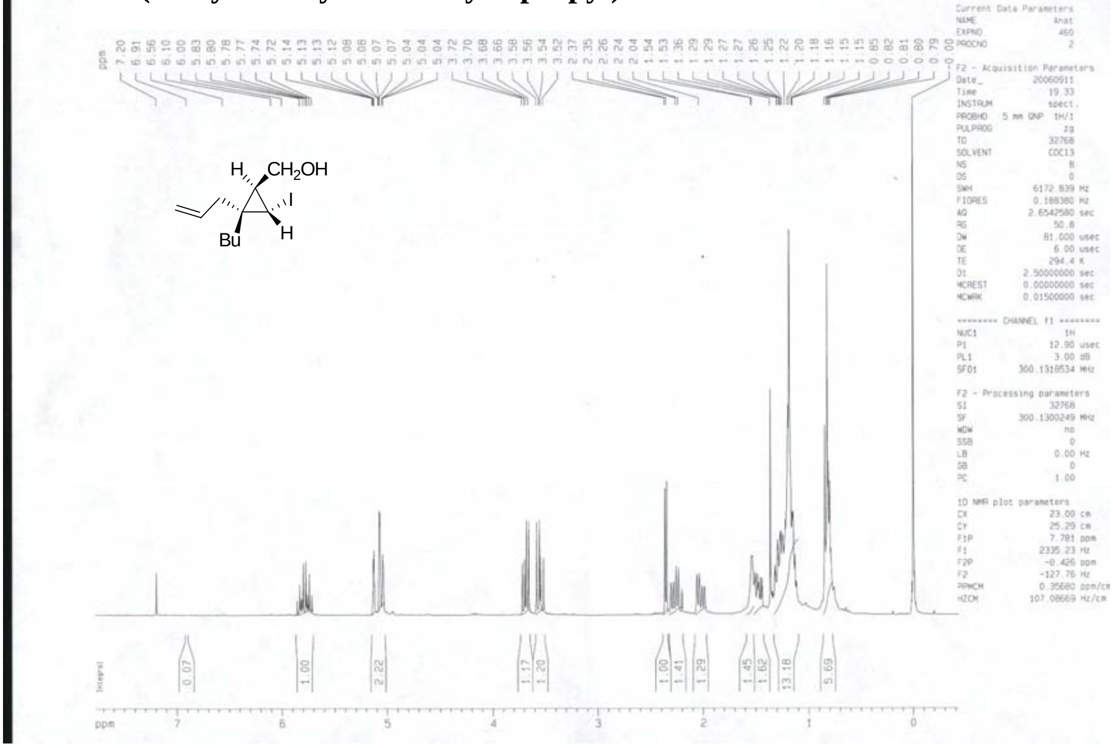
F2 - Processing parameters
SI                 32768
SF            75.4677548 MHz
WDW                   no
SSB                    0
LB                  0.00 Hz
GB                     0
PC                  1.40

1D NMR plot parameters
CX                 20.00 cm
CY                 10.10 cm
F1P              146.597 ppm
F1              11063.33 Hz
F2P                8.599 ppm
F2                648.98 Hz
PPMCM            6.89987 ppm/cm
HZCM           520.71735 Hz/cm
```

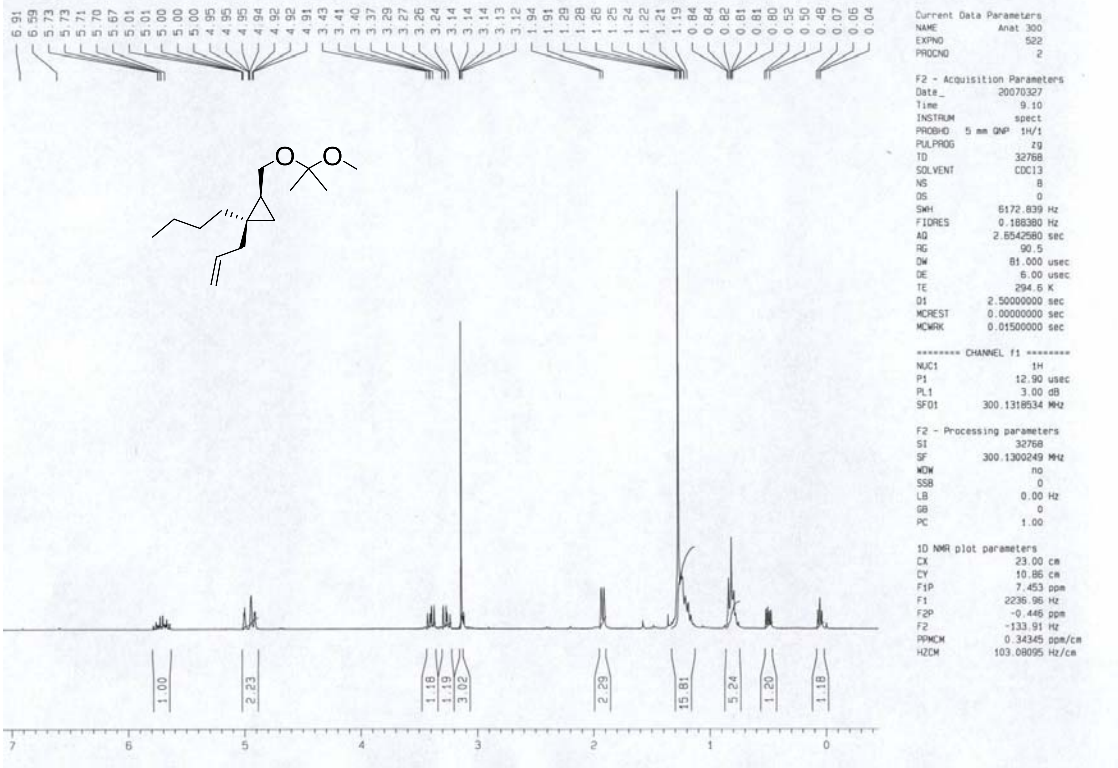
(2-allyl-2-butyl-3,3-diiodo-cyclopropyl)-methanol 18



(2-allyl-2-butyl-3-iodo-cyclopropyl)-methanol 20



(1R,2S)-1-allyl-1-butyl-2-((2-methoxypropan-2-yloxy)methyl)cyclopropane 21



```
Current Data Parameters
NAME             Anat 300
EXPNO                 522
PROCNO                  2

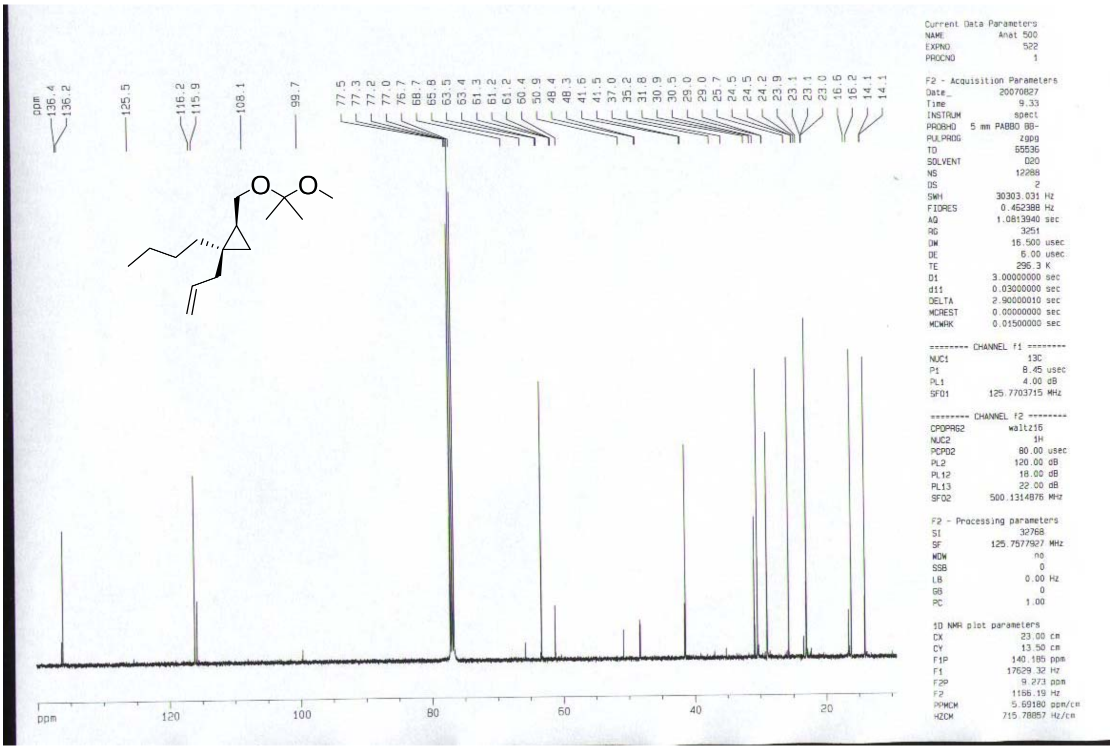
F2 - Acquisition Parameters
Date_            20070327
Time                 9.10
INSTRUM             spect
PROBHD    5 mm QNP  1H/1
PULPROG                zg
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      0
SWH              6172.839 Hz
FIDRES           0.188380 Hz
AQ              2.6542580 sec
RG                   90.5
DW                 81.000 usec
DE                   6.00 usec
TE                  294.6 K
D1             2.50000000 sec
MCREST         0.00000000 sec
MCWRK          0.01500000 sec

======== CHANNEL f1 ========
NUC1                   1H
P1                  12.90 usec
PL1                  3.00 dB
SFO1          300.1318534 MHz

F2 - Processing parameters
SI                  32768
SF            300.1300249 MHz
WDW                    no
SSB                     0
LB                   0.00 Hz
GB                      0
PC                   1.00

1D NMR plot parameters
CX                  23.00 cm
CY                  10.86 cm
F1P                 7.453 ppm
F1                2236.96 Hz
F2P                -0.446 ppm
F2                -133.91 Hz
PPMCM             0.34345 ppm/cm
HZCM            103.08095 Hz/cm
```

(1R,2S)-1-allyl-1-butyl-2-((2-methoxypropan-2-yloxy)methyl)cyclopropane 21



```
Current Data Parameters
NAME            Anat 500
EXPNO                522
PROCNO                 1

F2 - Acquisition Parameters
Date_           20070827
Time                9.33
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zgpg
TD                 65536
SOLVENT              D20
NS                 12288
DS                     2
SWH            30303.031 Hz
FIDRES          0.462388 Hz
AQ             1.0813940 sec
RG                  3251
DW                16.500 usec
DE                  6.00 usec
TE                 296.3 K
D1            3.00000000 sec
d11           0.03000000 sec
DELTA         2.90000010 sec
MCREST        0.00000000 sec
MCWRK         0.01500000 sec

======== CHANNEL f1 ========
NUC1                 13C
P1                  8.45 usec
PL1                 4.00 dB
SFO1         125.7703715 MHz

======== CHANNEL f2 ========
CPDPRG2          waltz16
NUC2                  1H
PCPD2              80.00 usec
PL2               120.00 dB
PL12               18.00 dB
PL13               22.00 dB
SFO2         500.1314876 MHz

F2 - Processing parameters
SI                 32768
SF           125.7577927 MHz
WDW                   no
SSB                    0
LB                  0.00 Hz
GB                     0
PC                  1.00

1D NMR plot parameters
CX                 23.00 cm
CY                 13.50 cm
F1P              140.185 ppm
F1              17629.32 Hz
F2P                9.273 ppm
F2               1166.19 Hz
PPMCM            5.69180 ppm/cm
HZCM           715.78857 Hz/cm
```