

# Syntheses of Hydroxamic Acid-Containing Bicyclic $\beta$ -Lactams via Palladium-Catalyzed Oxidative Amidation of Alkenes

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## Supporting Information

$^1\text{H}$  and  $^{13}\text{C}$  for **17a**: S2

$^1\text{H}$  and  $^{13}\text{C}$  for **17b**: S3

$^1\text{H}$  and  $^{13}\text{C}$  for **24**: S4

$^1\text{H}$  and  $^{13}\text{C}$  for **16**: S5

ROESY for **16**: S6

$^1\text{H}$  and  $^{13}\text{C}$  for **25**: S7

$^1\text{H}$  and  $^{13}\text{C}$  for **15**: S8

$^1\text{H}$  and  $^{13}\text{C}$  for **28**: S9

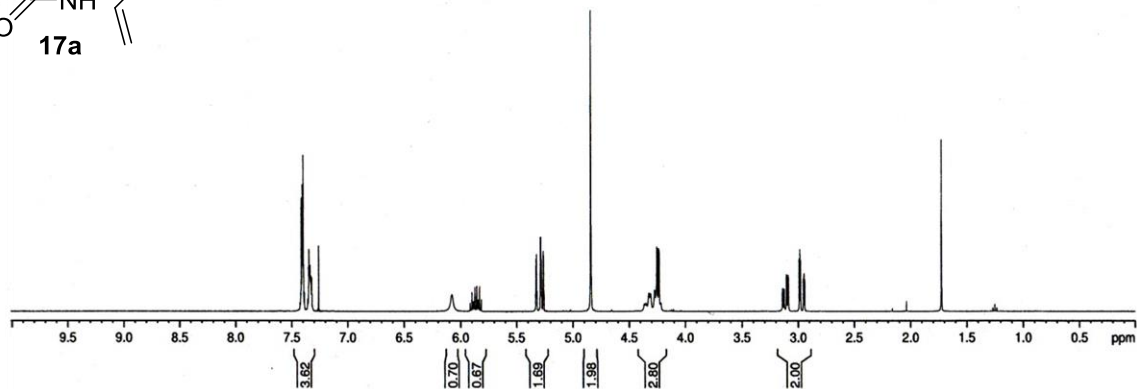
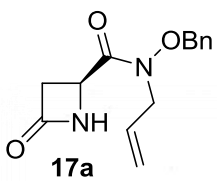
$^1\text{H}$  and  $^{13}\text{C}$  for **29**: S10

$^1\text{H}$  and  $^{13}\text{C}$  for **30**: S11

$^1\text{H}$  and  $^{13}\text{C}$  for **31**: S12

ROESY for **31**: S13

$^1\text{H}$  and  $^{13}\text{C}$  for **32**: S14

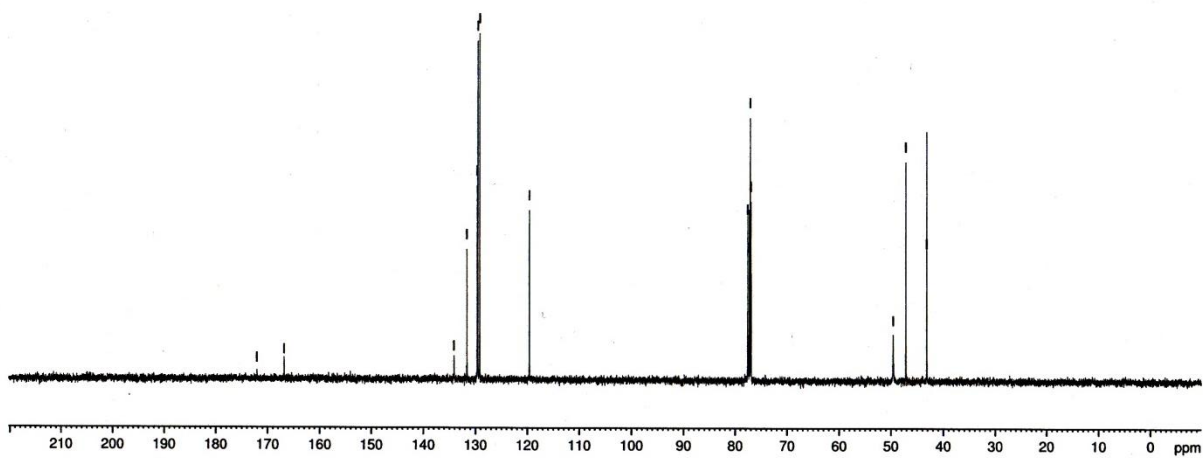


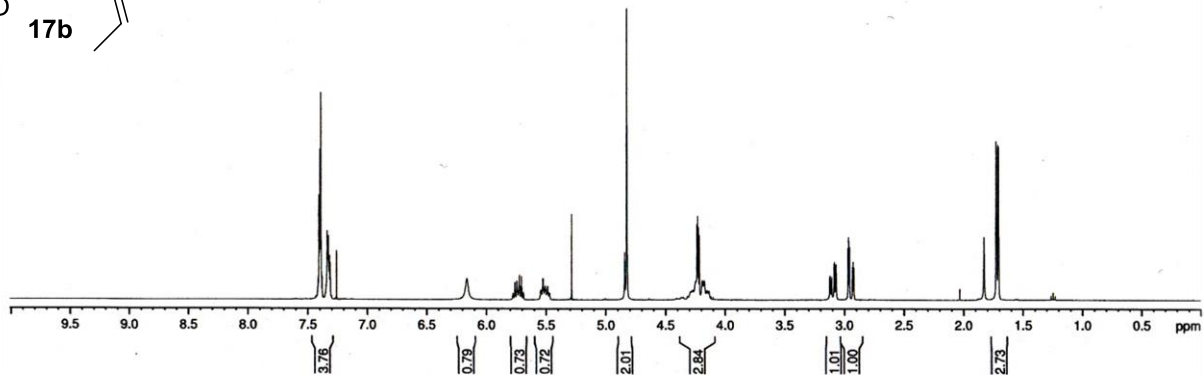
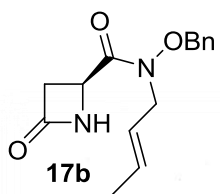
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166.833

134.092  
131.622  
129.639  
129.543  
129.178  
119.594

77.576  
77.258  
77.087  
76.940

49.559  
47.128  
43.144





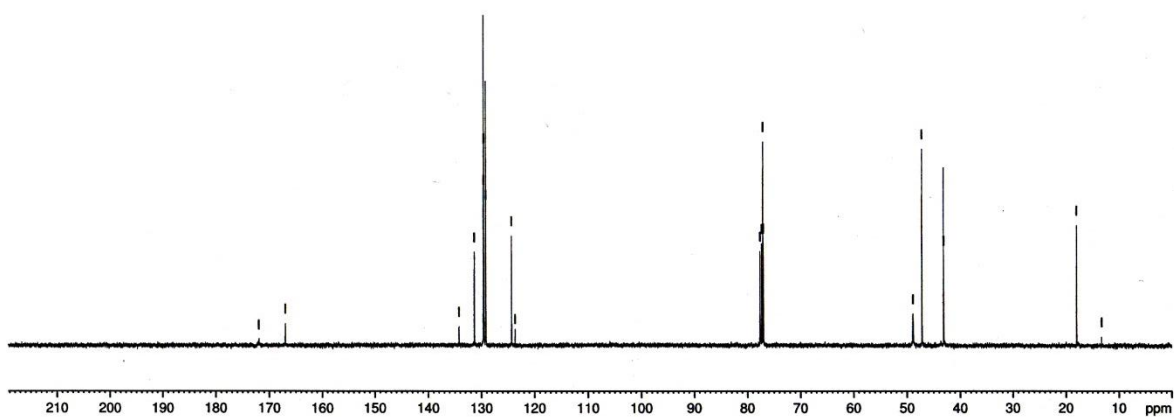
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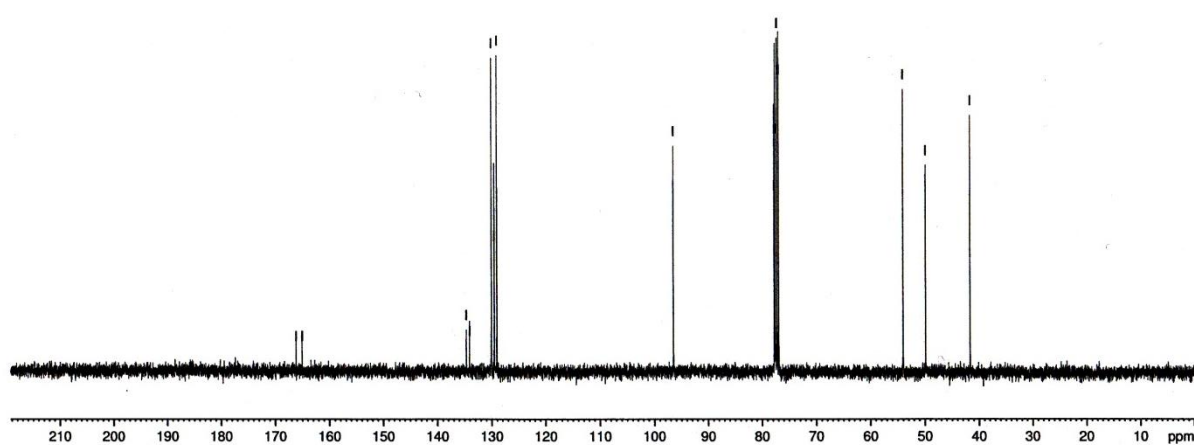
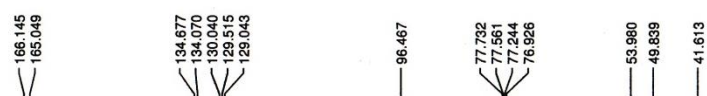
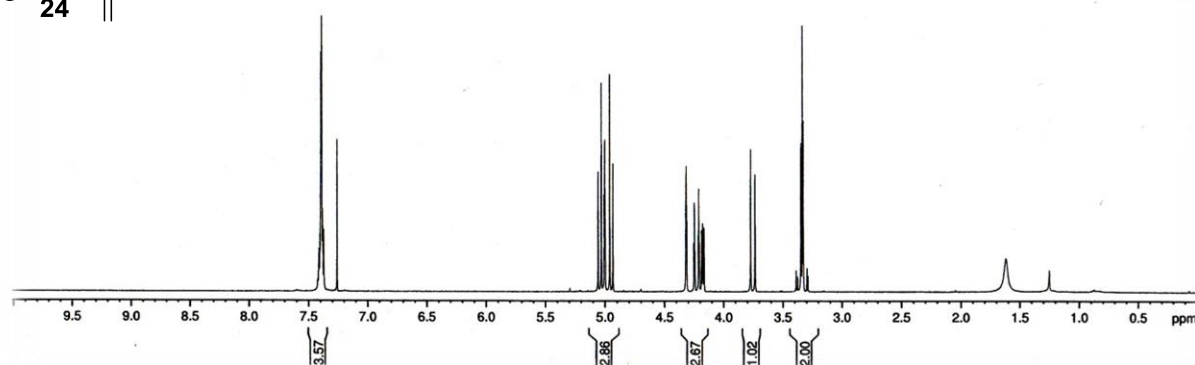
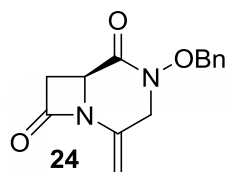
134.203  
131.291  
129.575  
129.536  
129.148  
124.311  
123.628

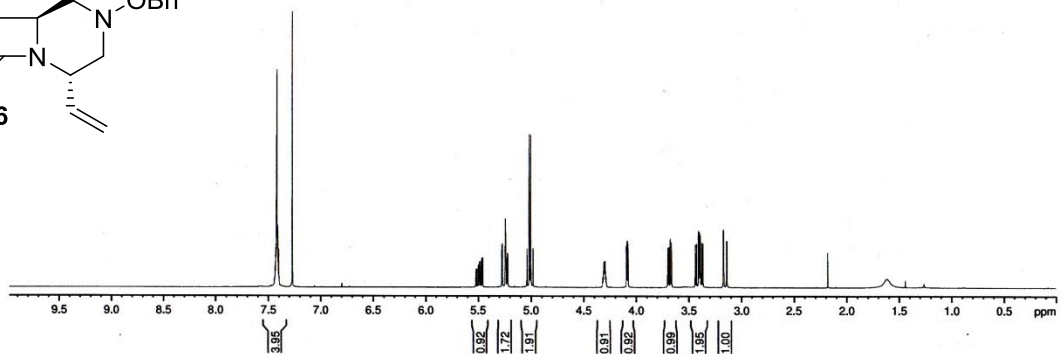
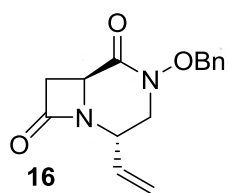
77.597  
77.278  
77.015  
76.962

48.946  
47.185  
43.108

17.985  
13.279





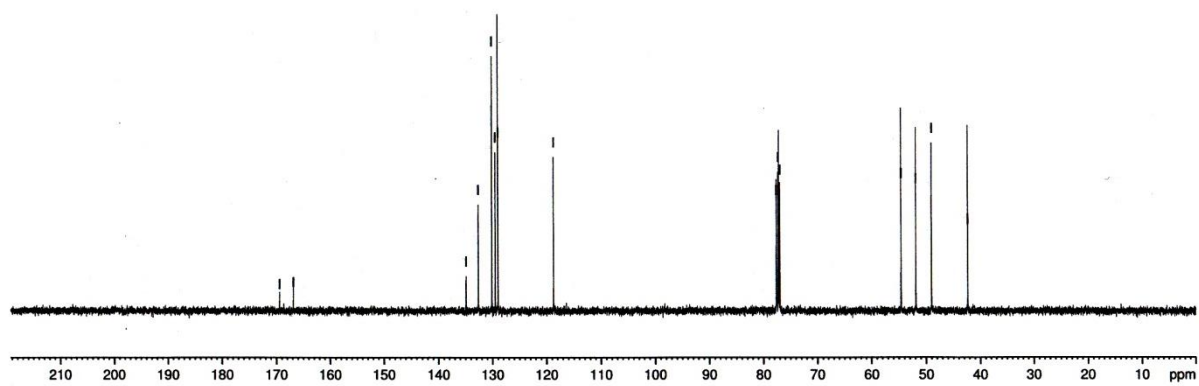


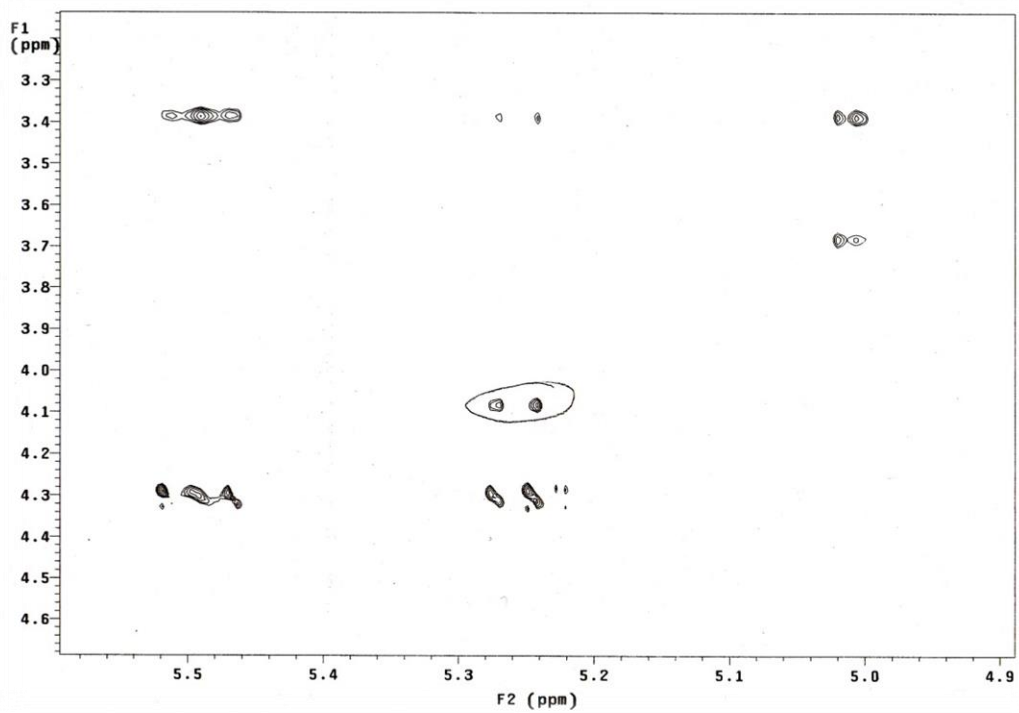
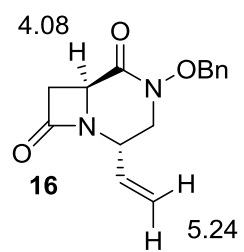
169.387  
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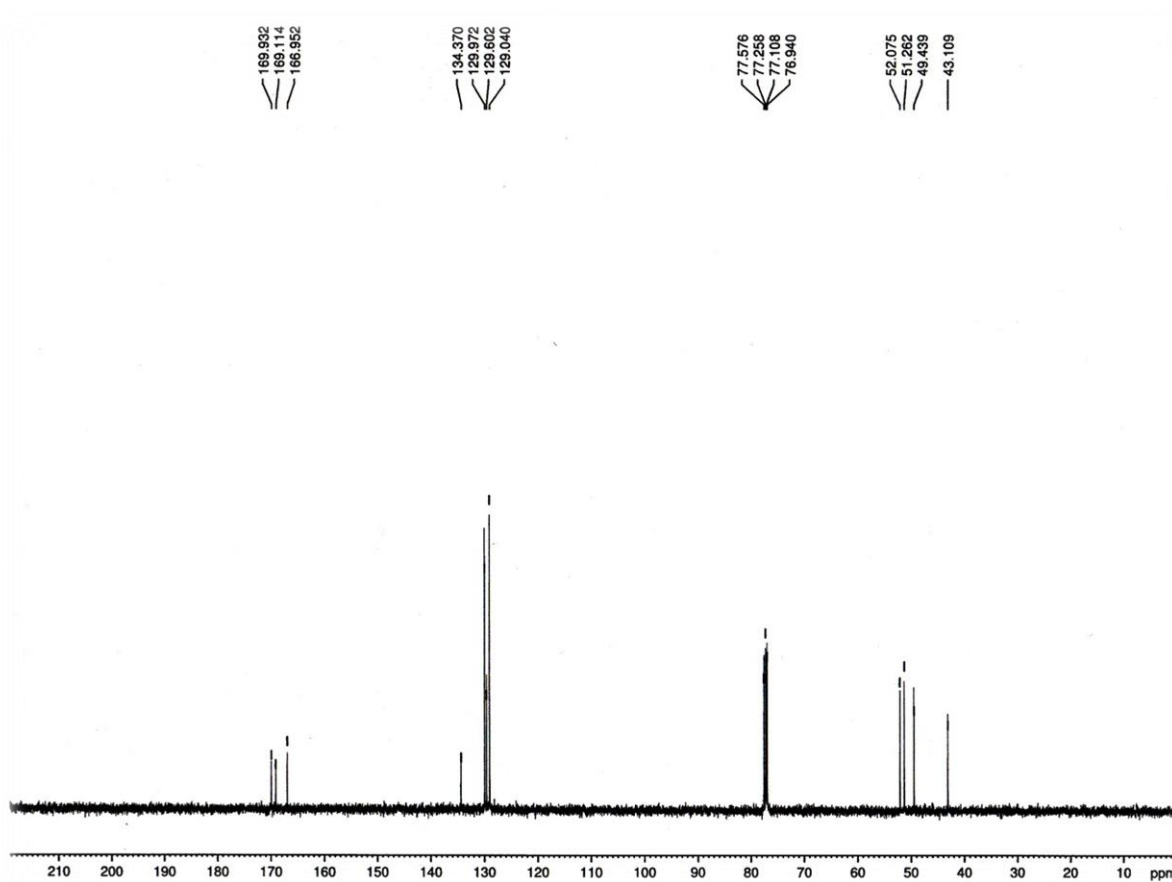
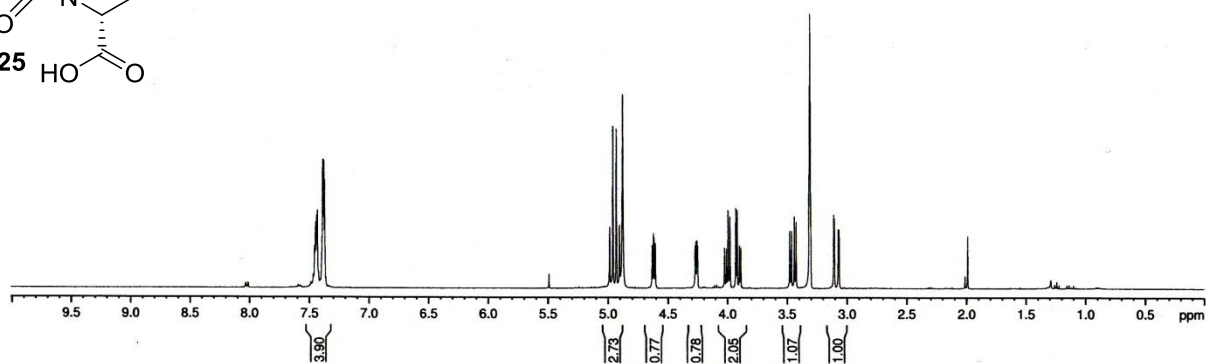
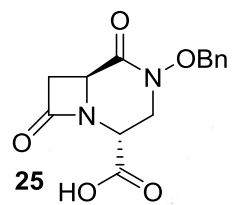
134.885  
132.804  
130.104  
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128.983  
118.719

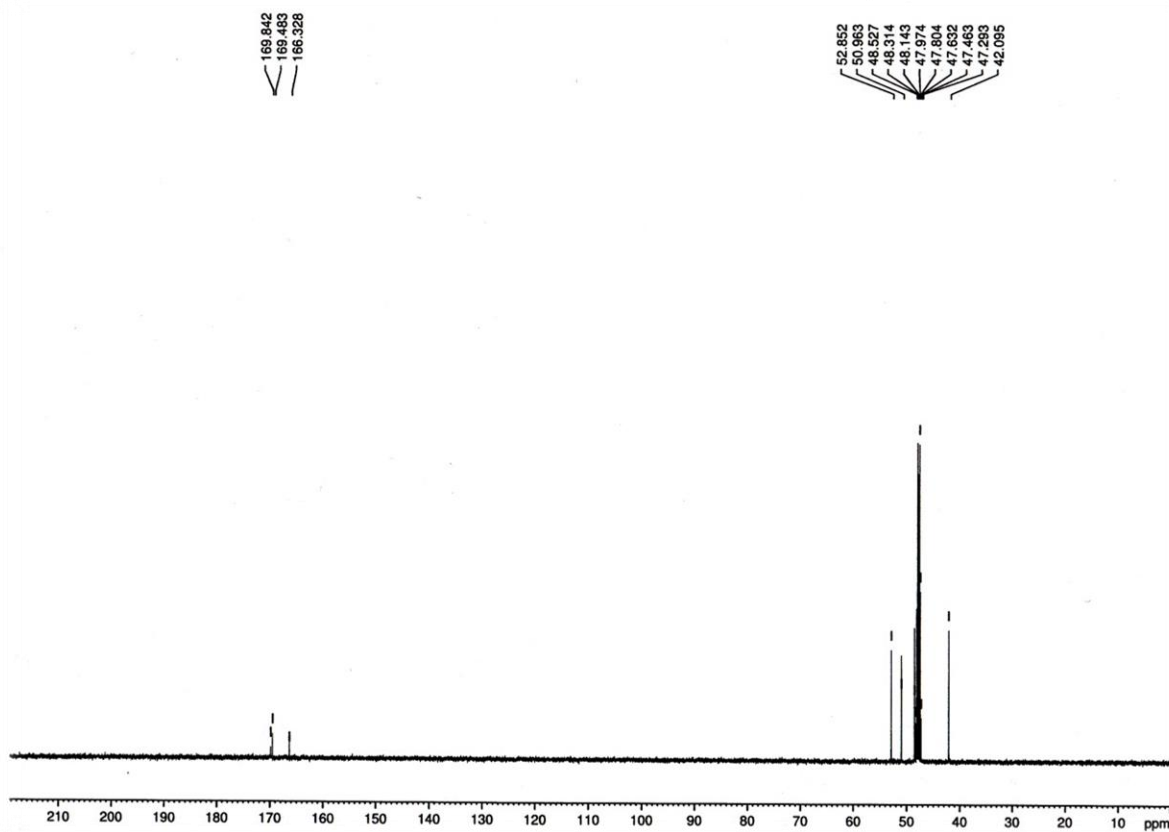
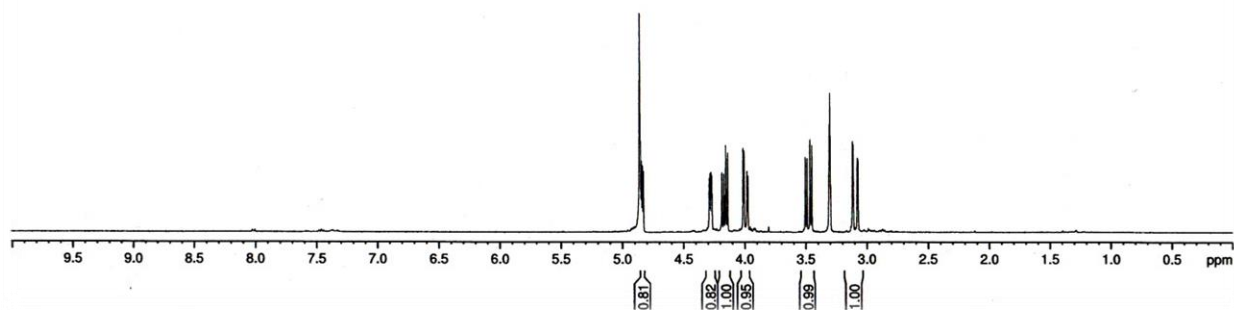
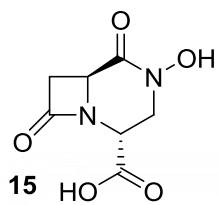
77.583  
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77.141  
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54.564  
51.857  
48.989  
42.299

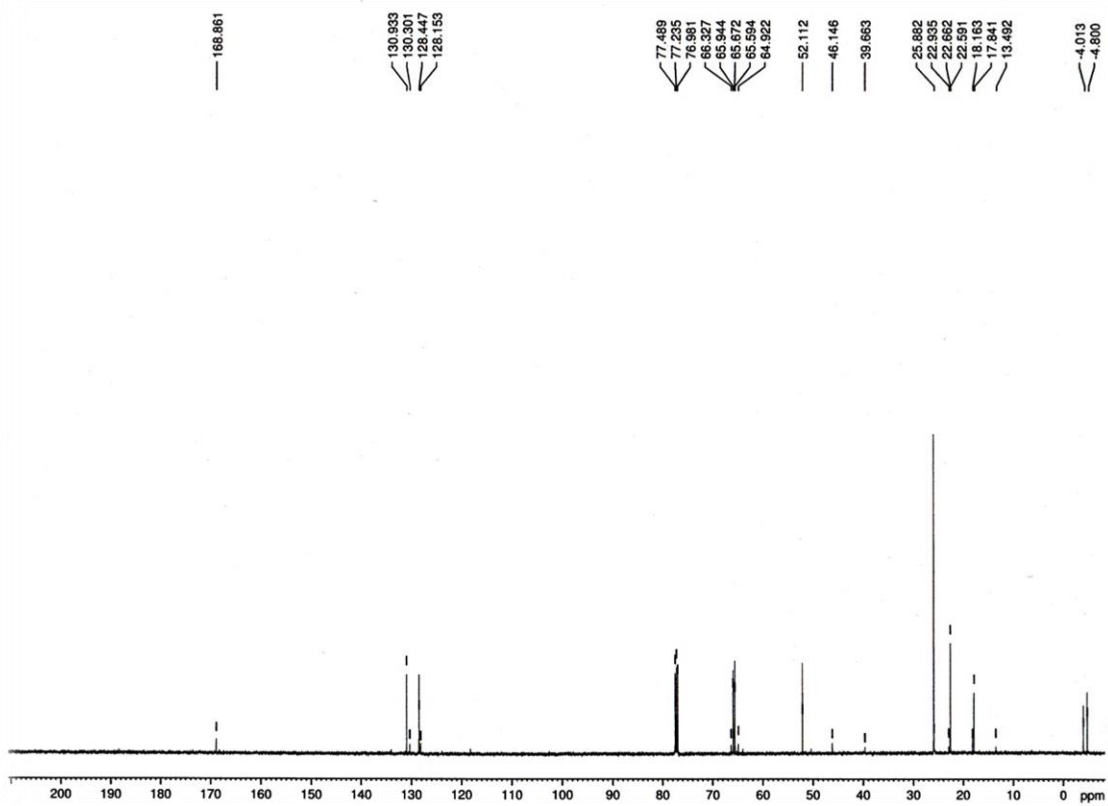
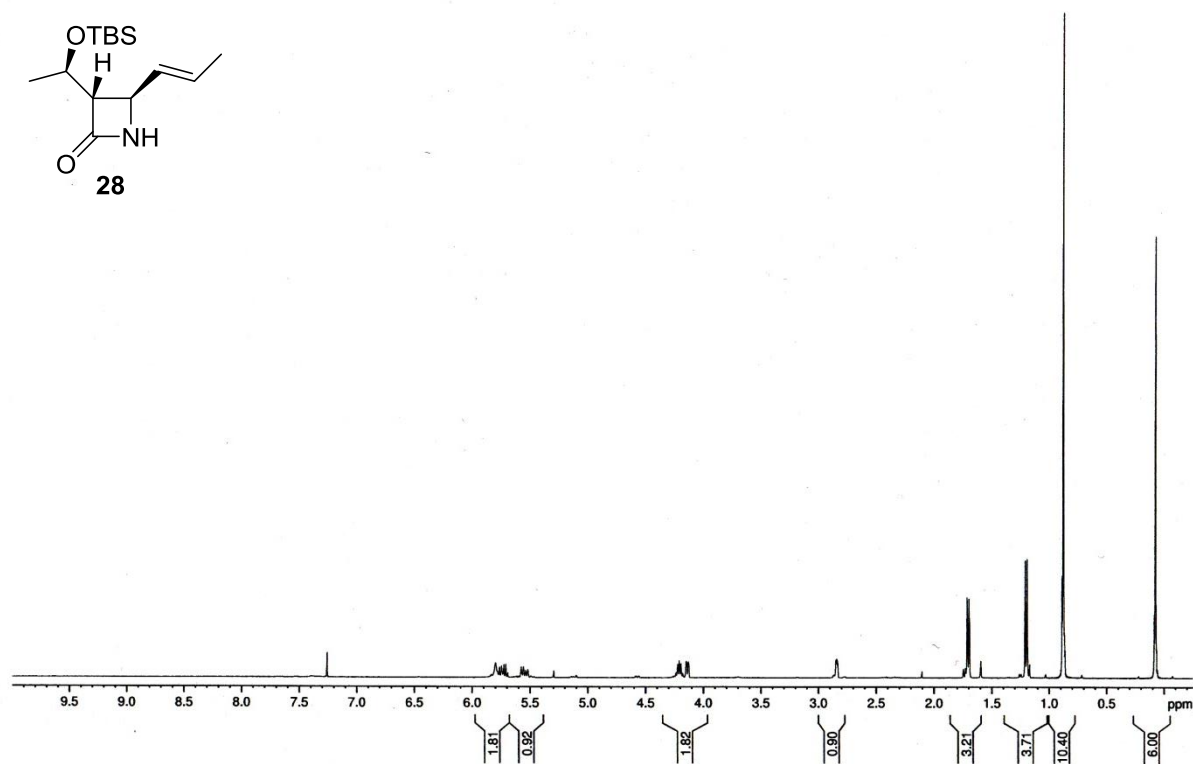
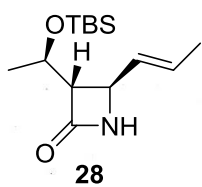


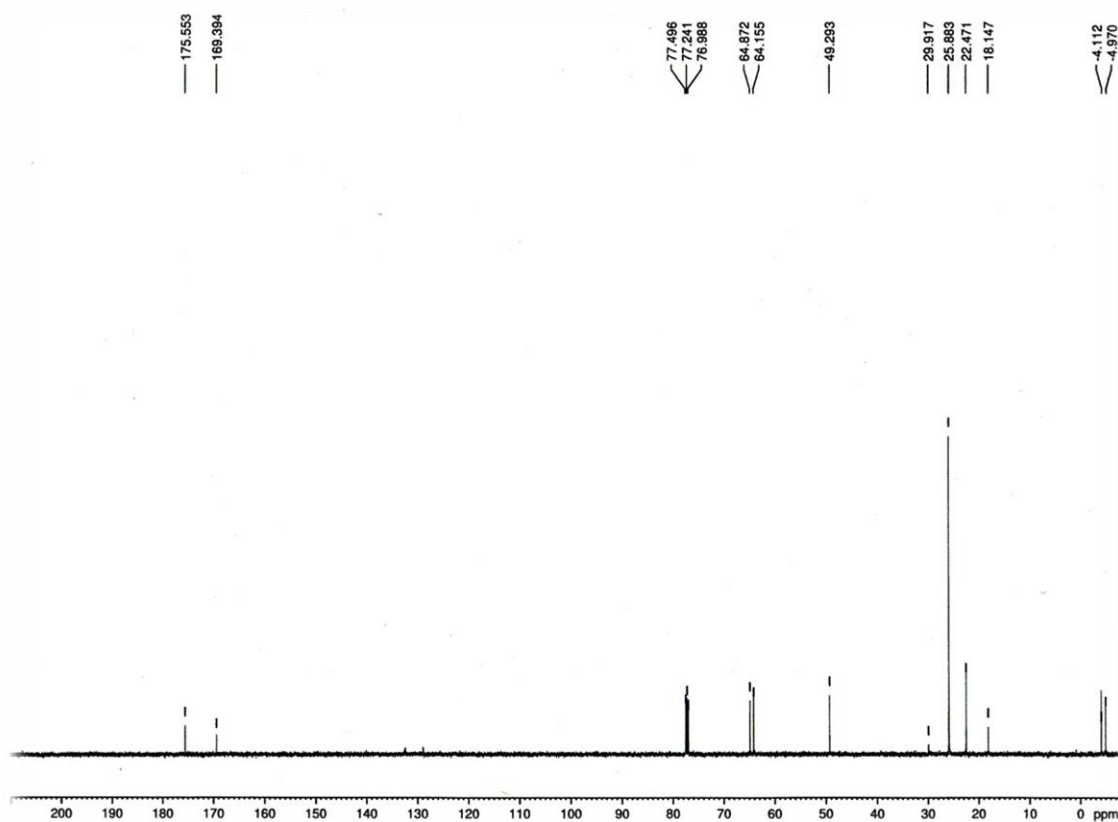
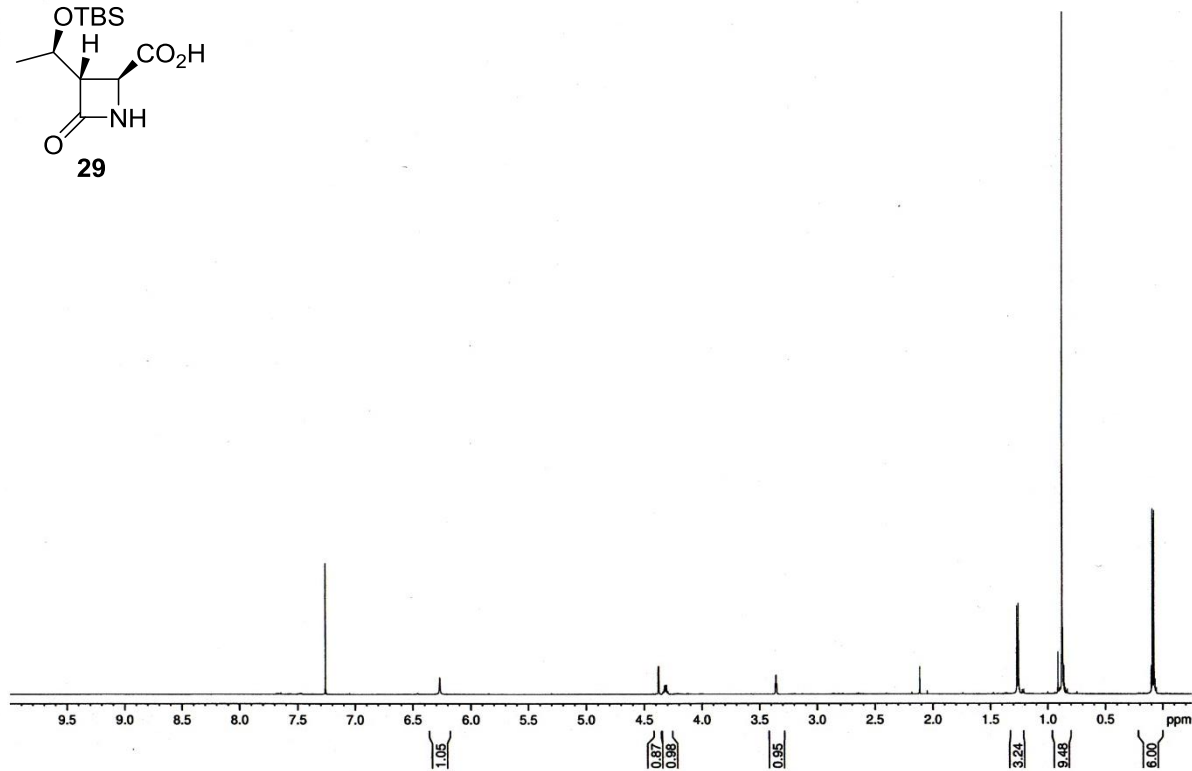
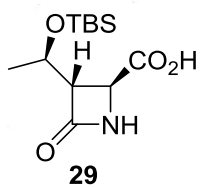


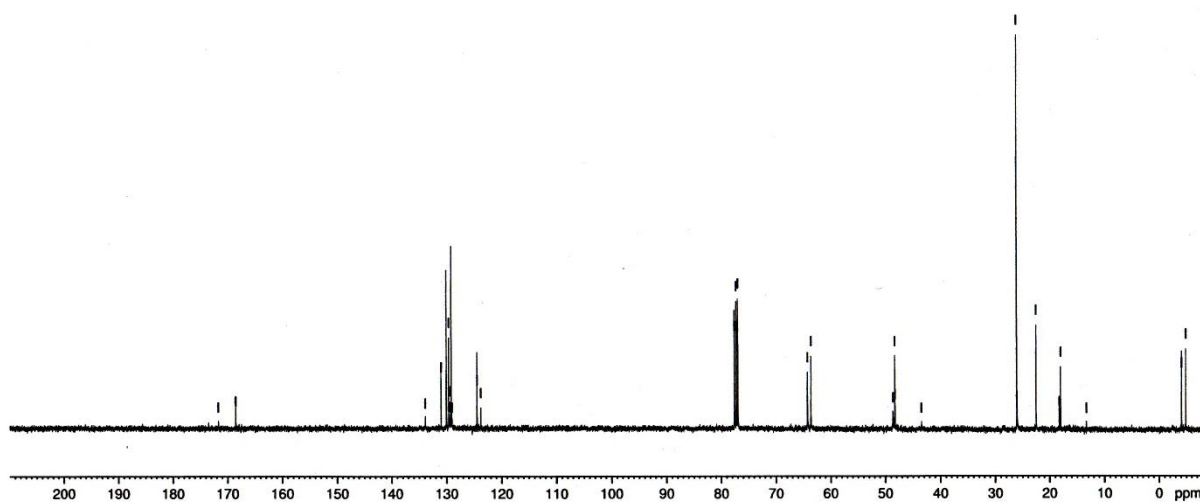
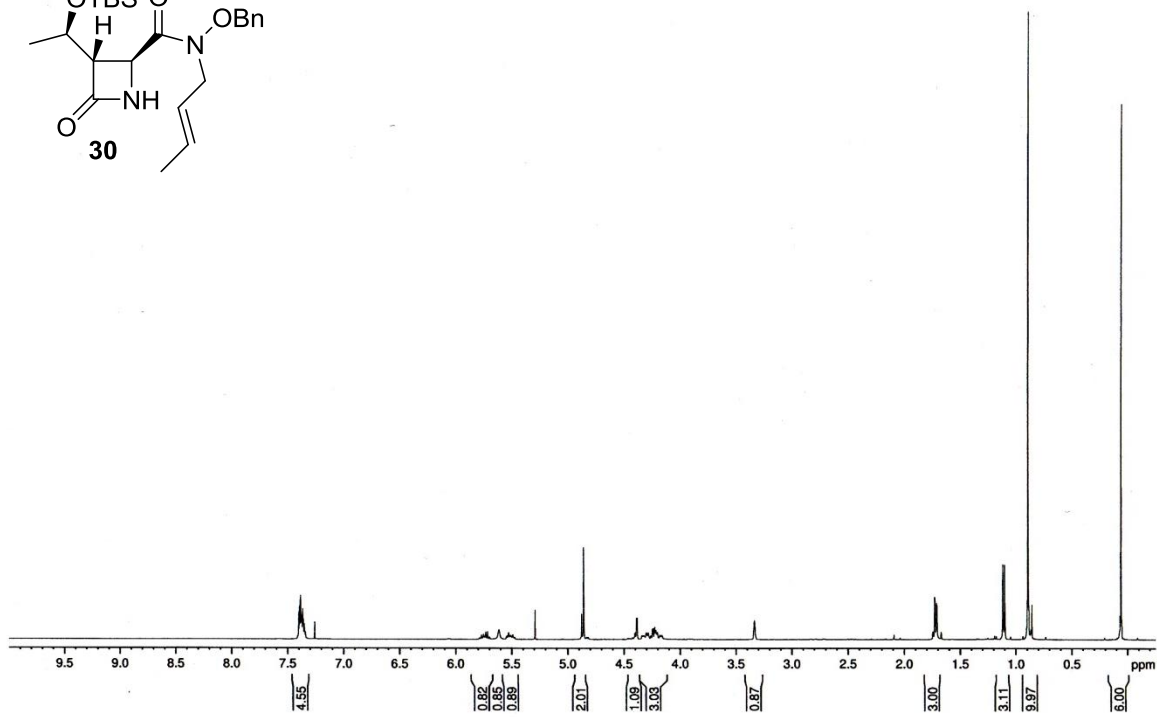
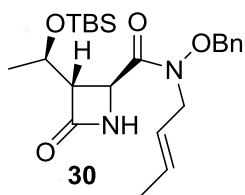


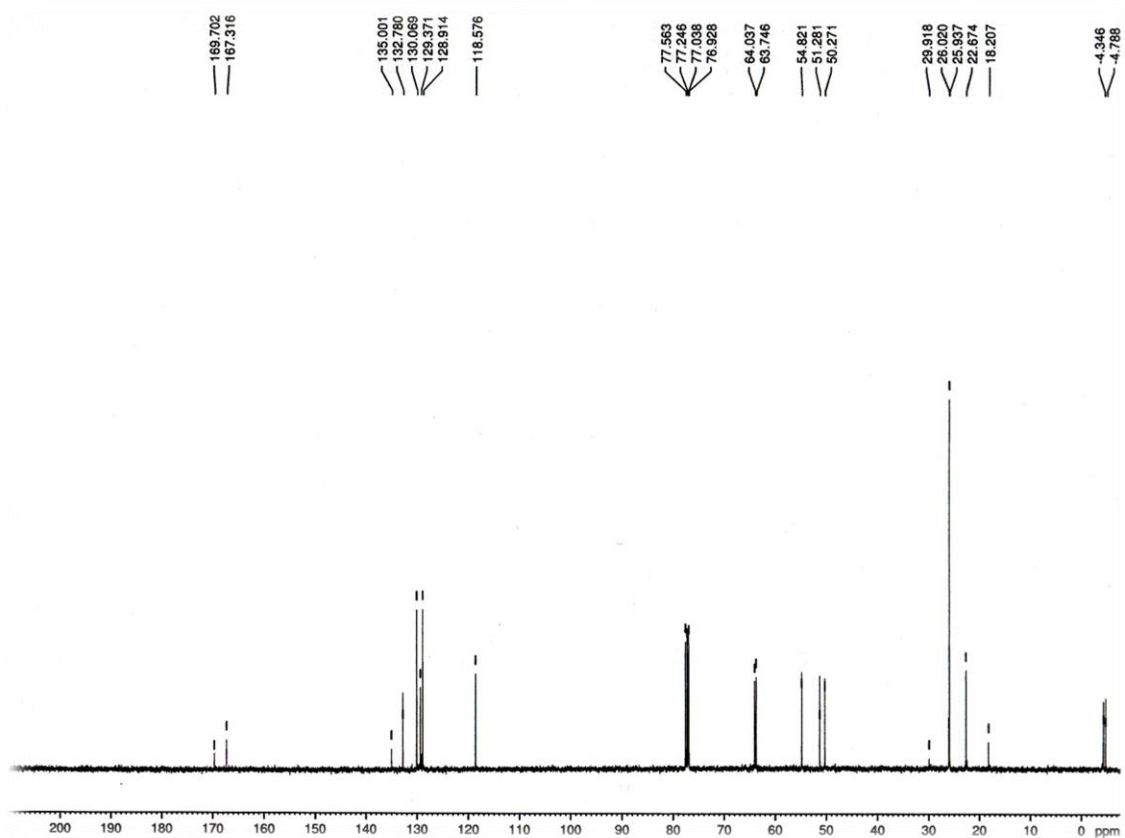
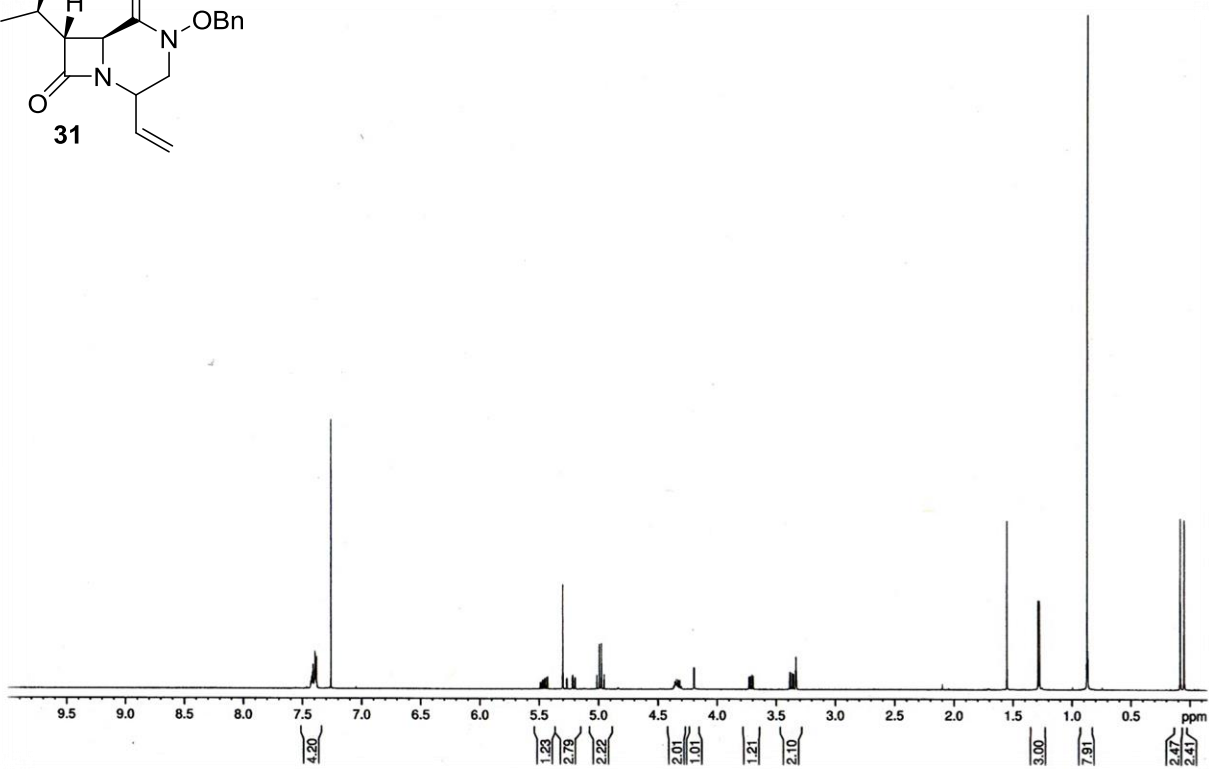
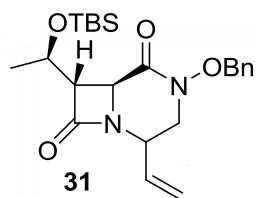


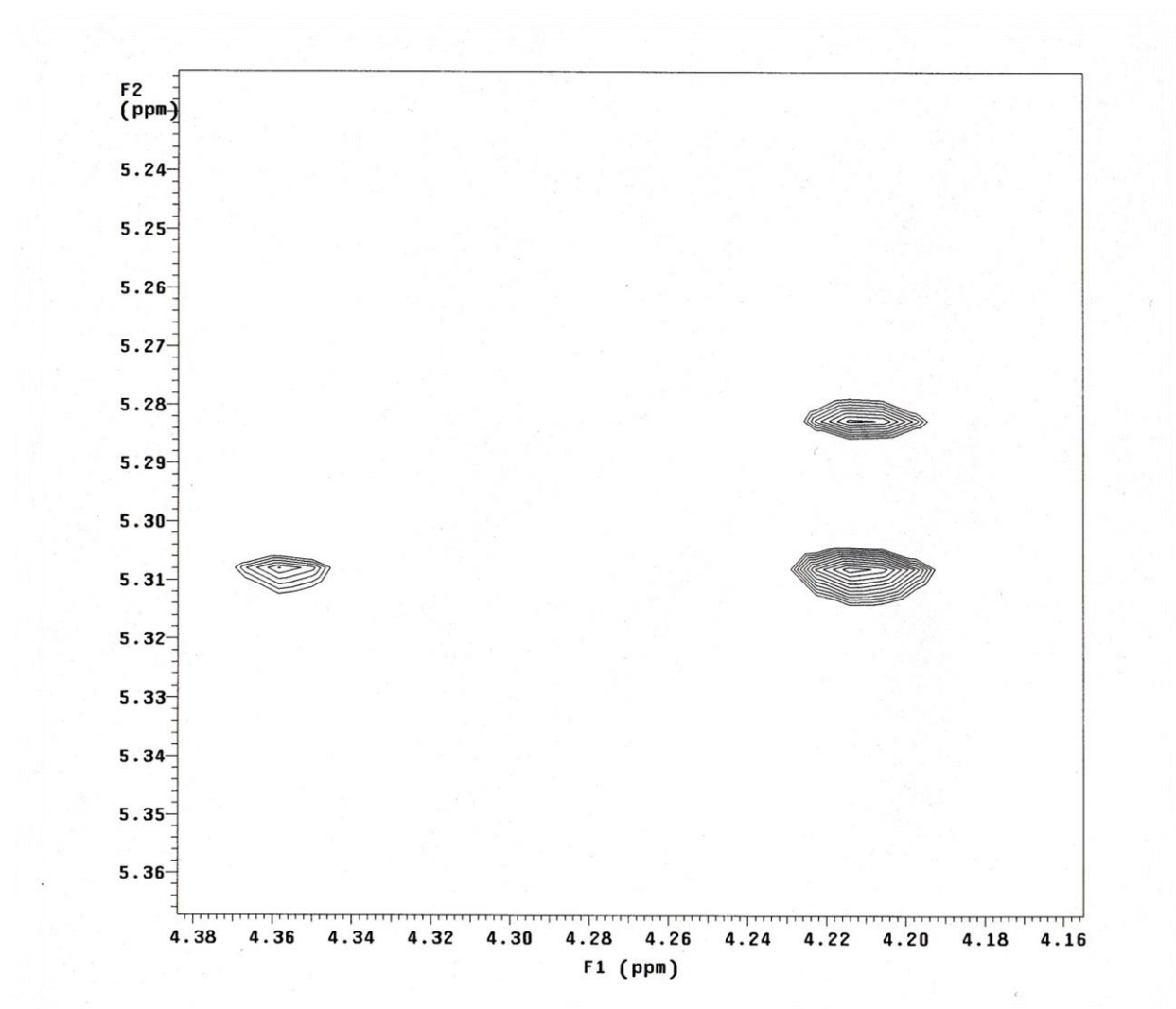
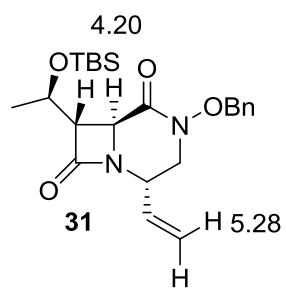


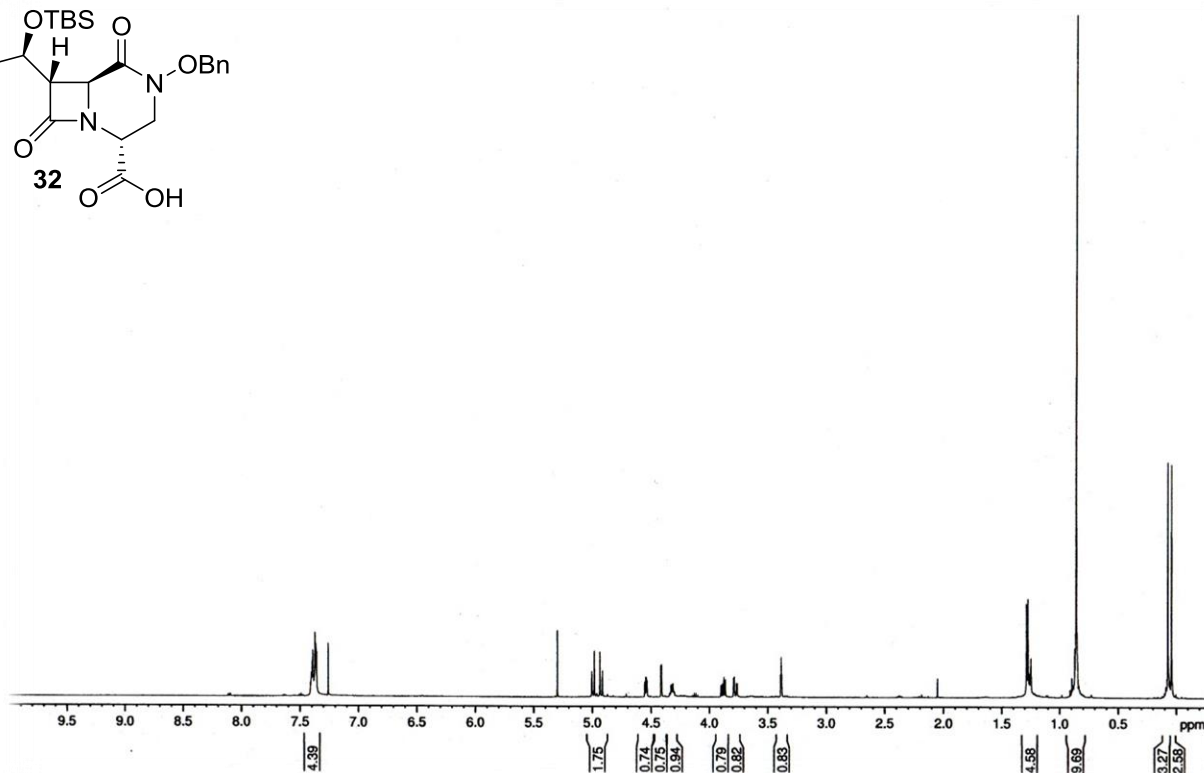
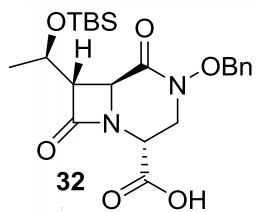












171.342  
169.383  
167.123

134.567  
130.484  
129.773  
128.472  
126.960

77.506  
77.251  
77.060  
76.997  
65.026  
63.683

52.469  
50.898  
50.501

29.933  
25.889  
25.820  
22.624  
18.125

-4.233  
-4.981

