

## Supplementary Information 2

### Doubleisomerization / cycloisomerization / aromatization of 1-(allyloxy)-2-(cyclopropylmethyl)benzenes to give 2-ethyl-3-isopropylbenzofurans using multitasking single rhodium catalyst.

Yuta Sato<sup>a</sup>, Tsuyoshi Matsuzaki<sup>b</sup>, Tsunayoshi Takehara<sup>b</sup>, Makoto Sako<sup>a</sup>, Takeyuki Suzuki<sup>b</sup>, Mitsuhiro Arisawa<sup>\*,a</sup>.

<sup>a</sup> Graduate School of Pharmaceutical Sciences, Osaka University, Yamada-oka 1-6, Suita, Osaka 565-0871, Japan

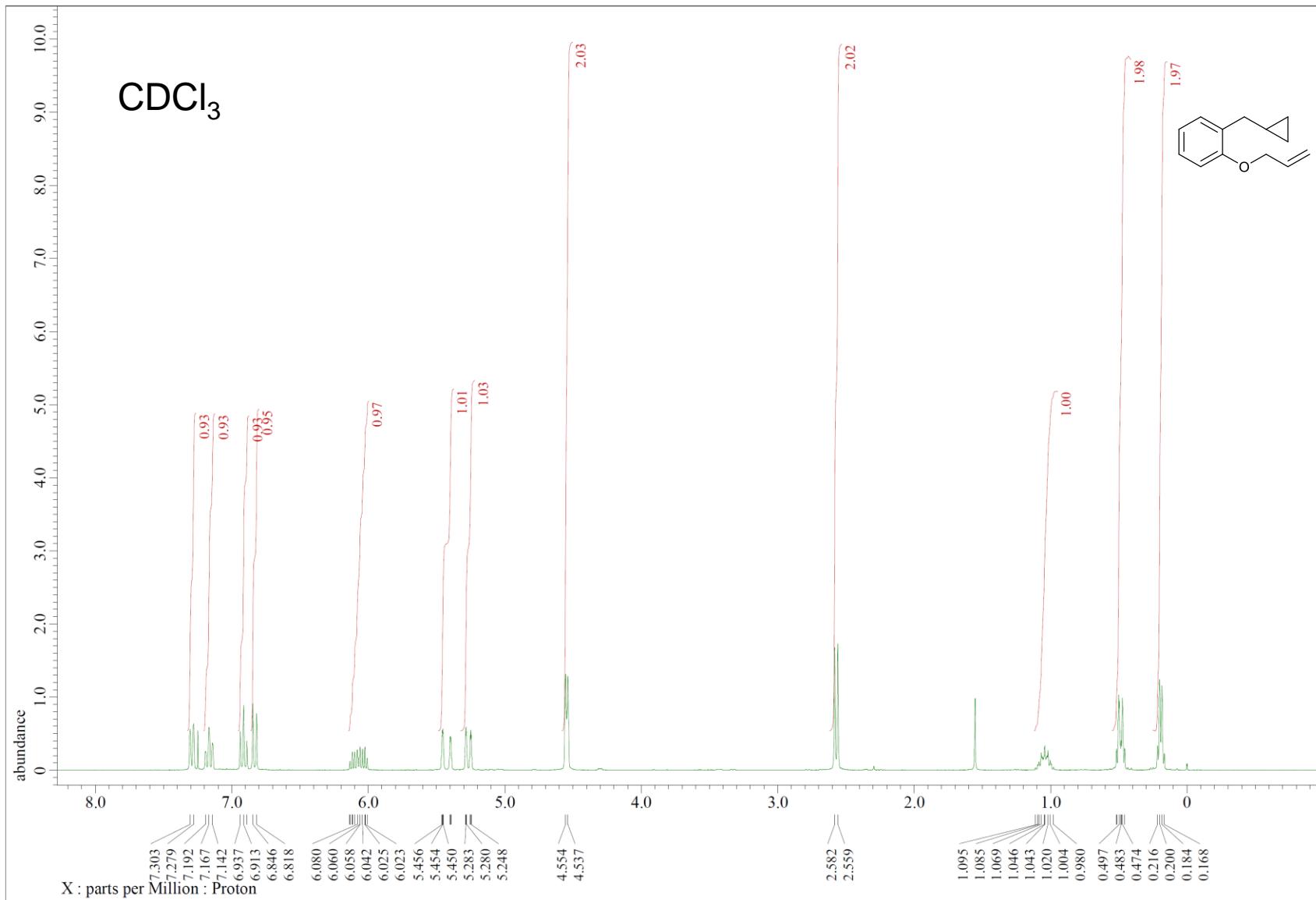
<sup>b</sup> Comprehensive Analysis Center, SANKEN, Osaka University, Mihogaoka 8-1, Ibaraki, Osaka 567-0047, Japan

#### Contents

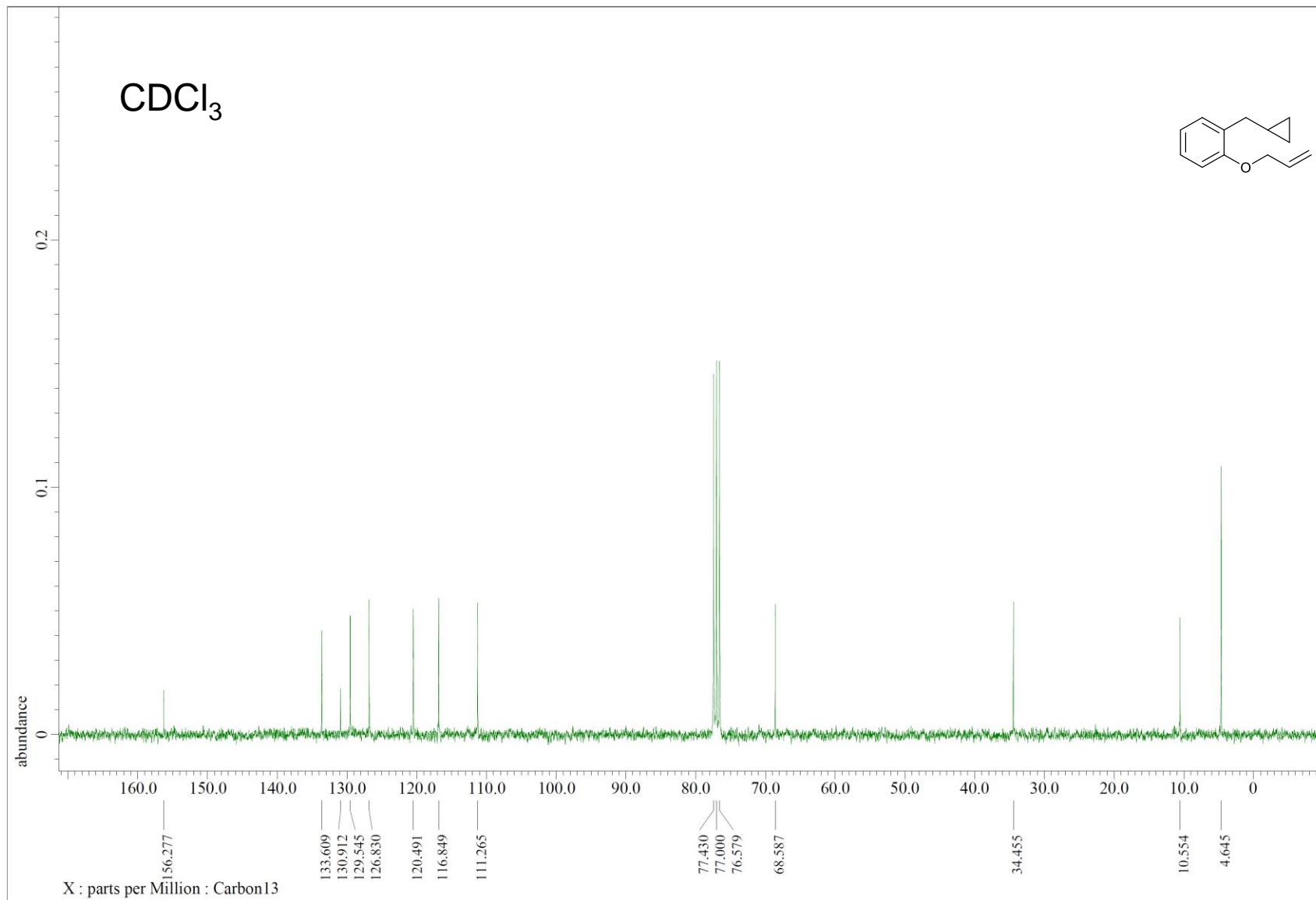
#### NMR spectra

S2– 2-110

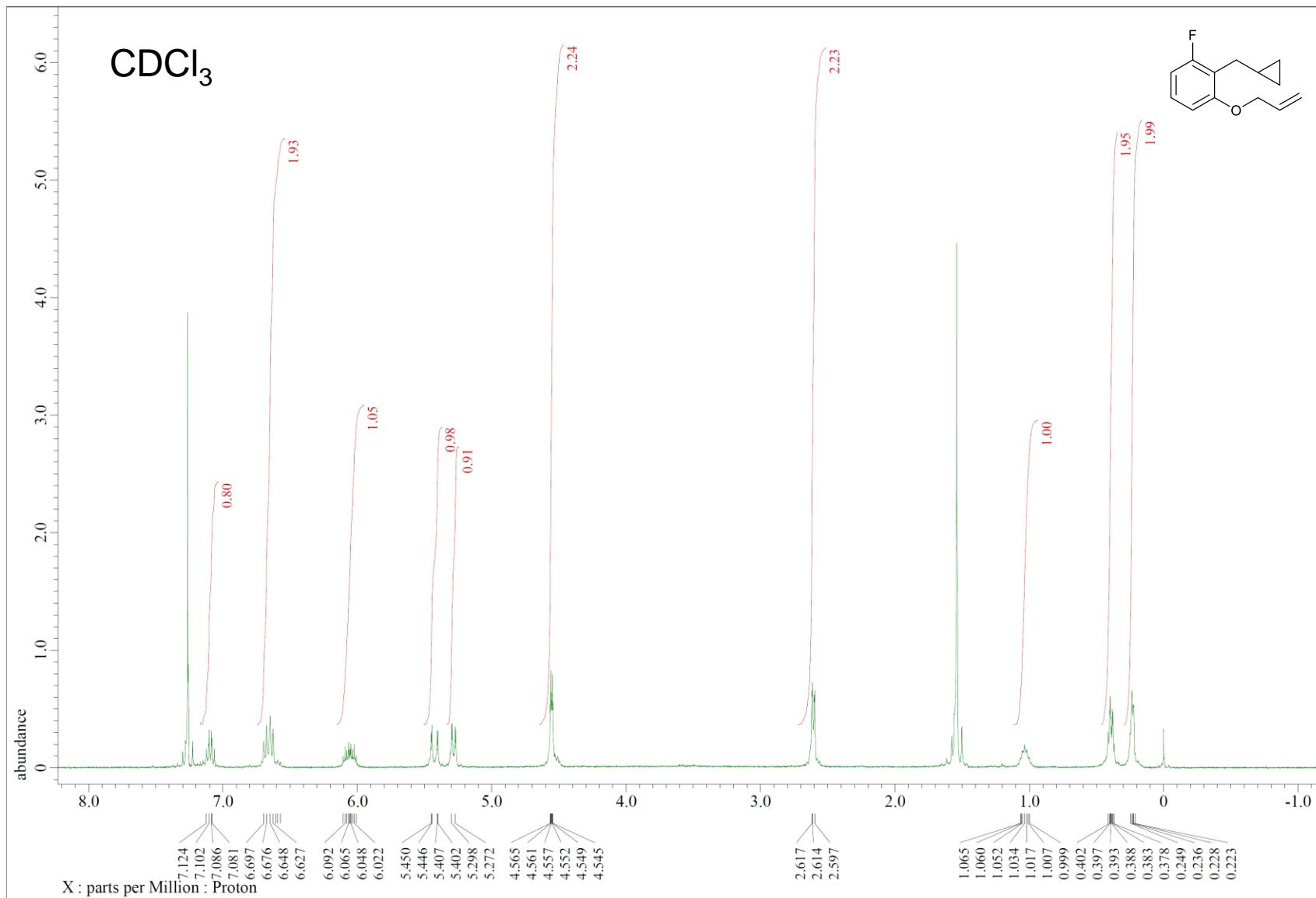
1a'



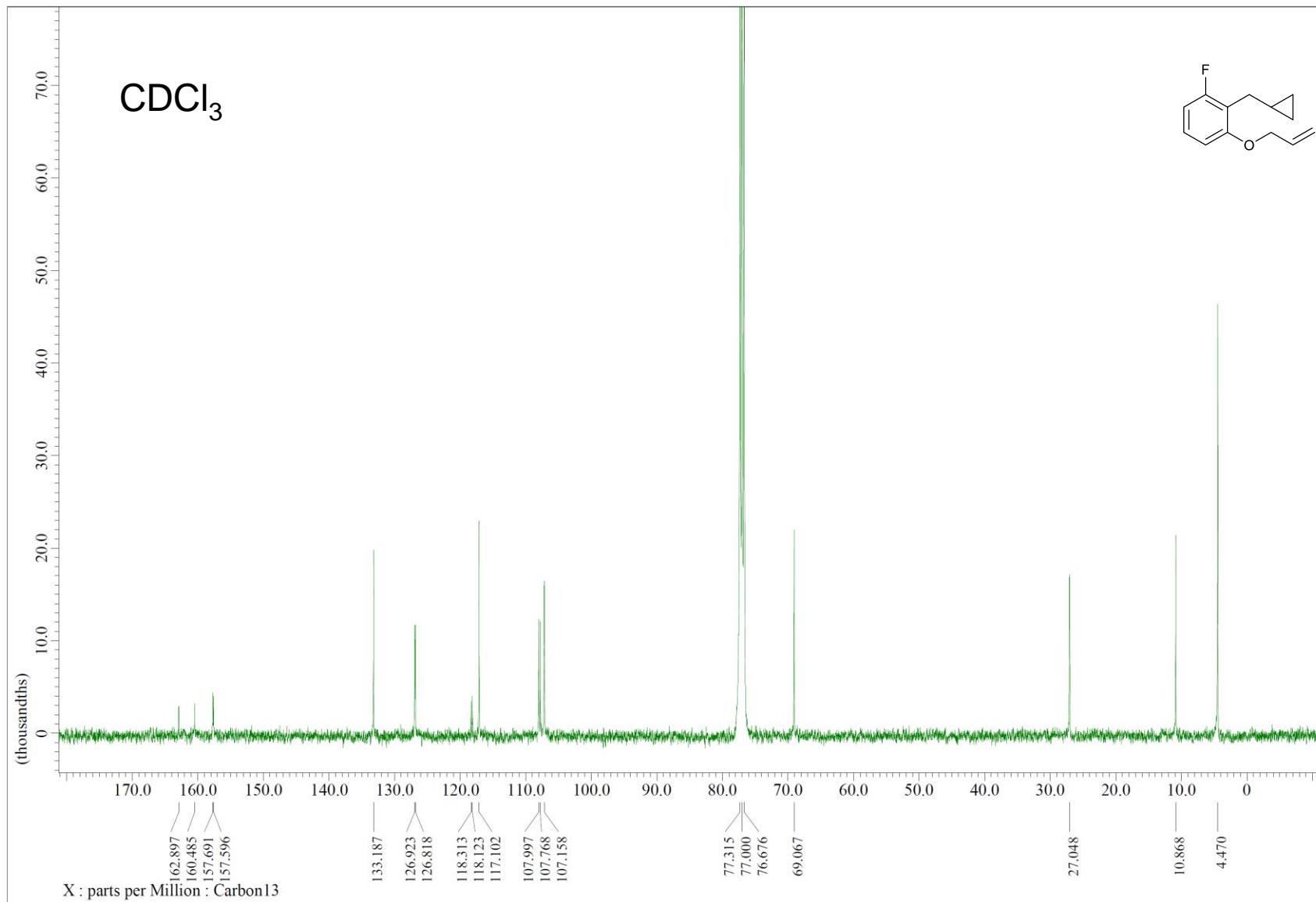
1a'



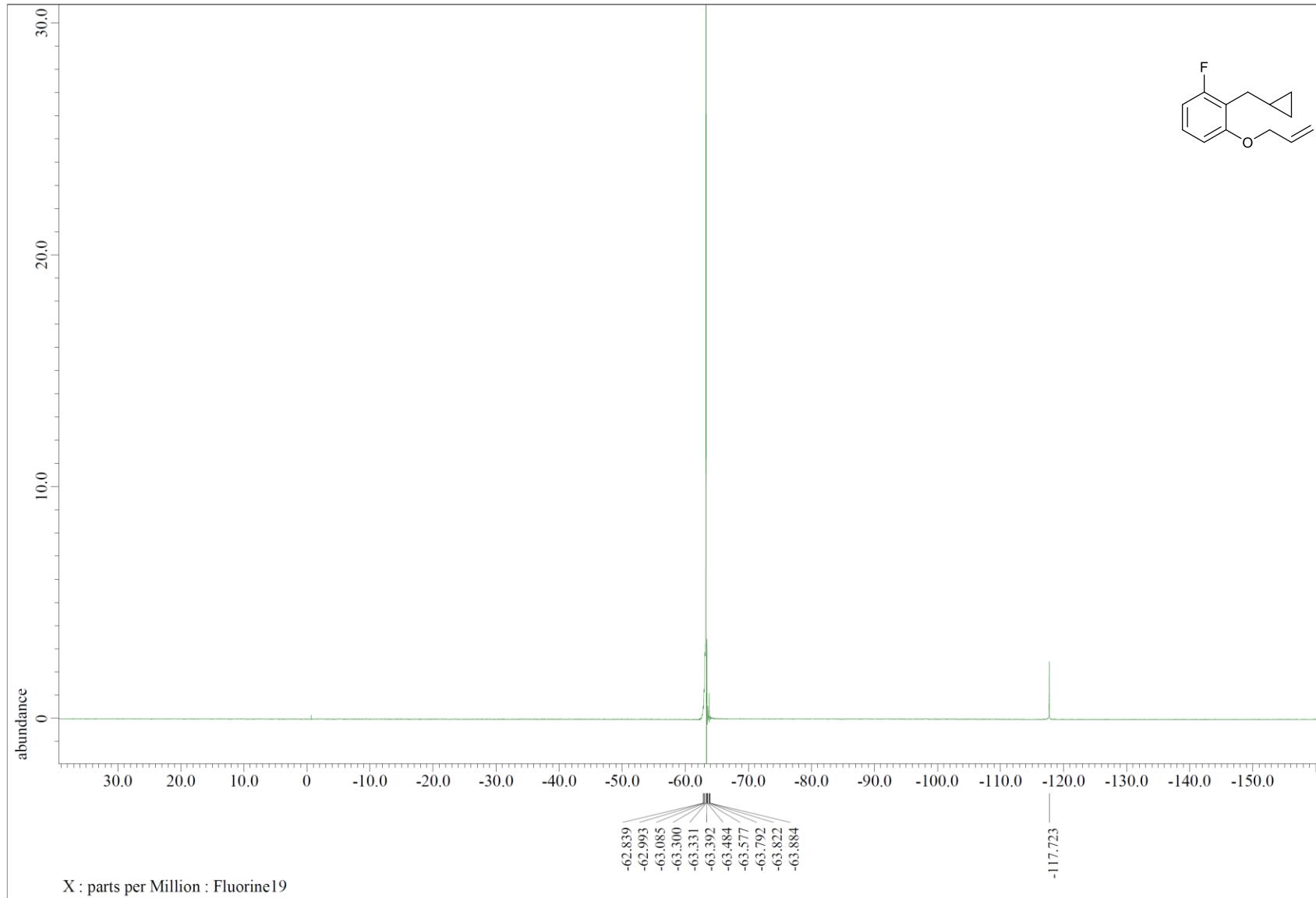
1b'



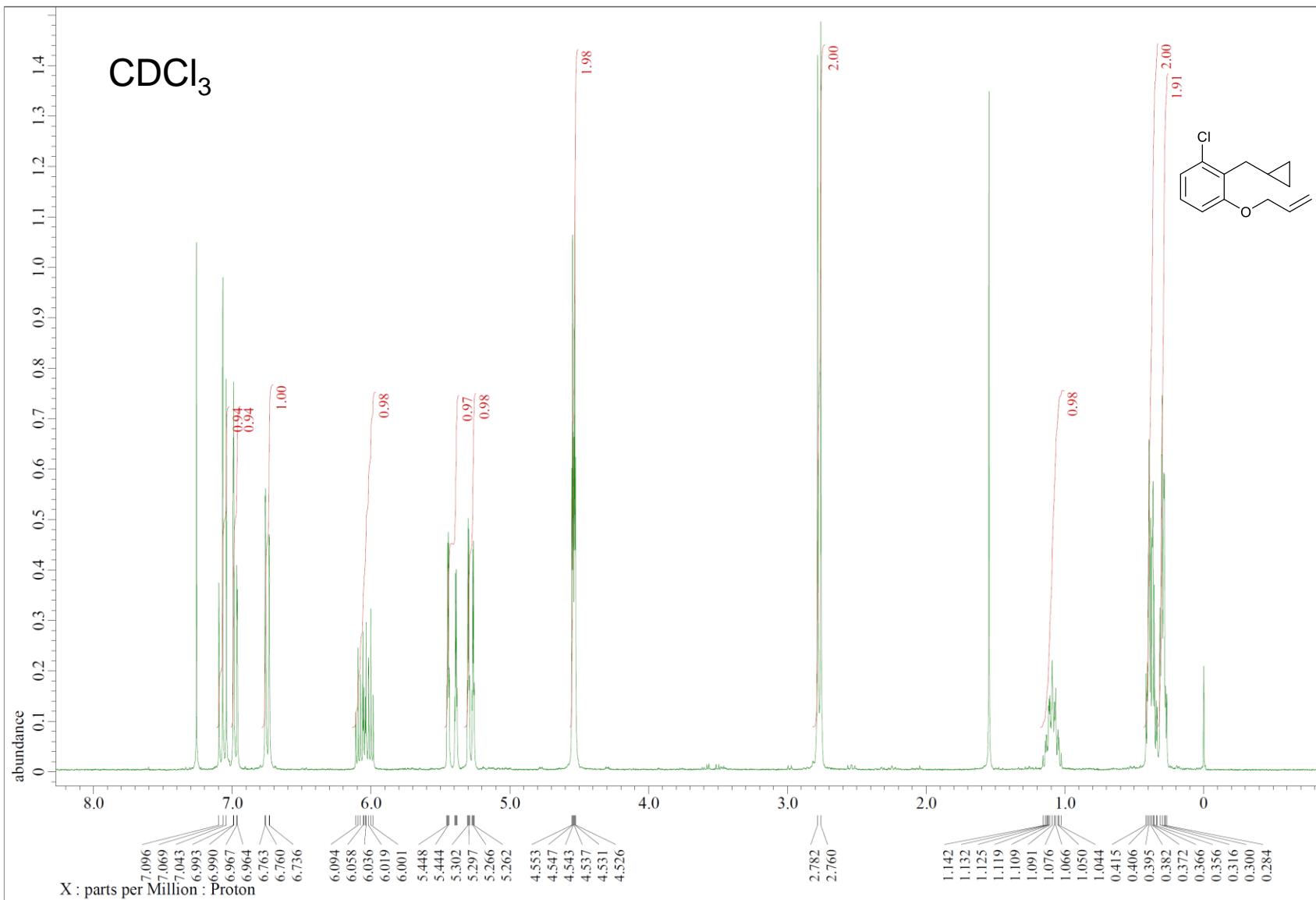
**1b'**



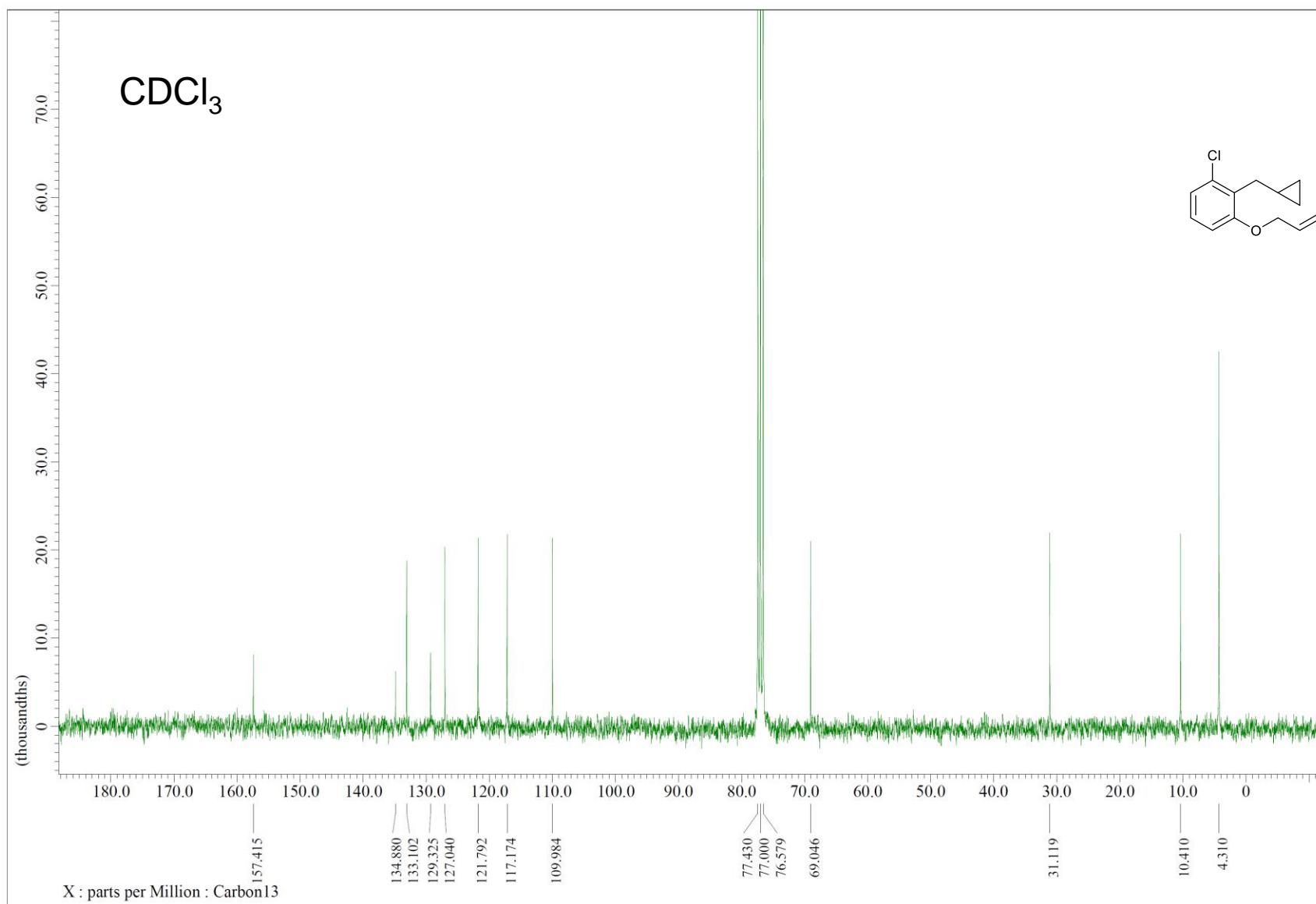
**1b'**



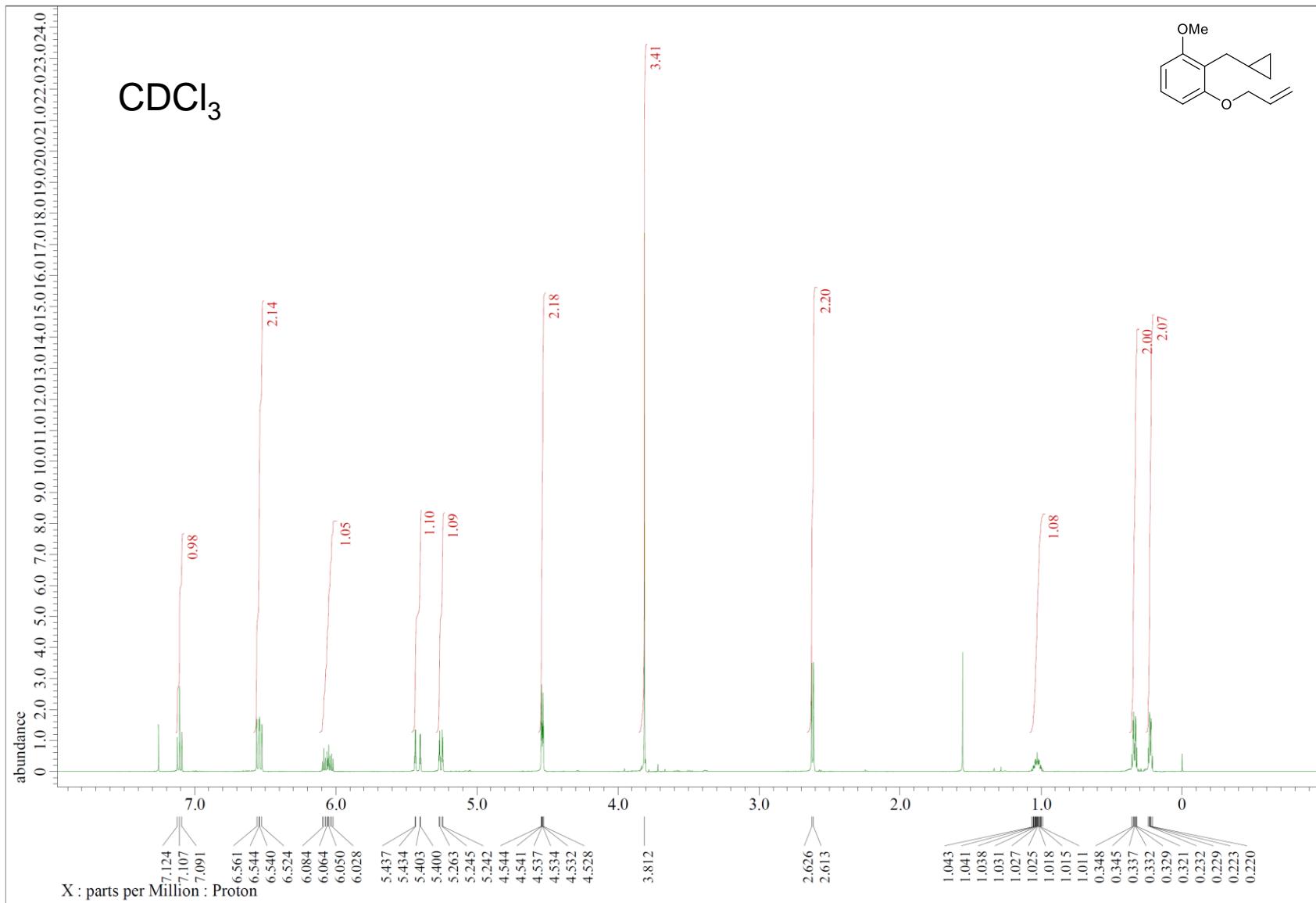
1c'



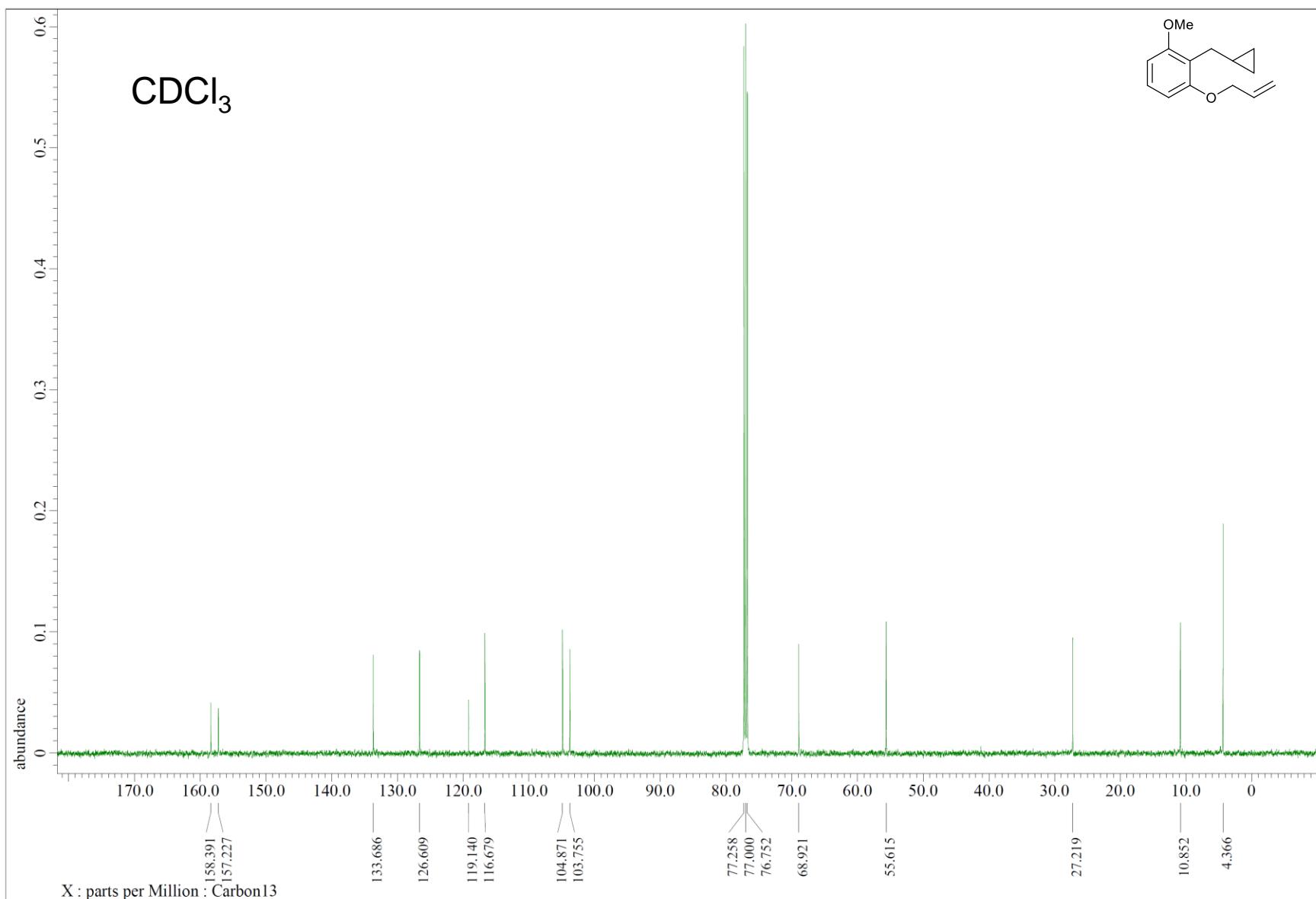
1c'



1d'

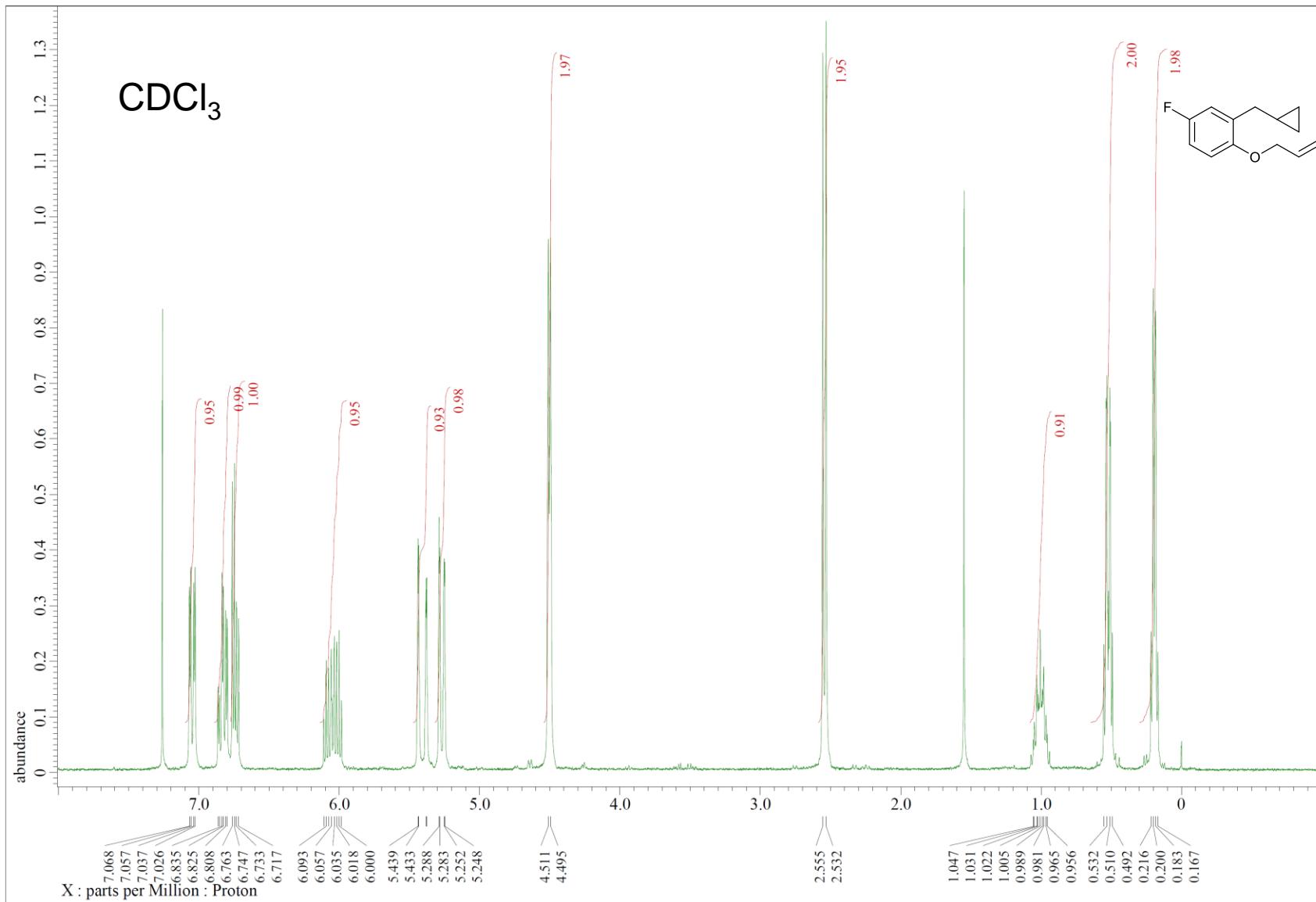


1d'

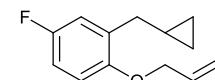
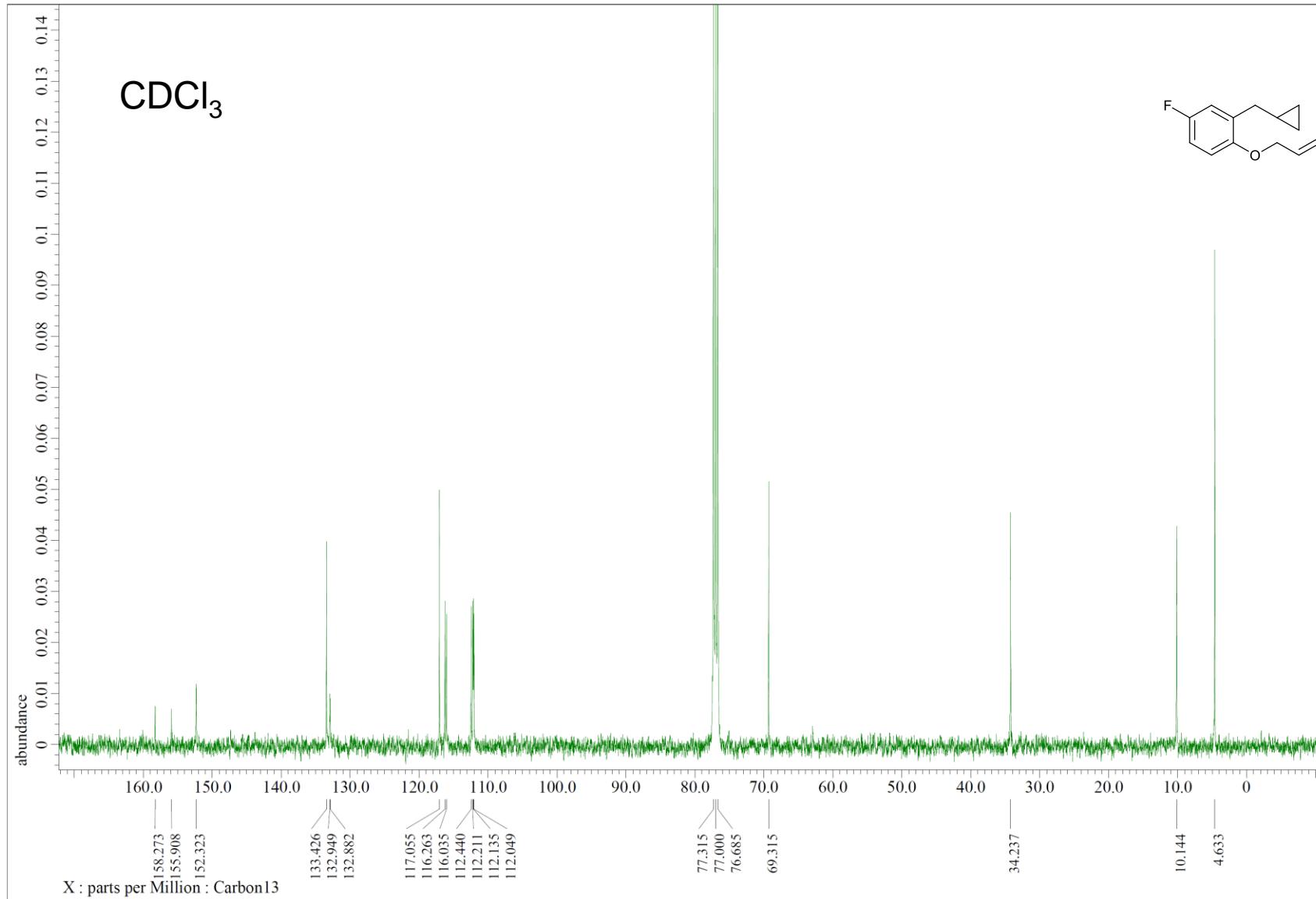


S2- 10

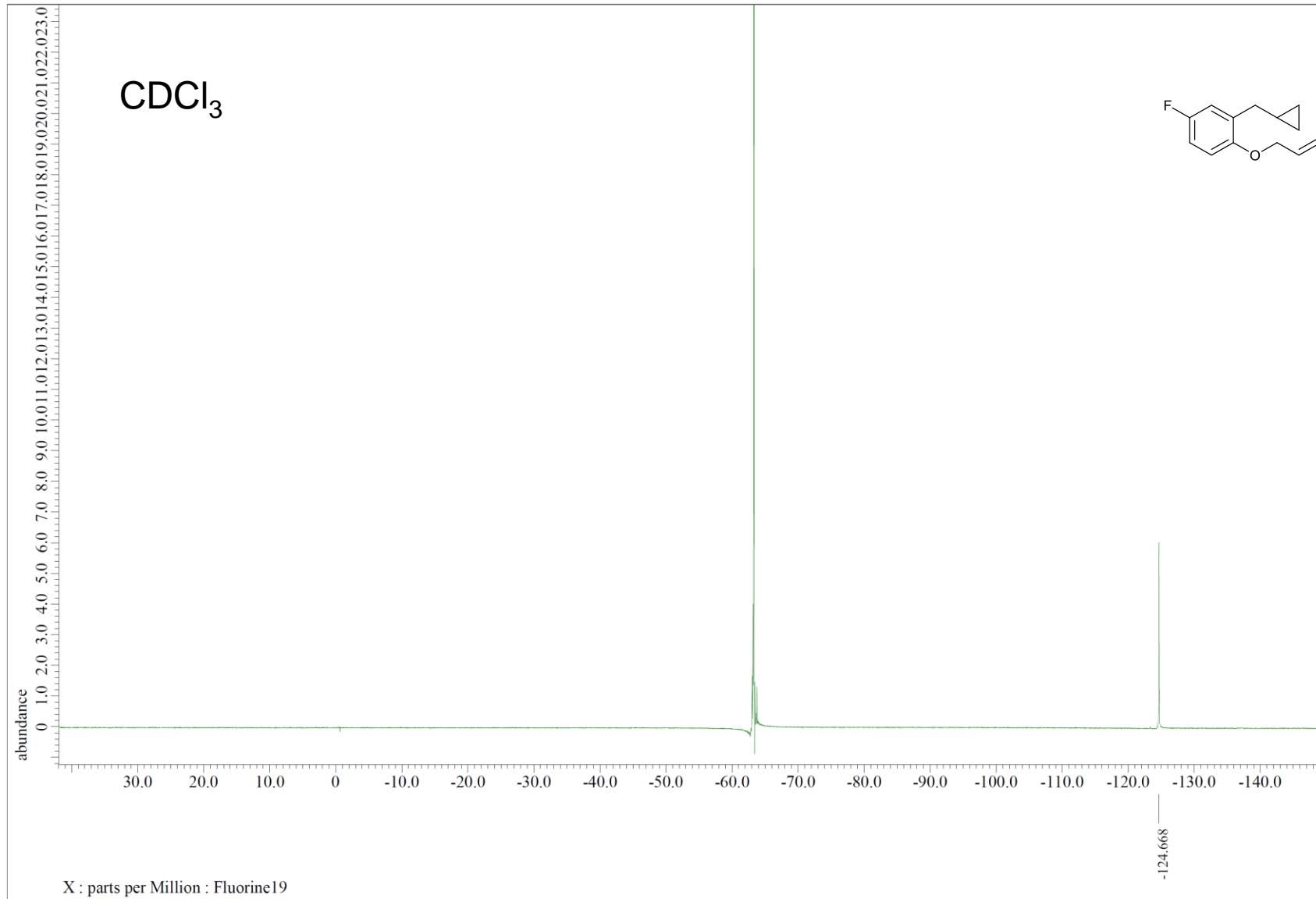
1e'



1e'

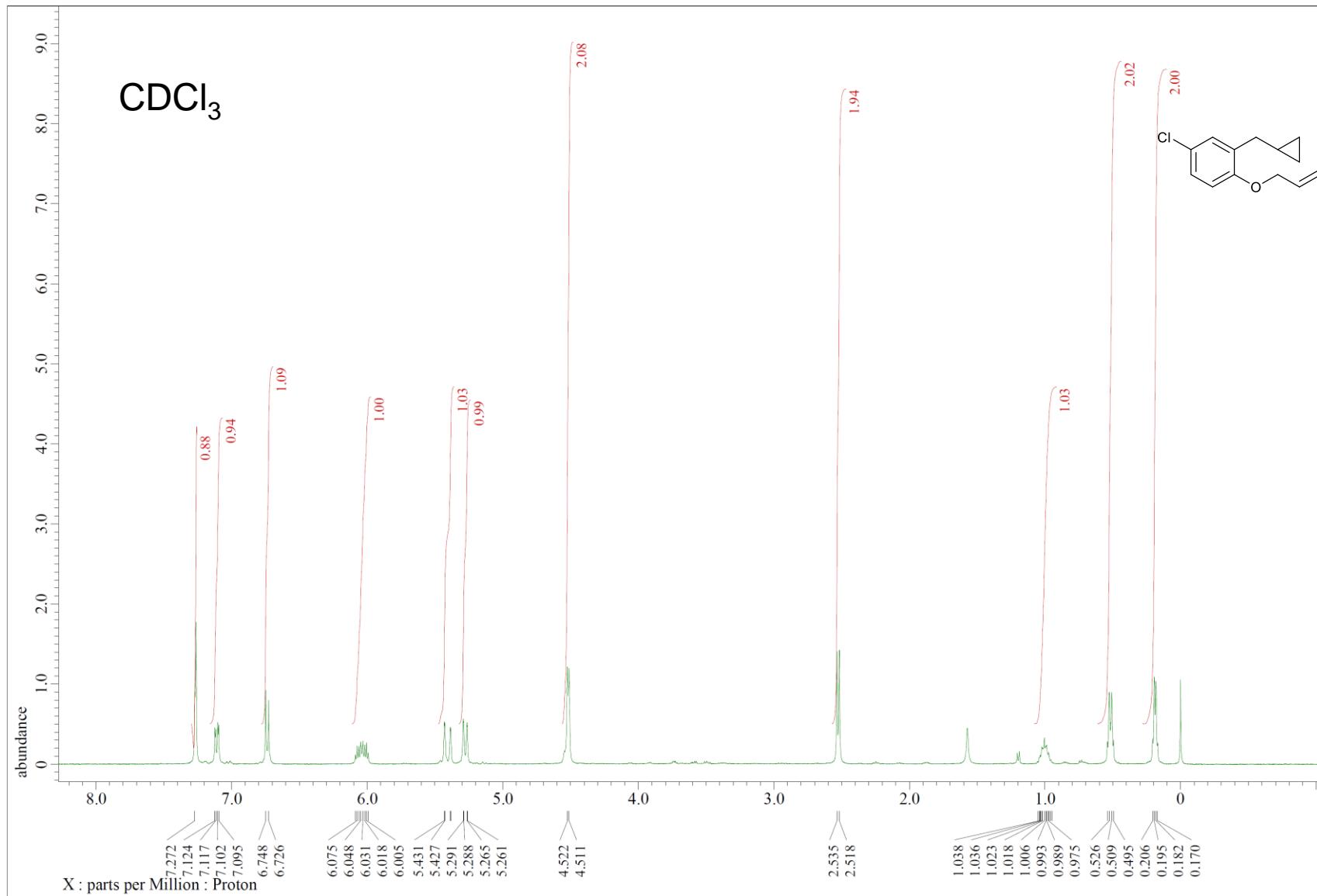


1e'

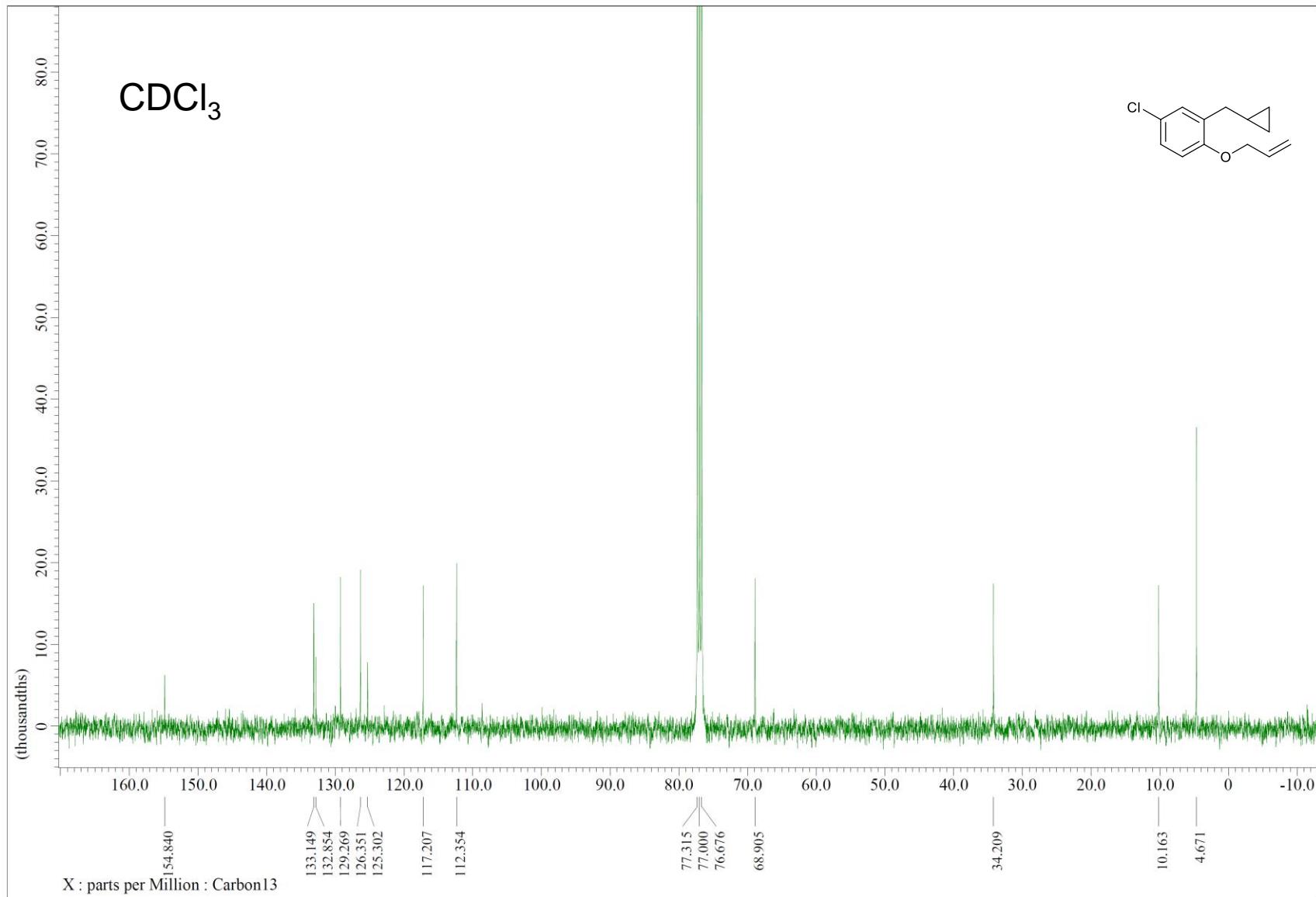


S2- 13

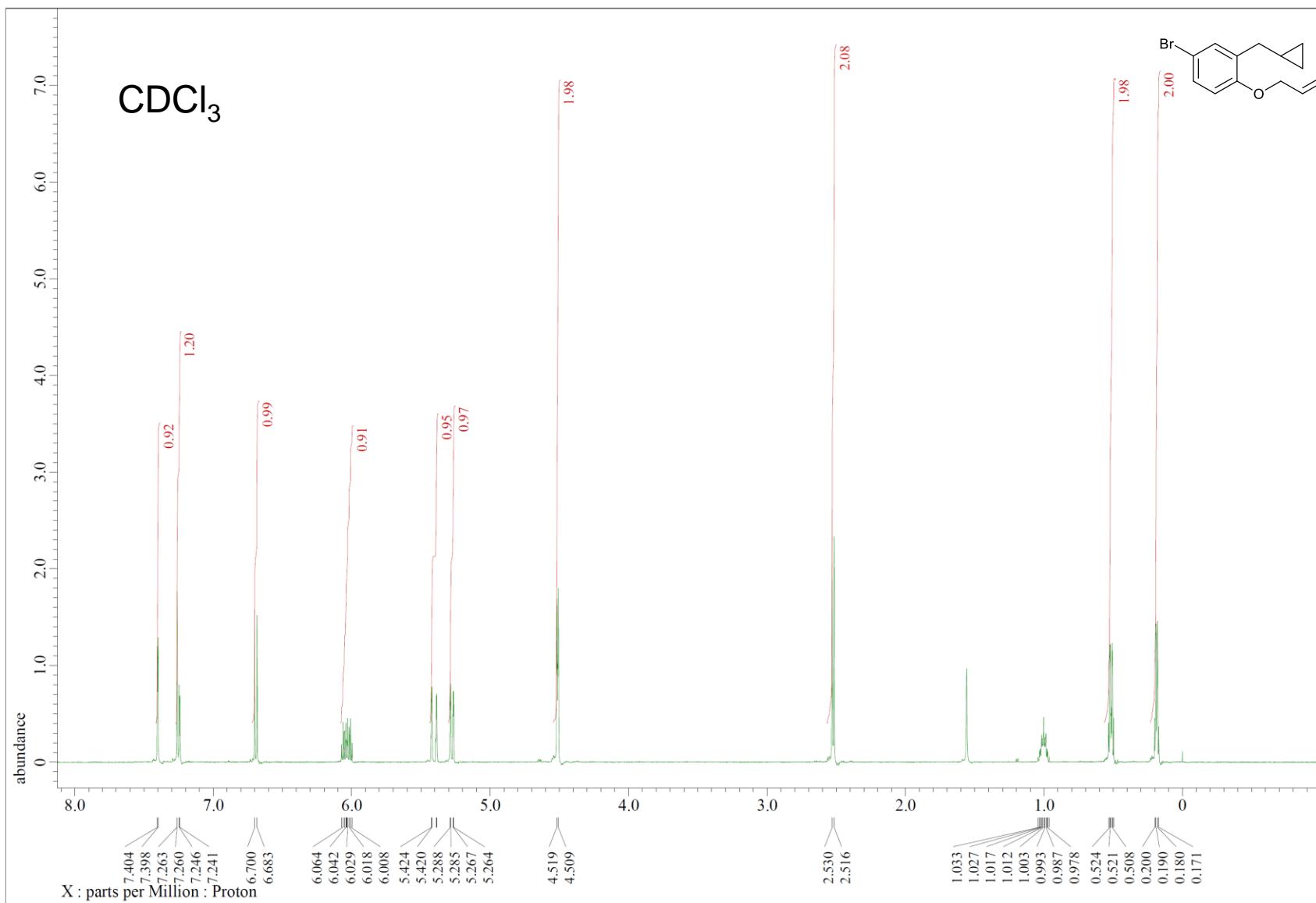
1f'



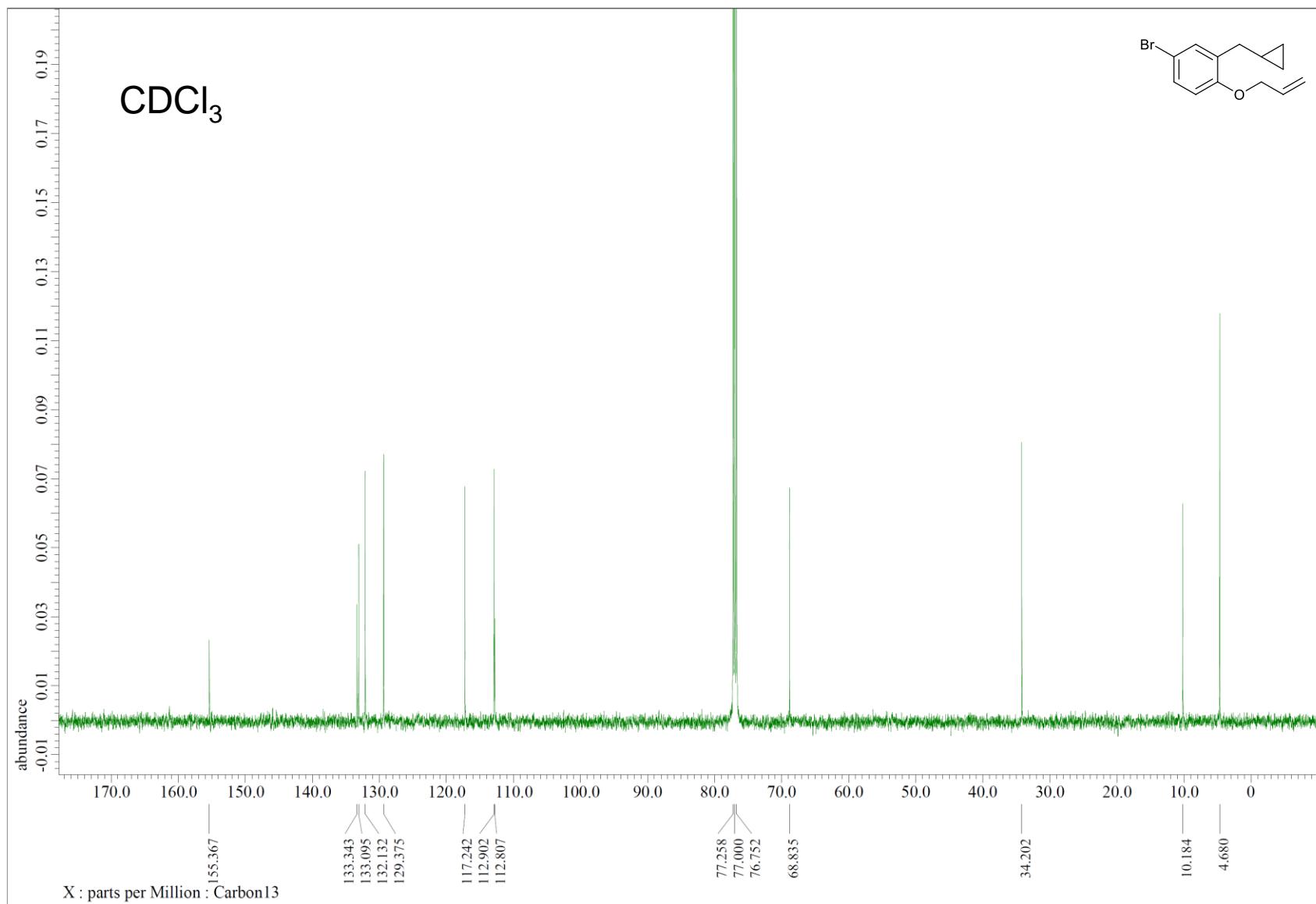
1f'



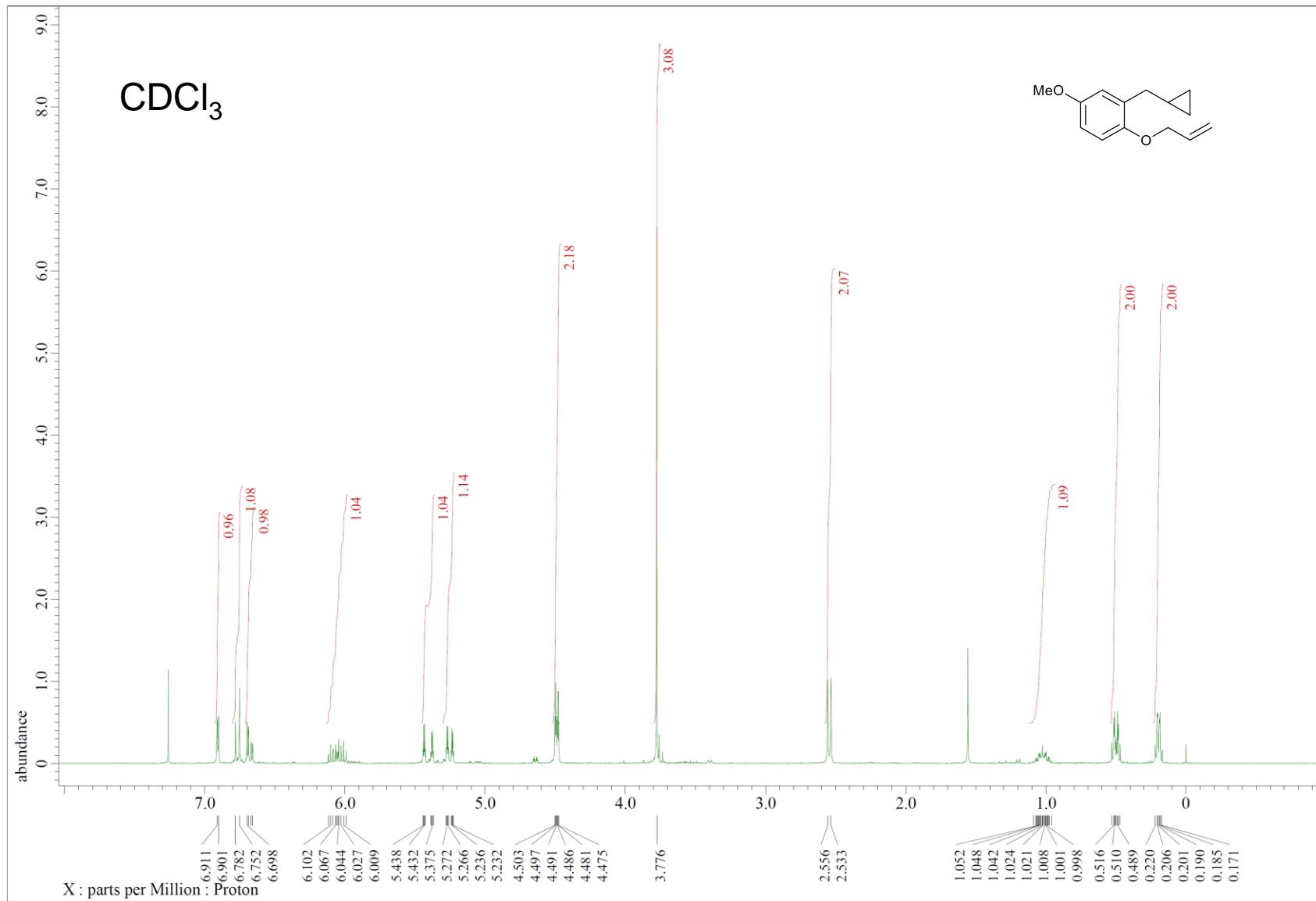
1g'



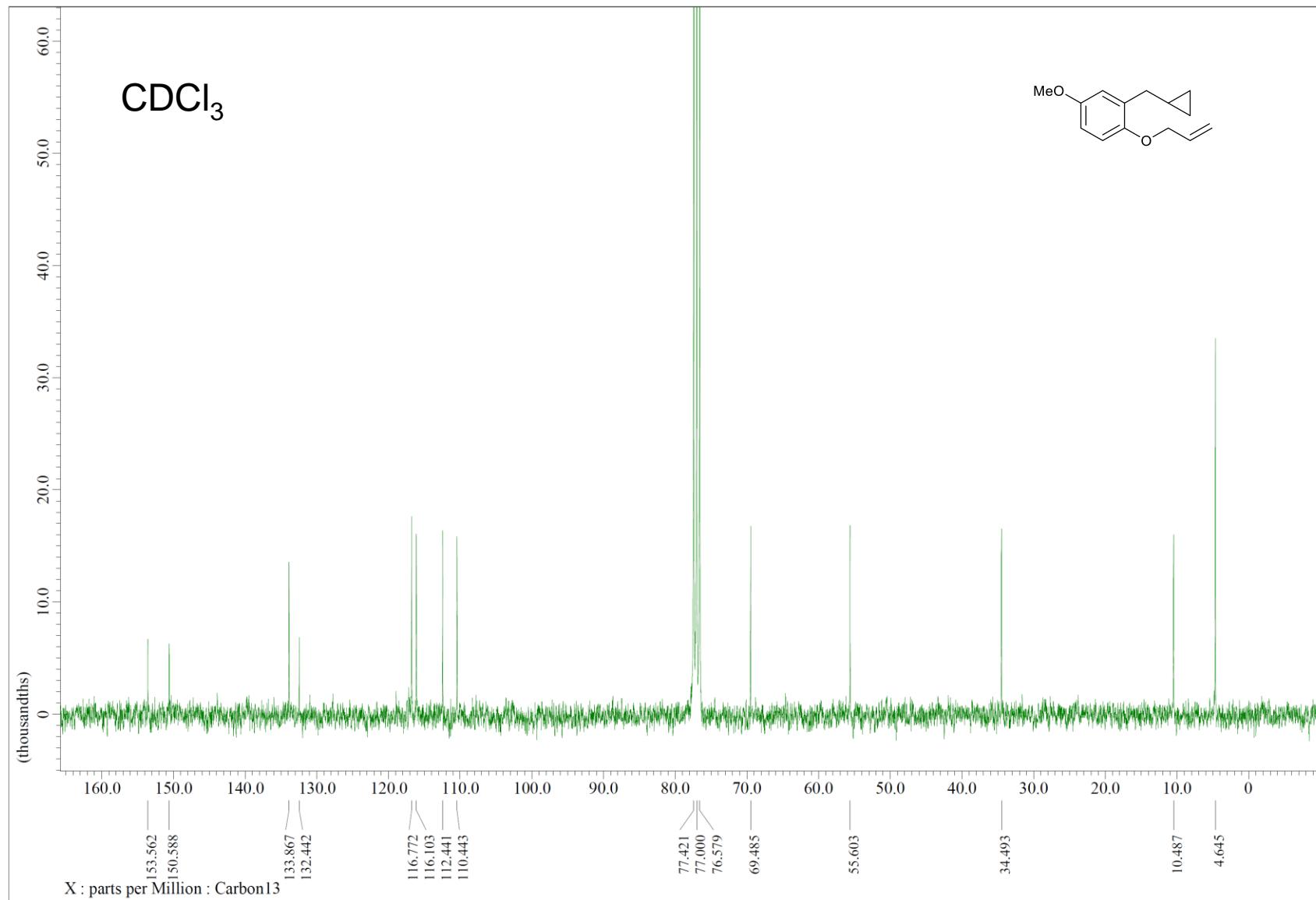
1g'



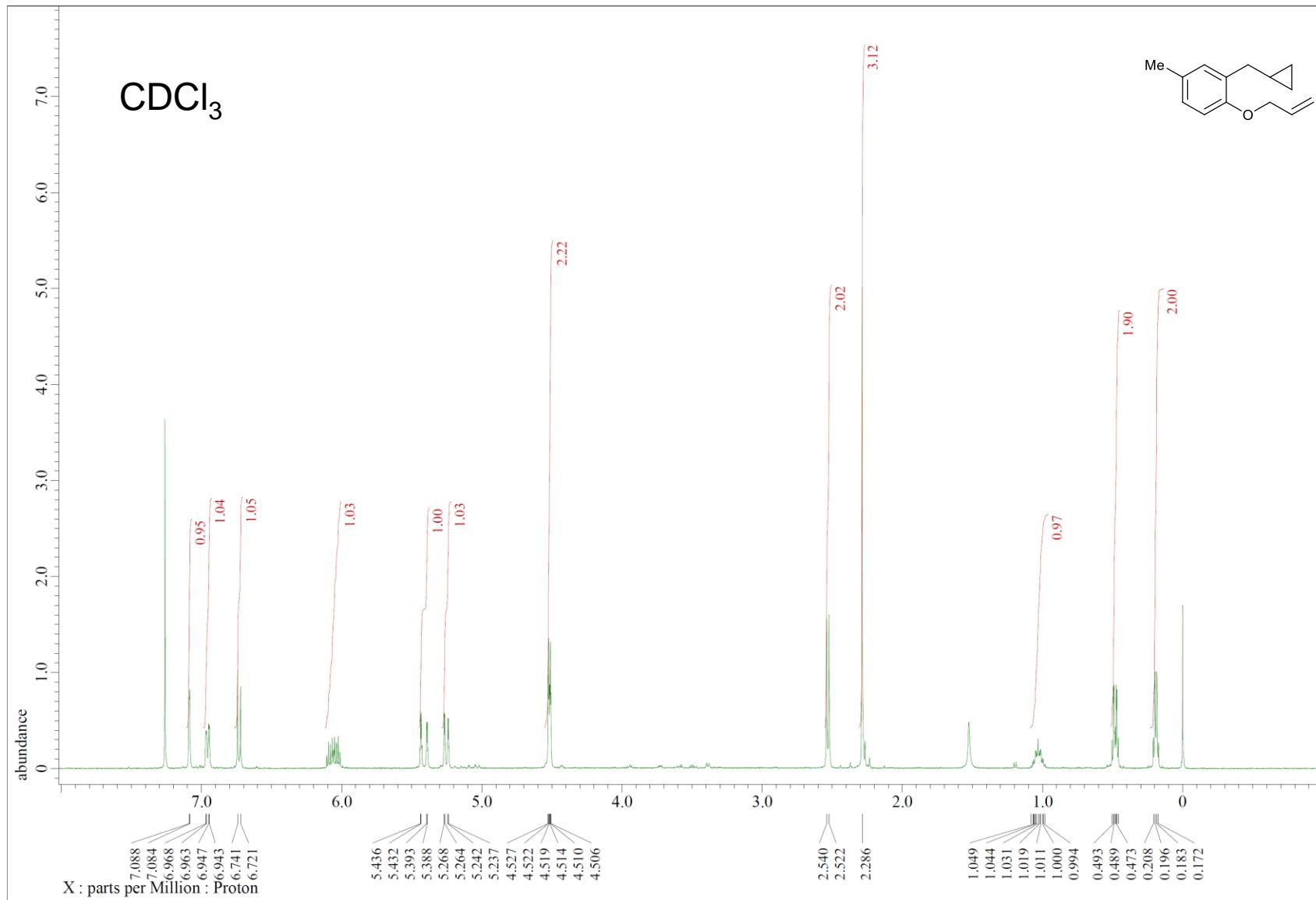
1h'



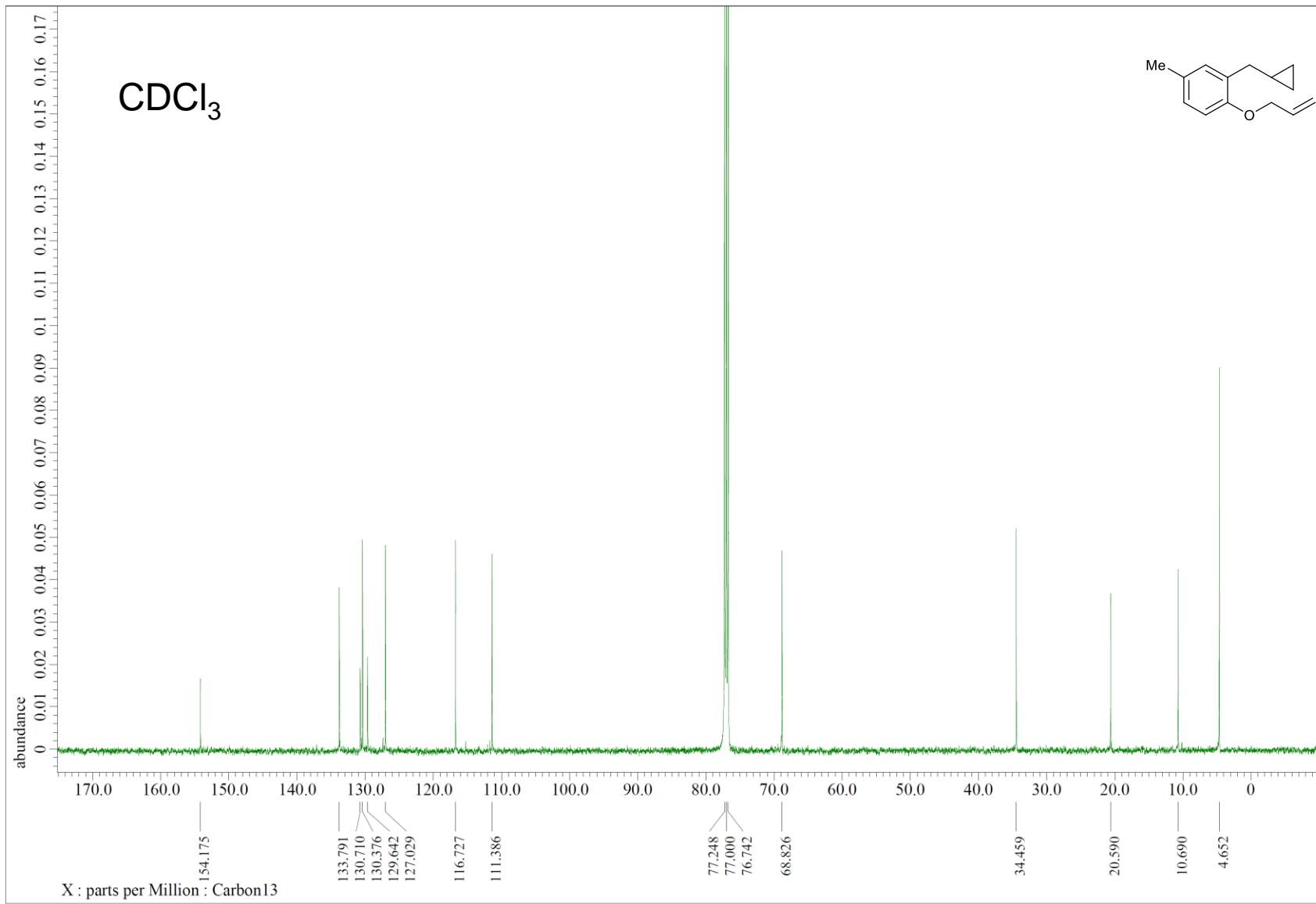
1h'



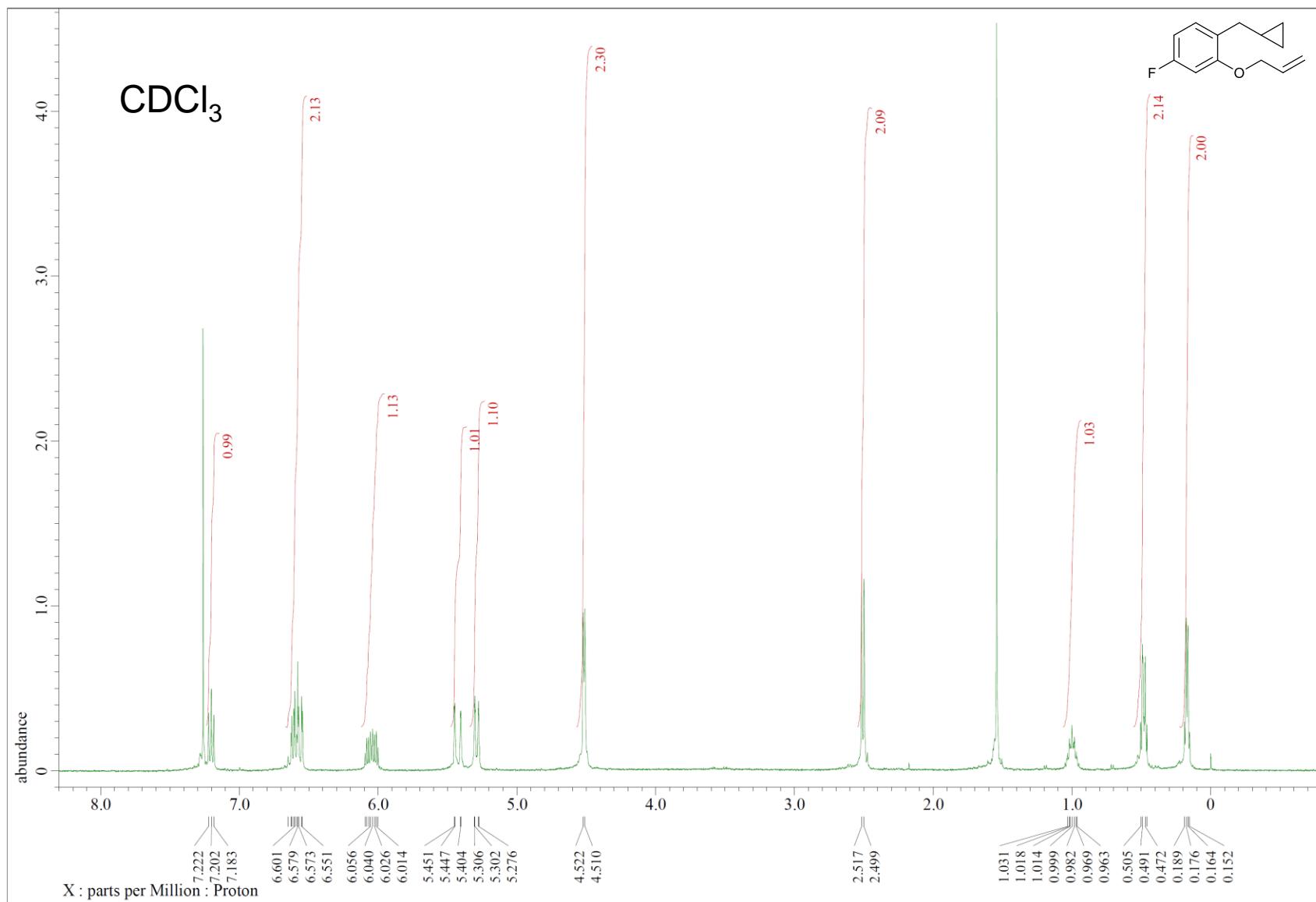
1i'



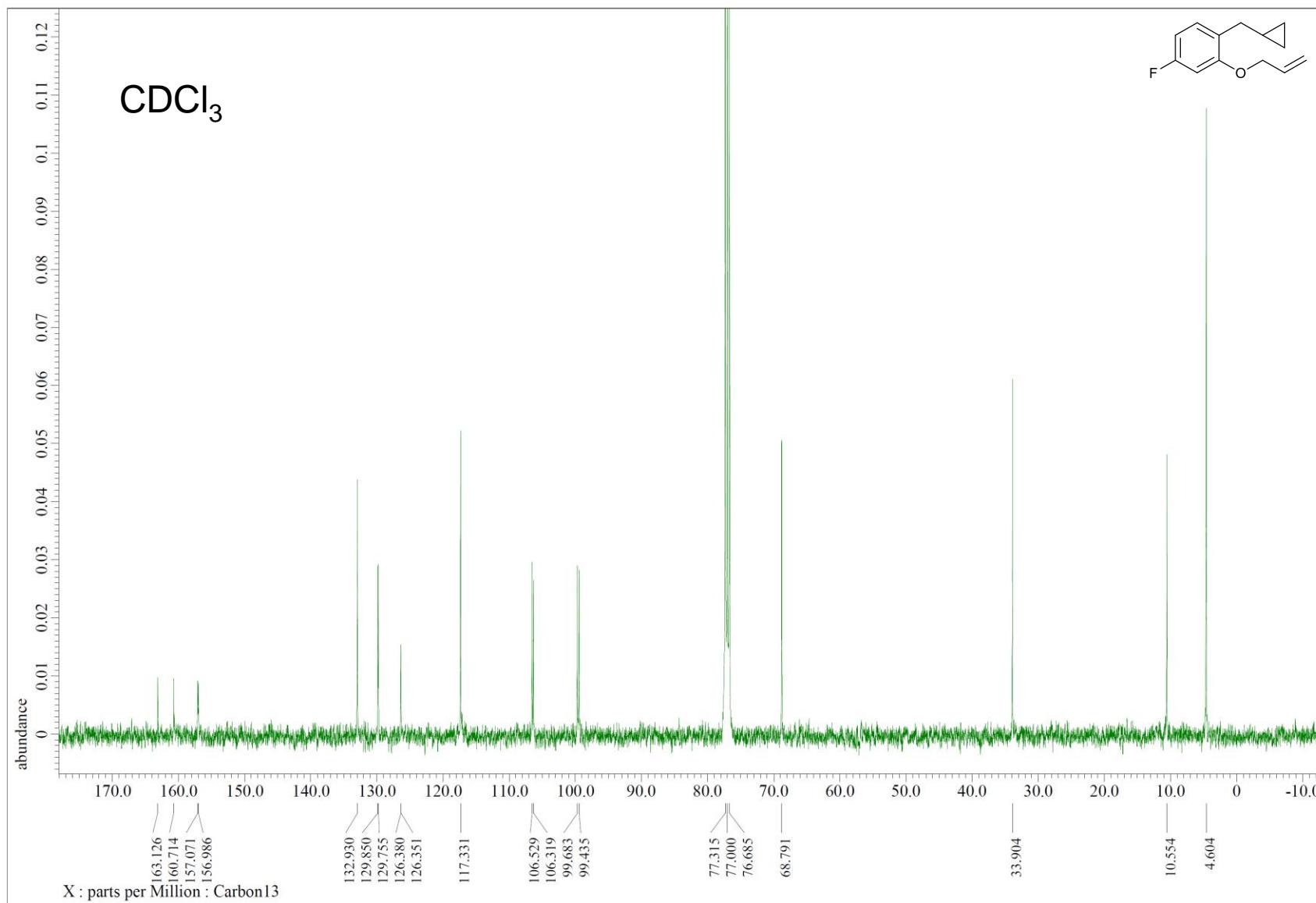
1i'



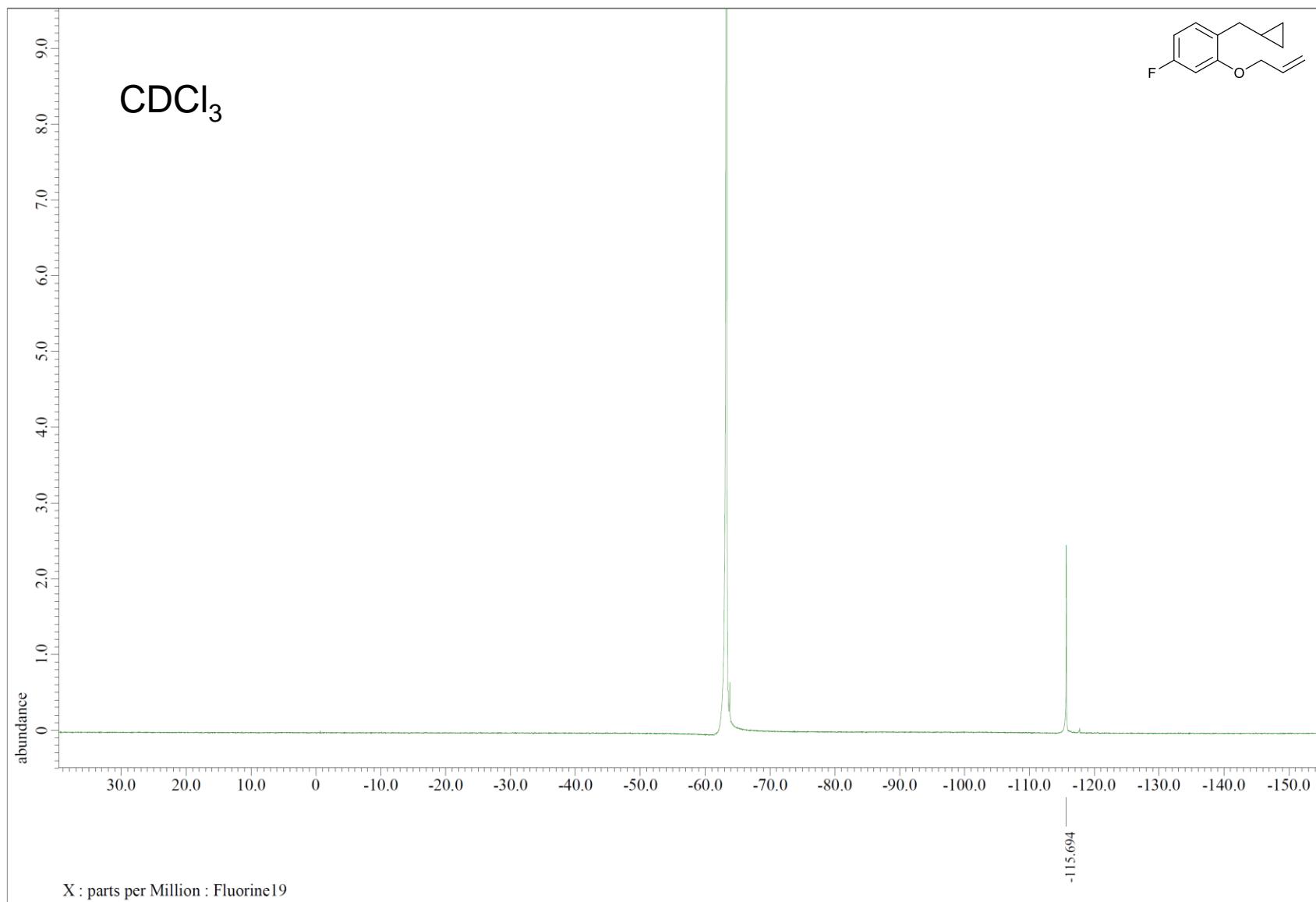
1j'



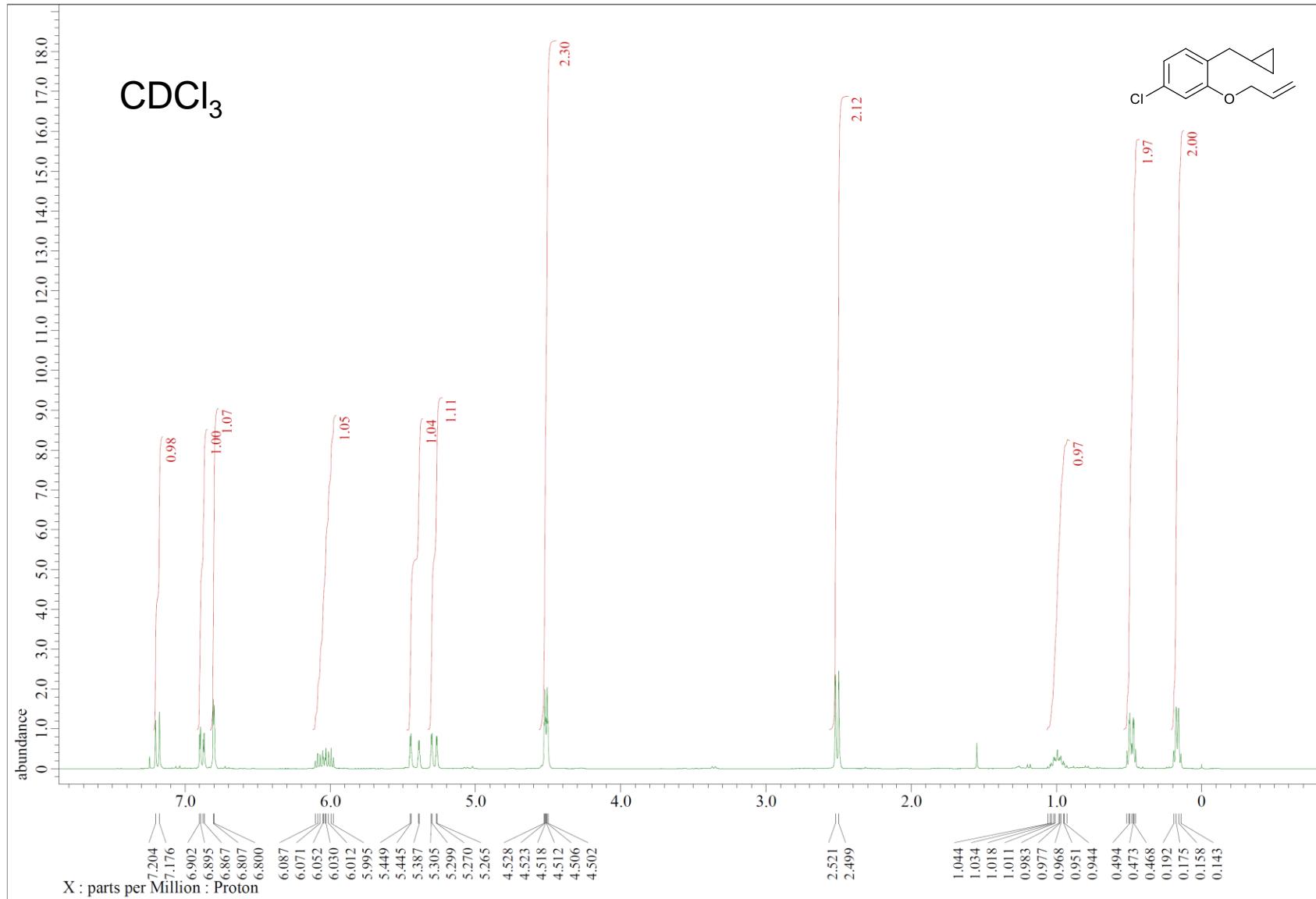
1j'



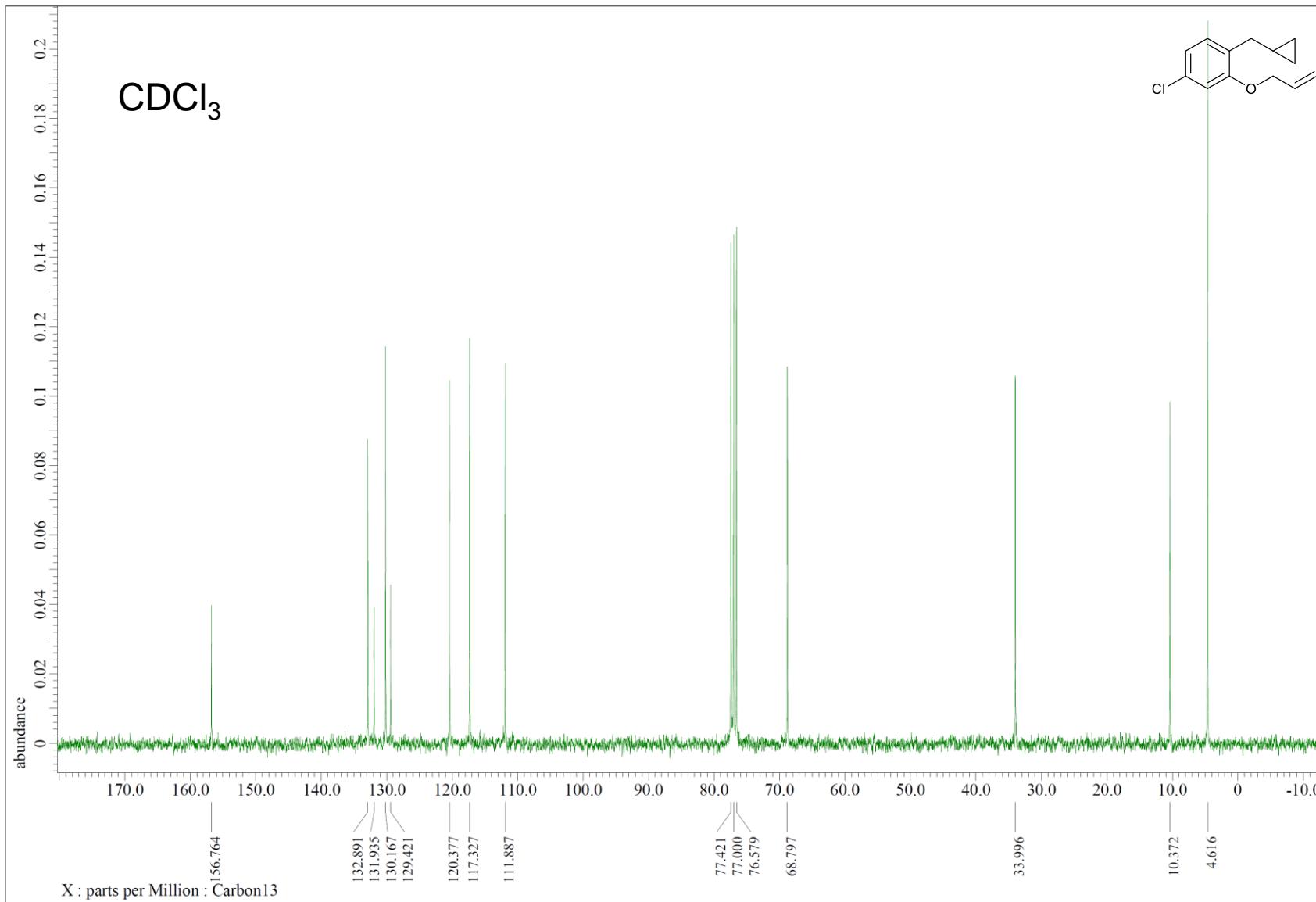
1j'

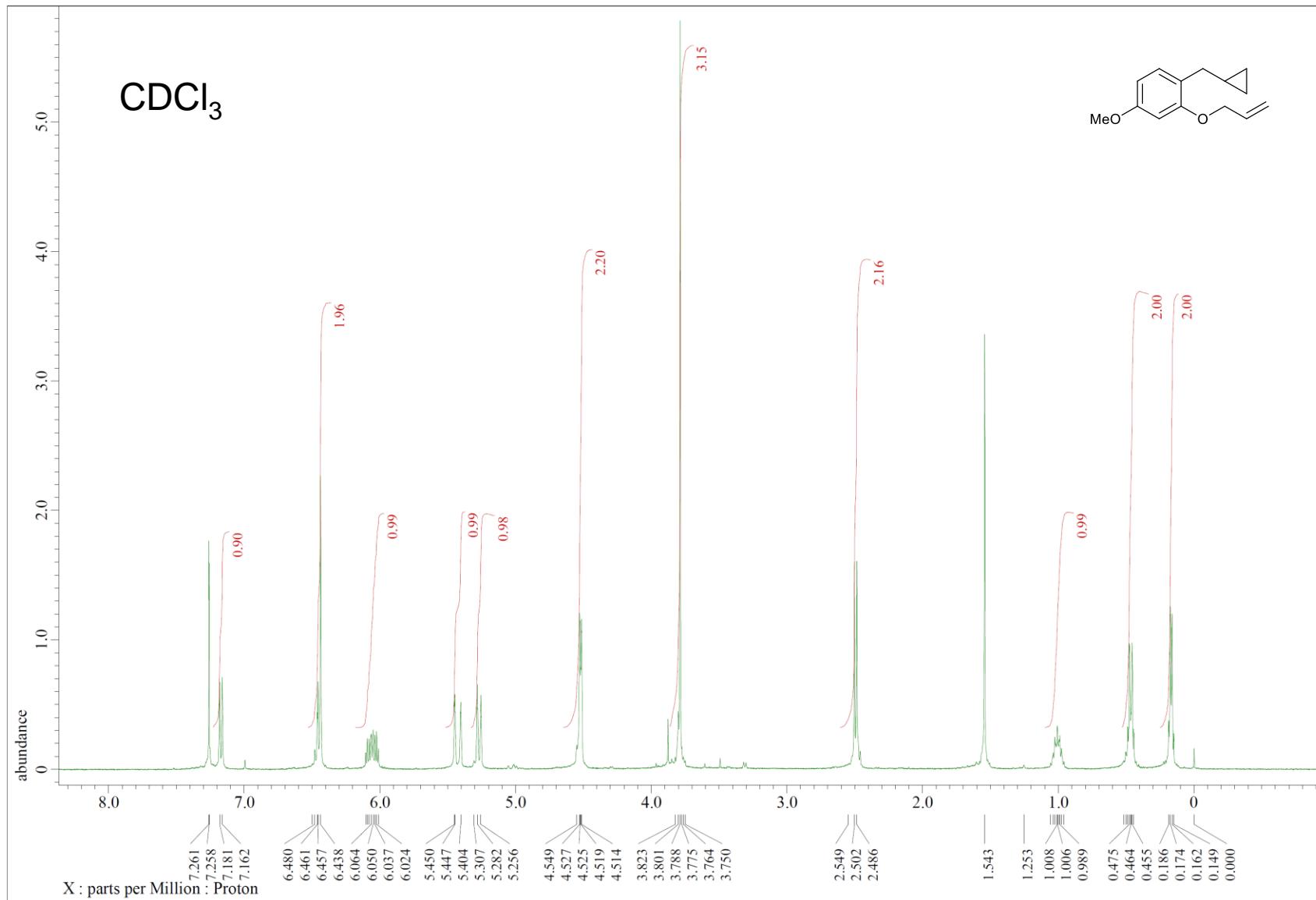


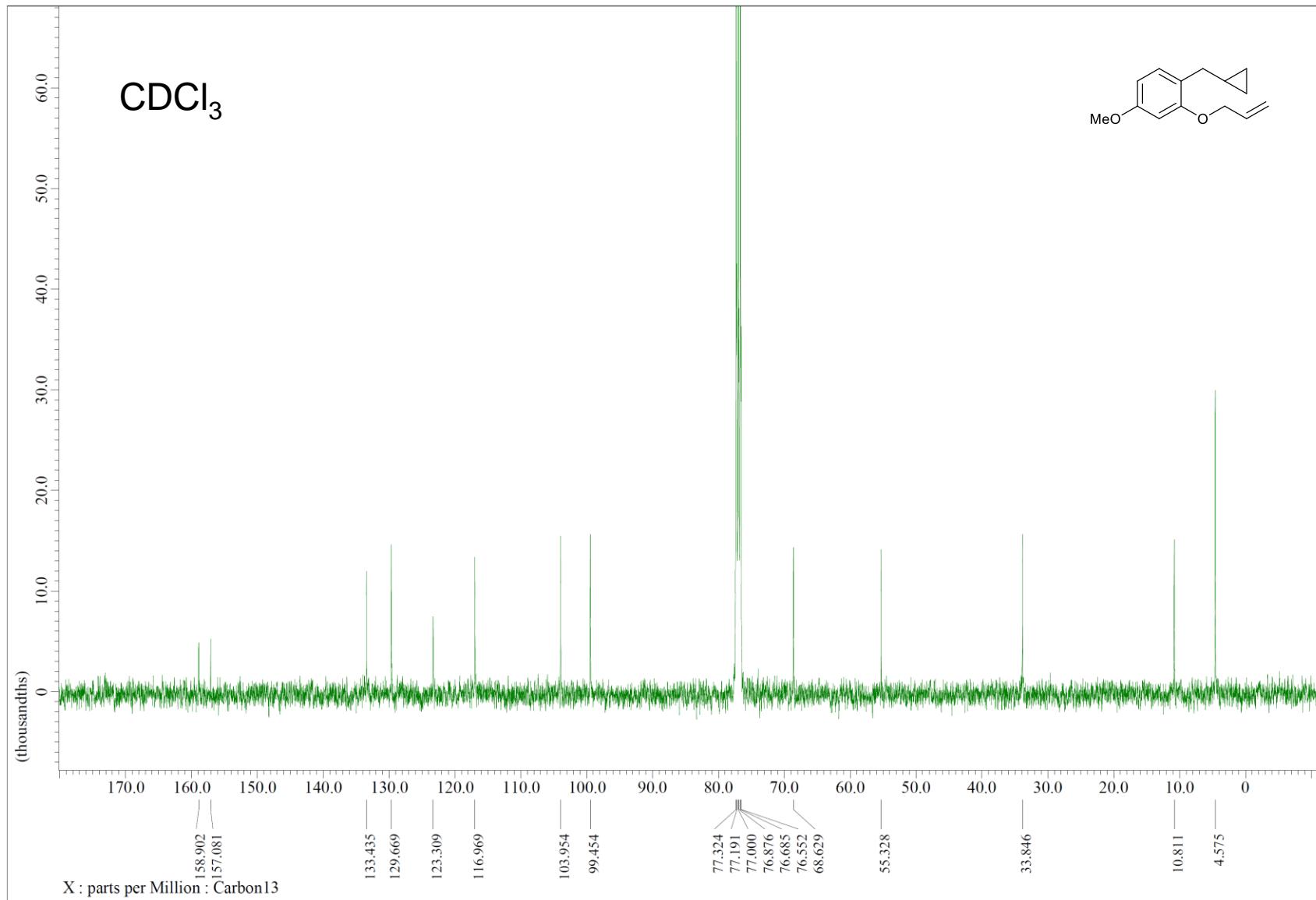
1k'



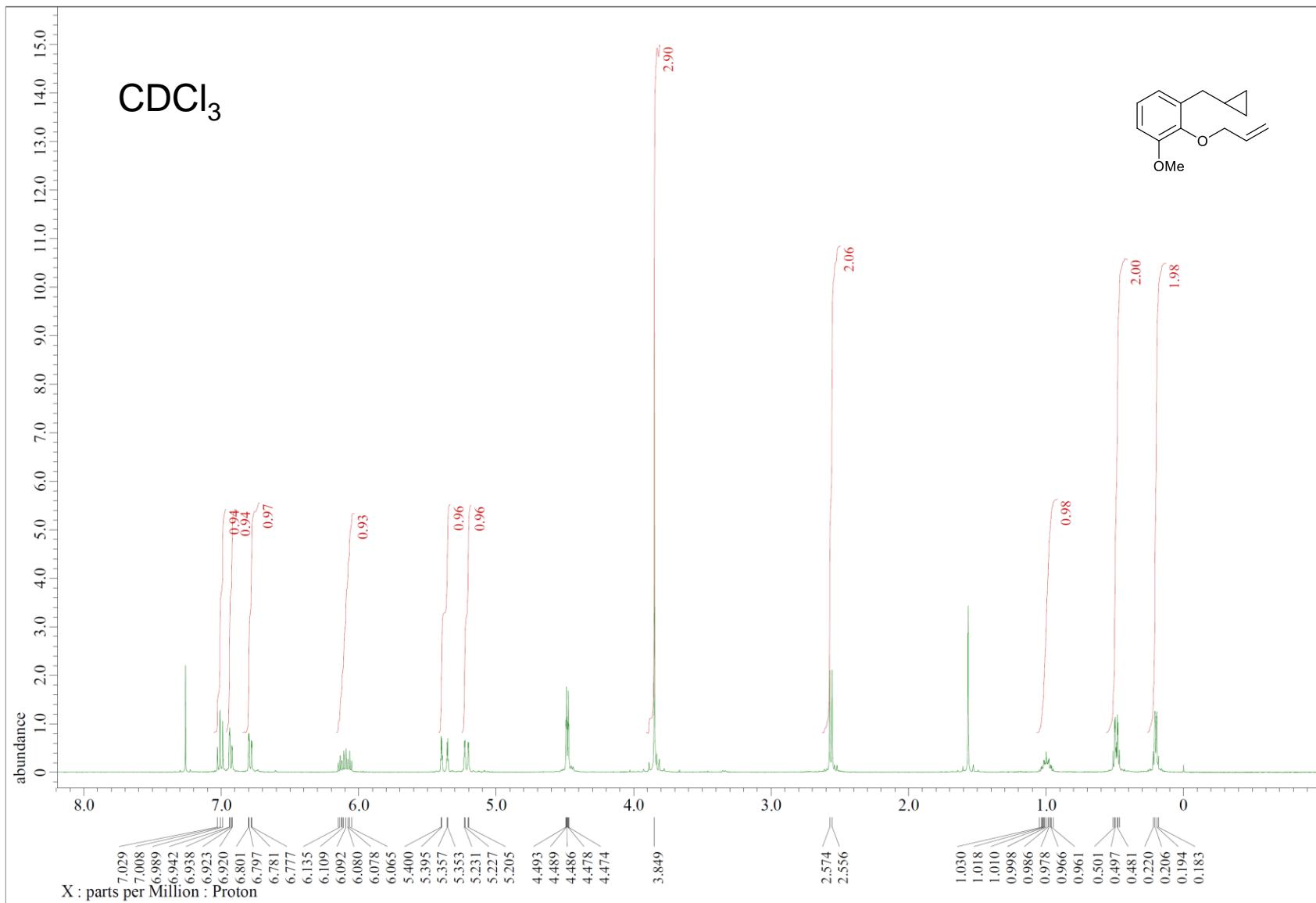
1k'



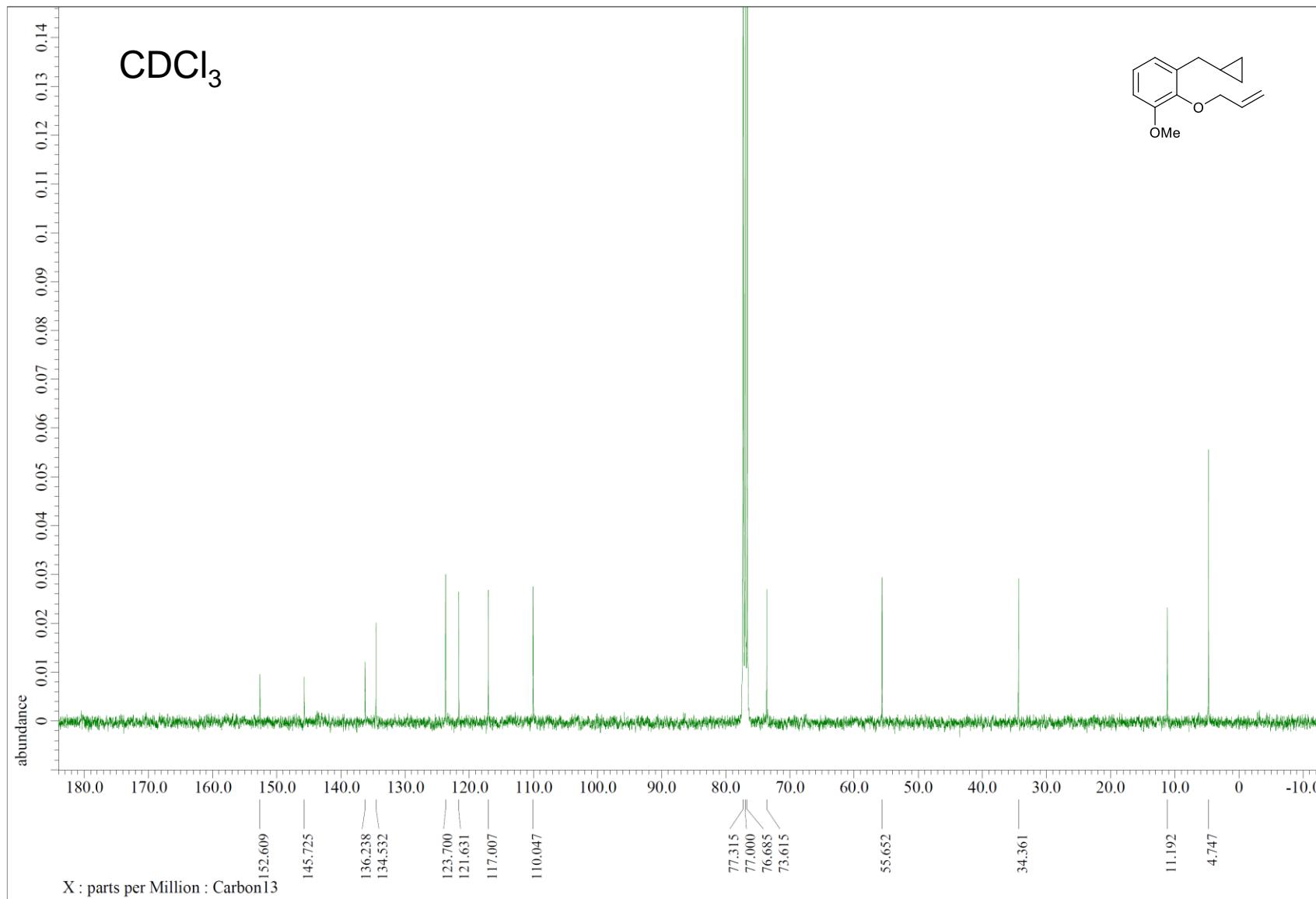




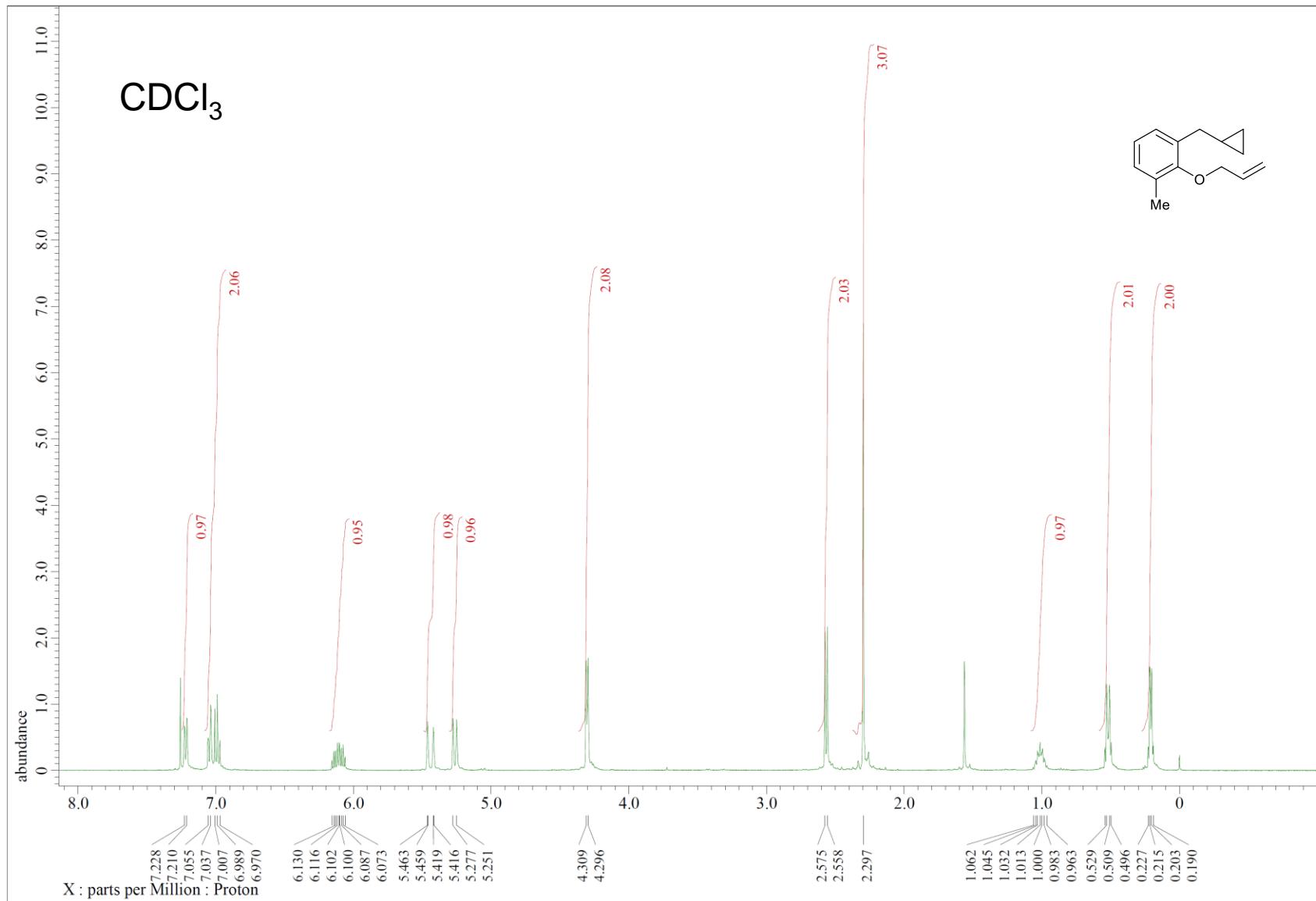
**1m'**



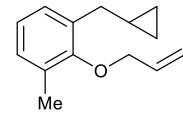
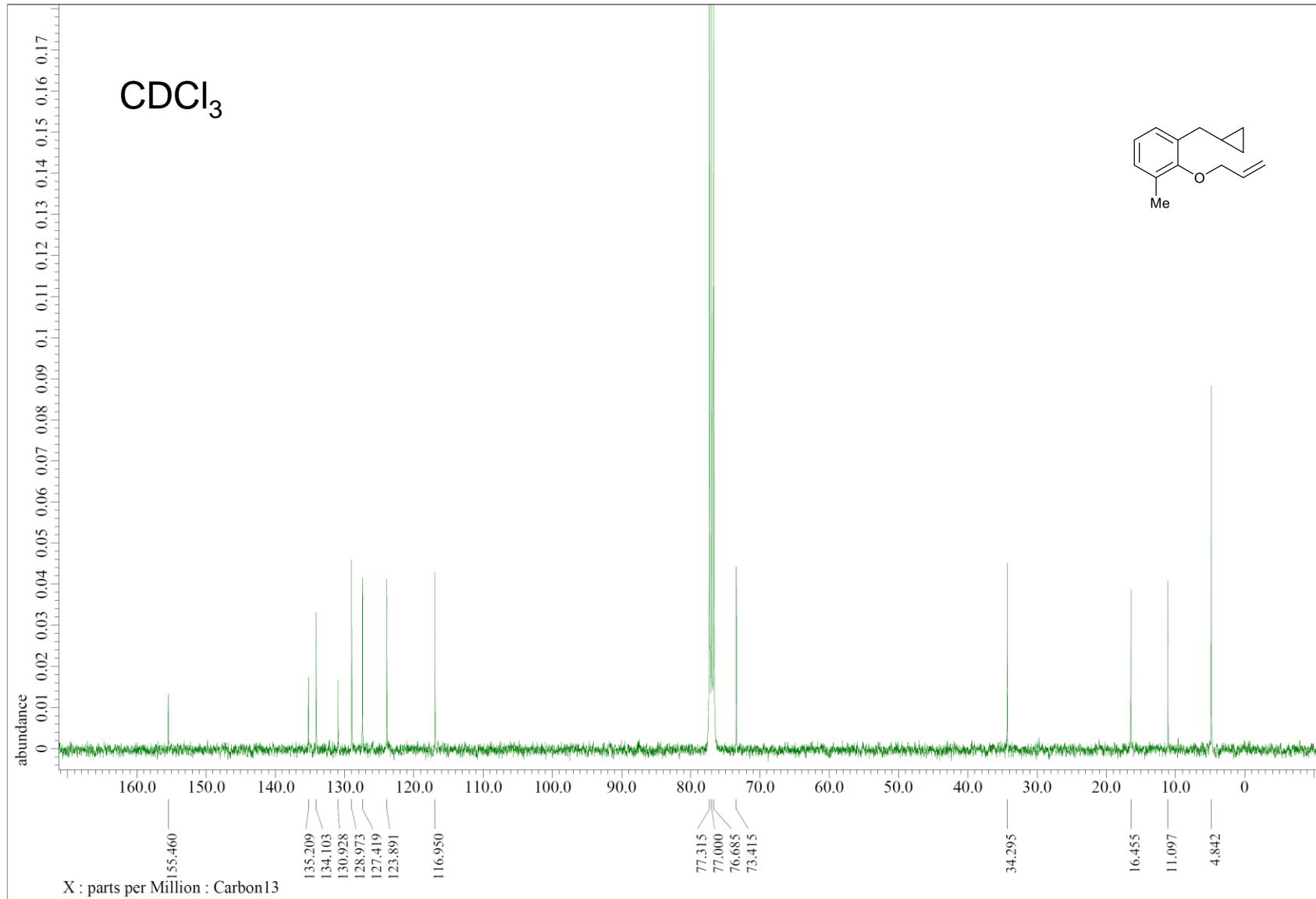
1m'

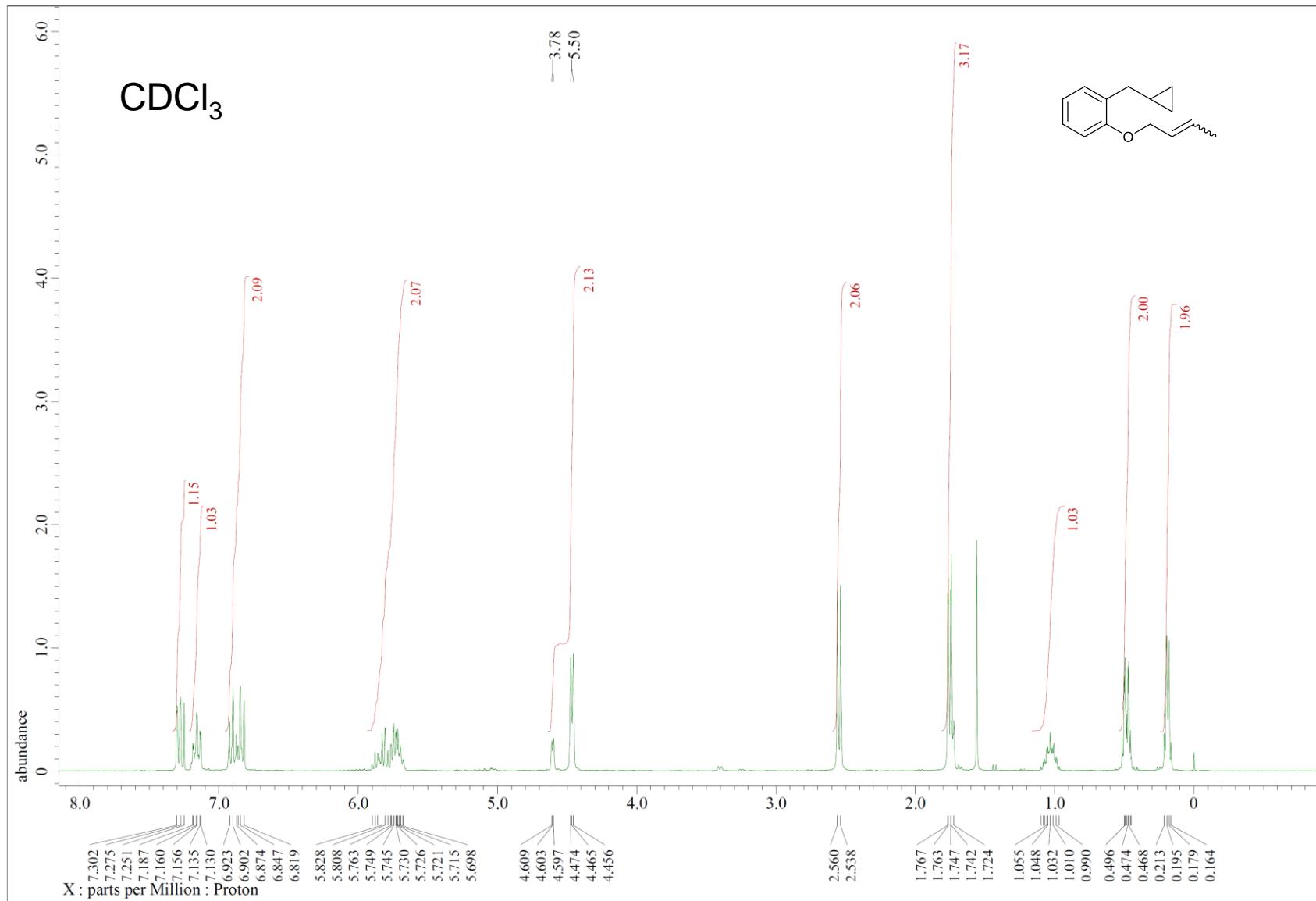


1n'

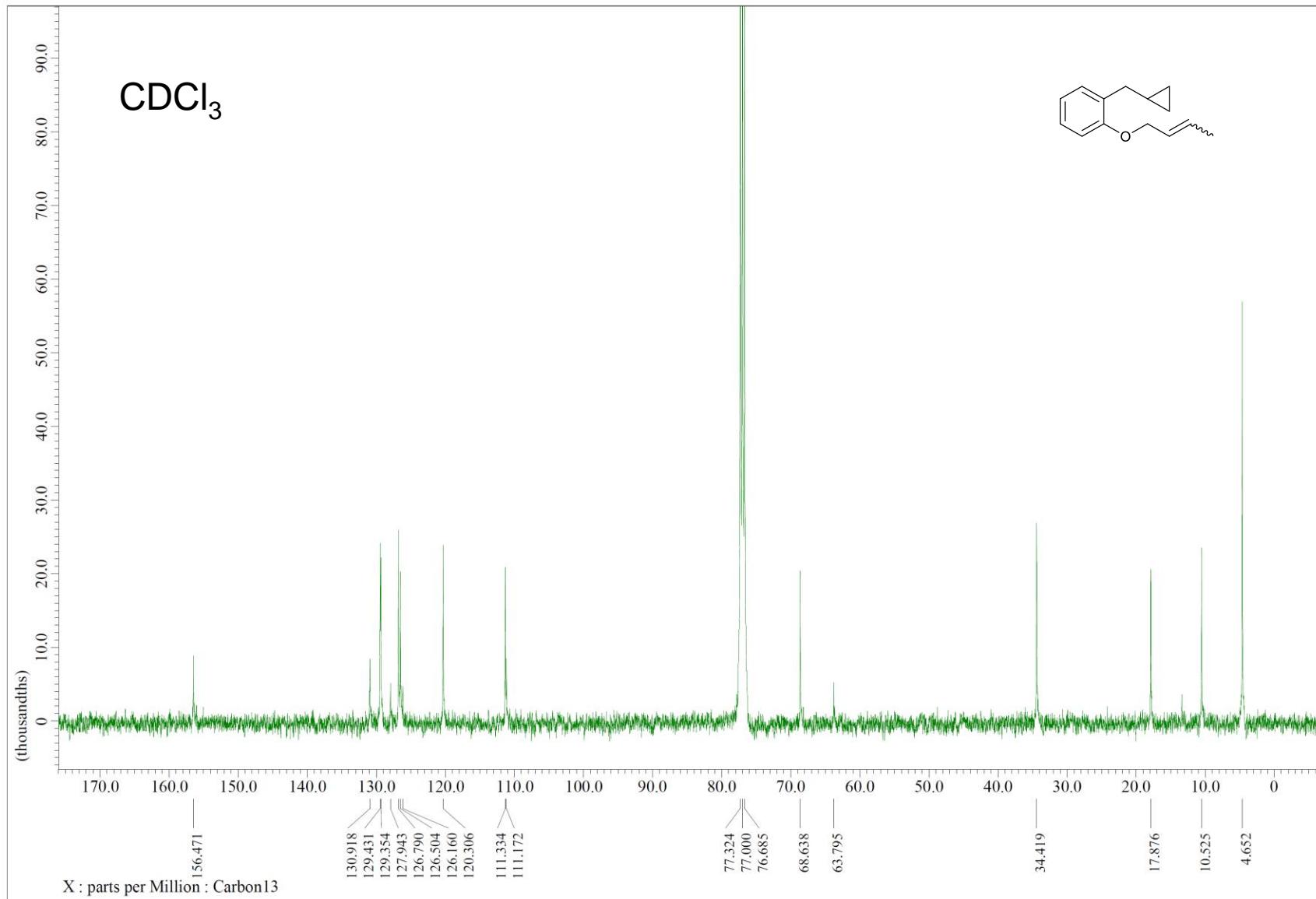


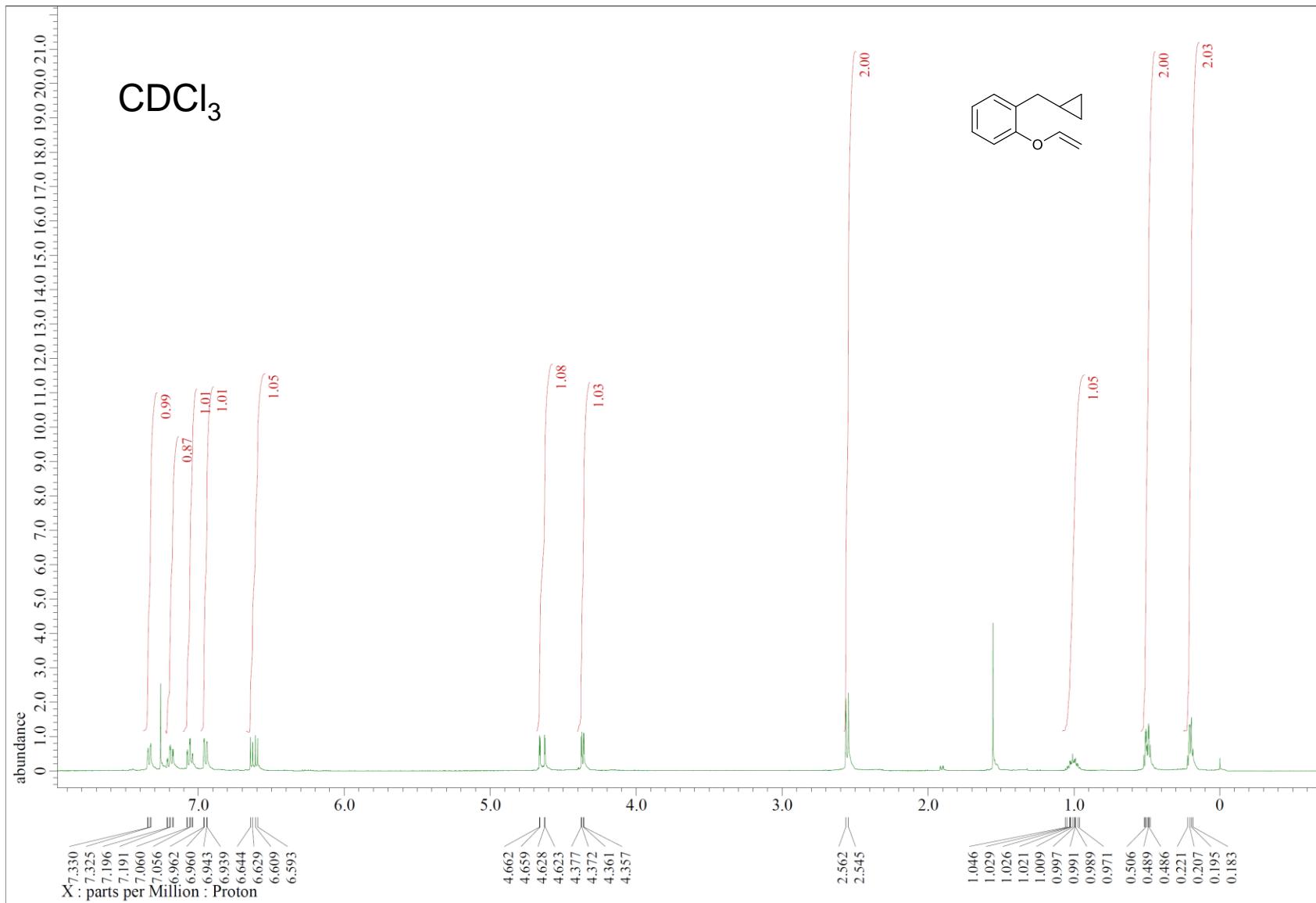
1n'

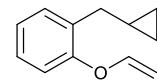
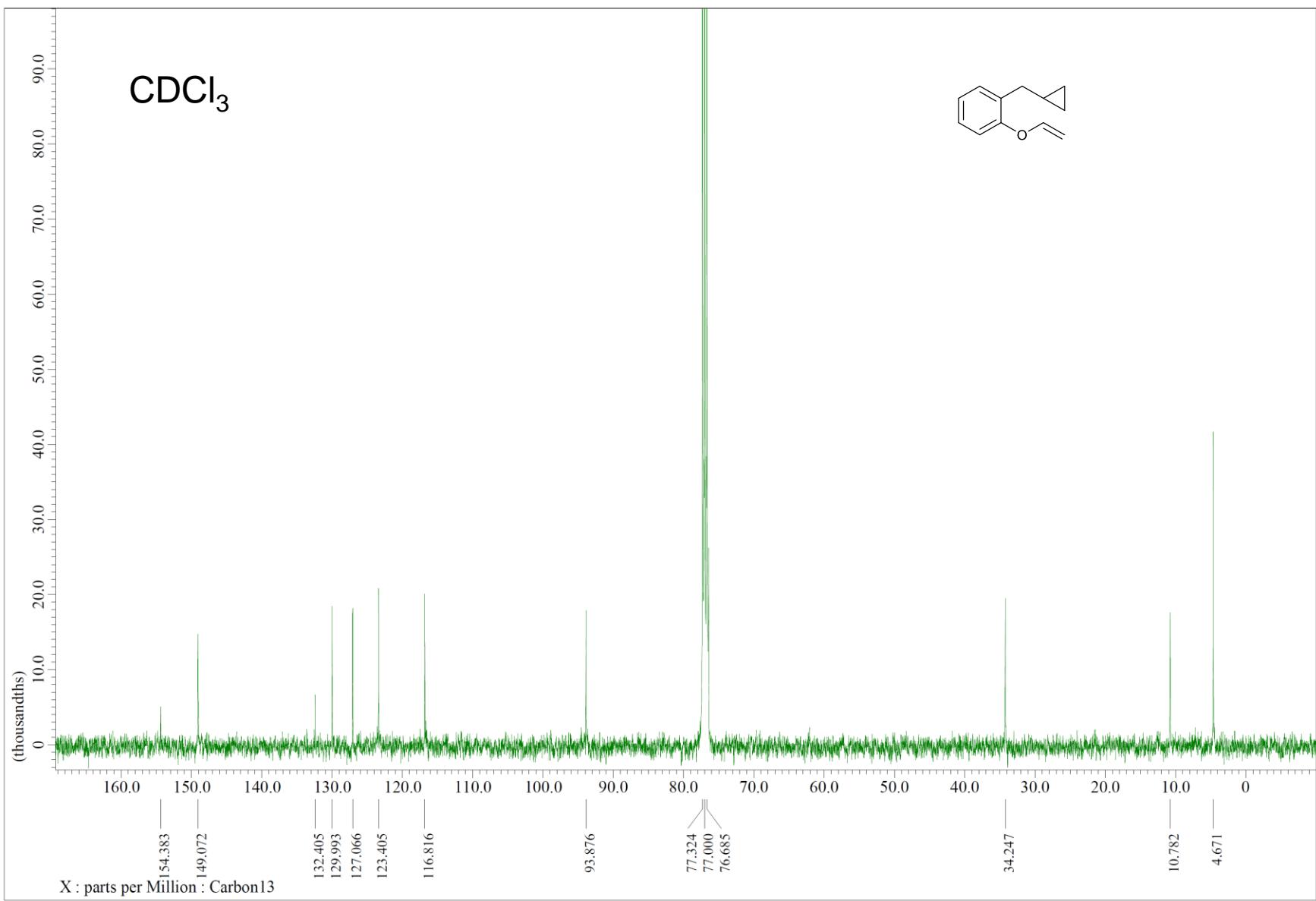




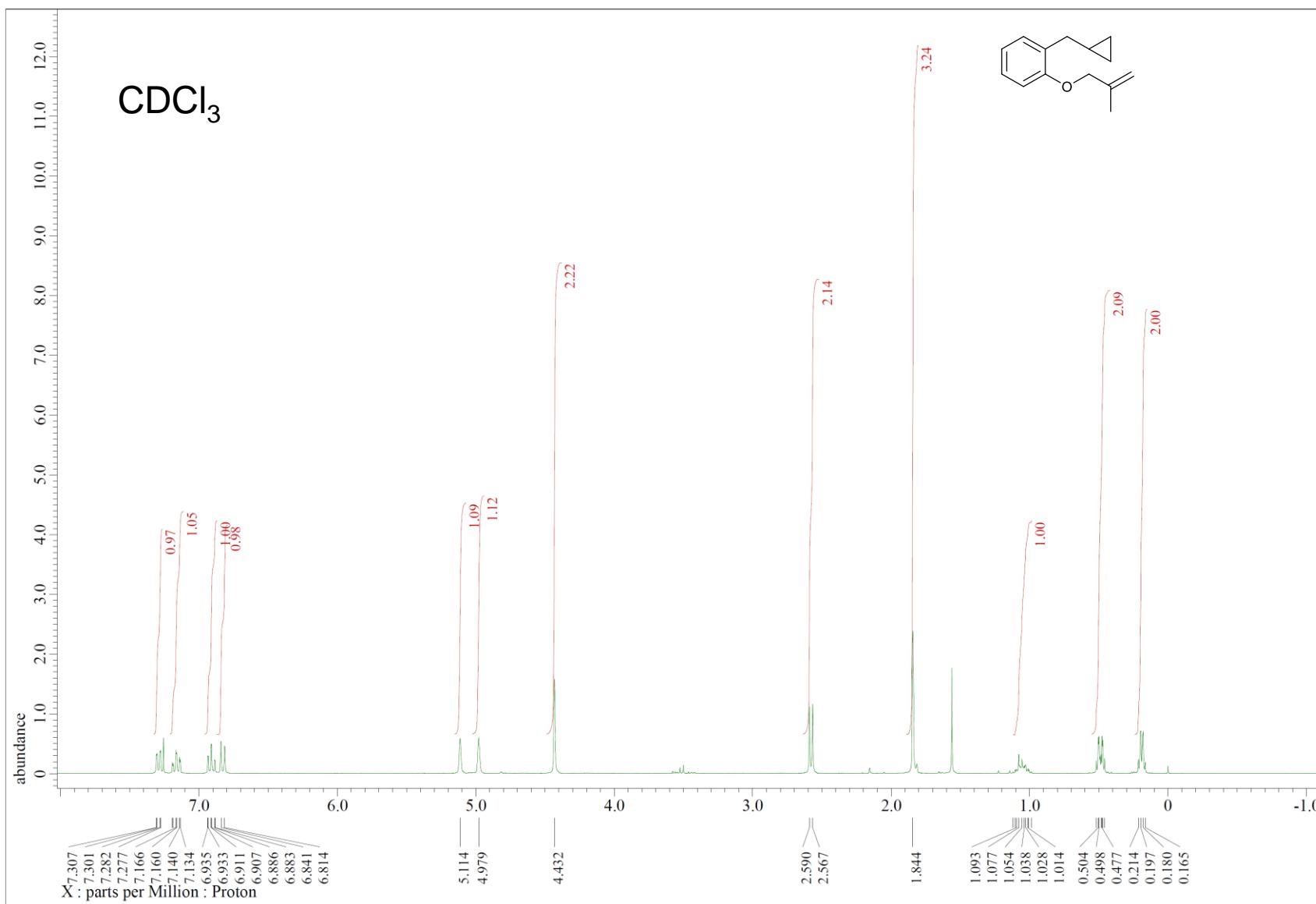
1o (E:Z = 4:1)



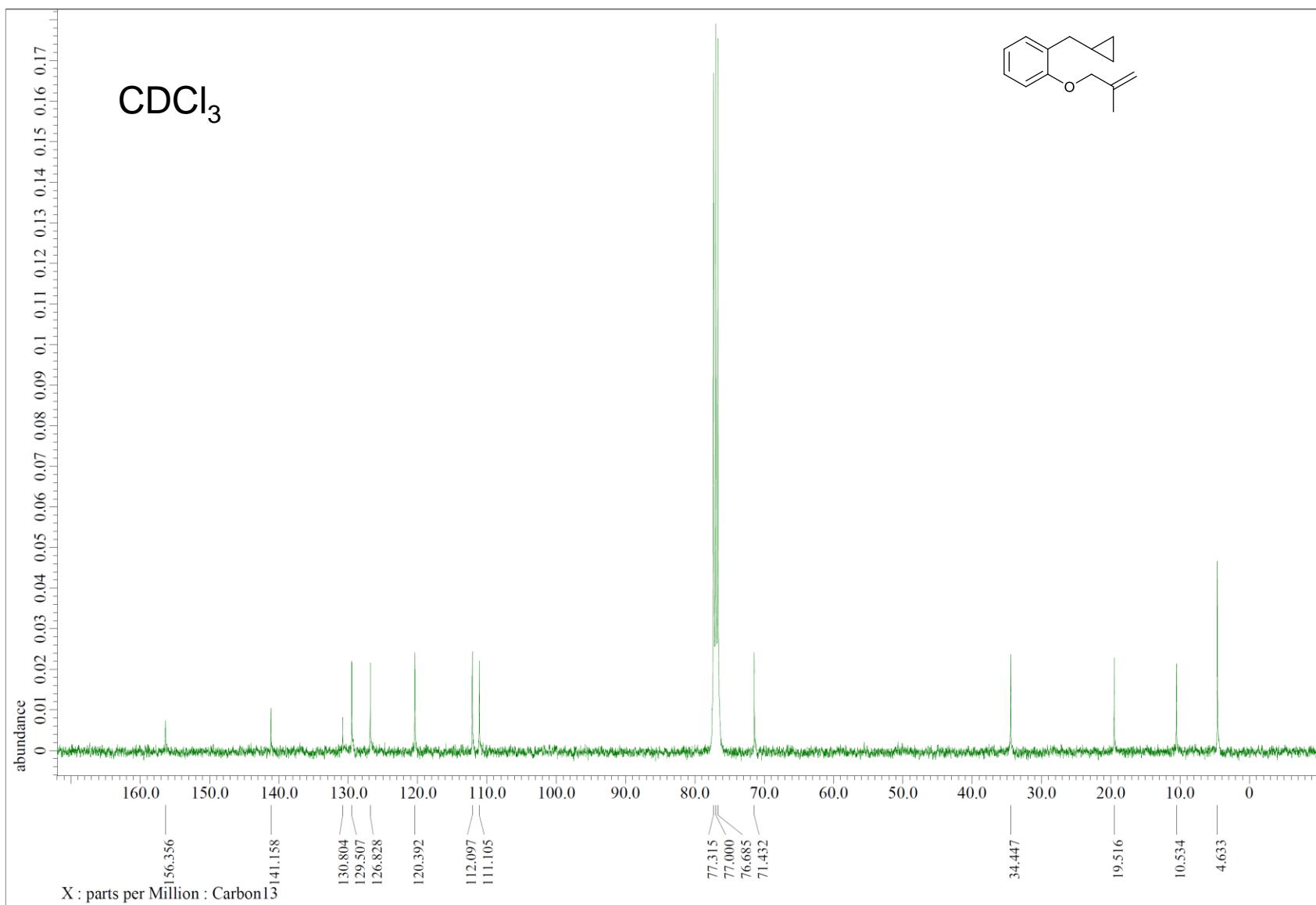




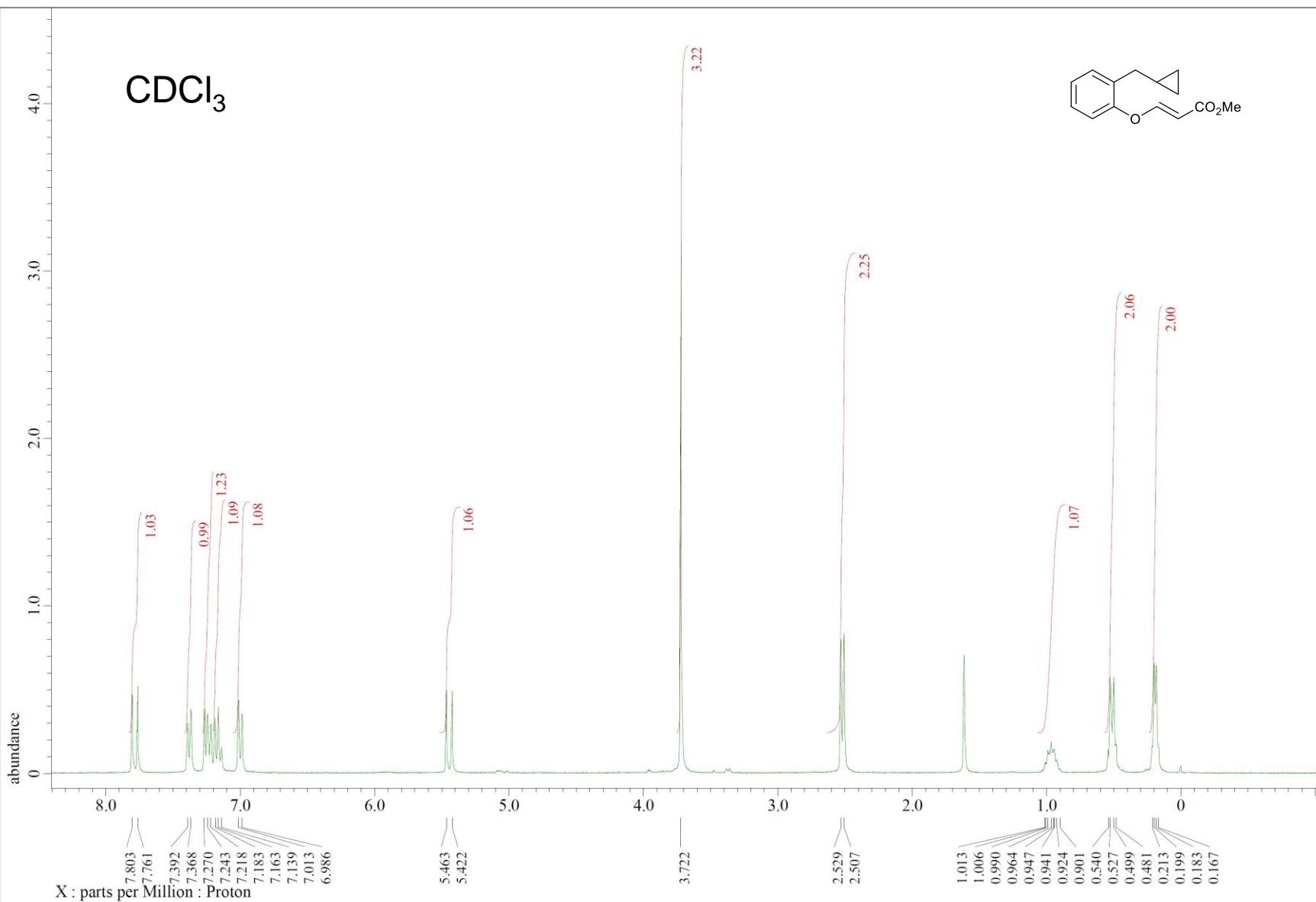
1q



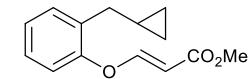
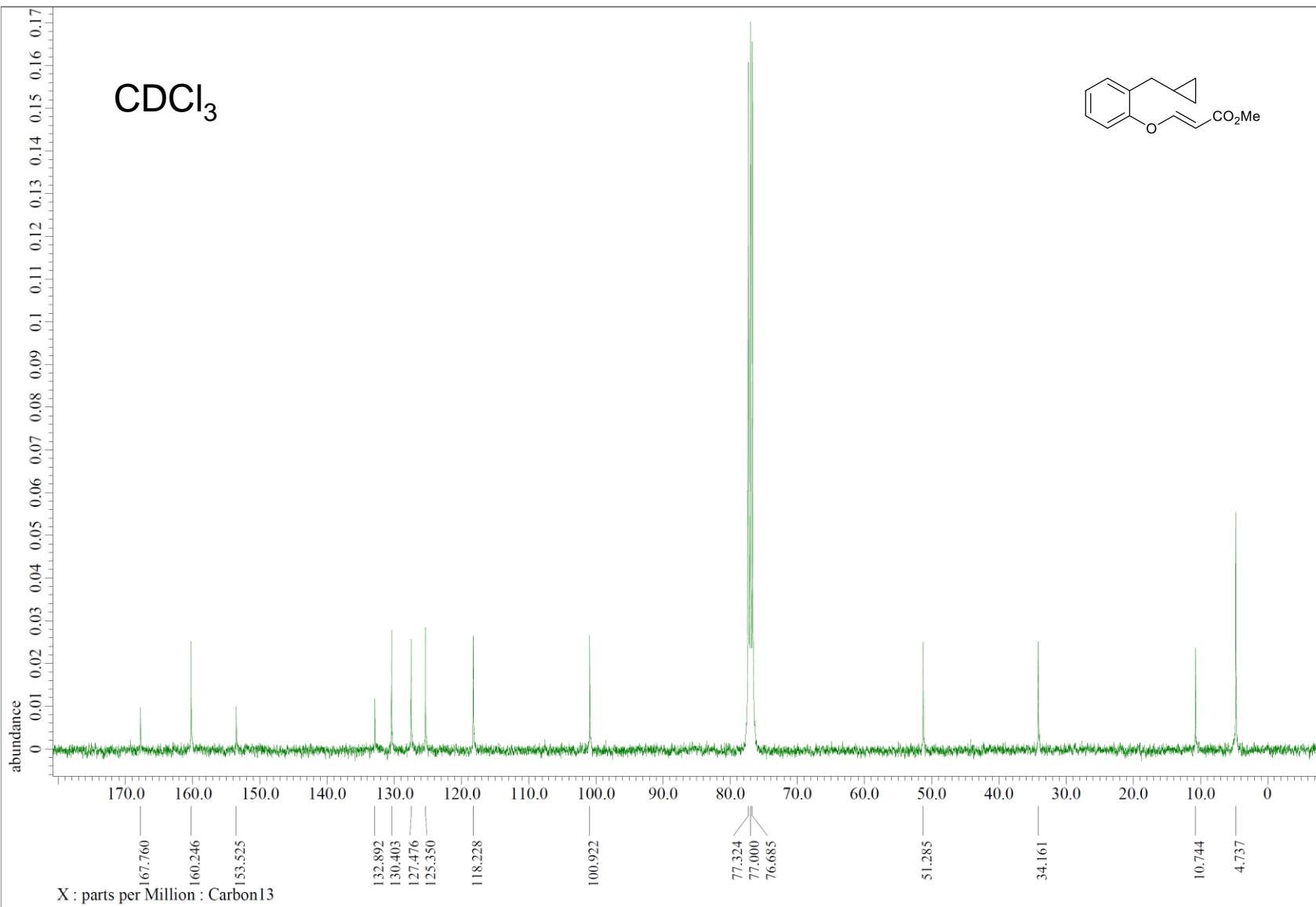
1q

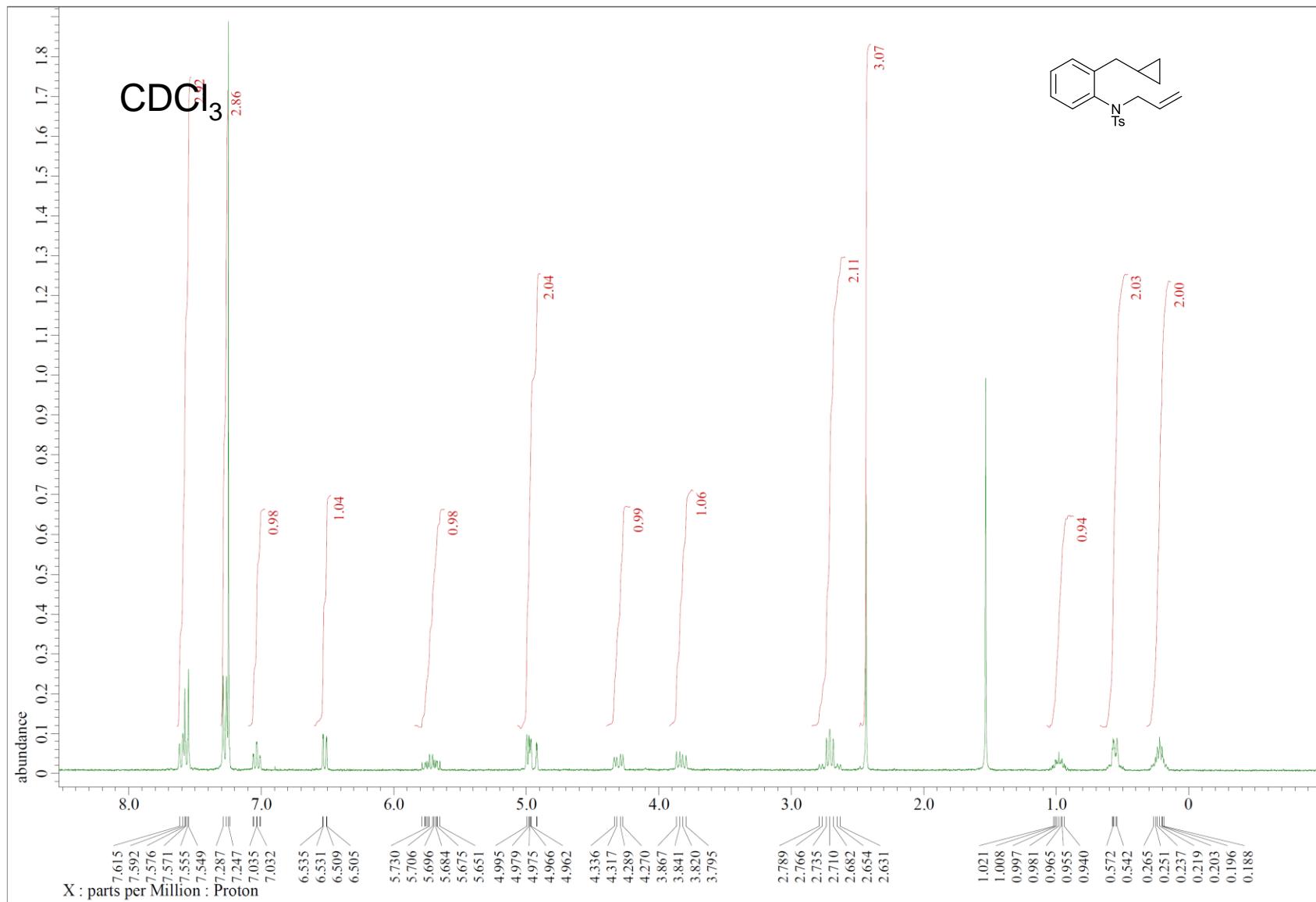


1r

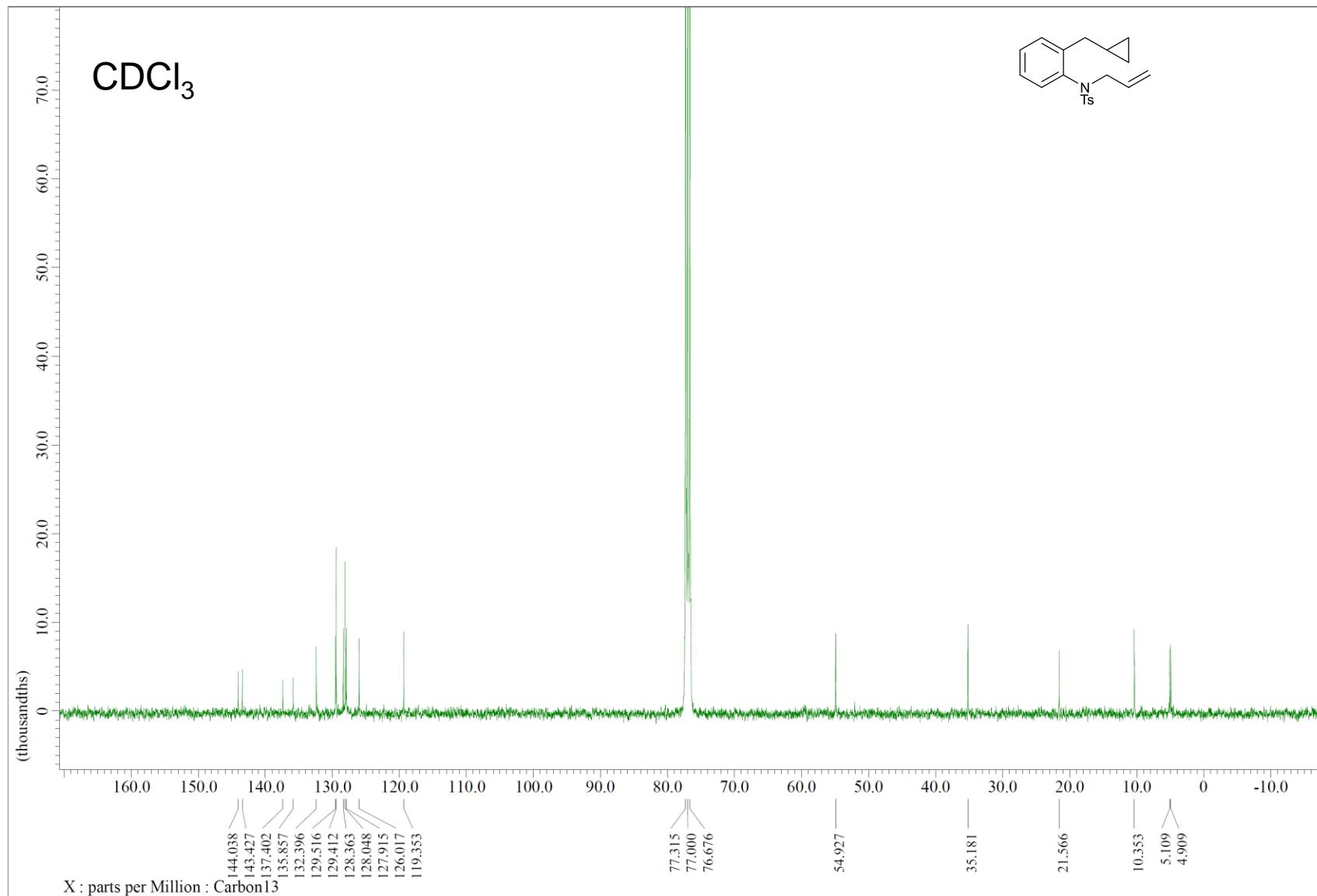


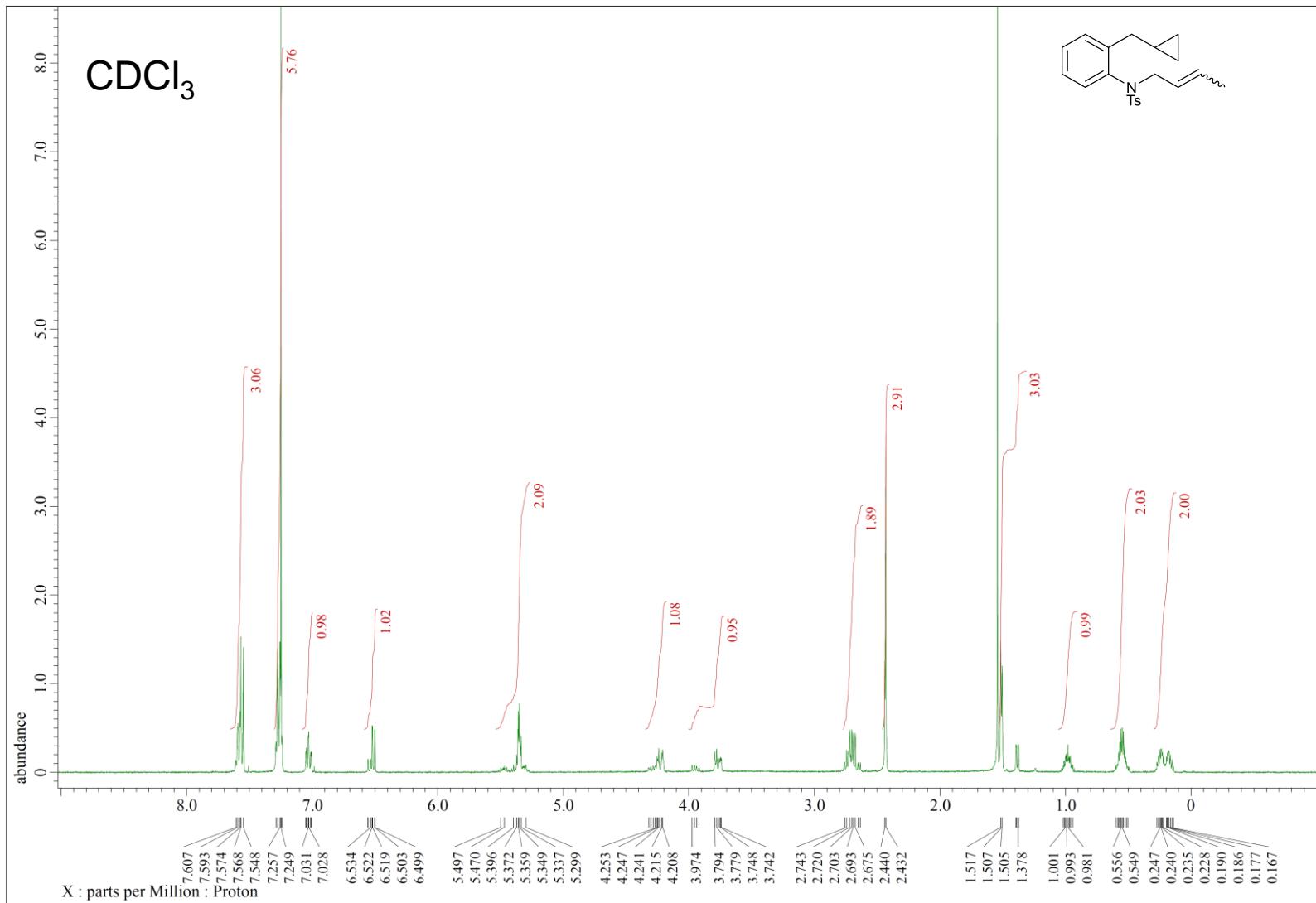
1r



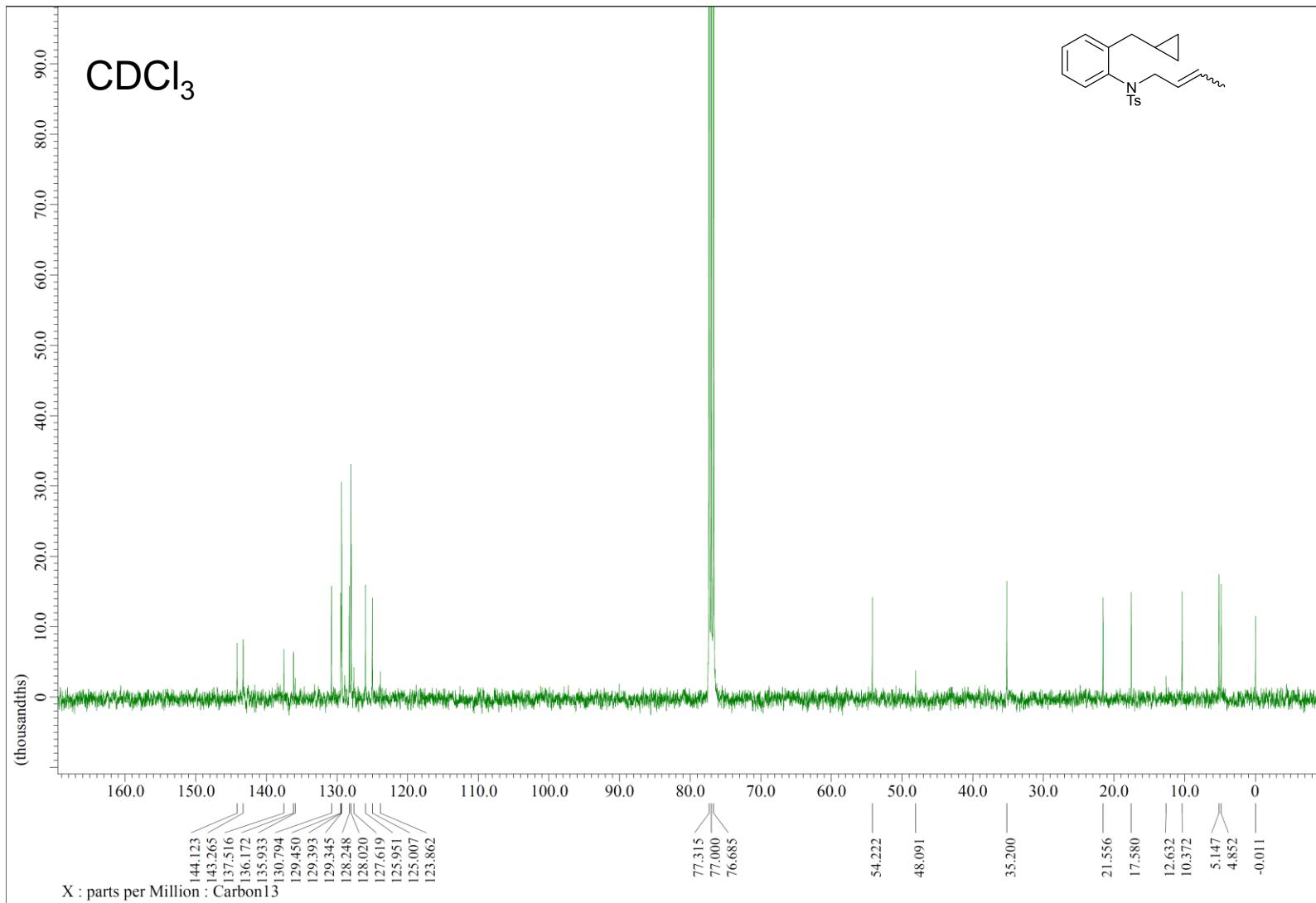


1s

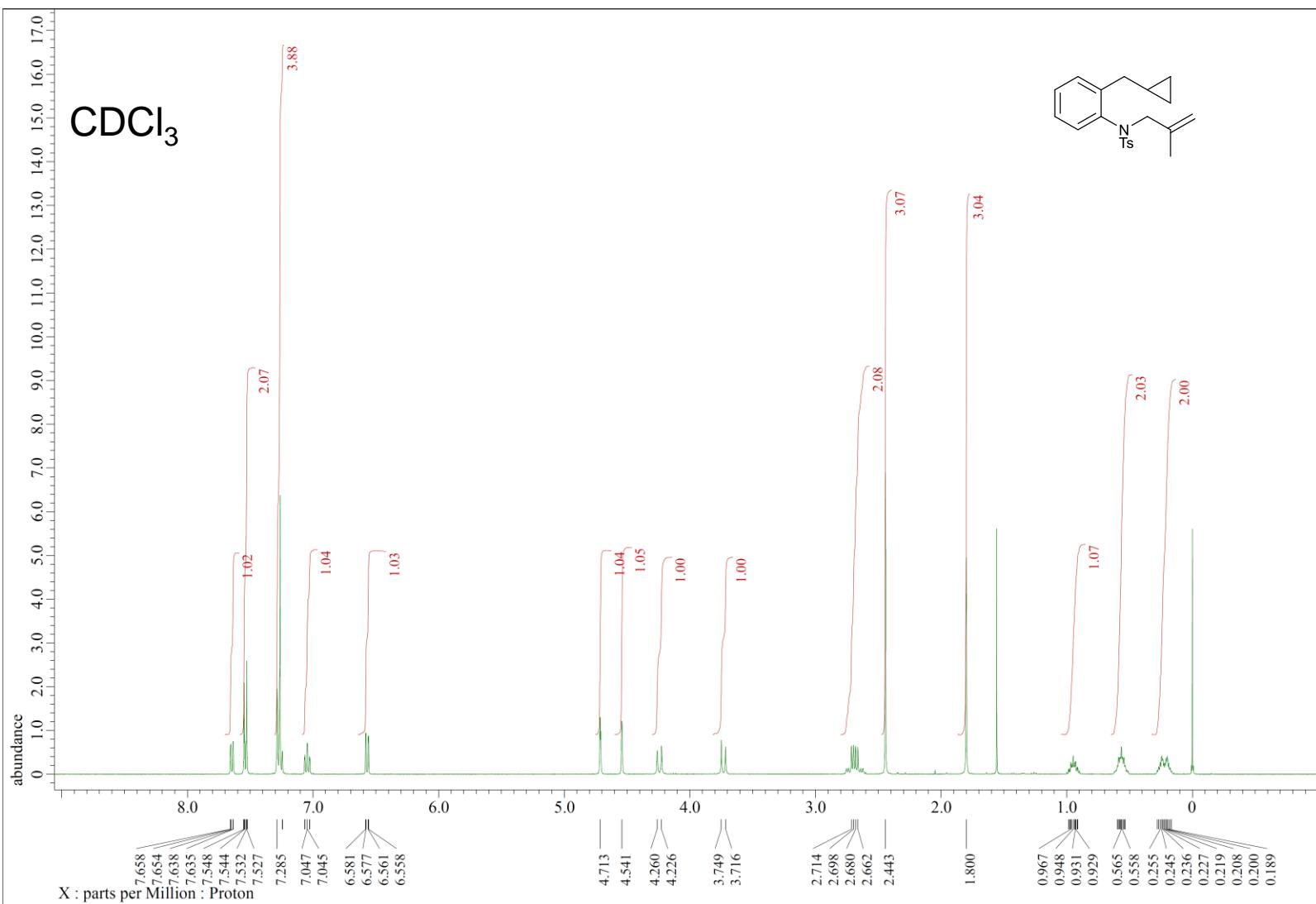


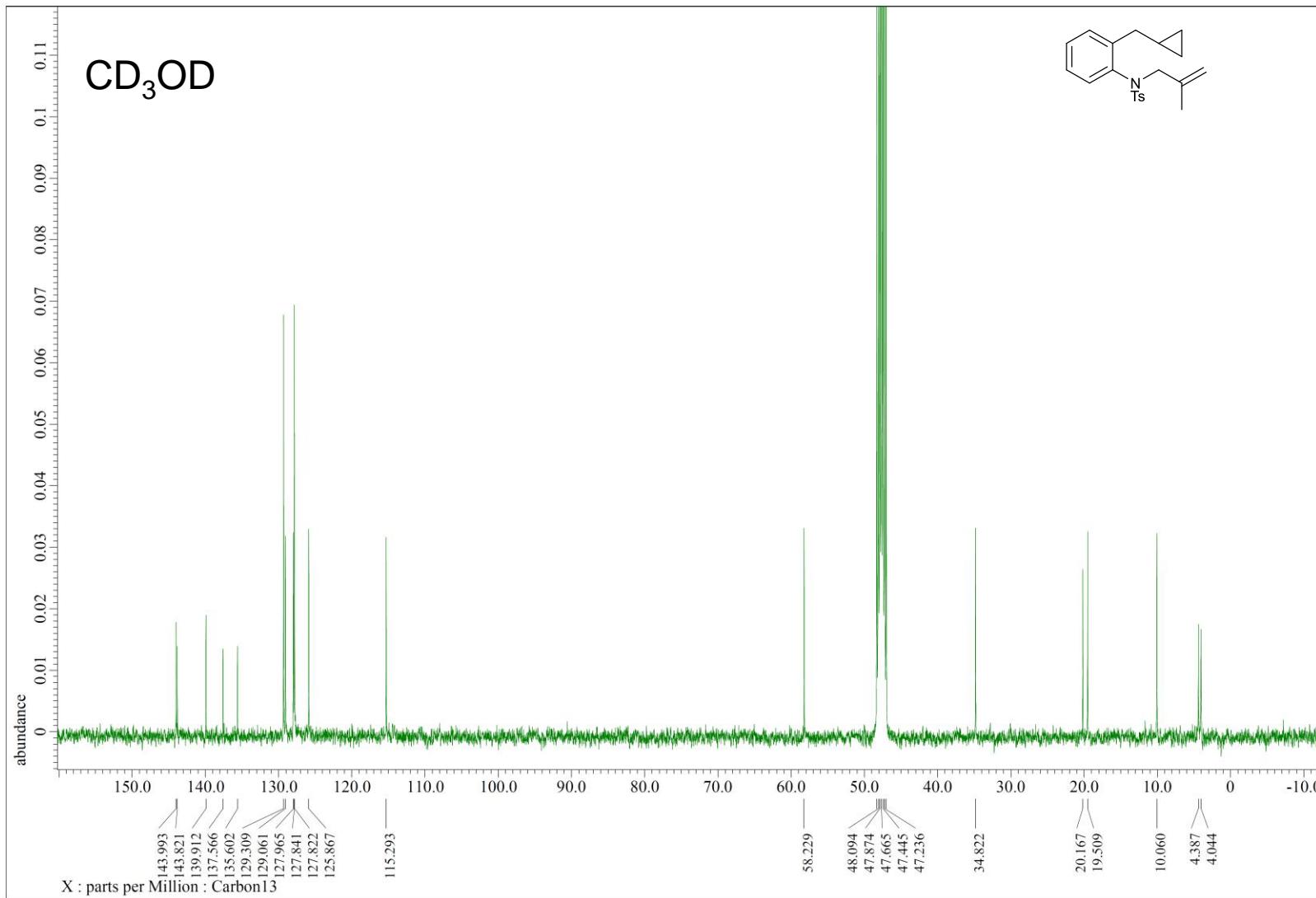


1t (E:Z = 4:1)

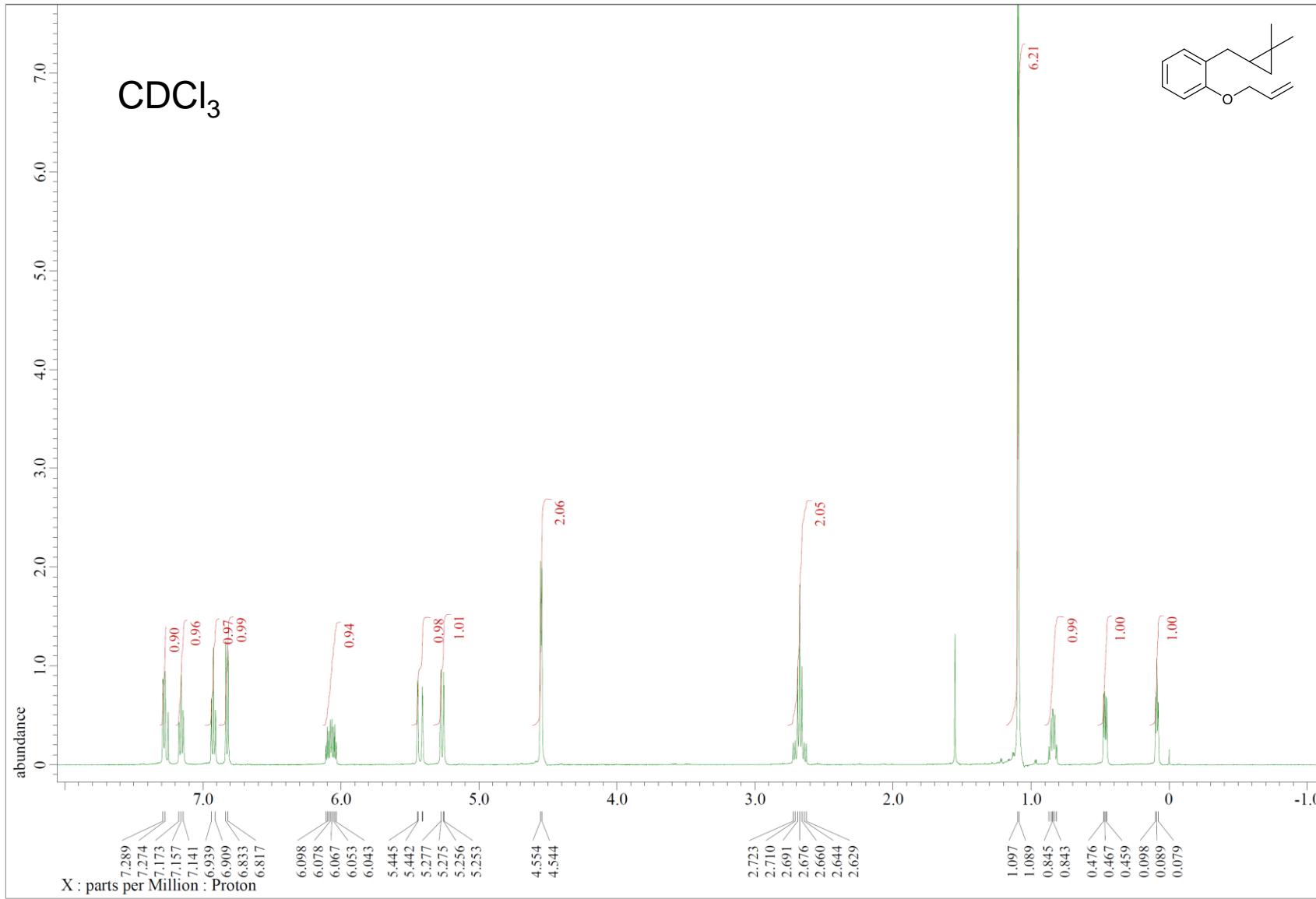


1u

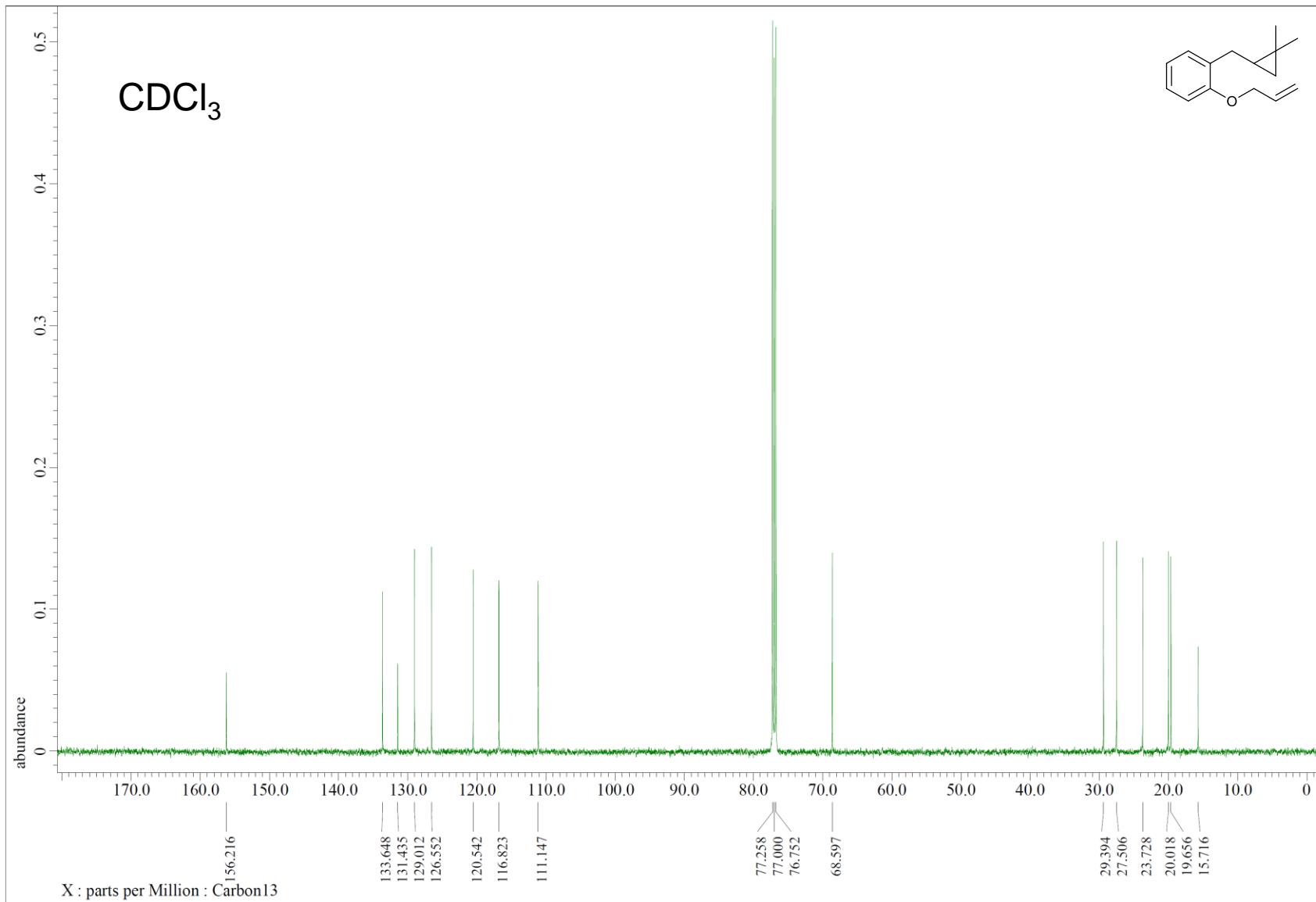




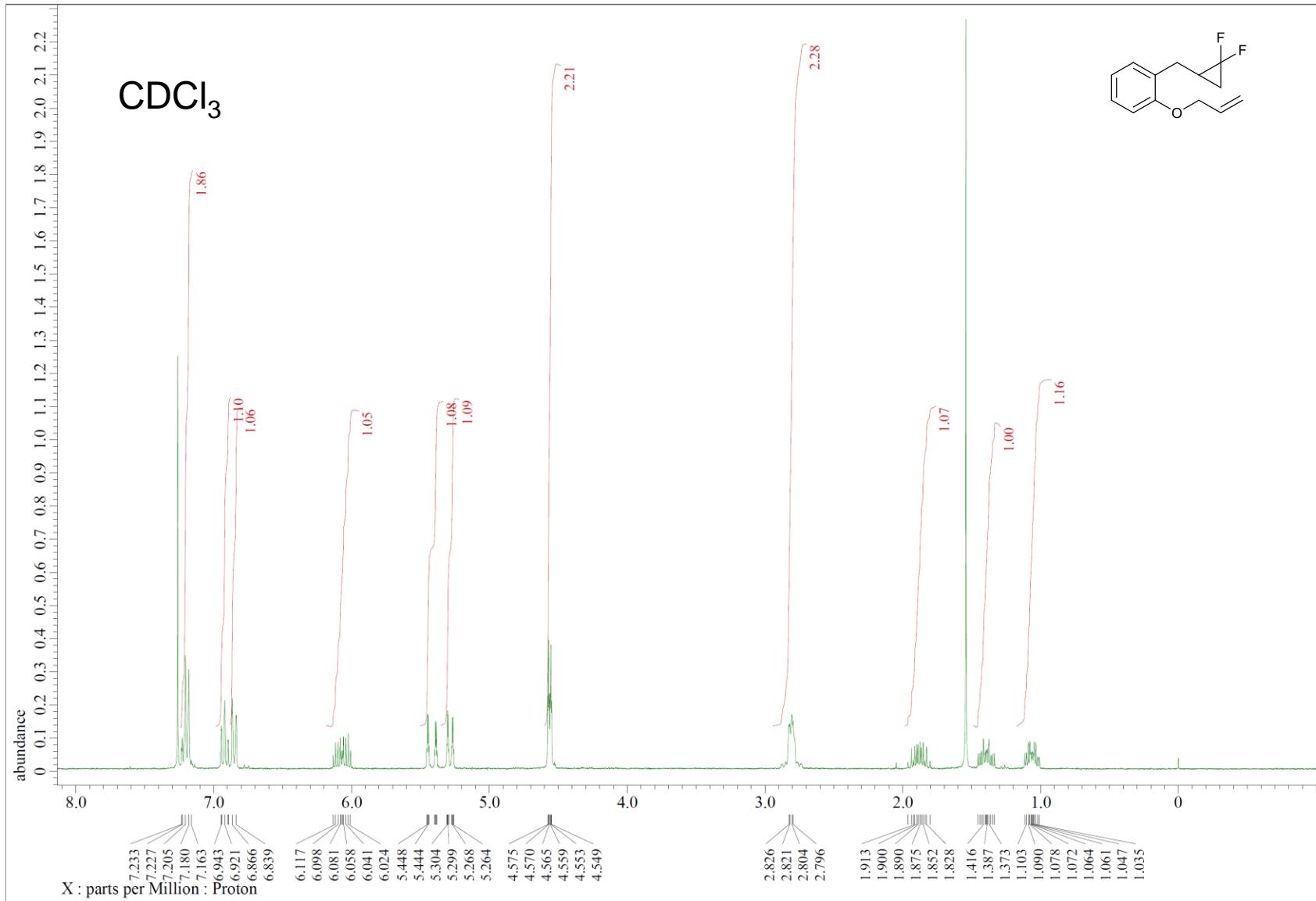
1v



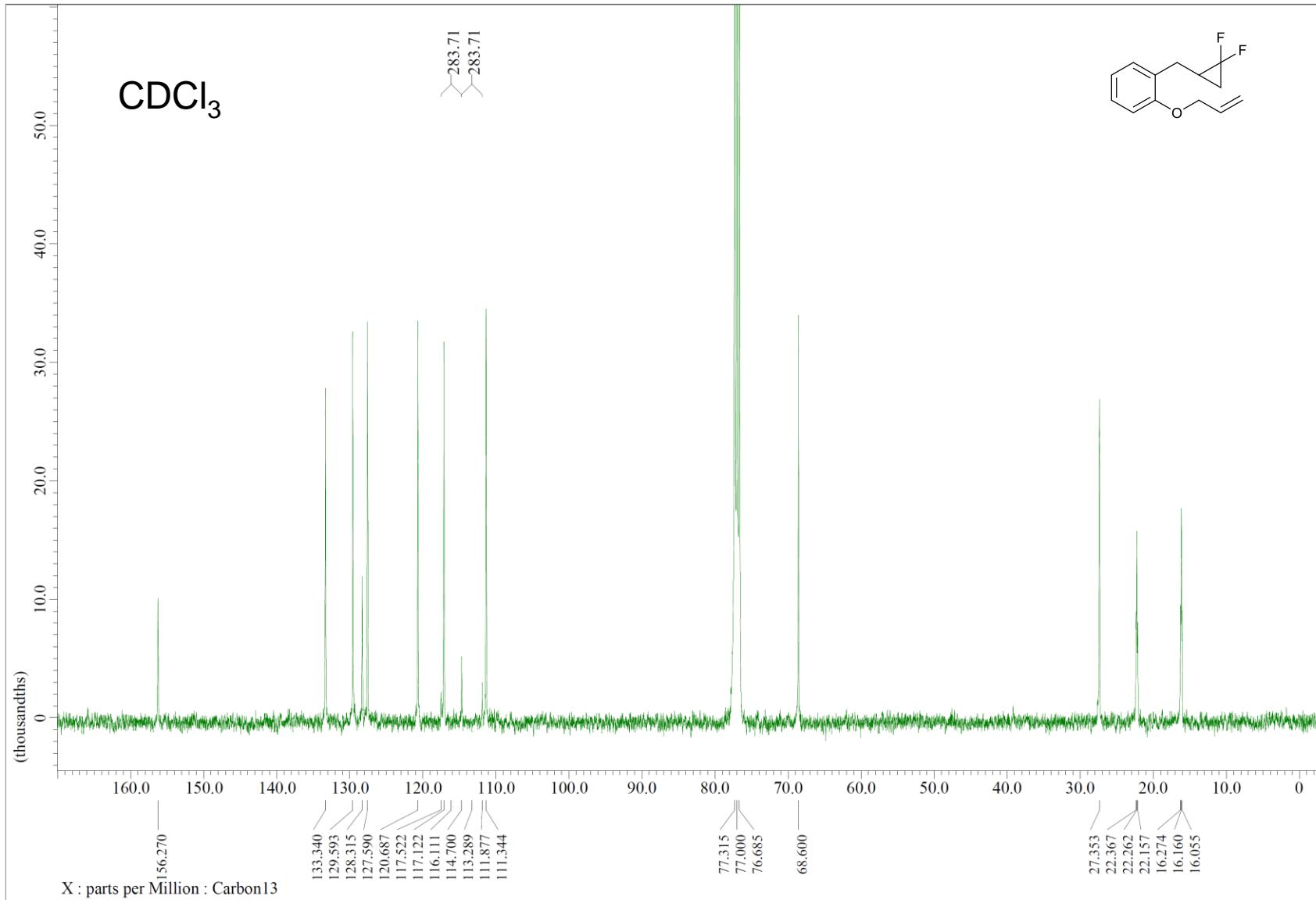
1v



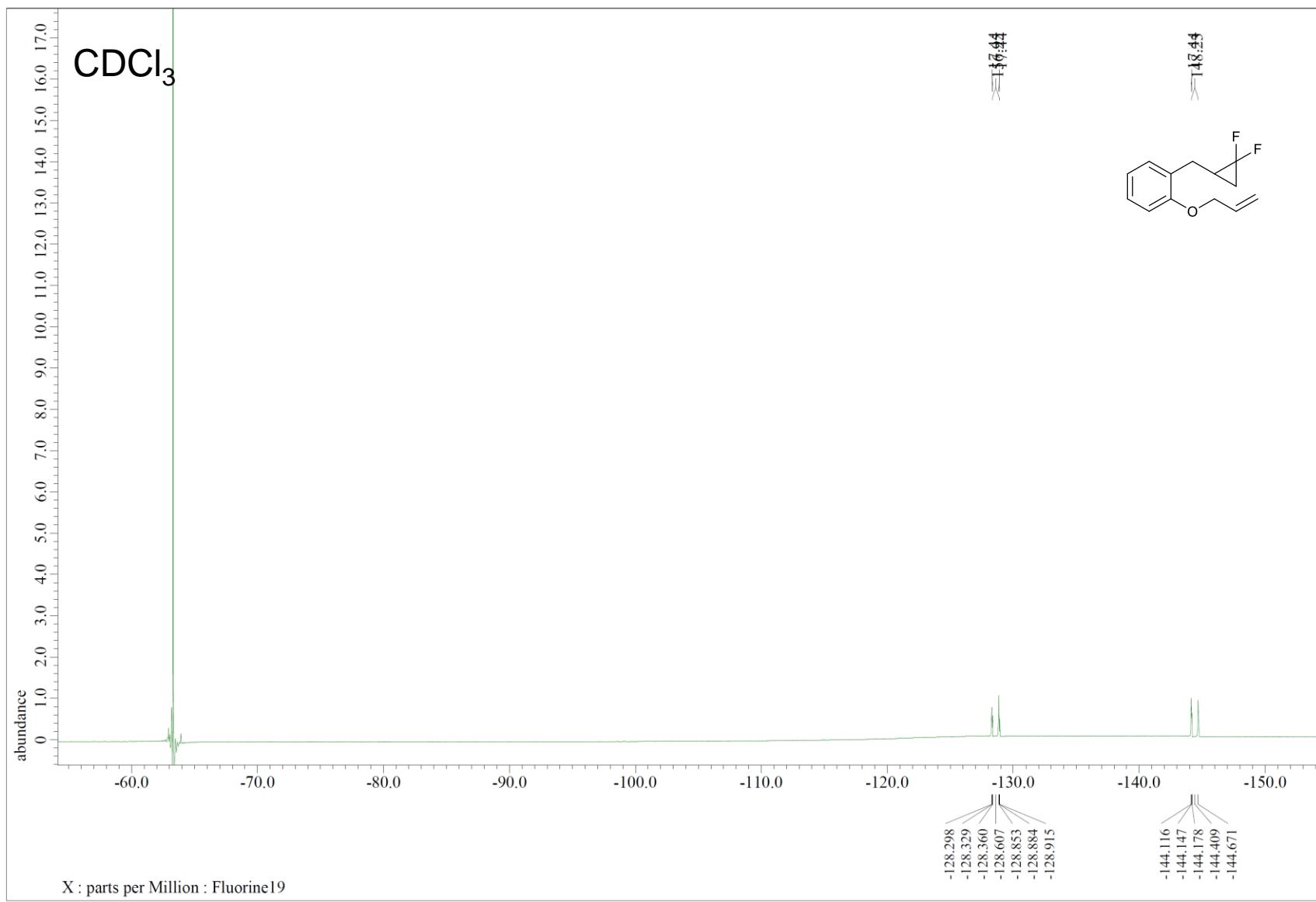
1w

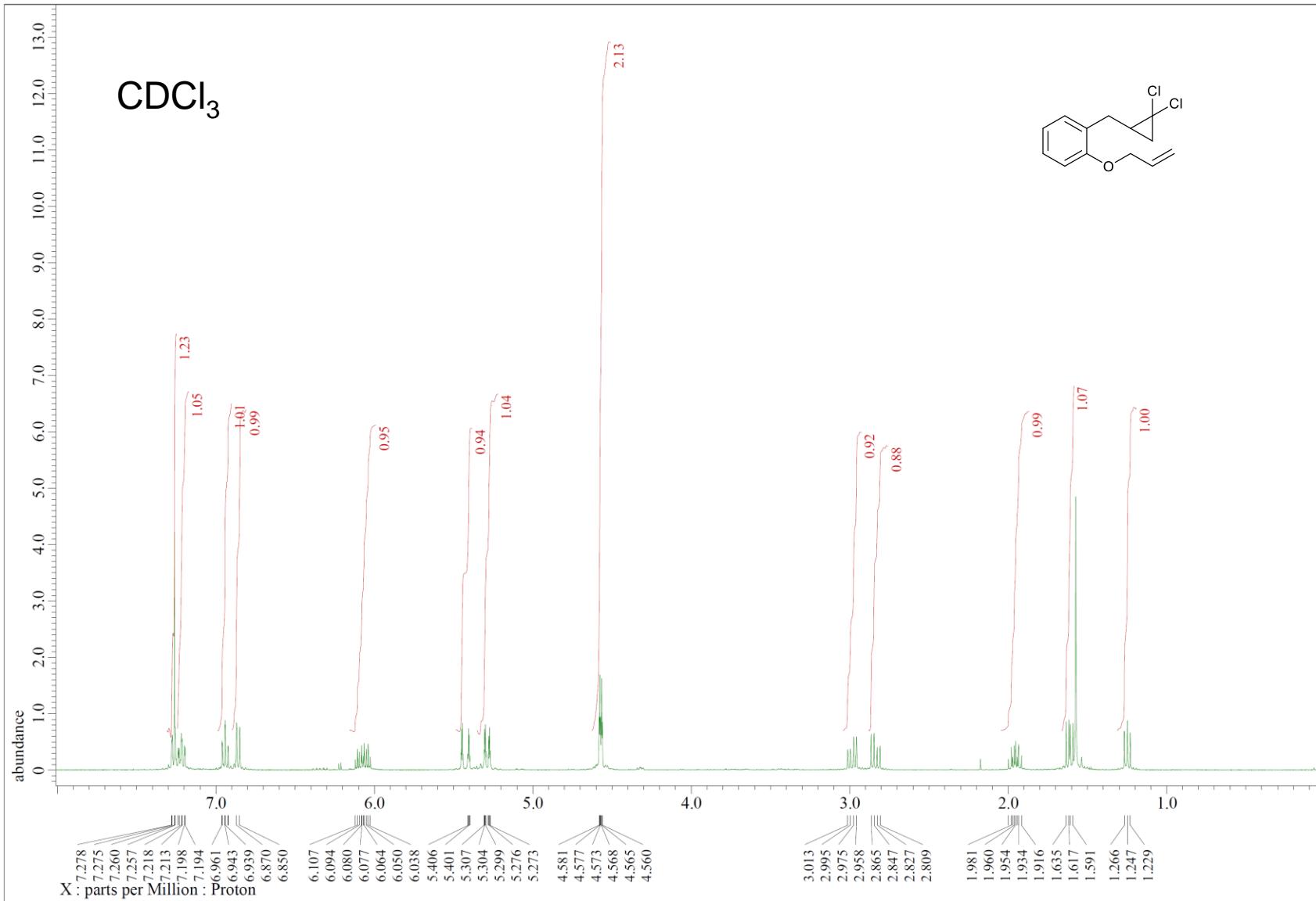


1w

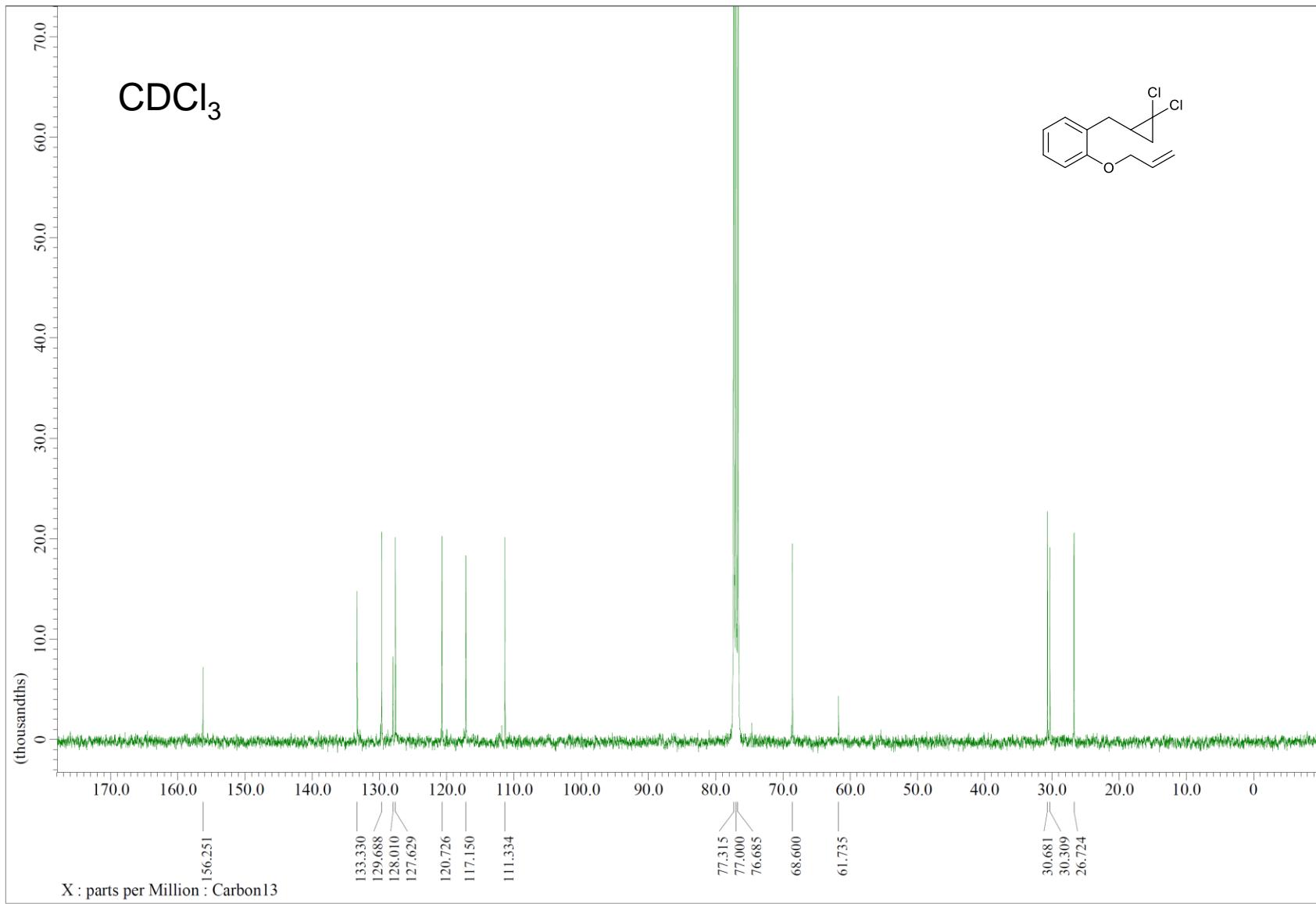


1w

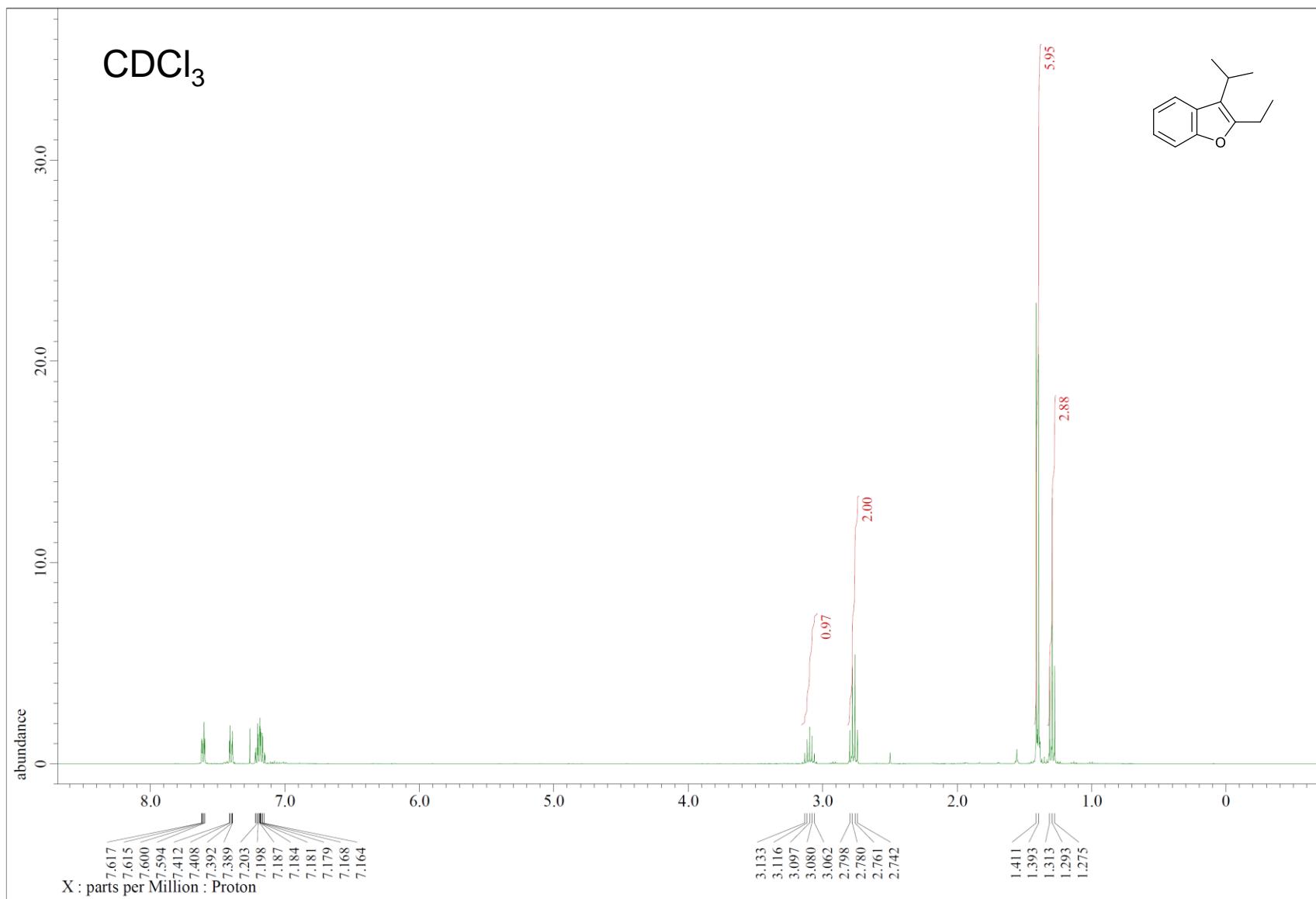




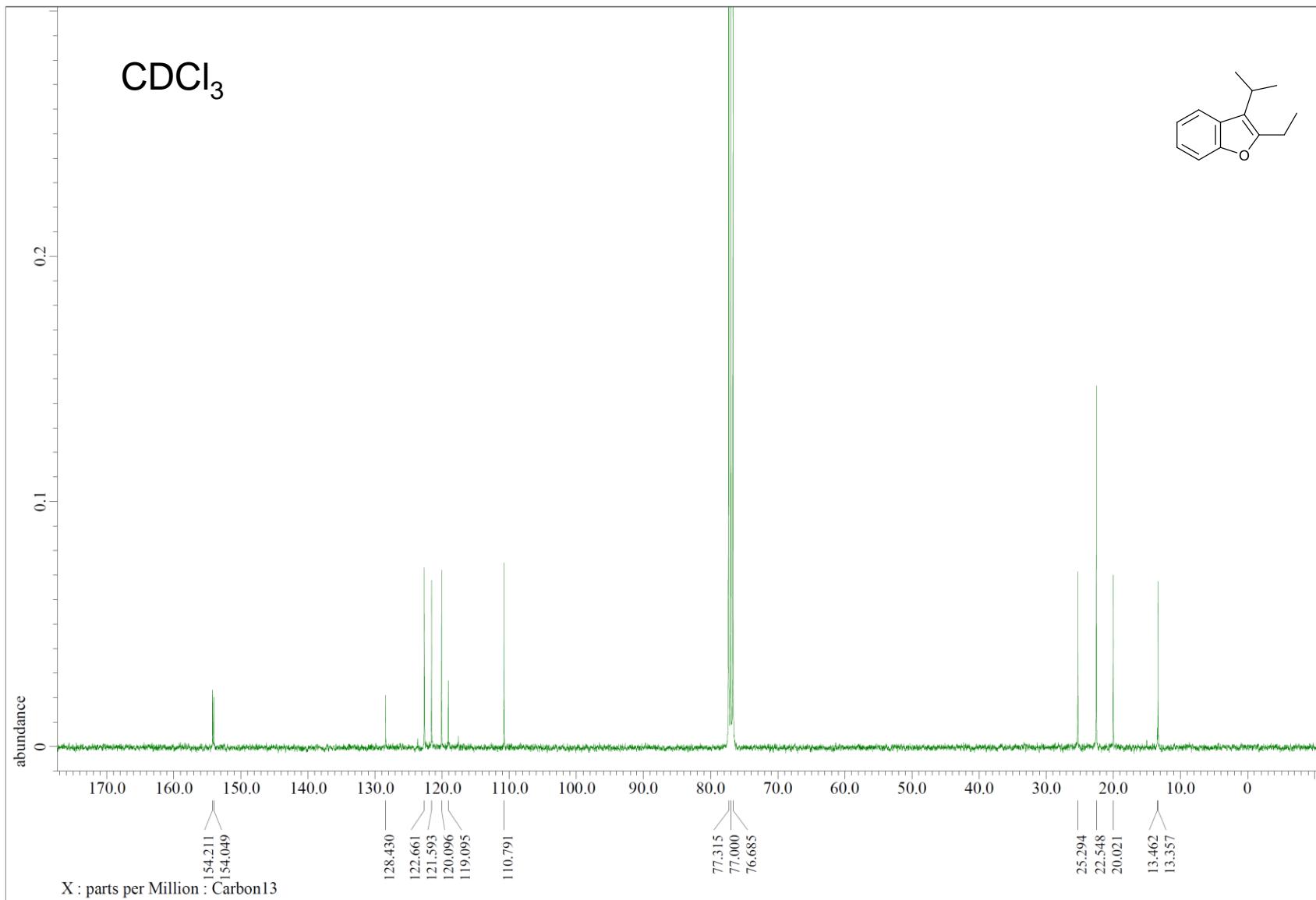
1x



2a

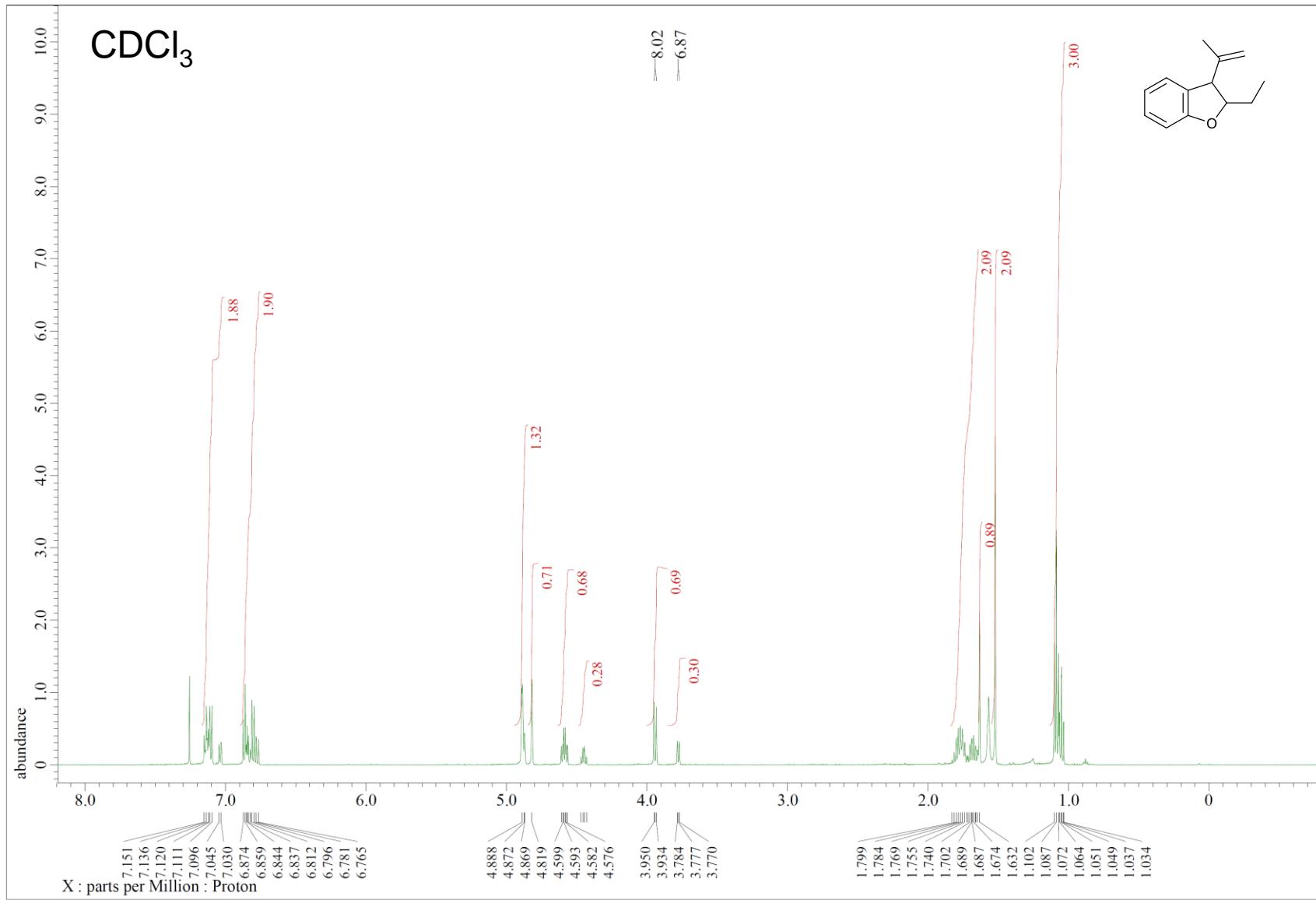


2a

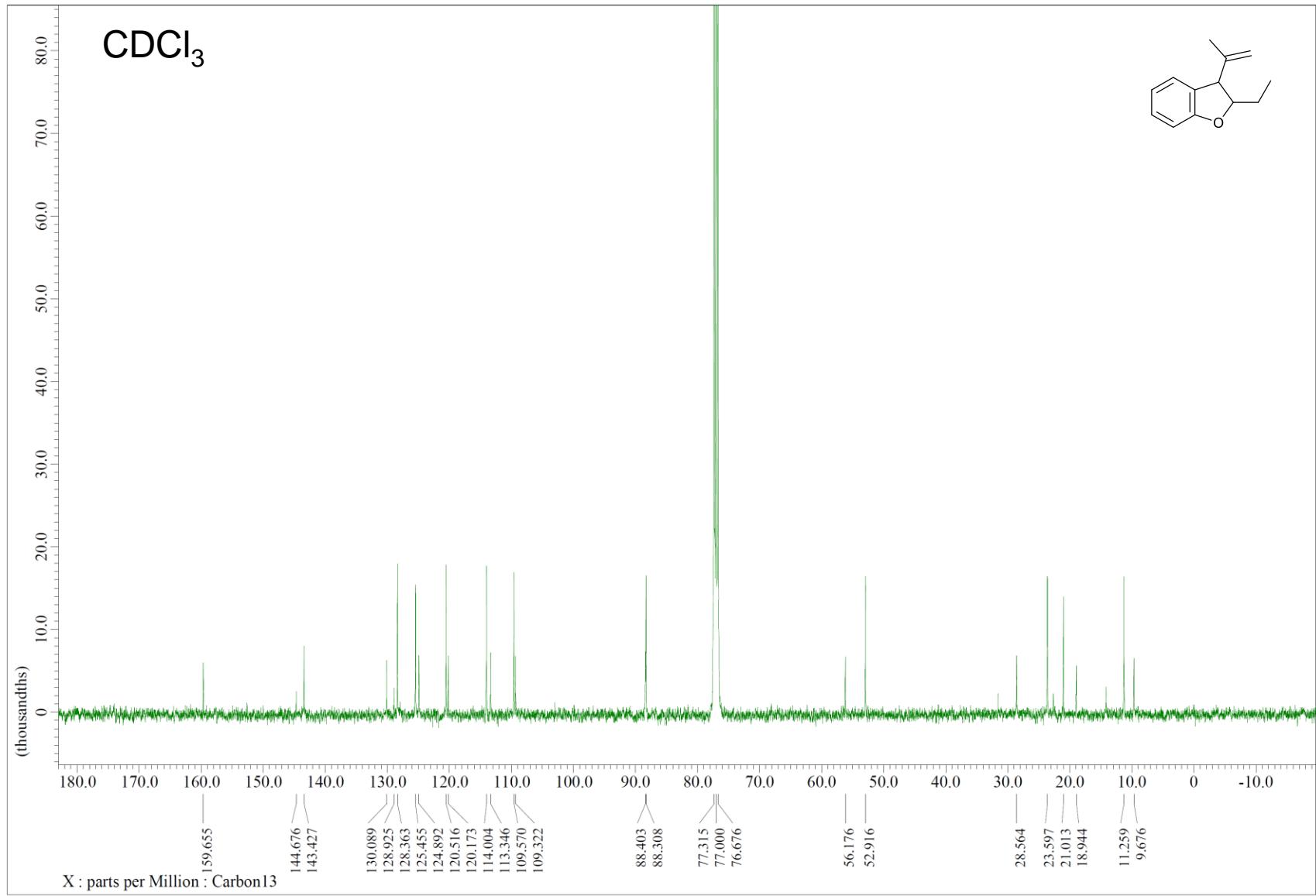


S2- 55

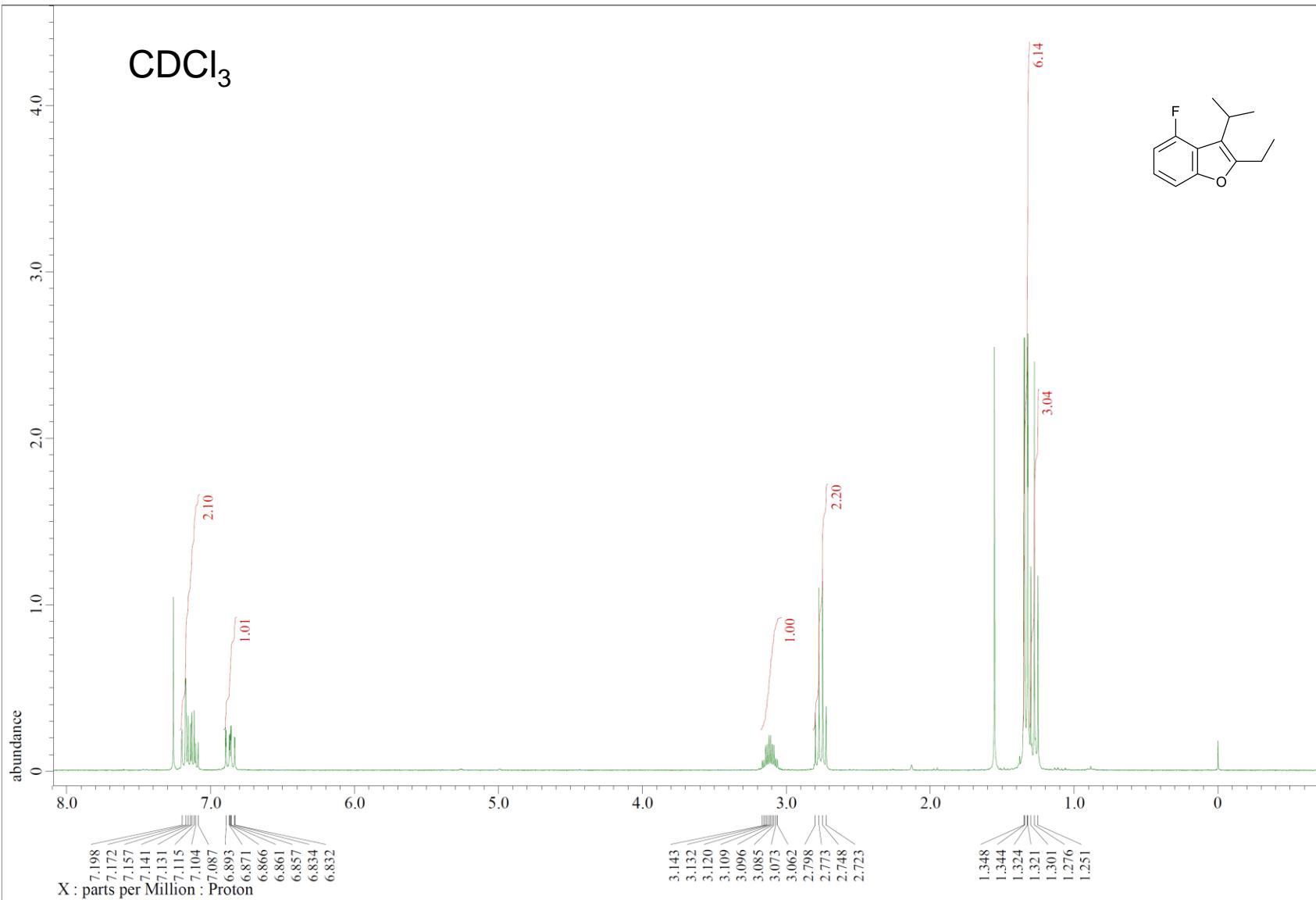
2a'



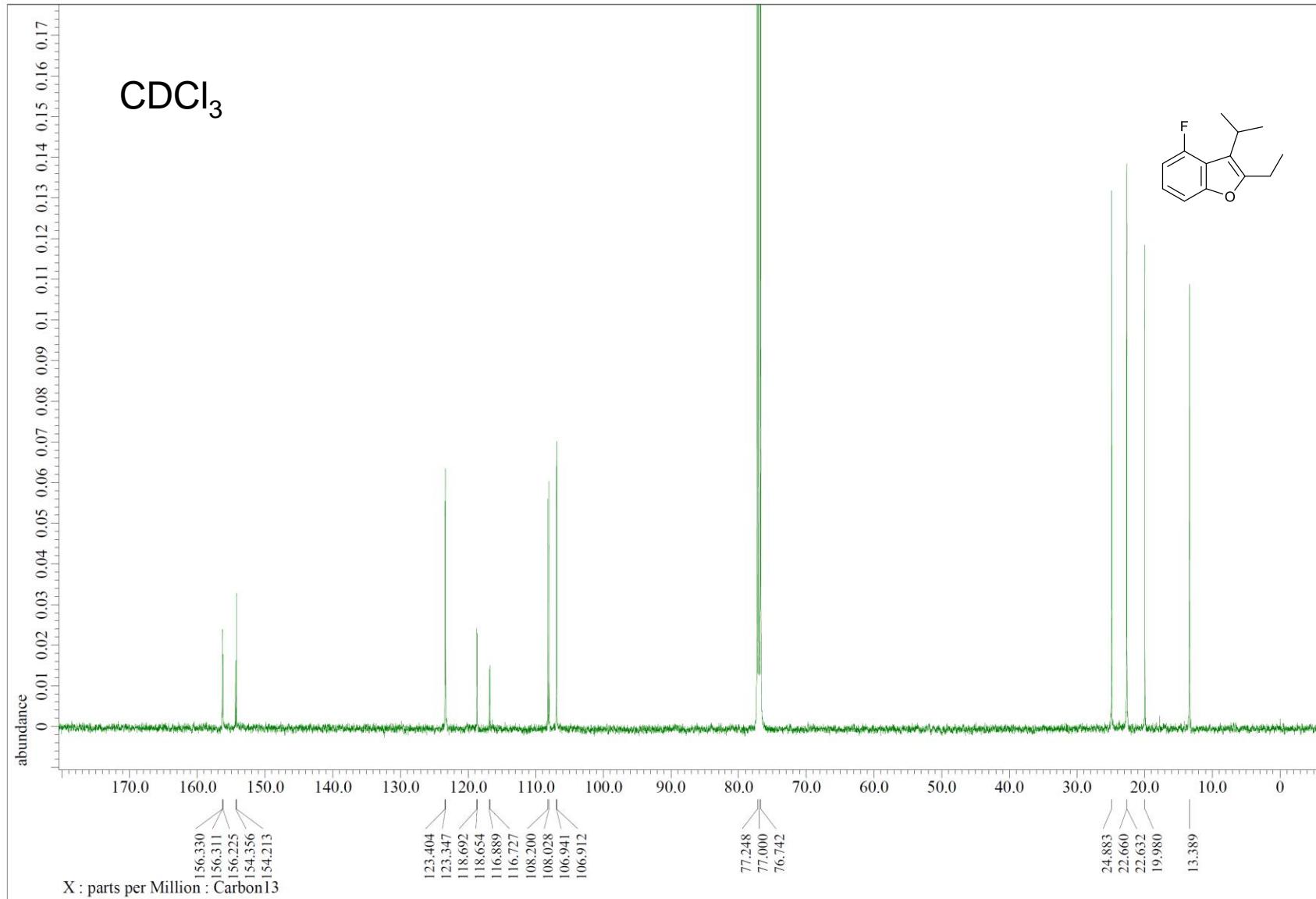
2a'



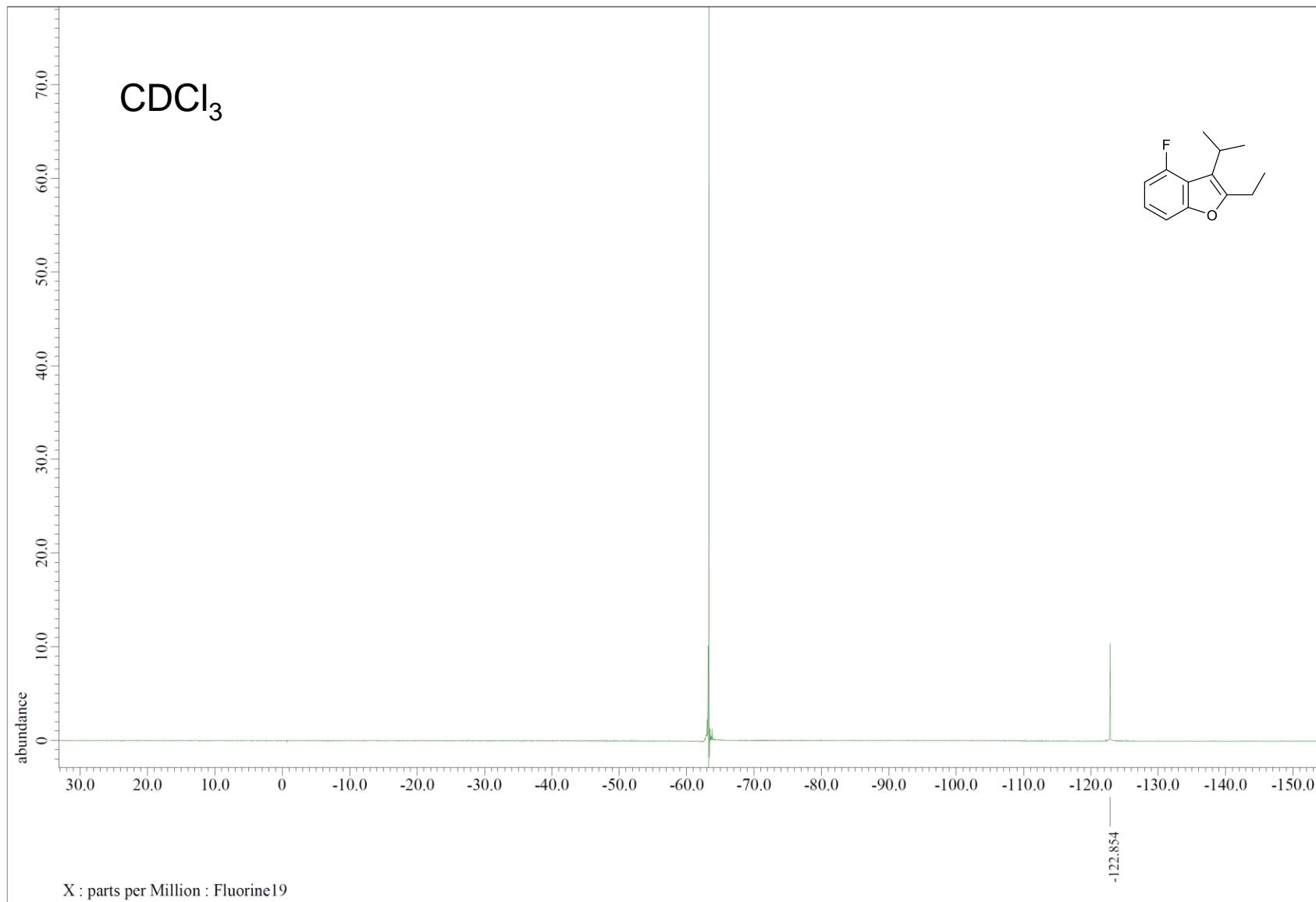
2b



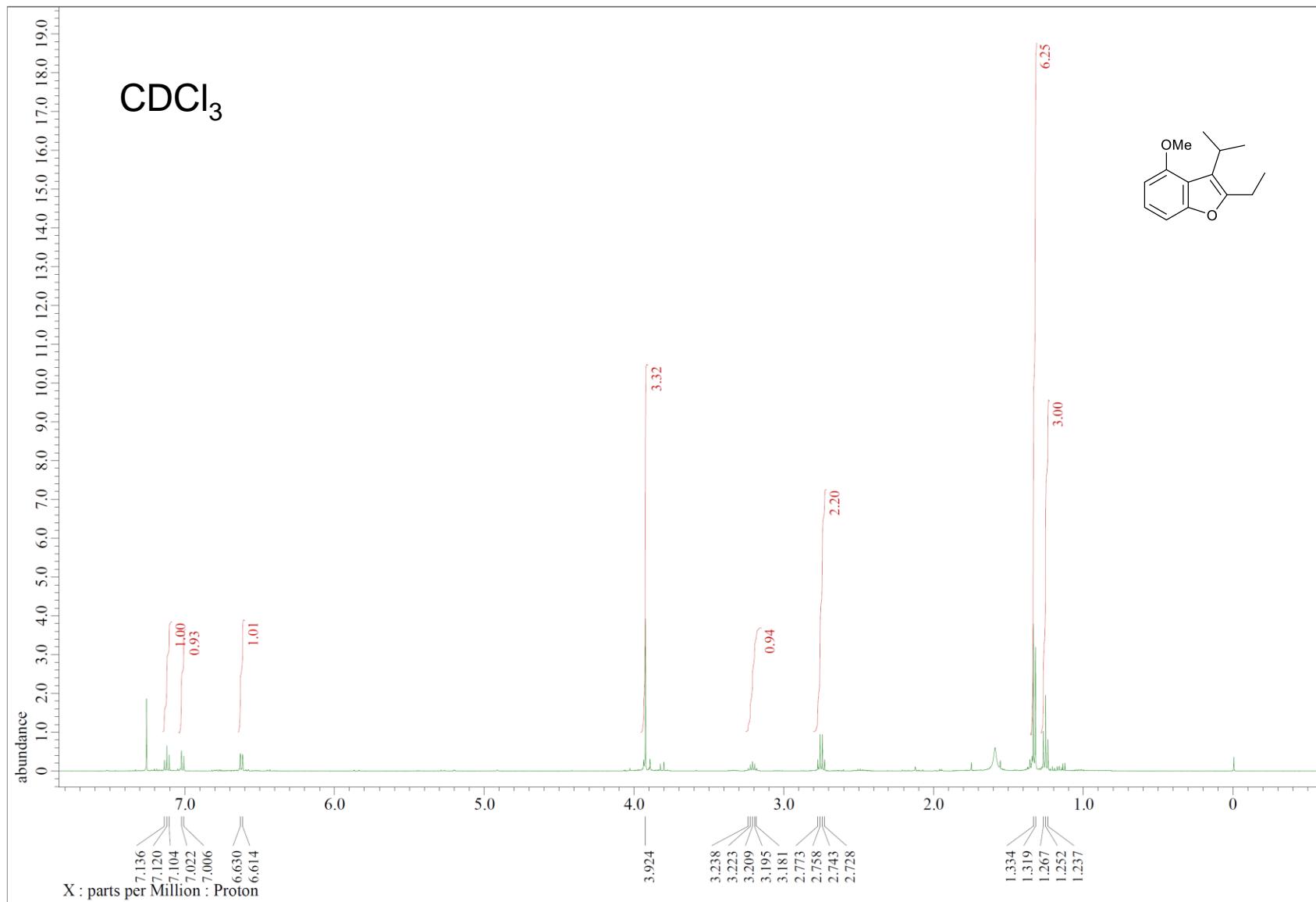
2b



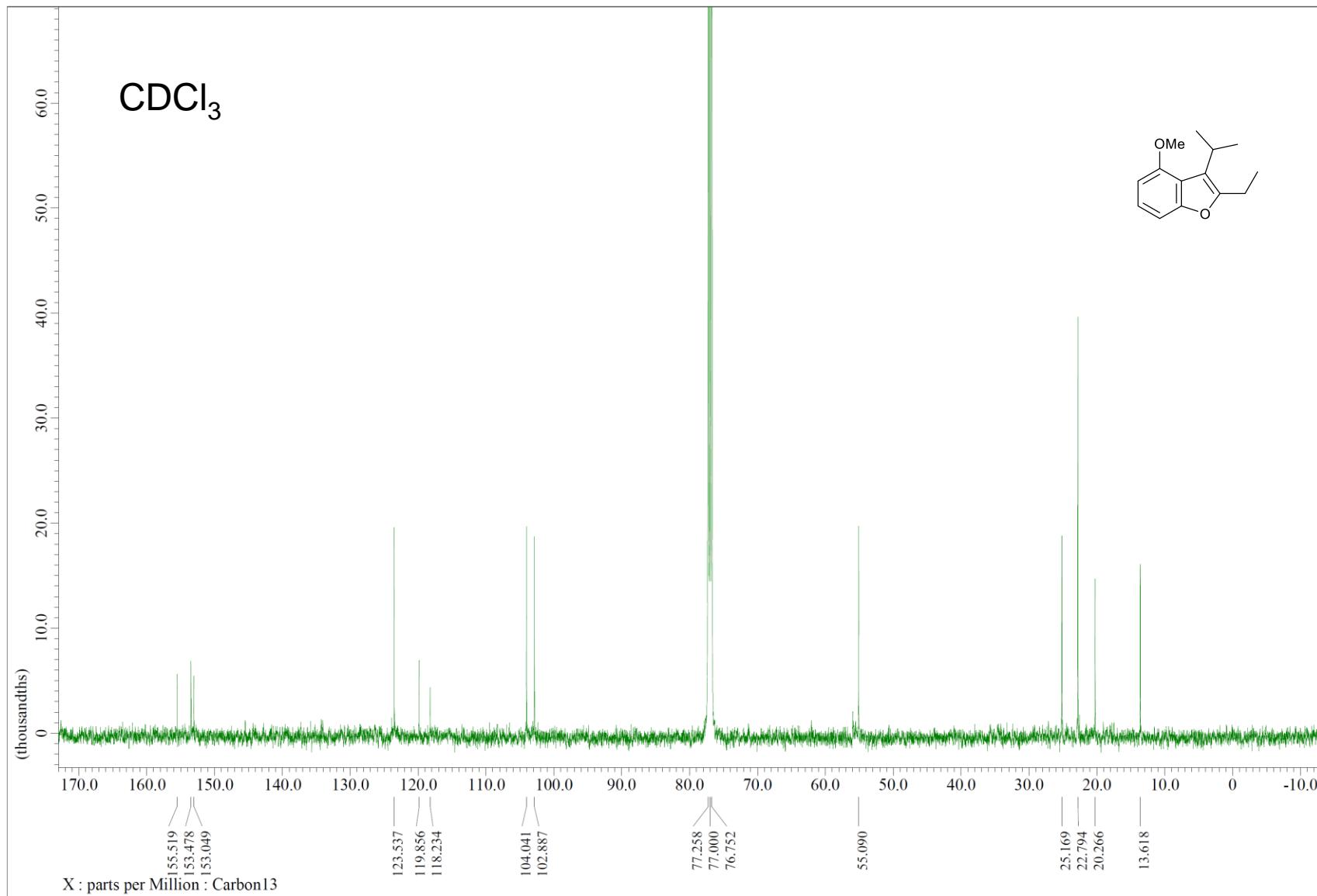
**2b**



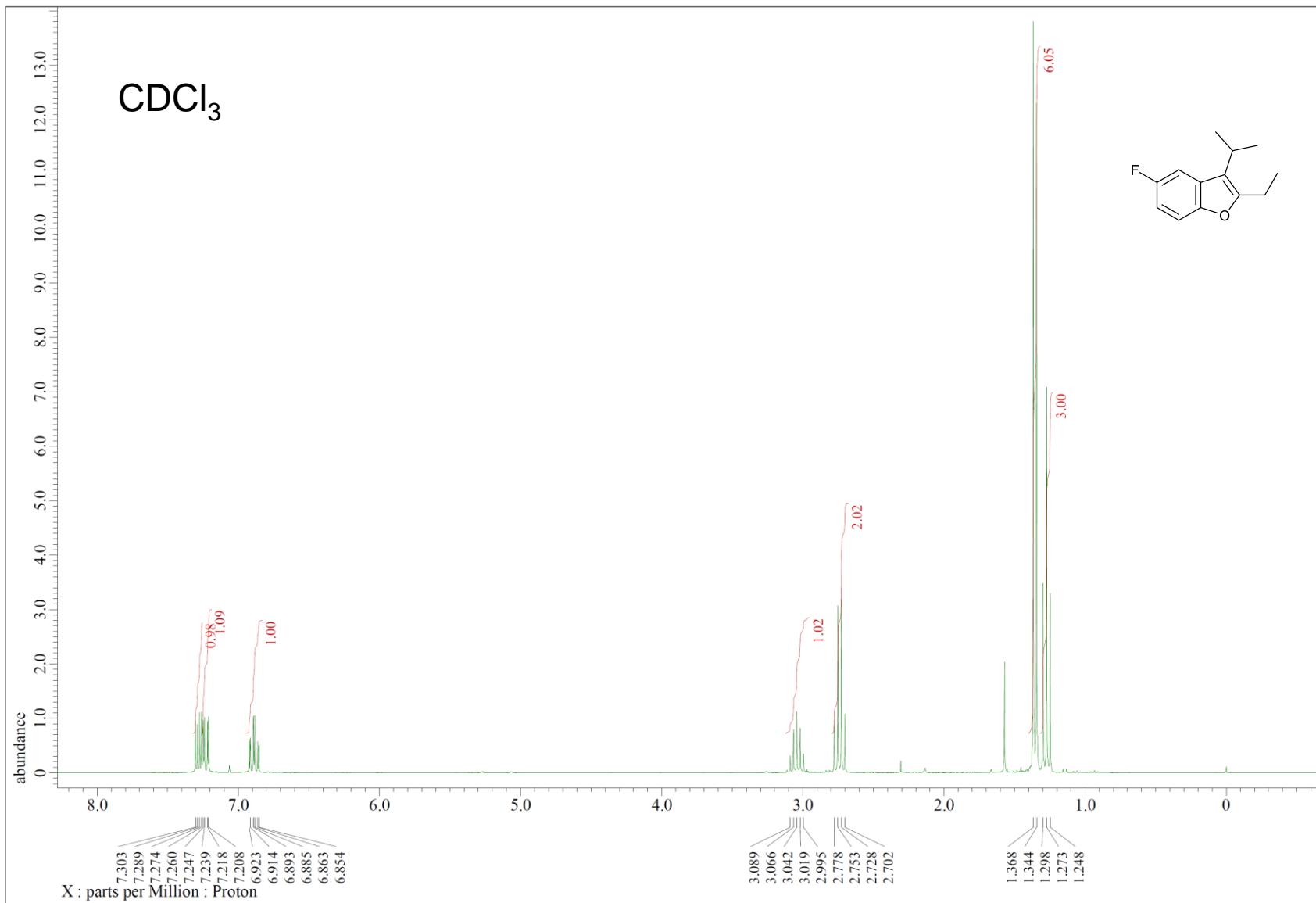
S2- 60



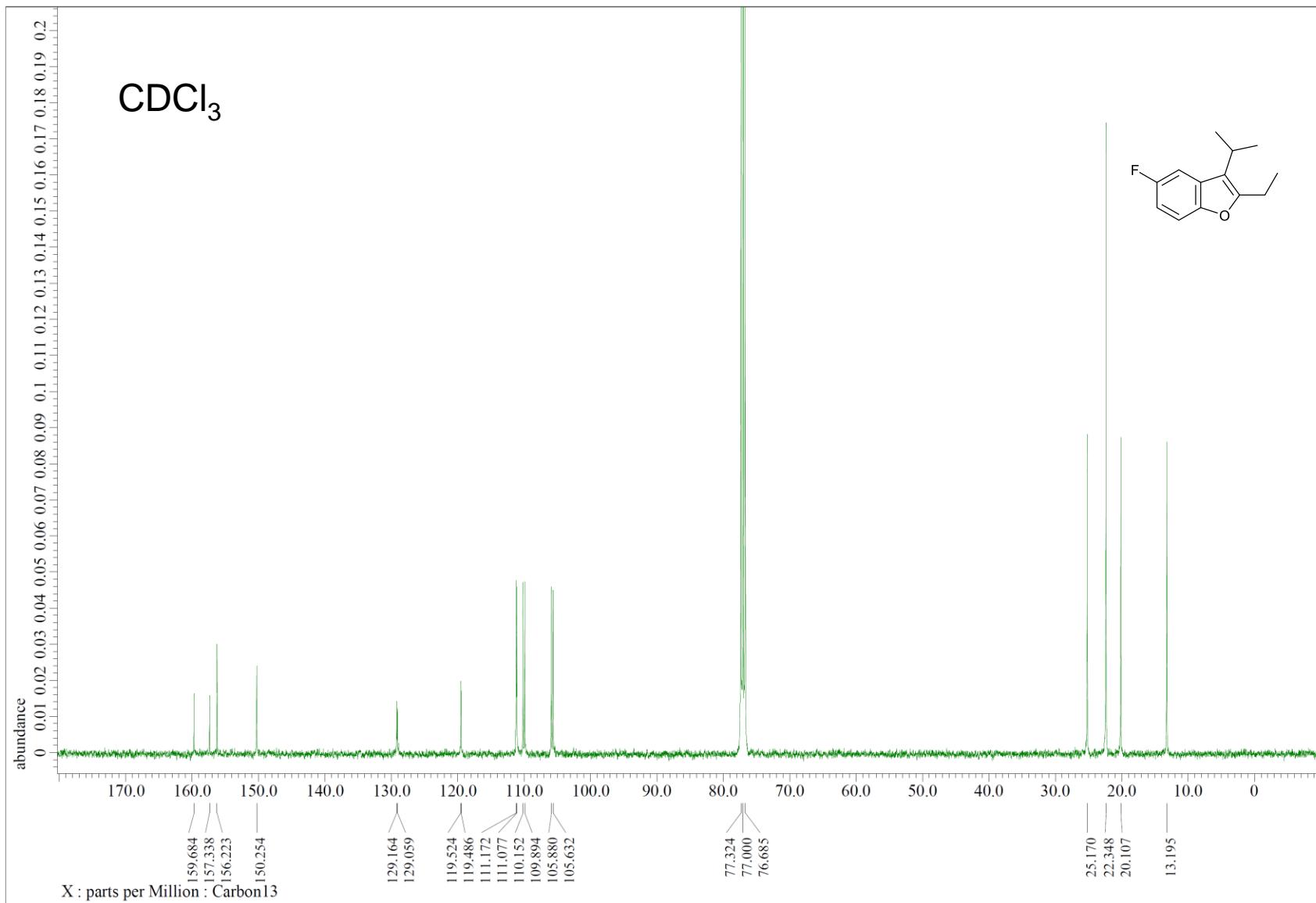
2d



2e

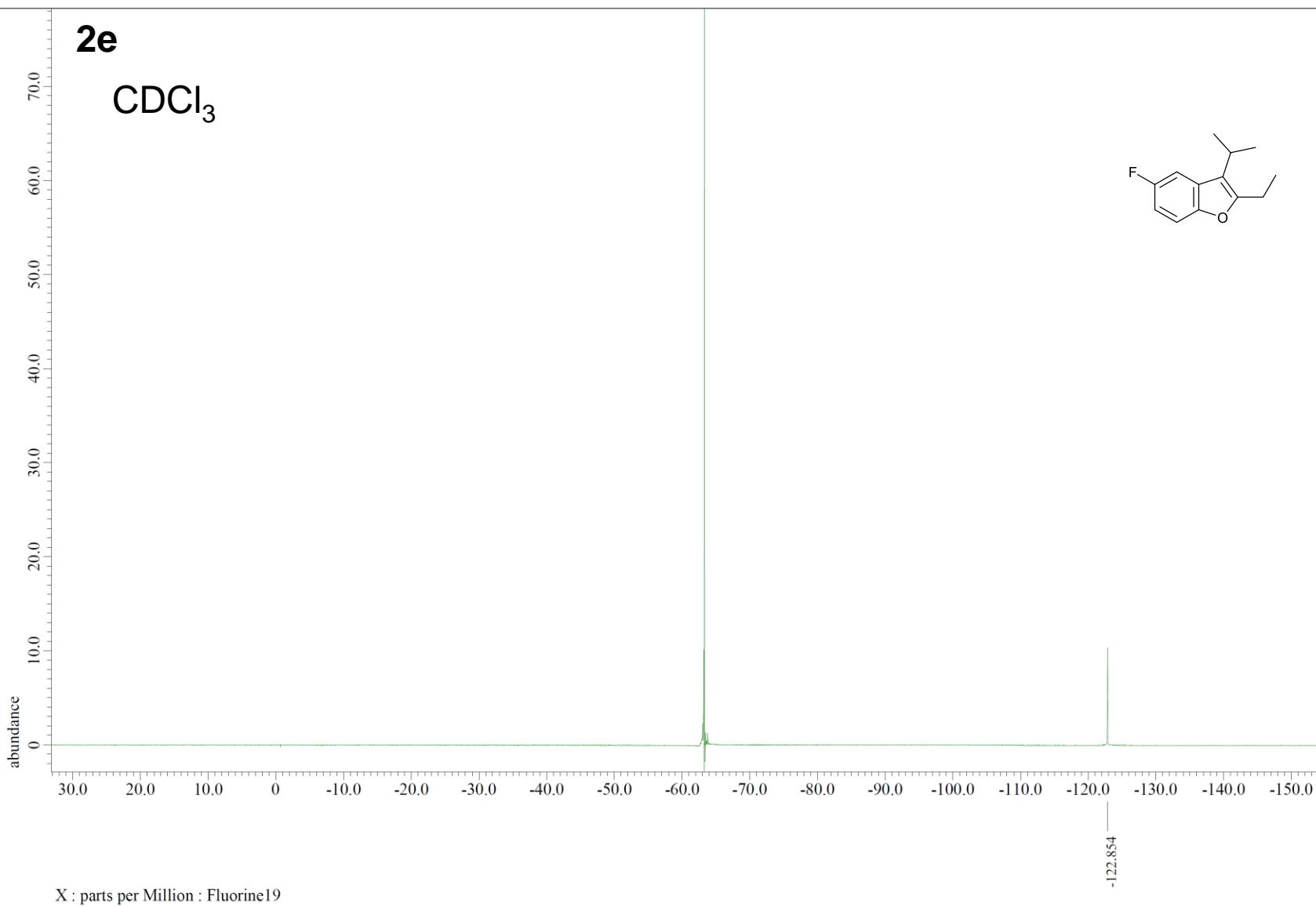


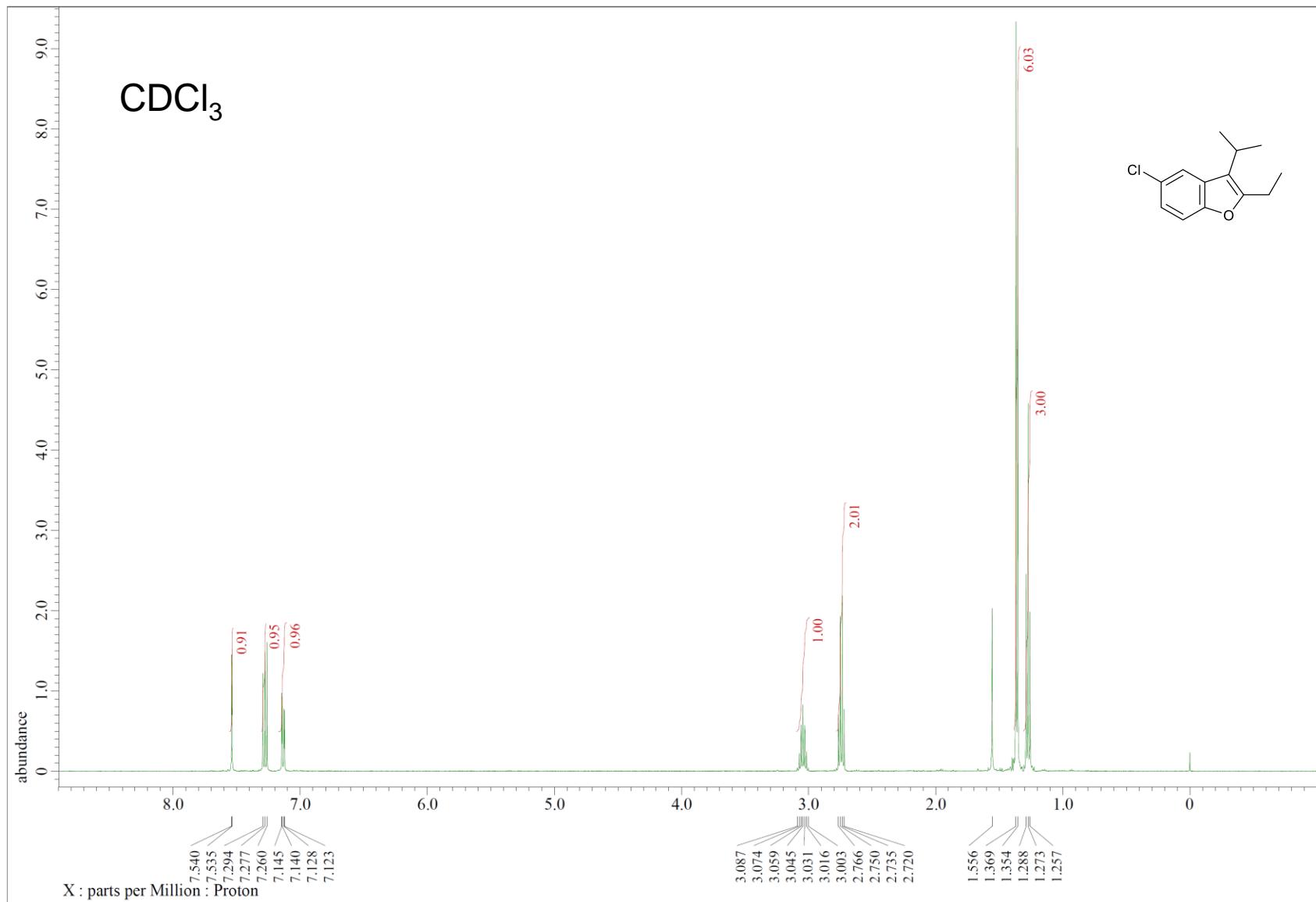
2e



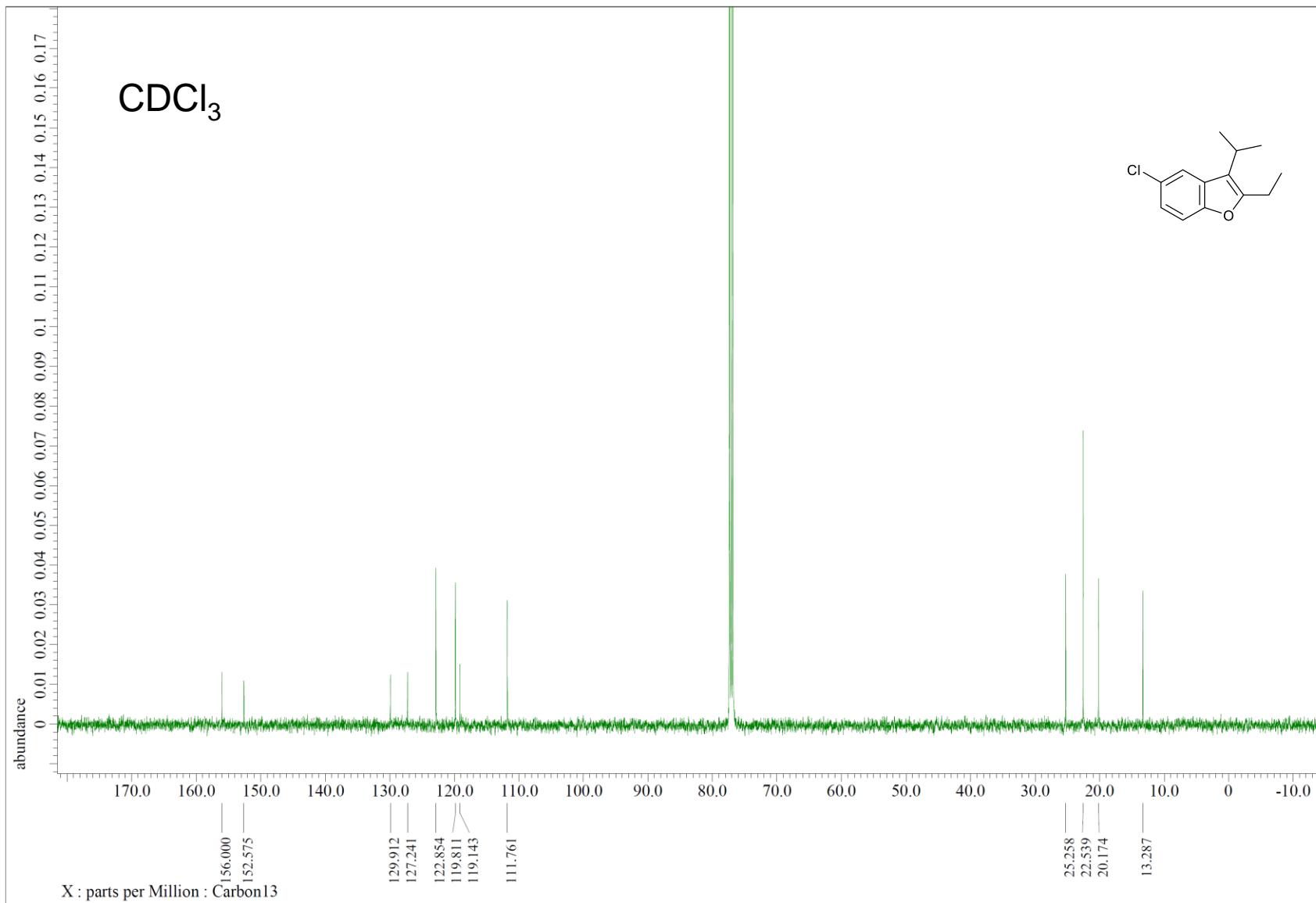
**2e**

$\text{CDCl}_3$

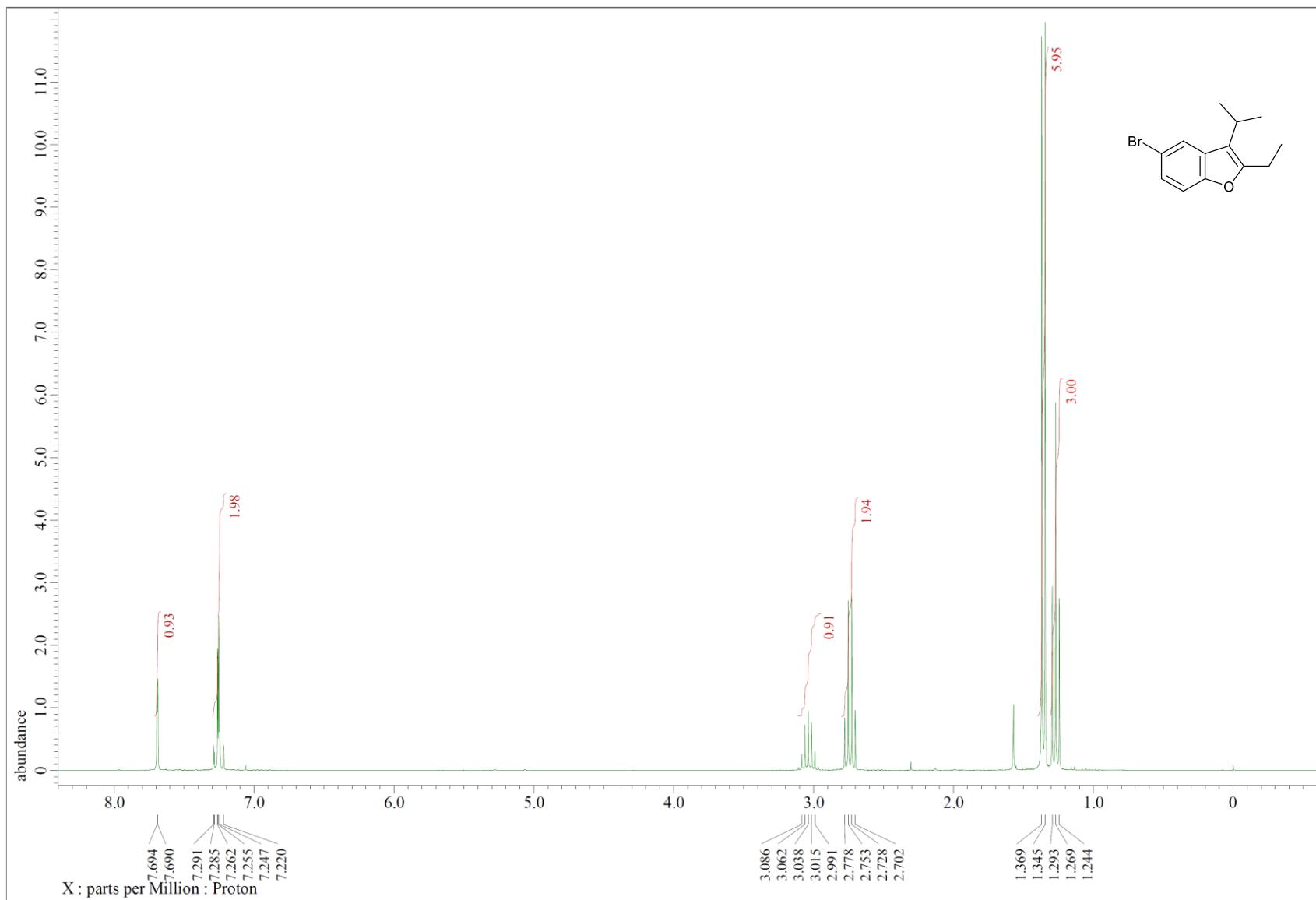




2f

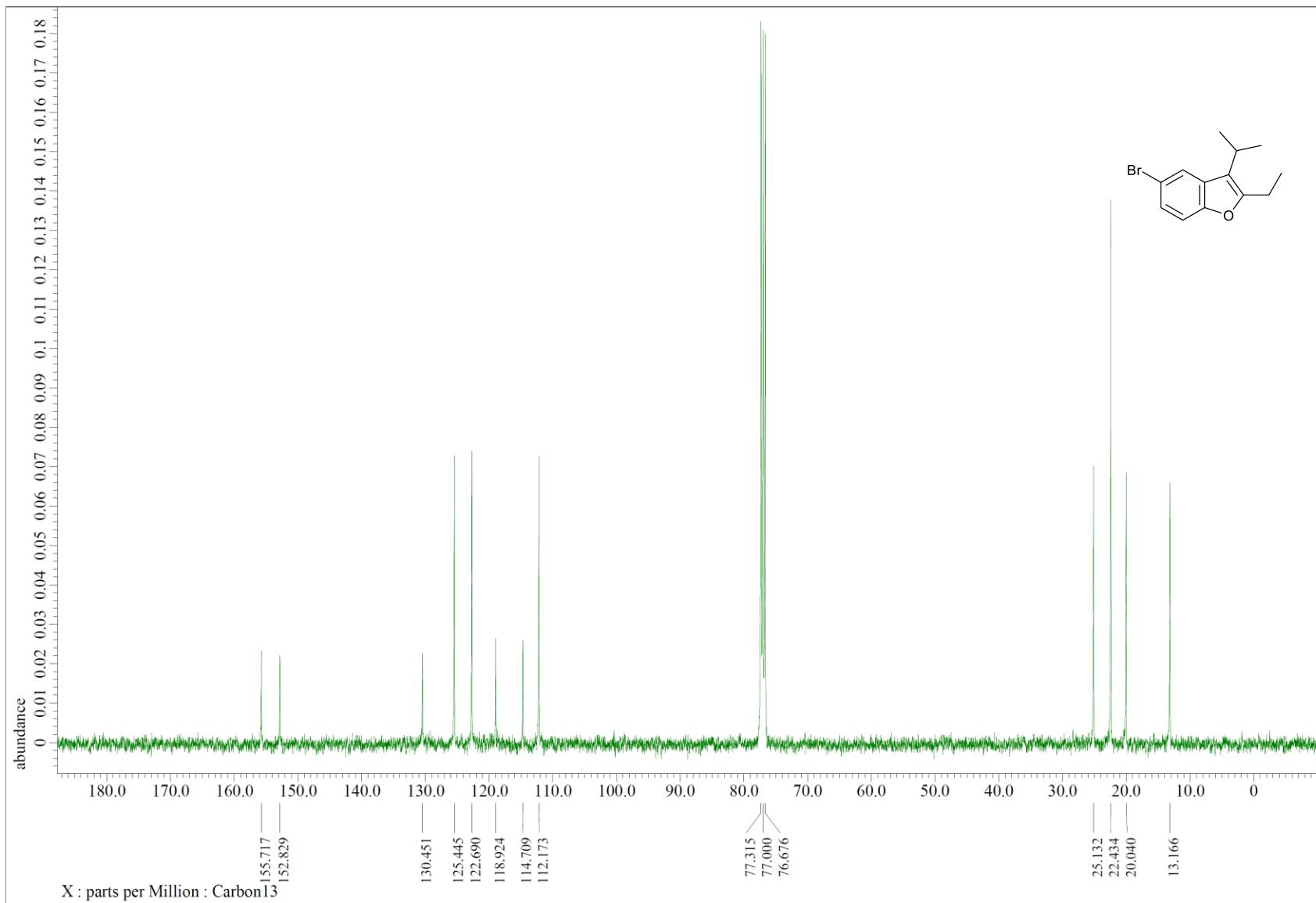


2g

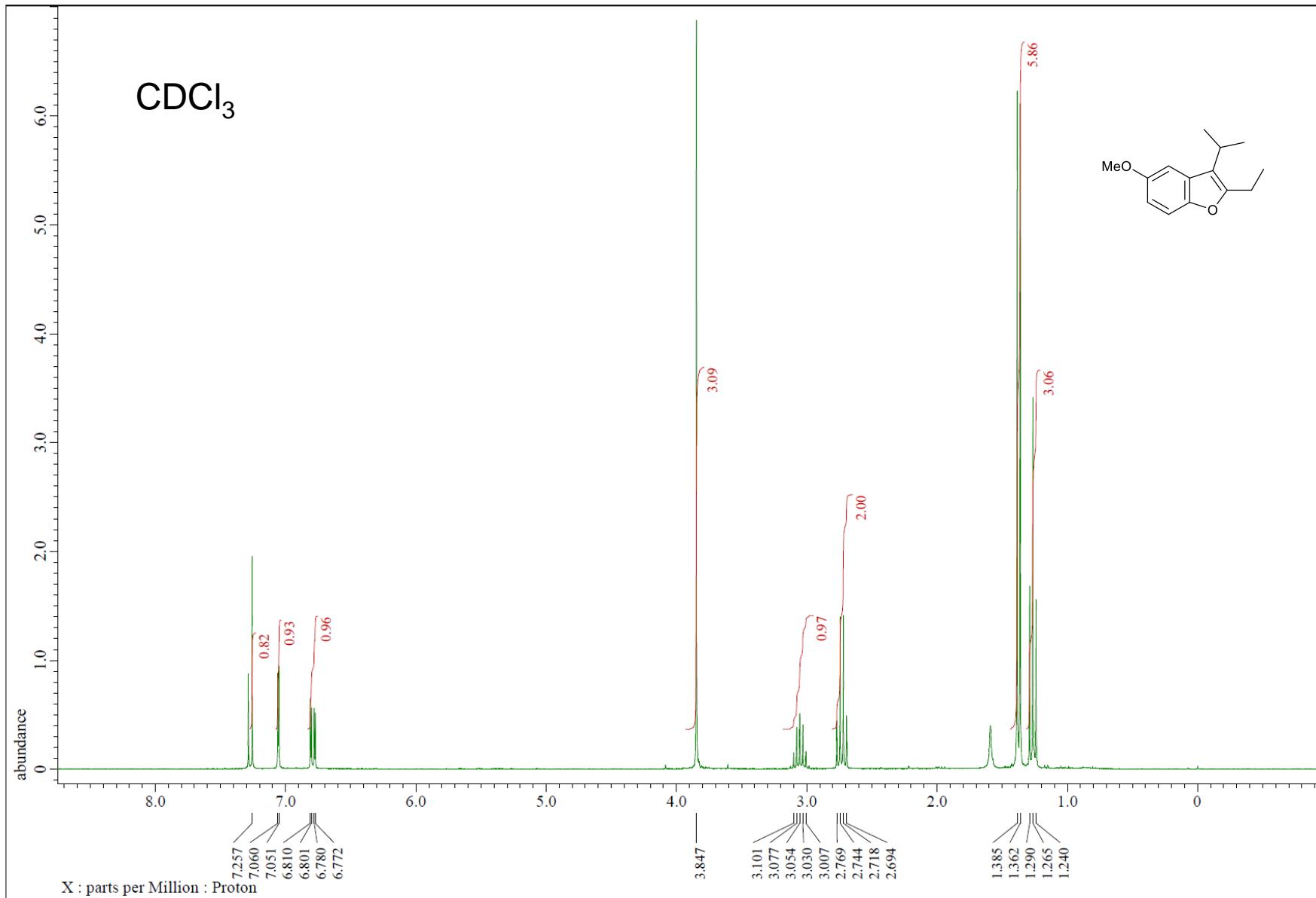


S2- 68

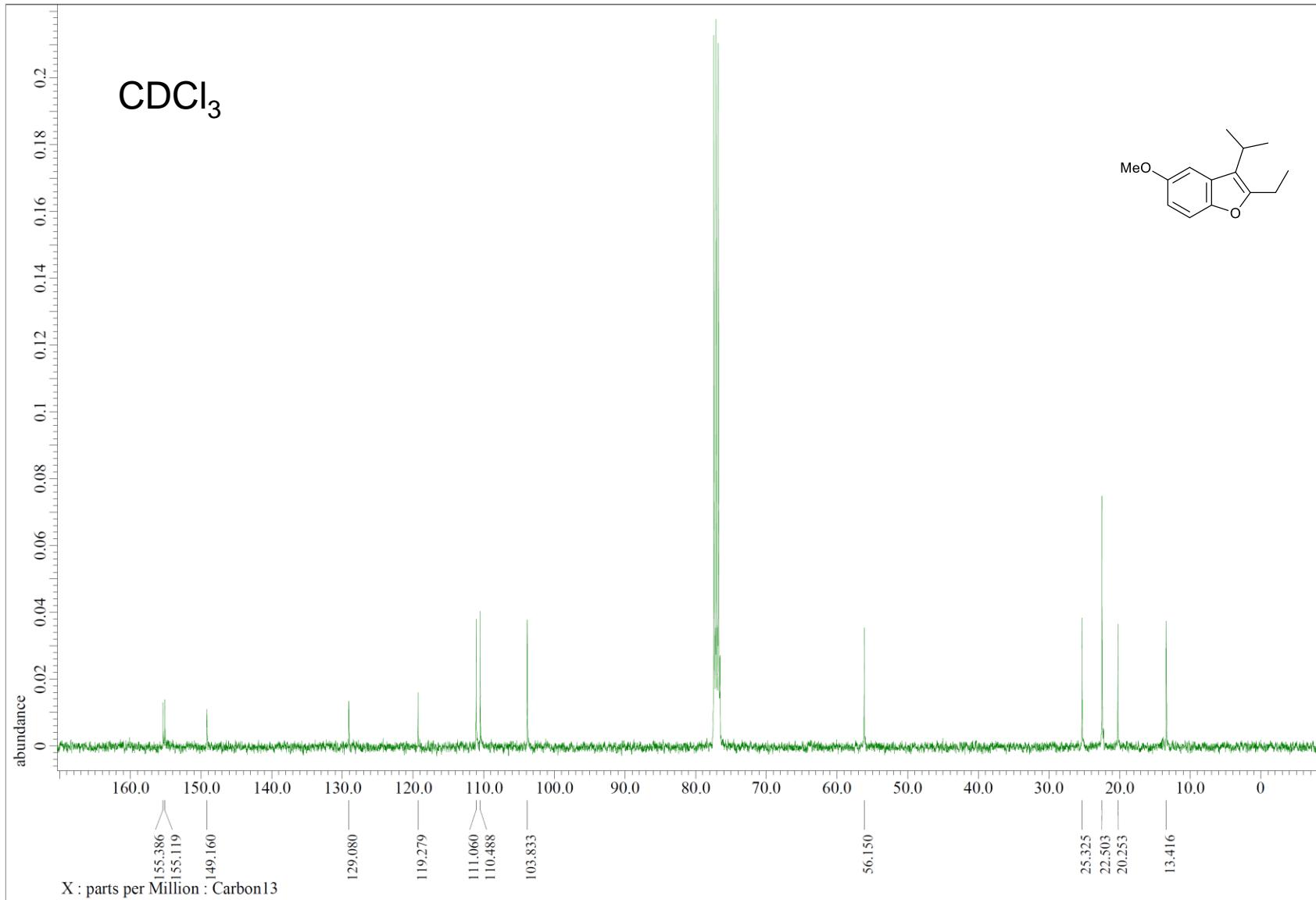
2g

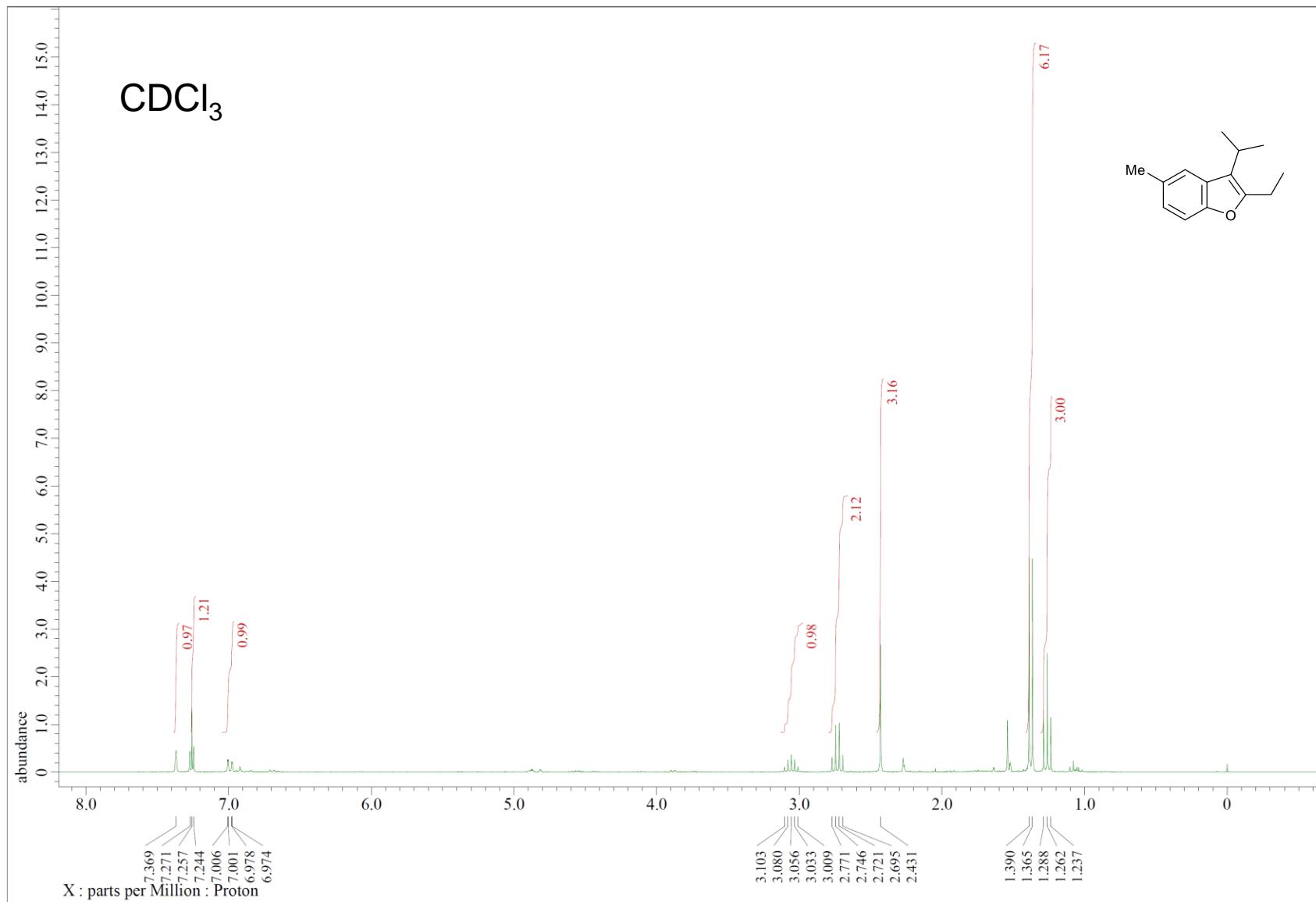


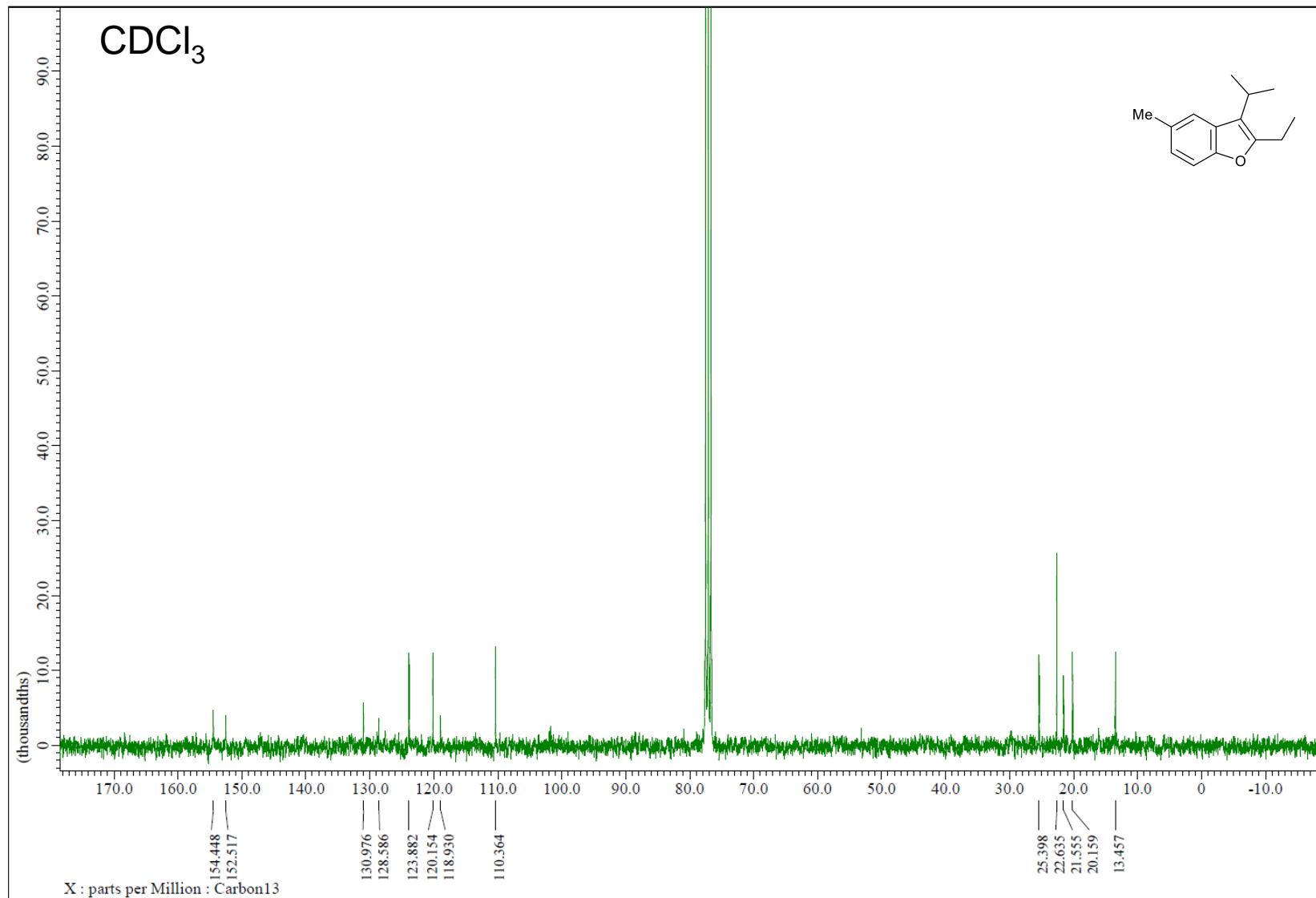
2h

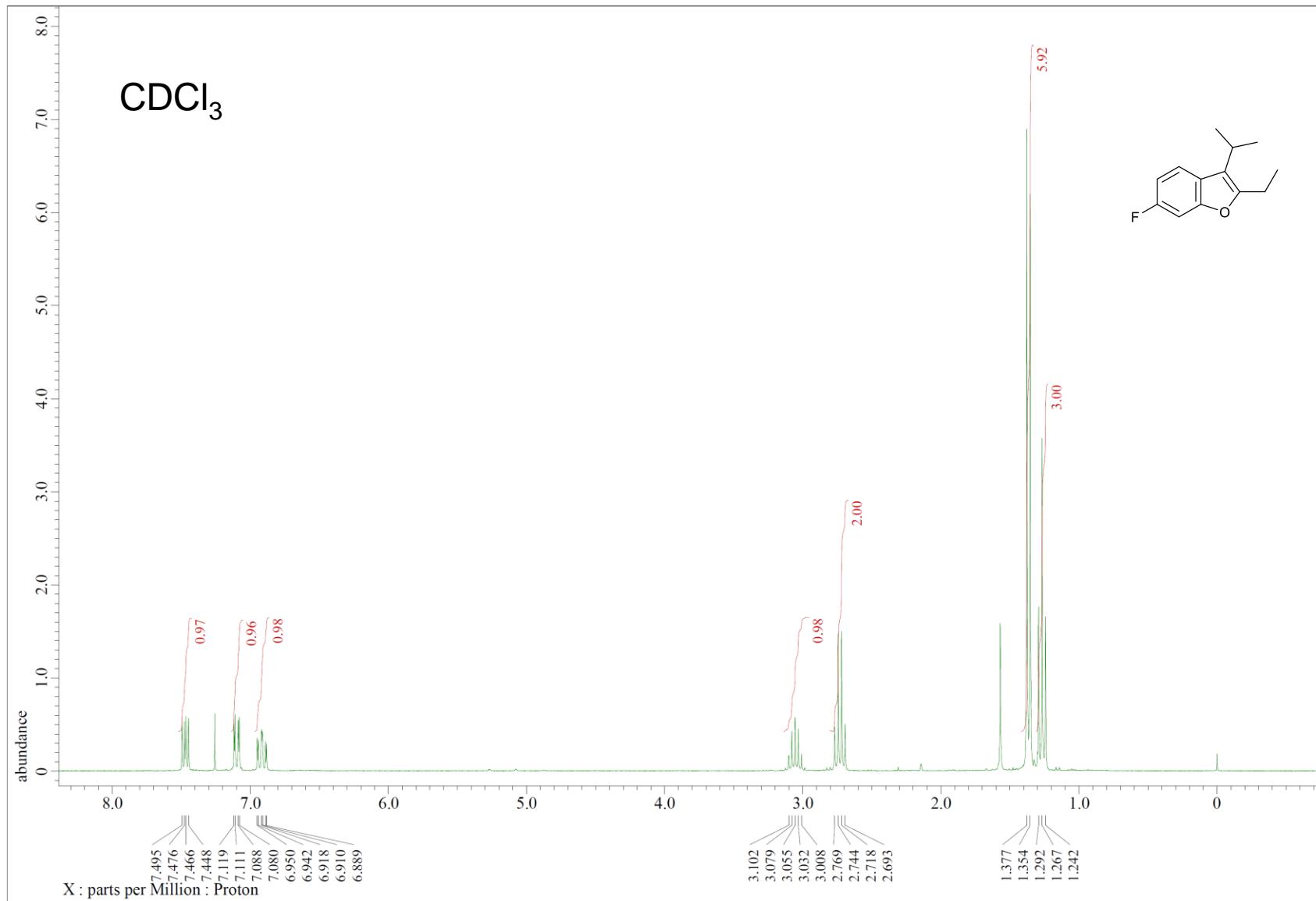


2h

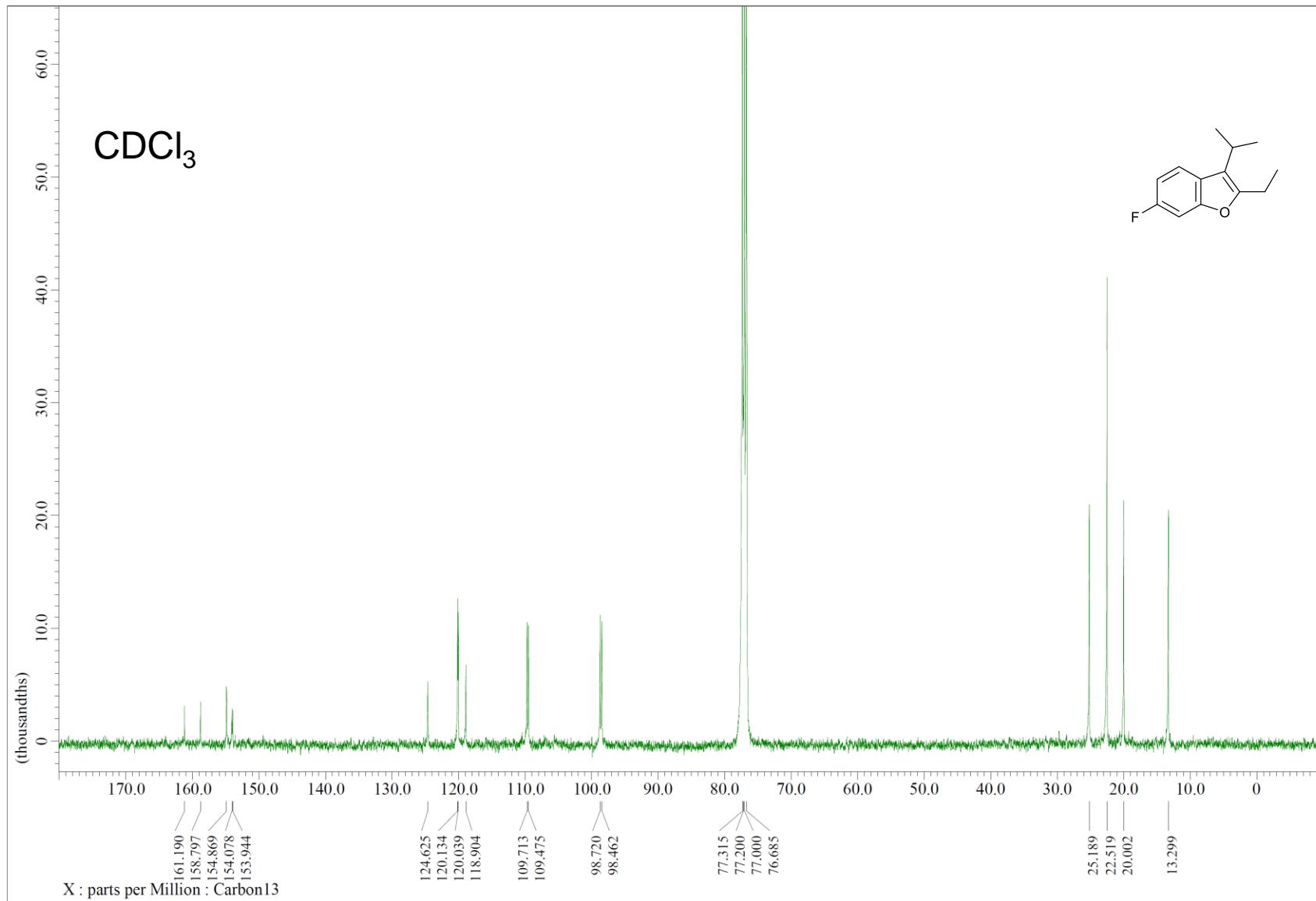






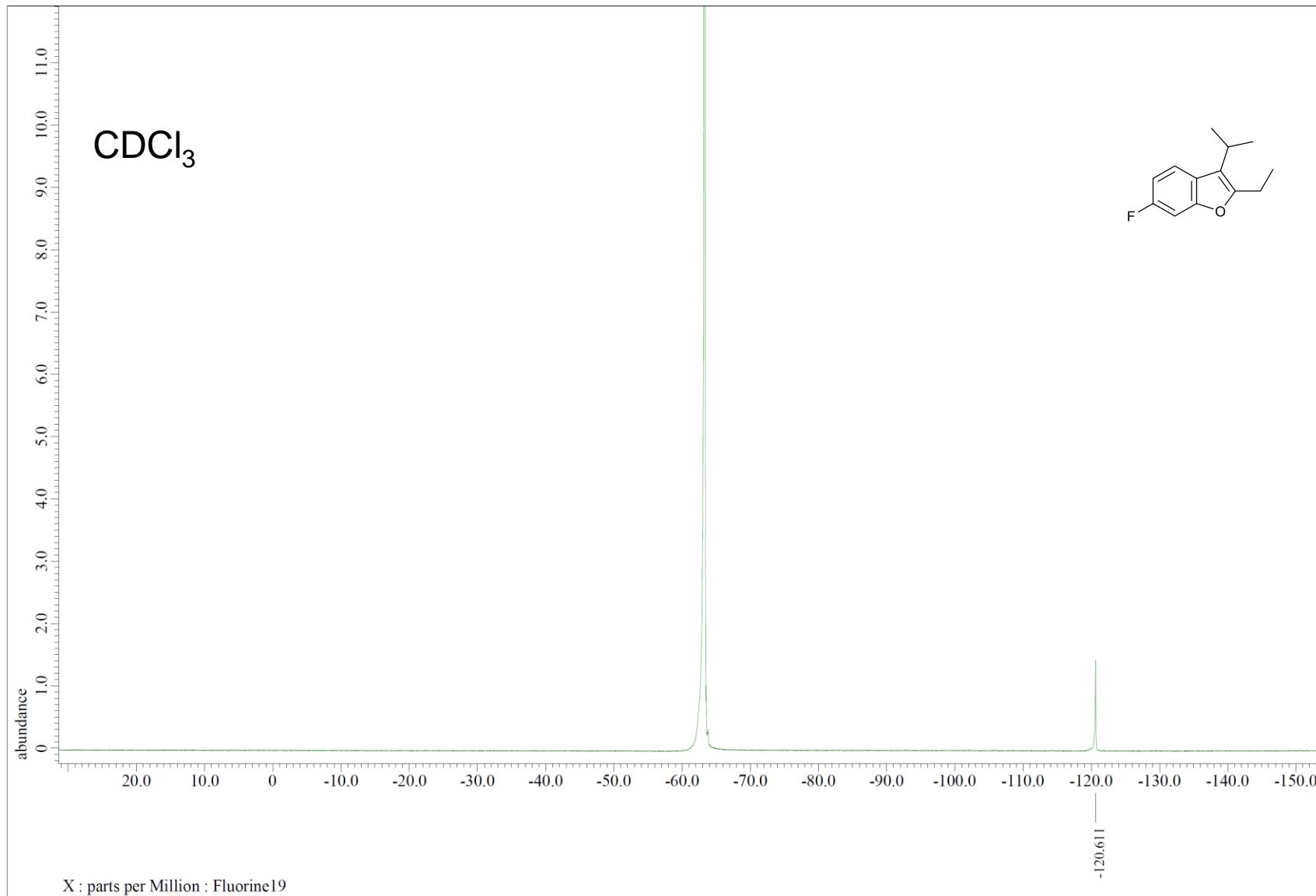


2j

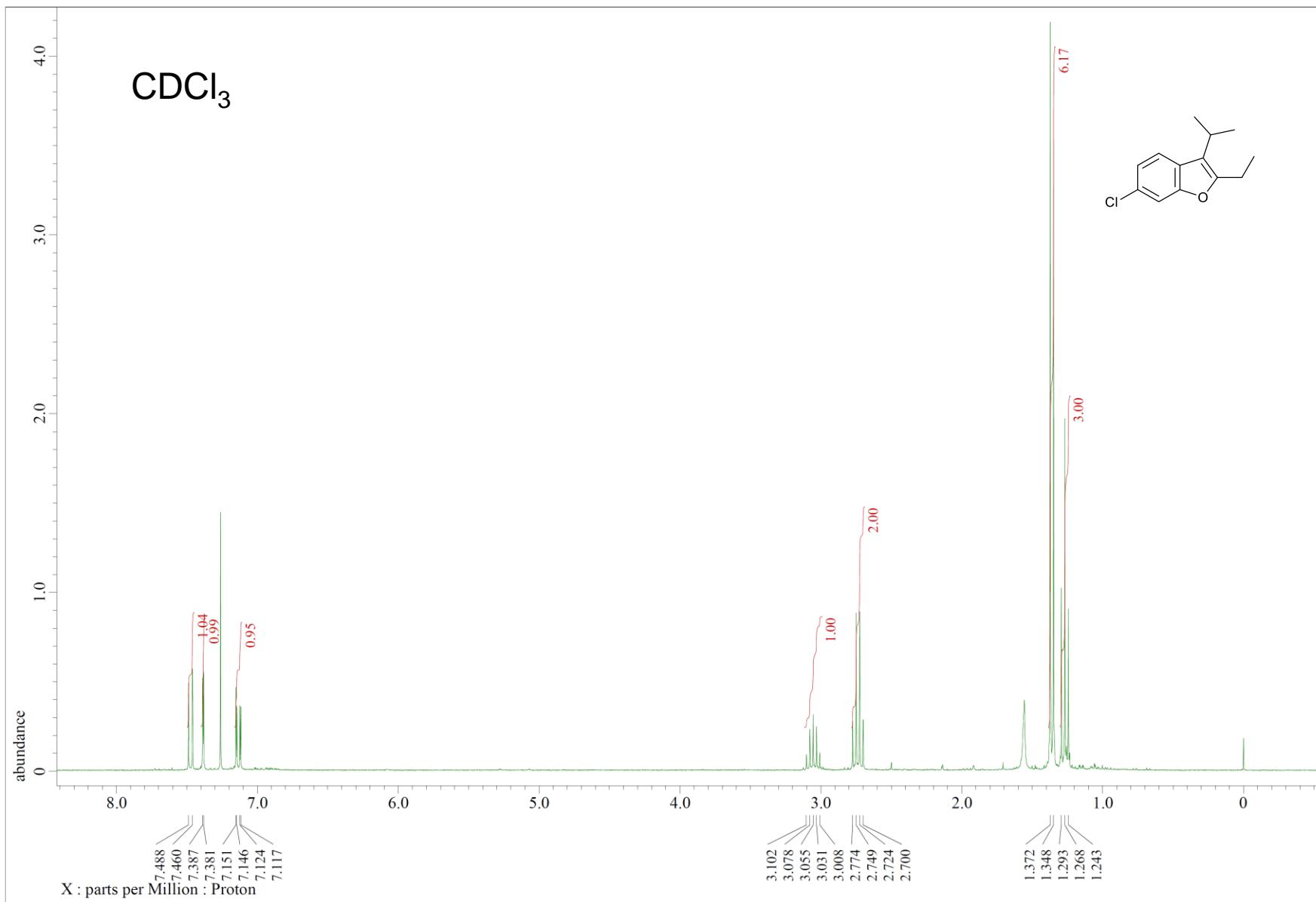


S2- 75

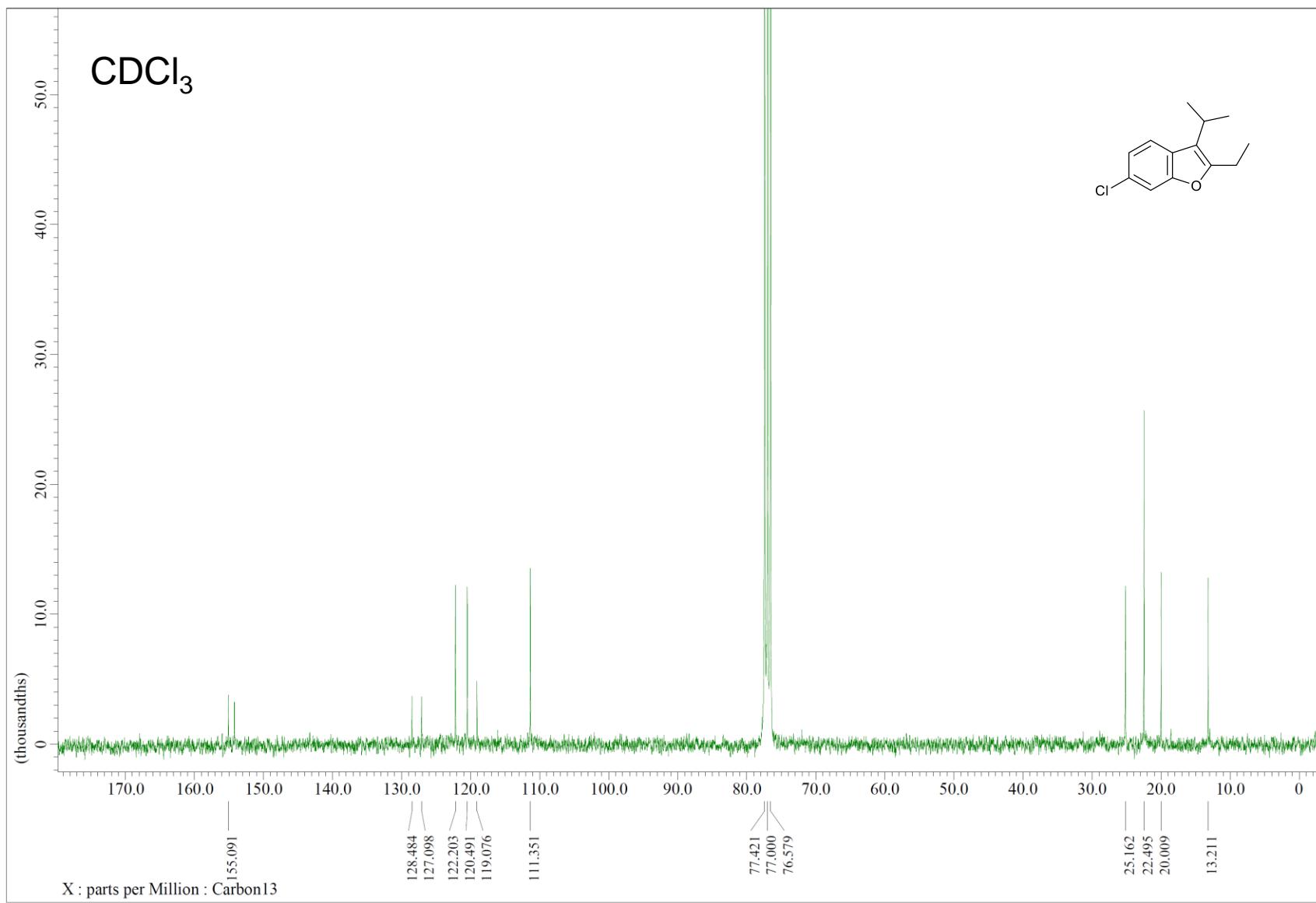
2j

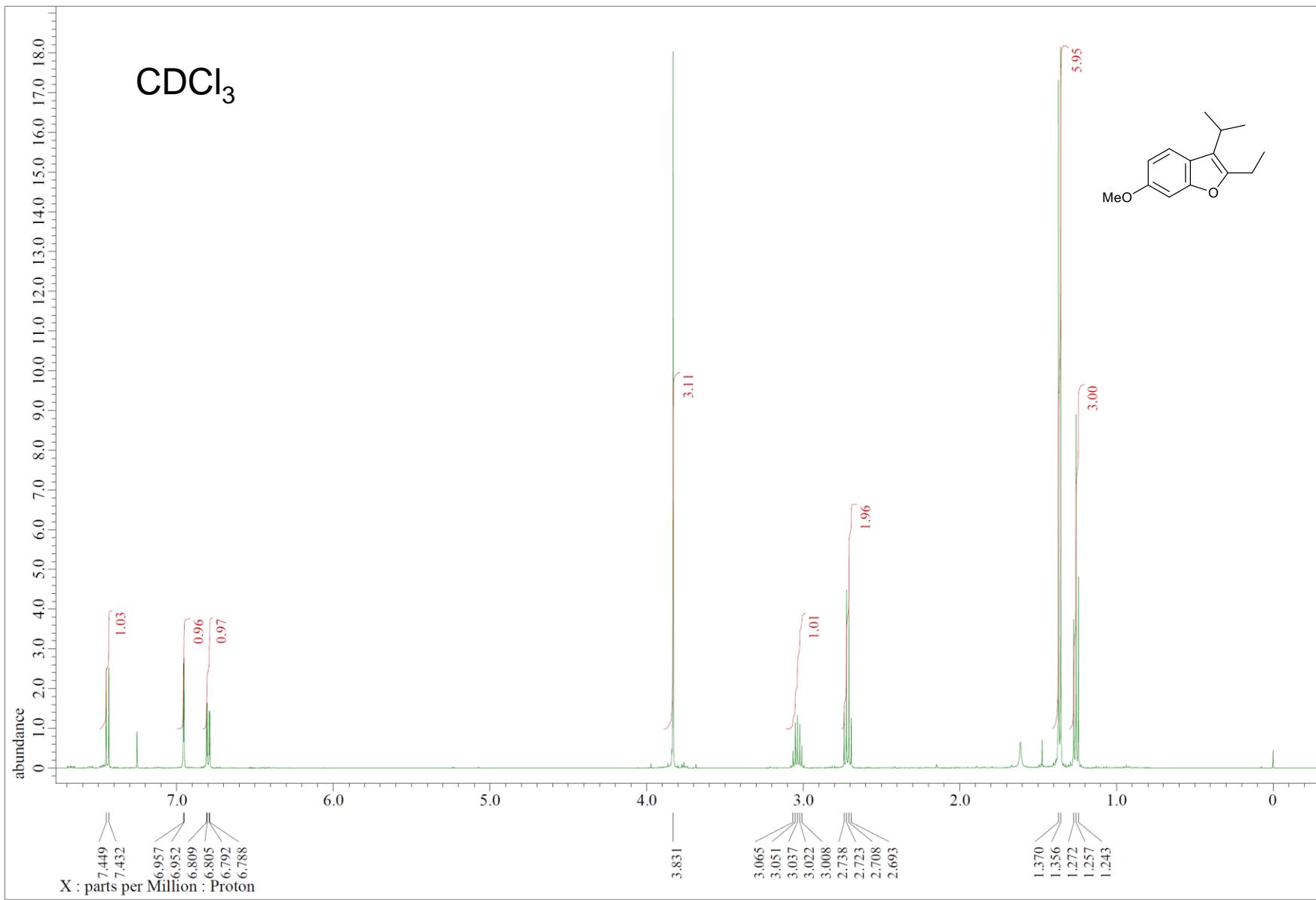


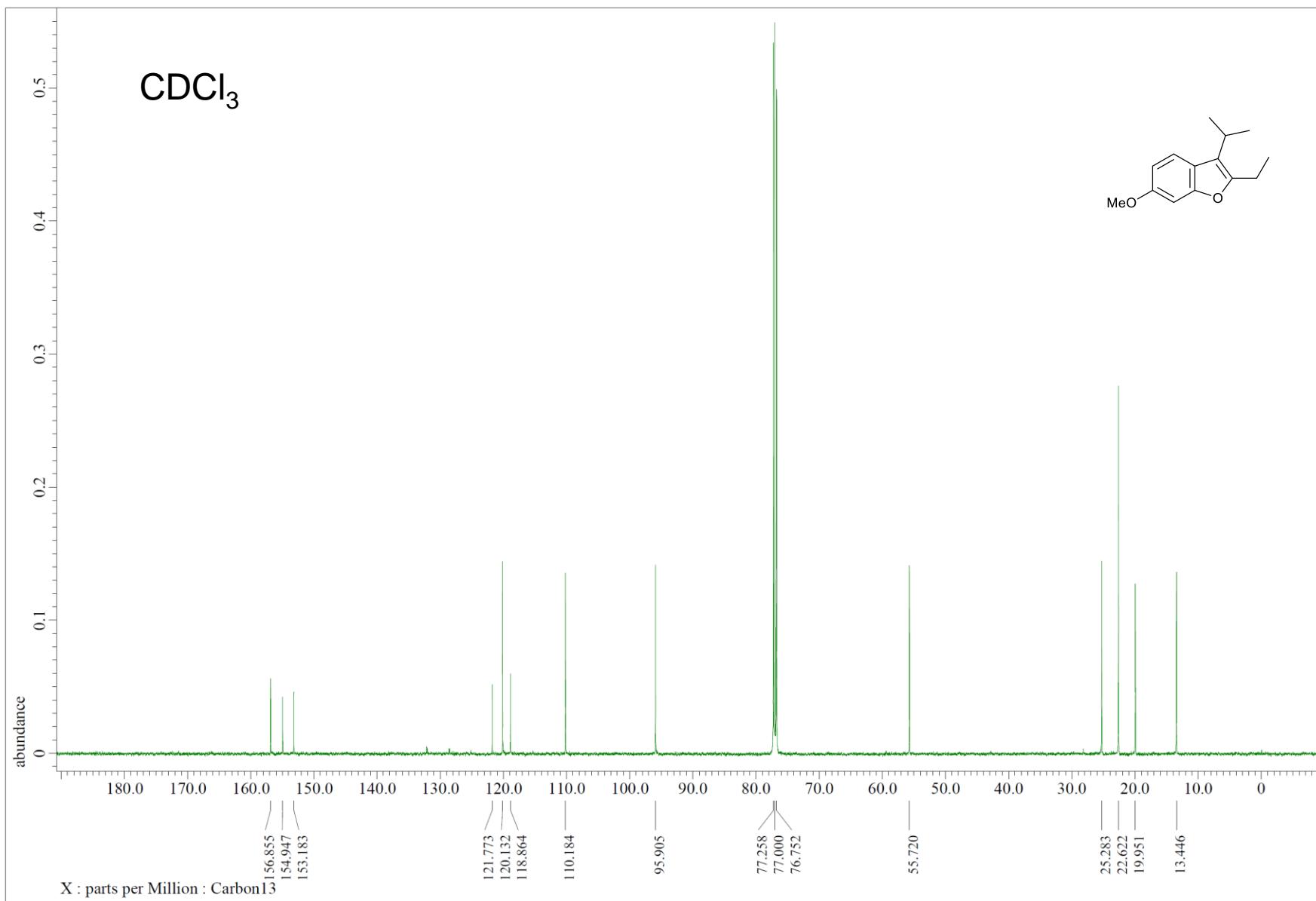
S2- 76



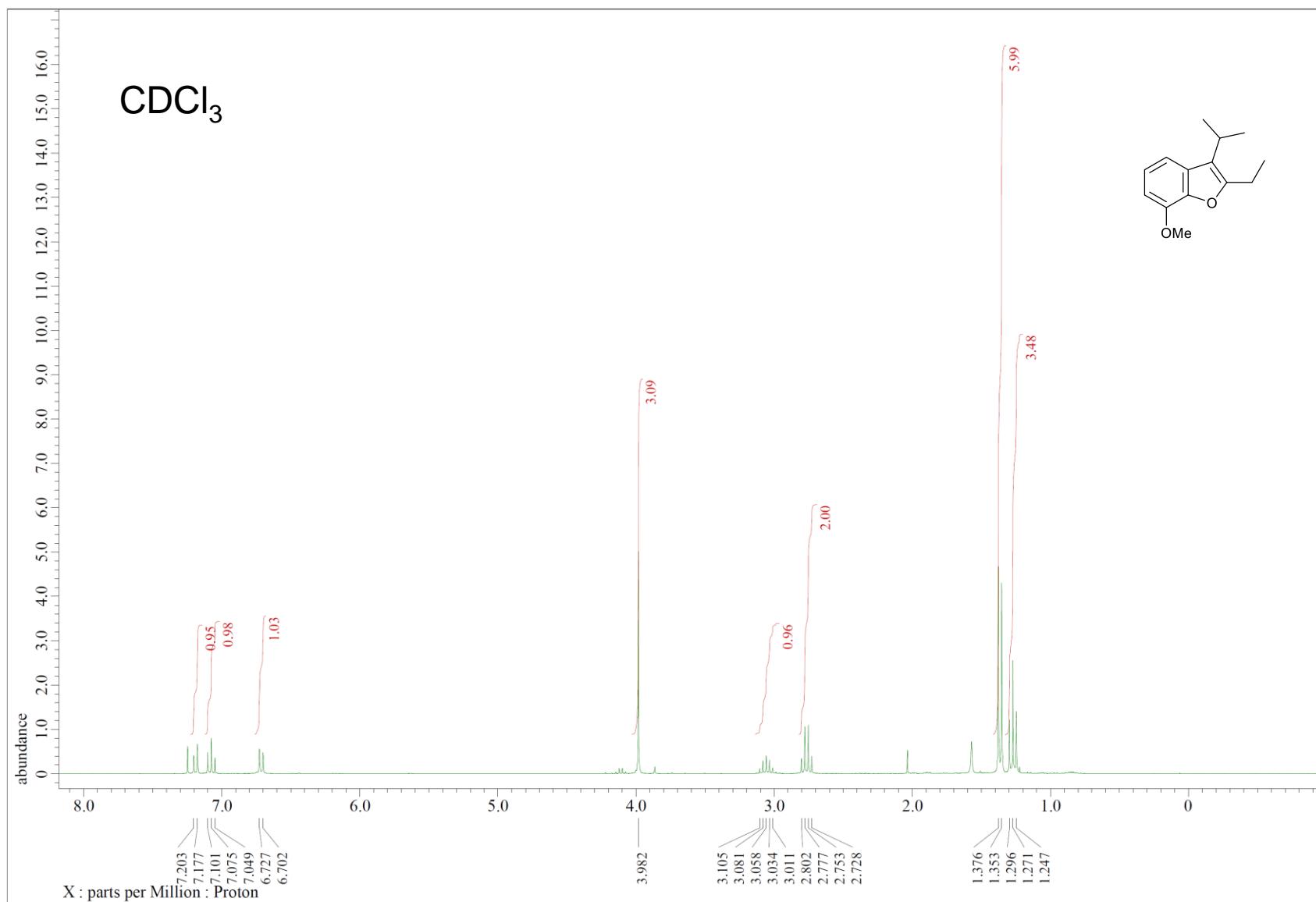
2k



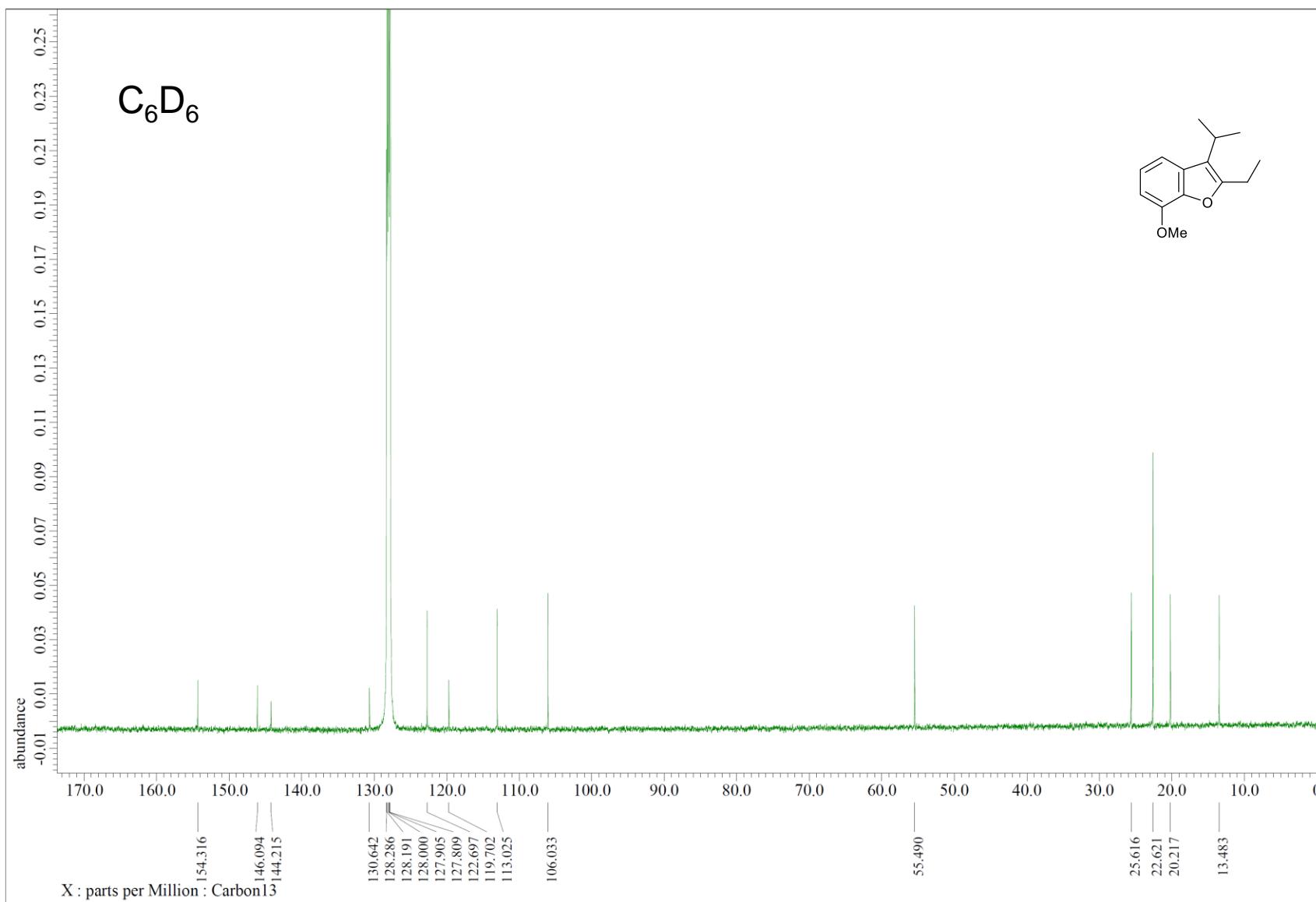




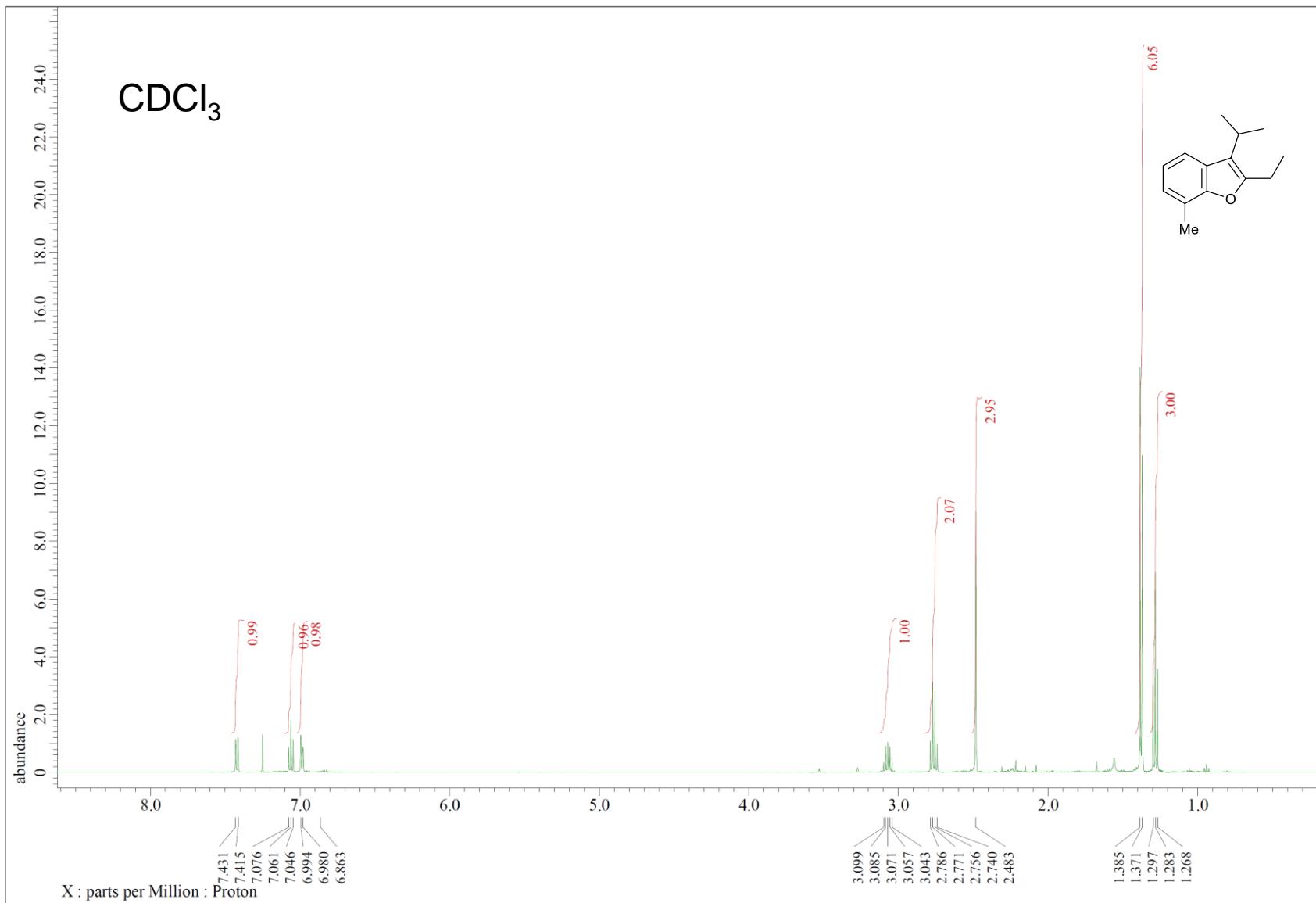
2m



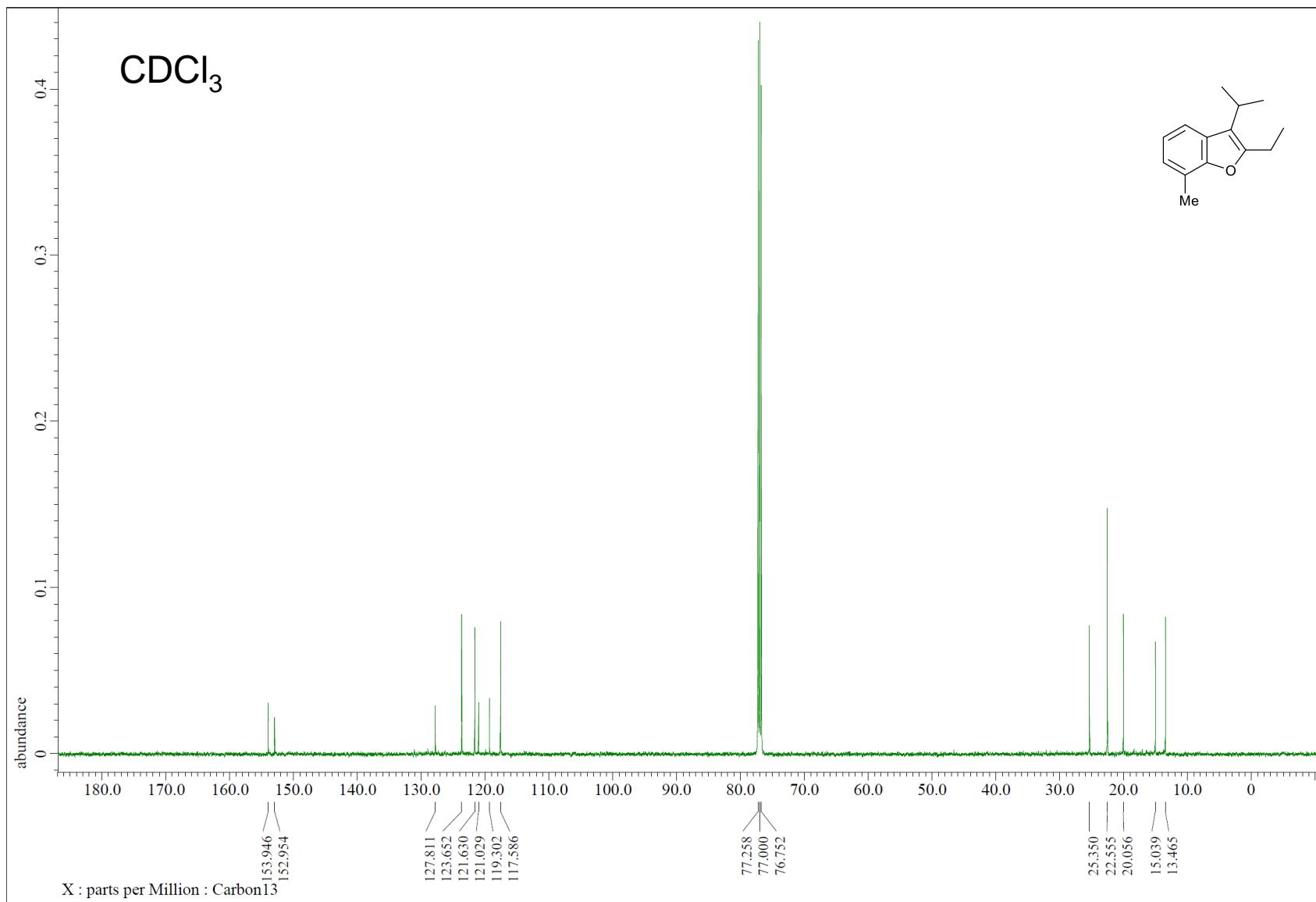
2m

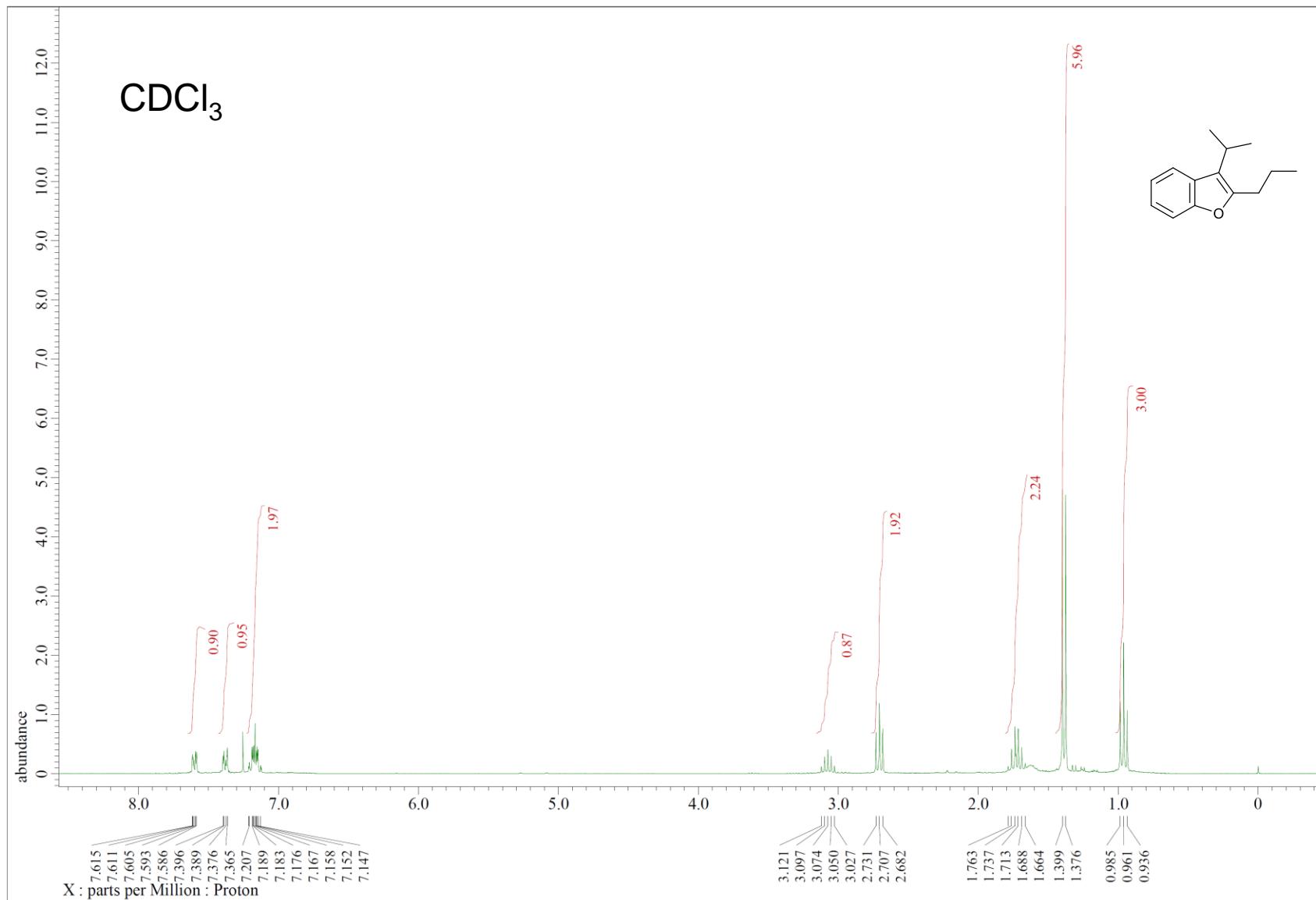


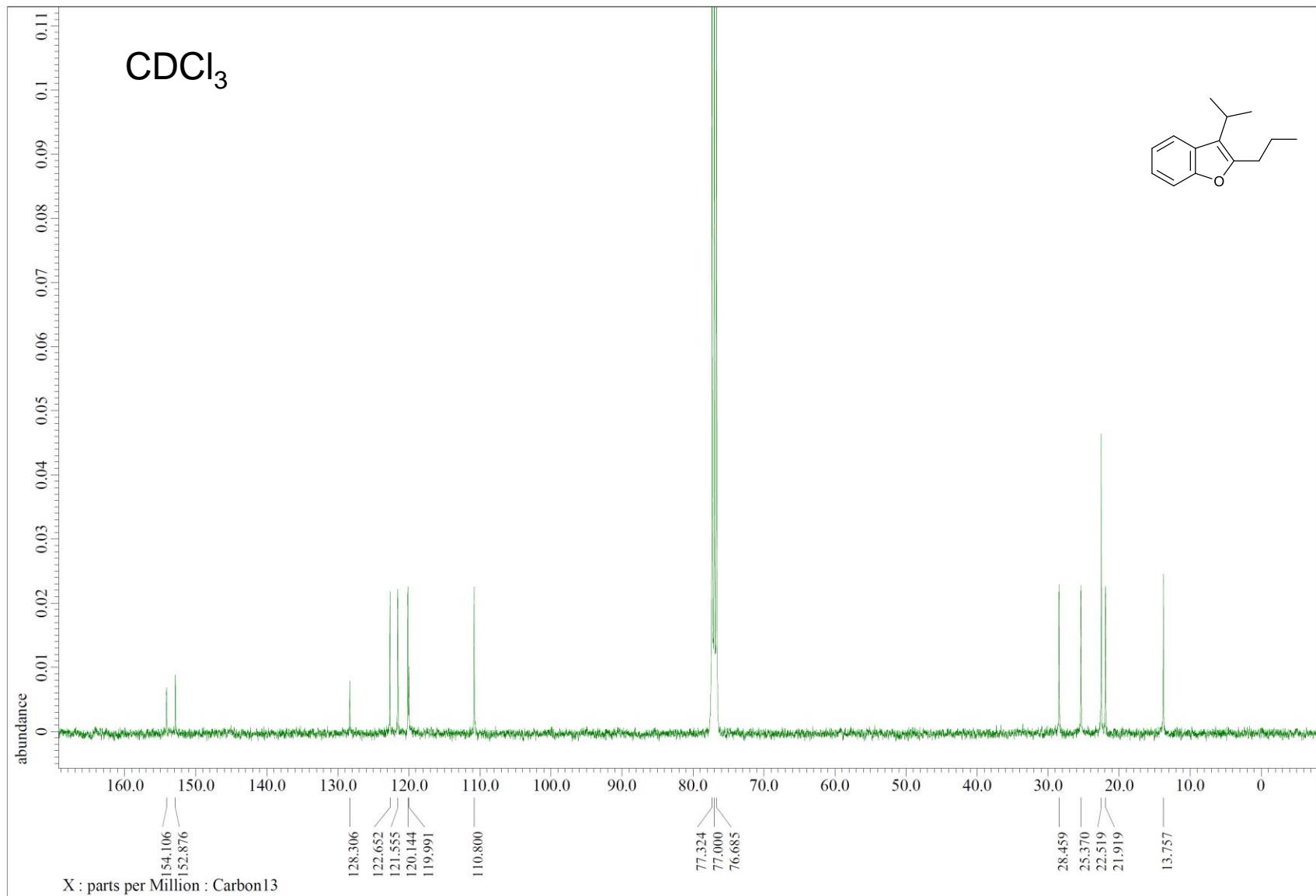
2n

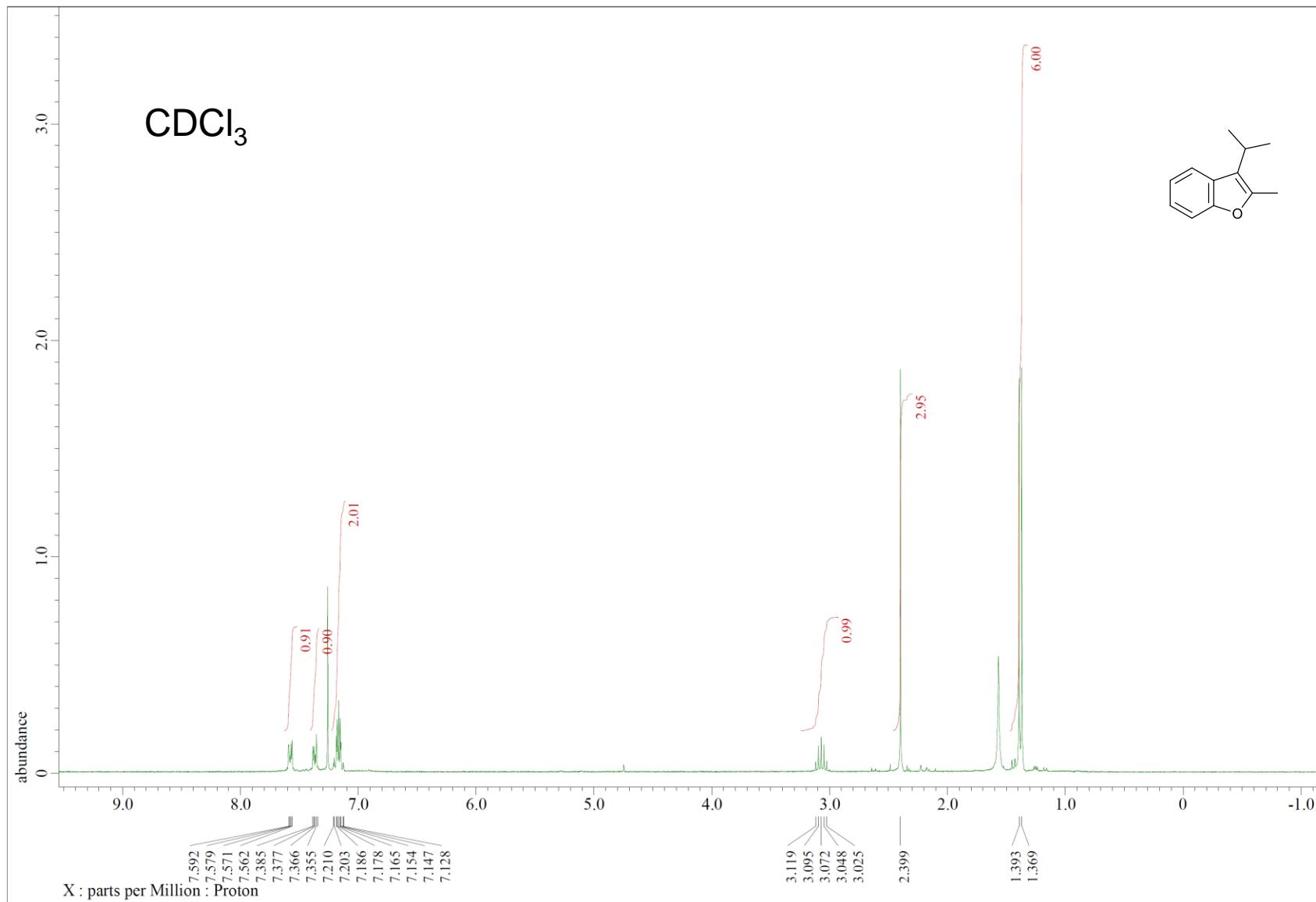


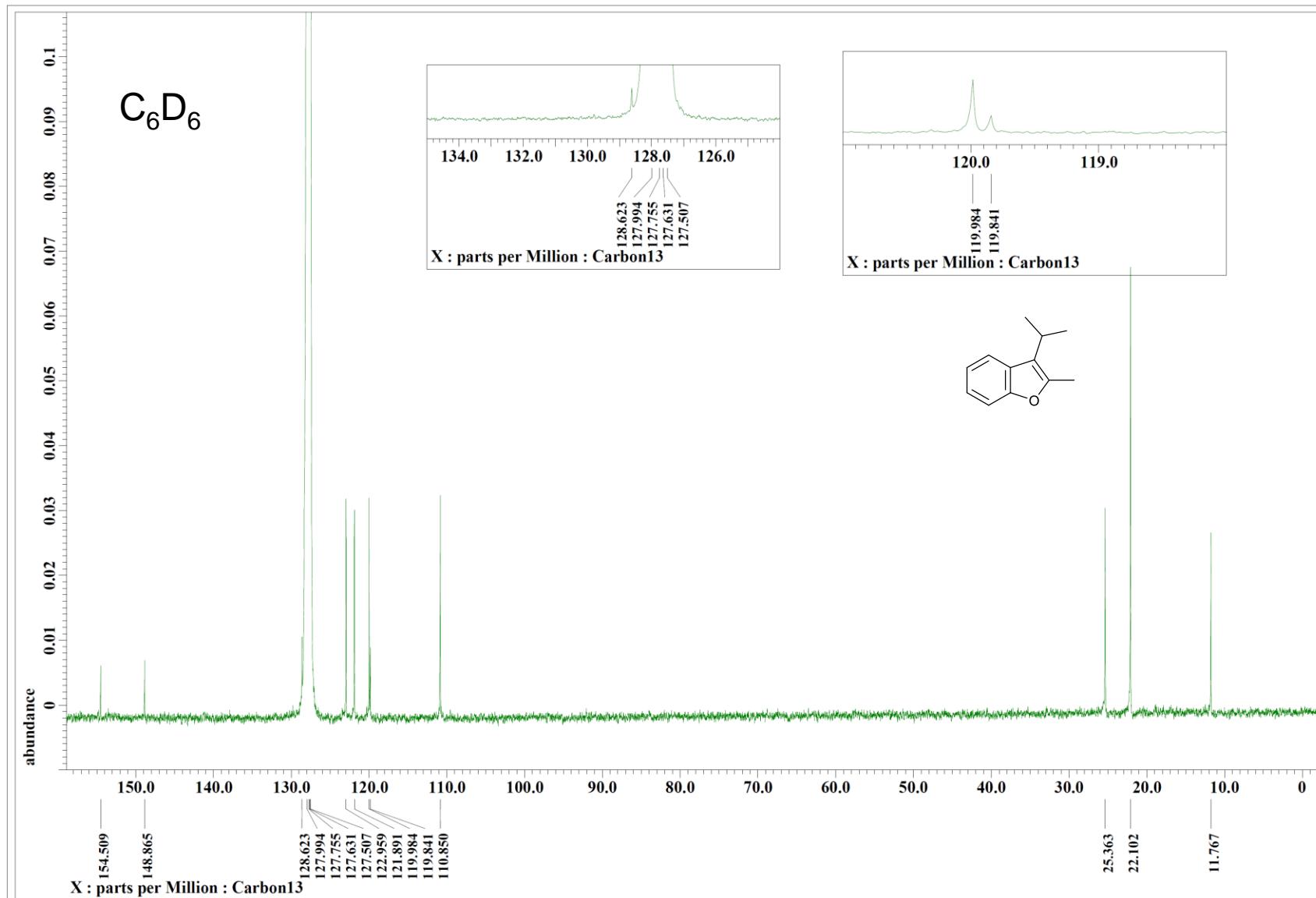
2n

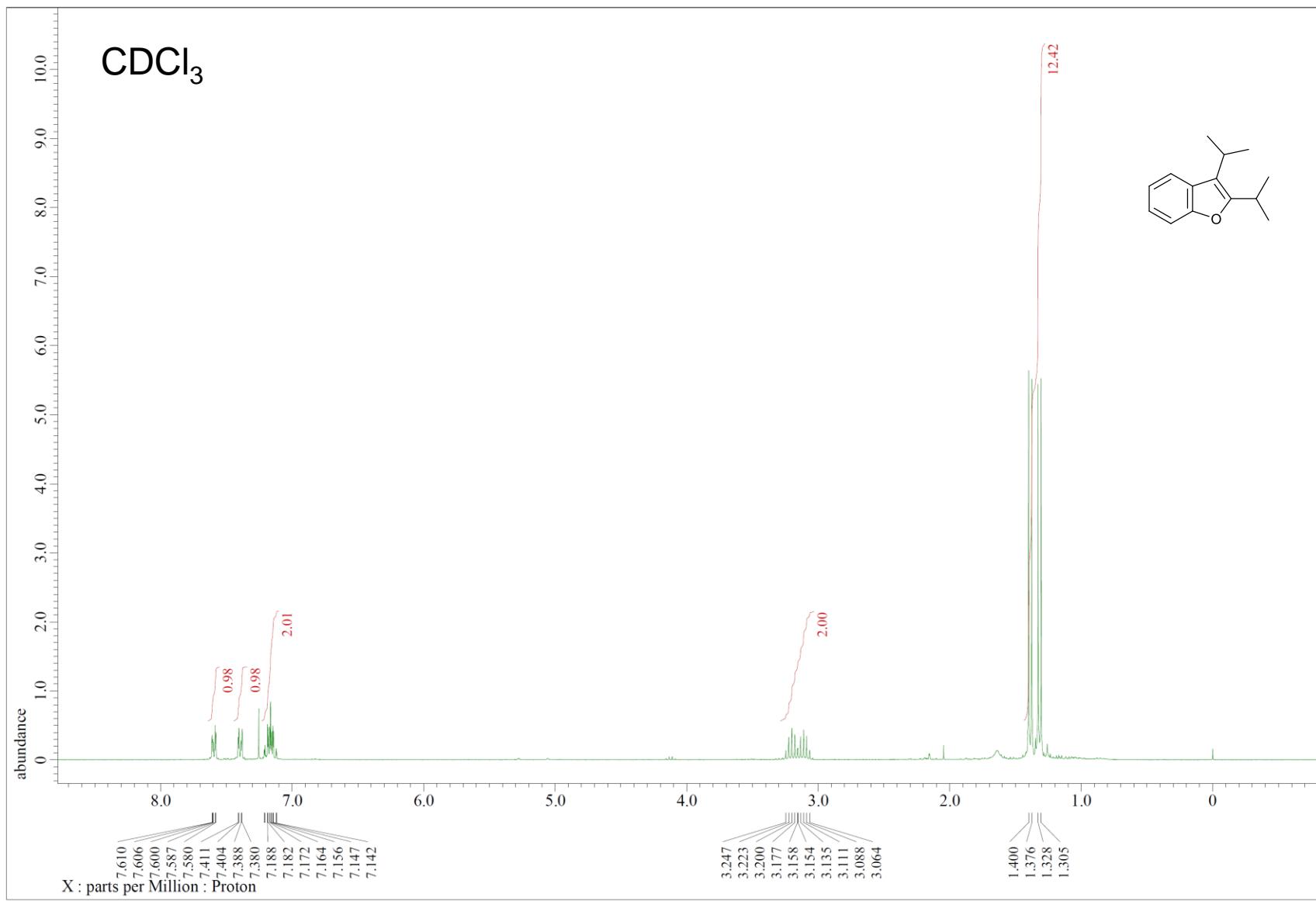




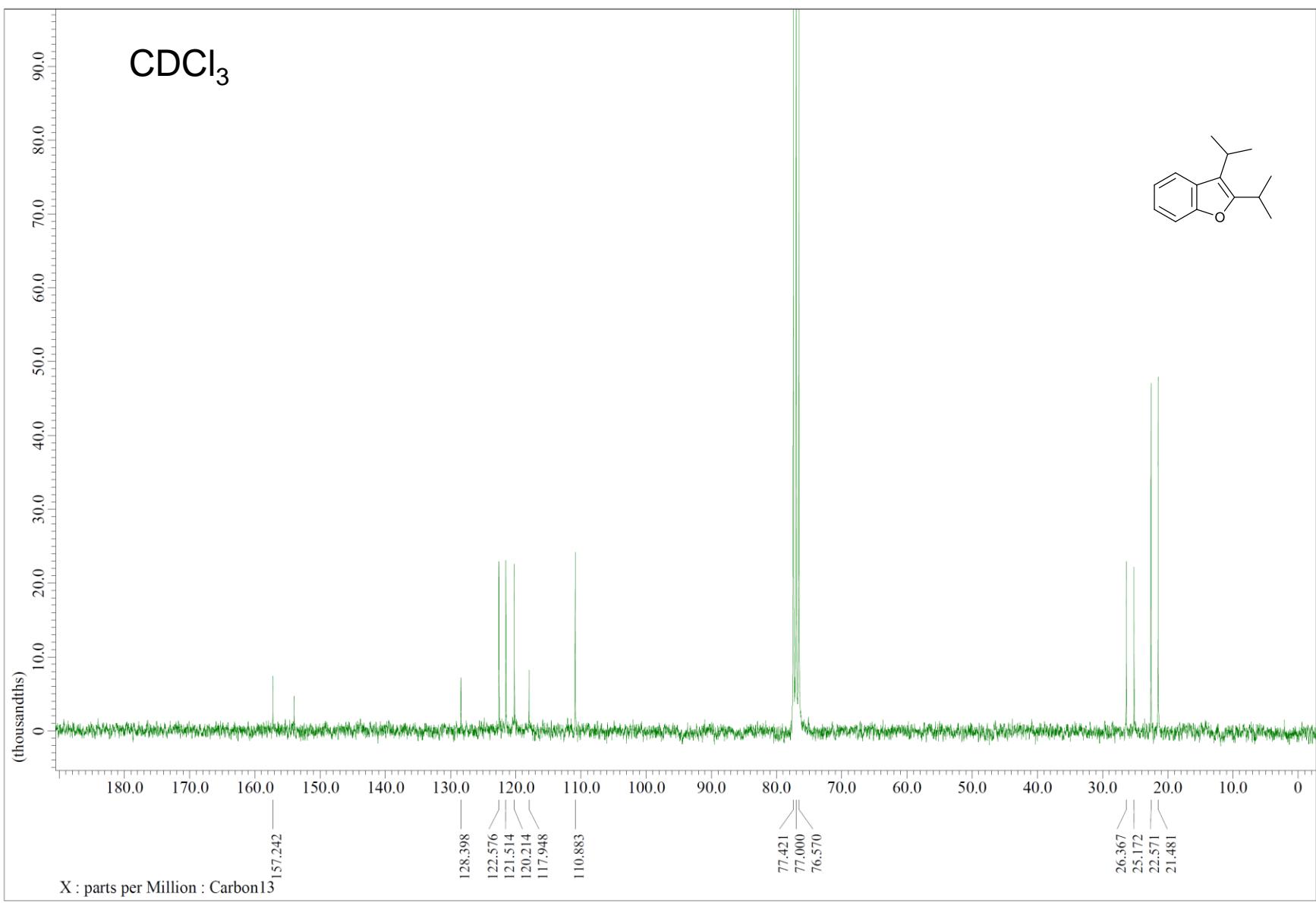




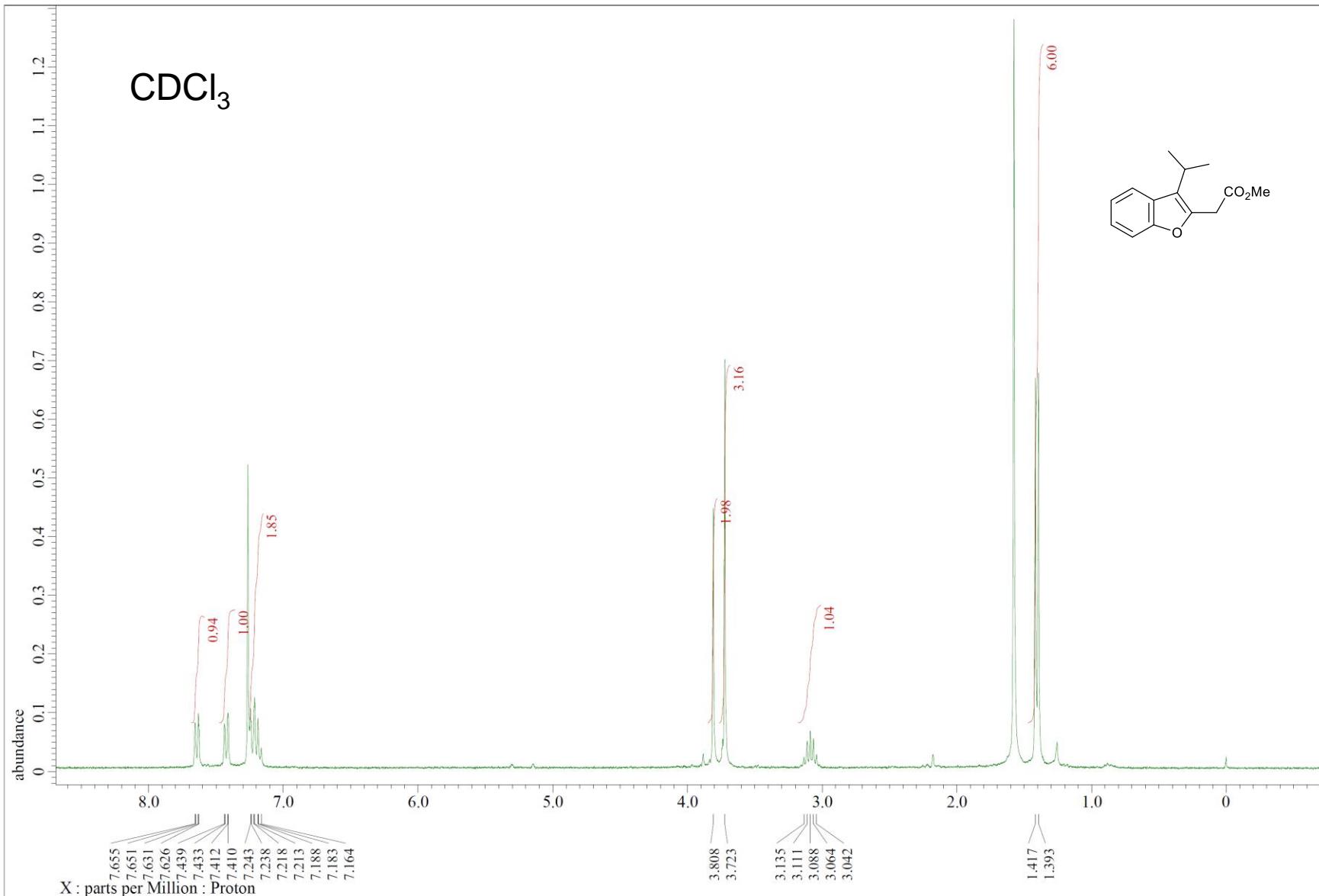


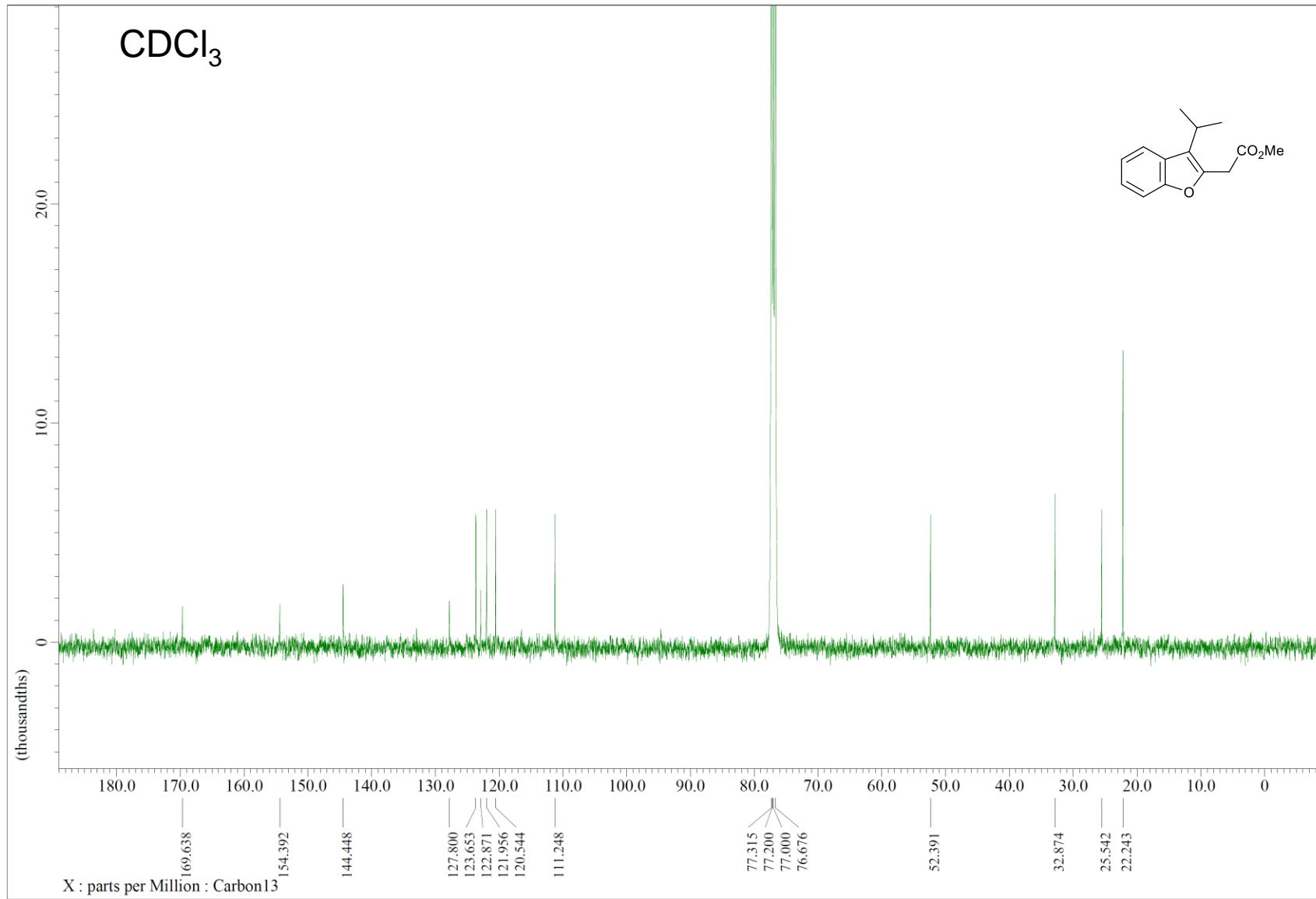


2q

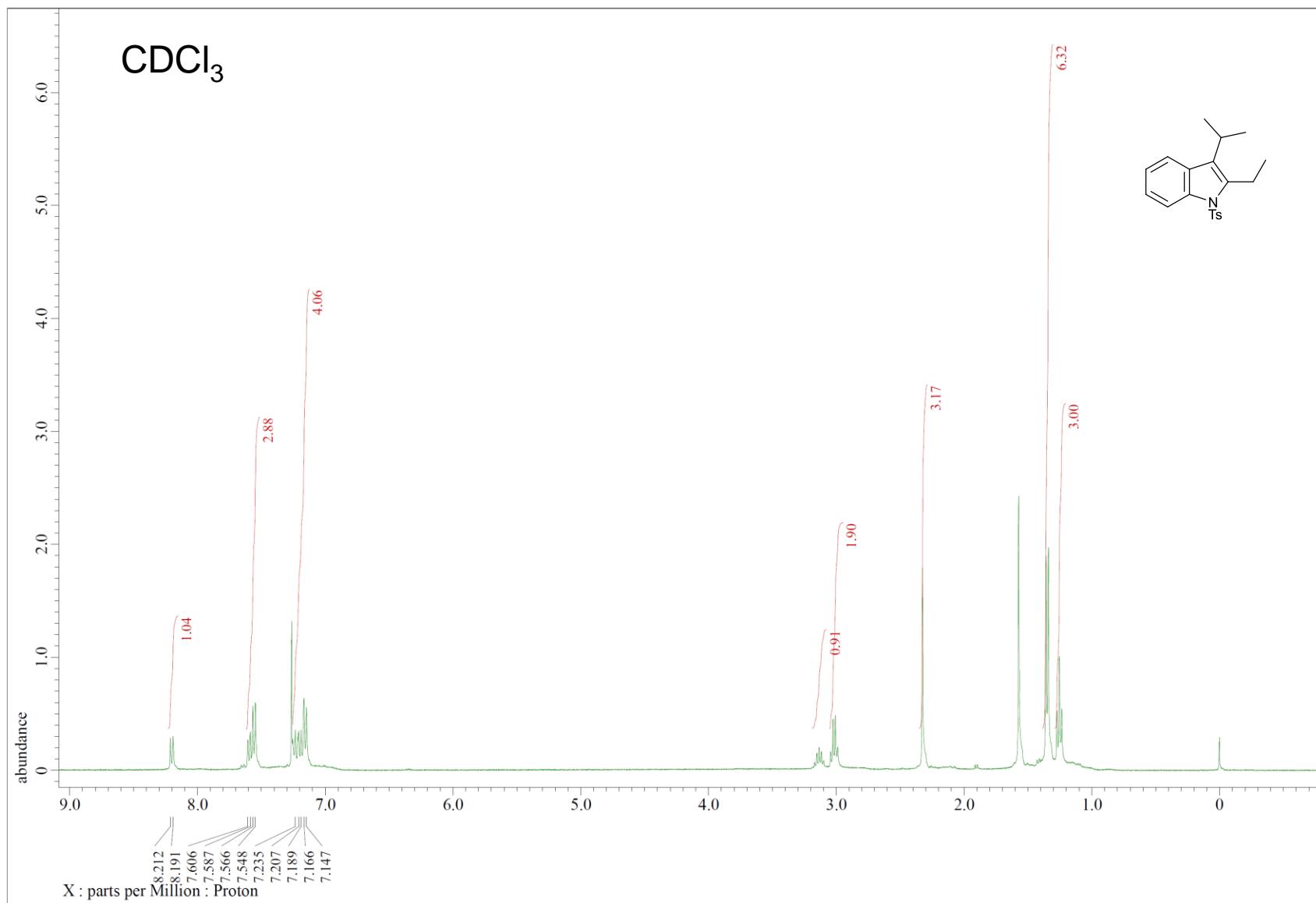


2r

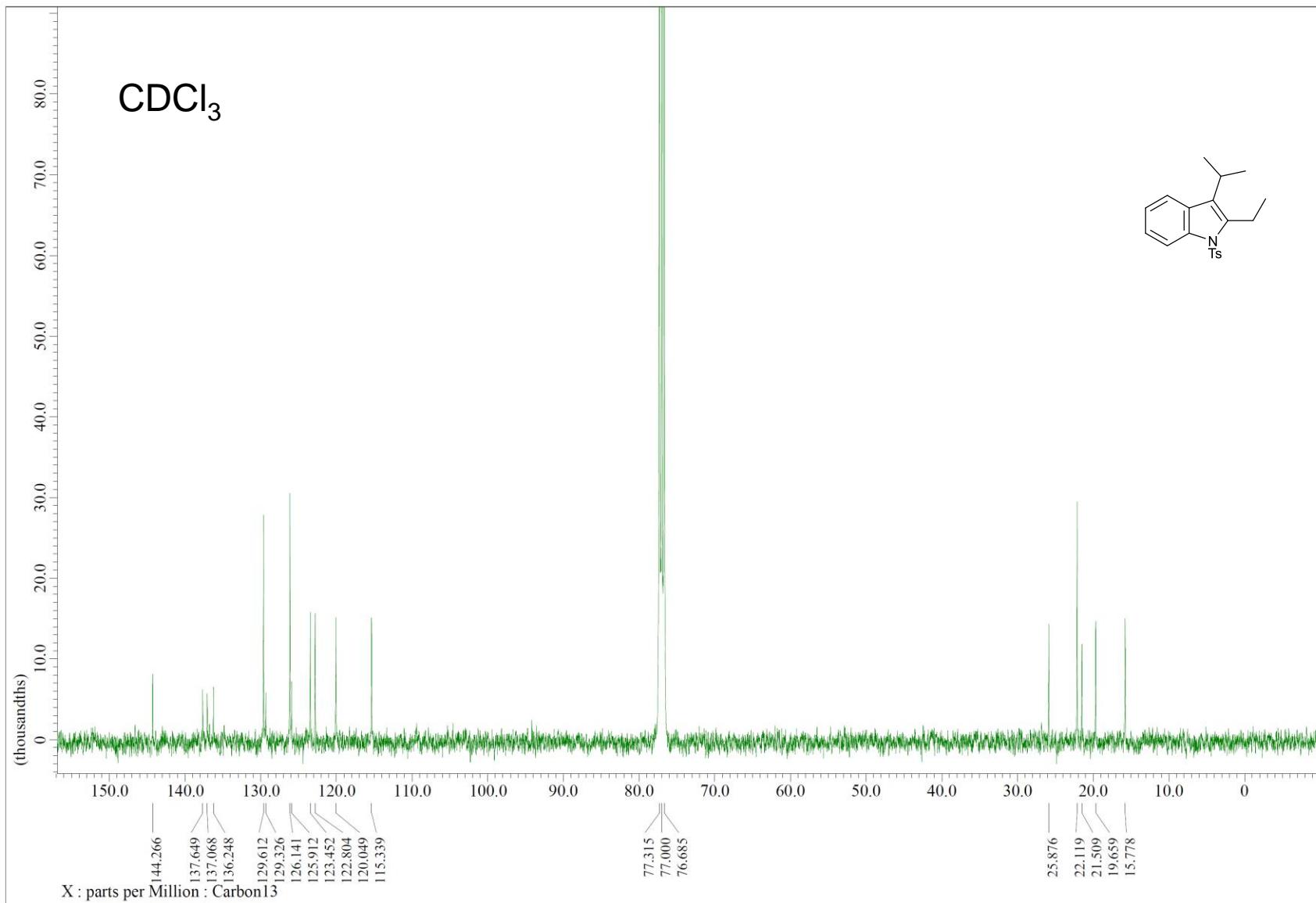




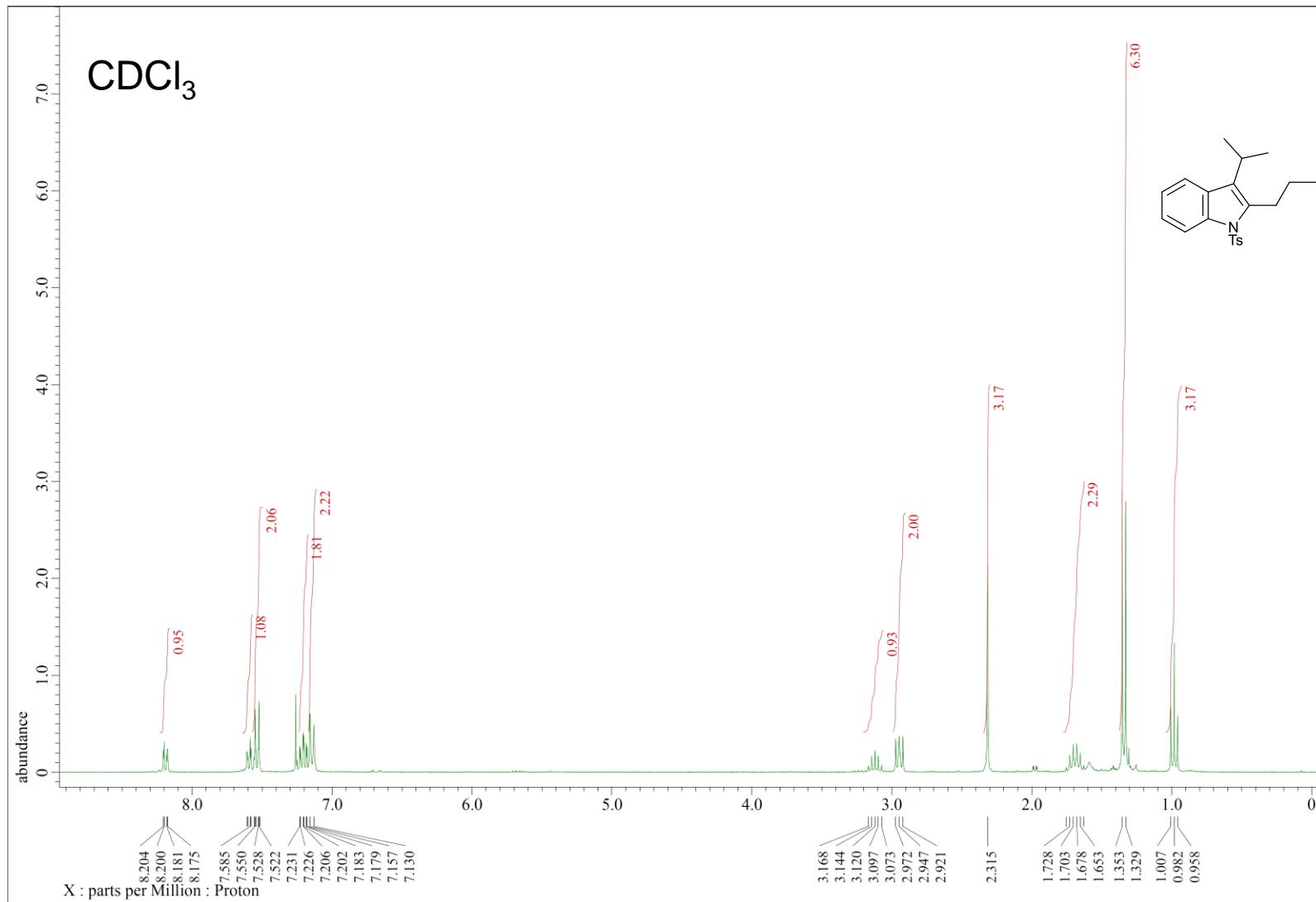
2s



2s

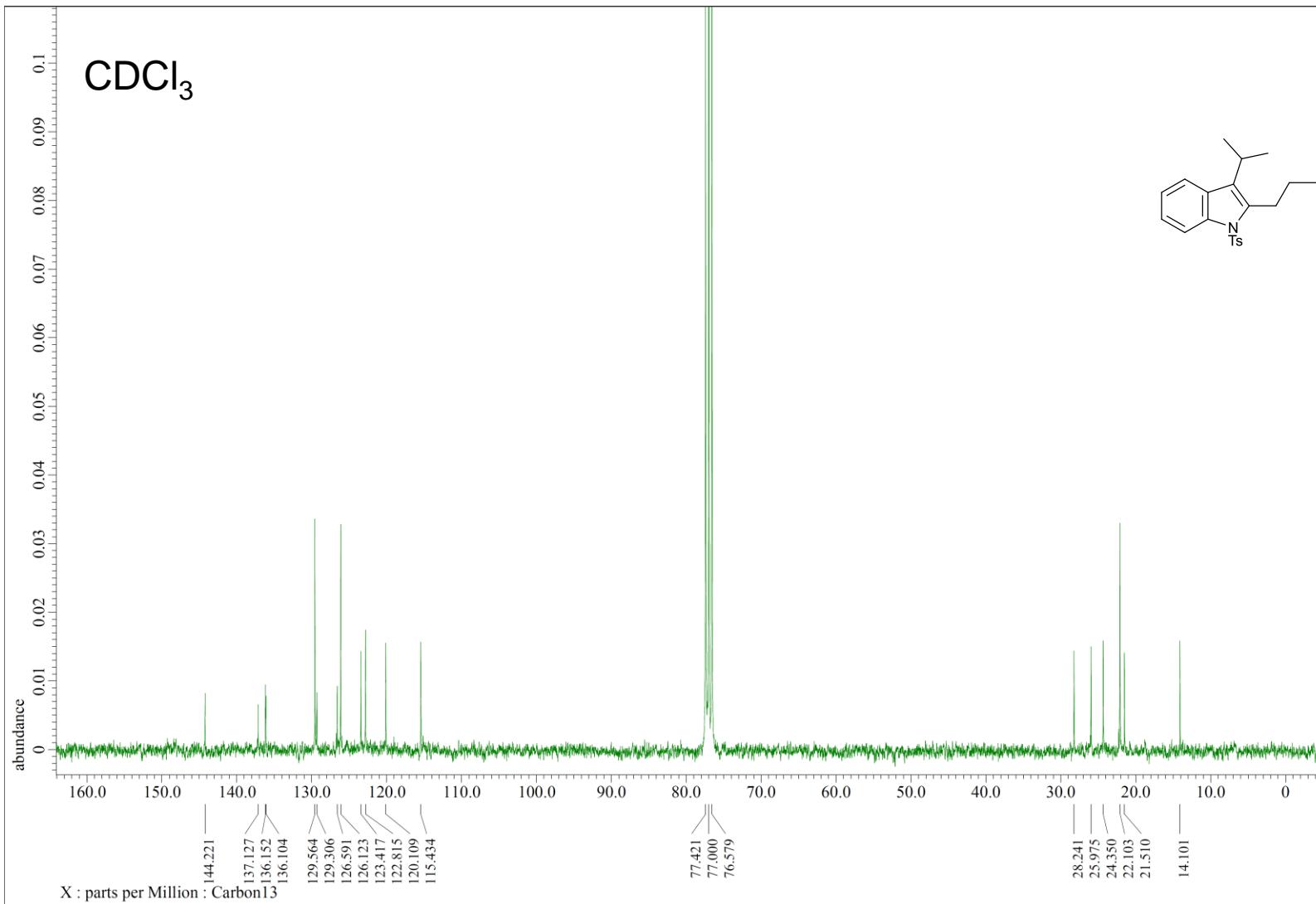


2t

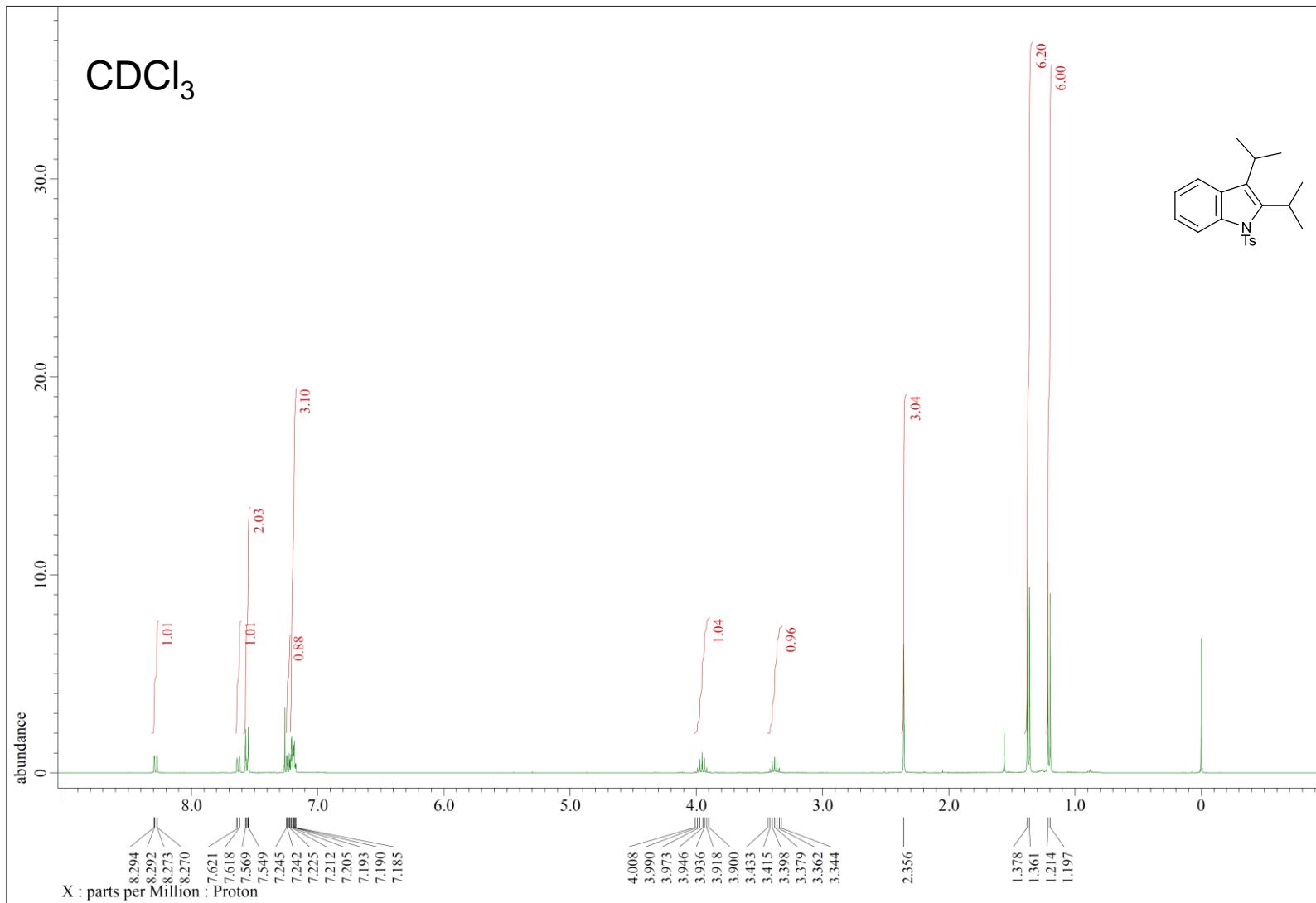


S2- 95

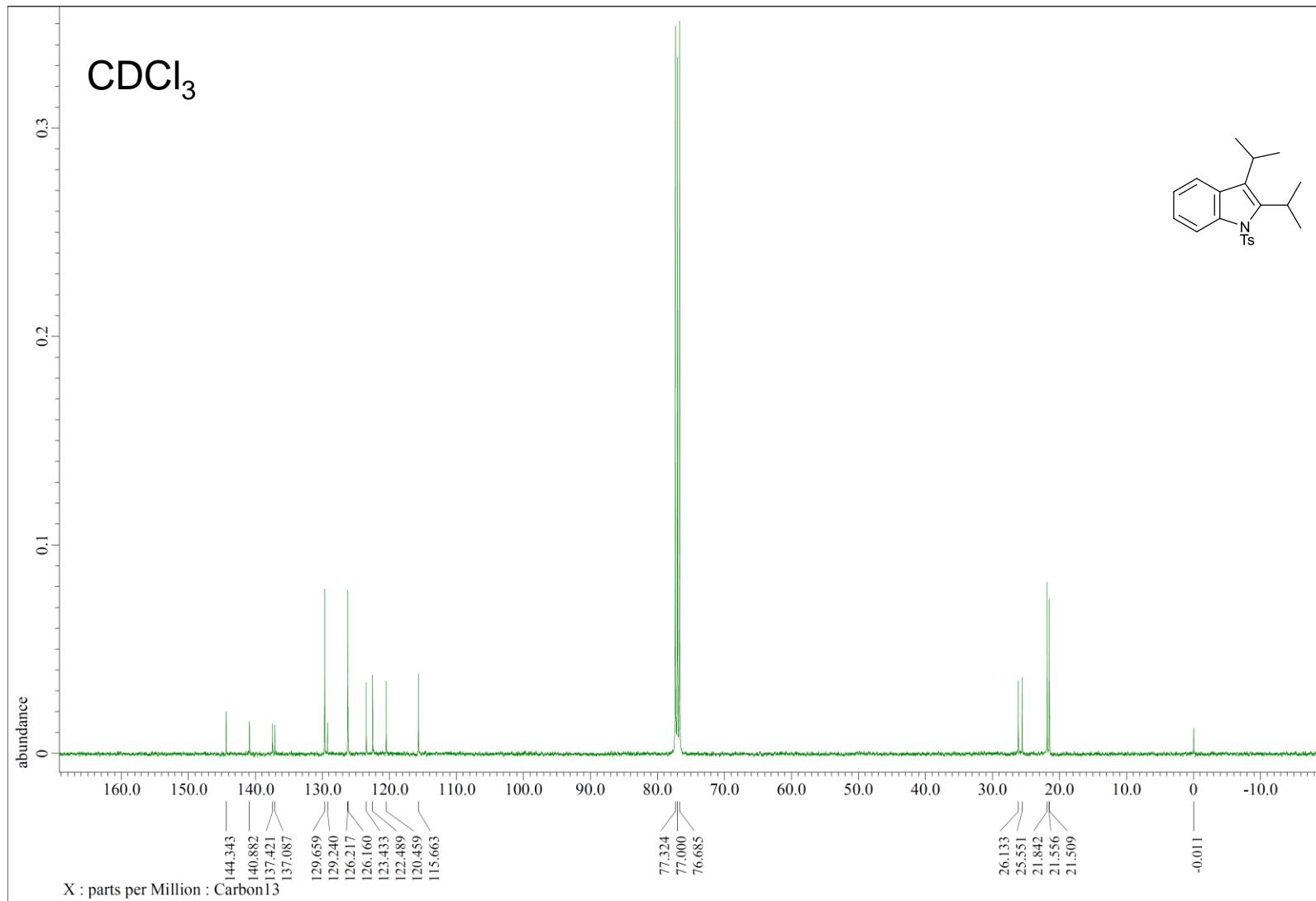
2t

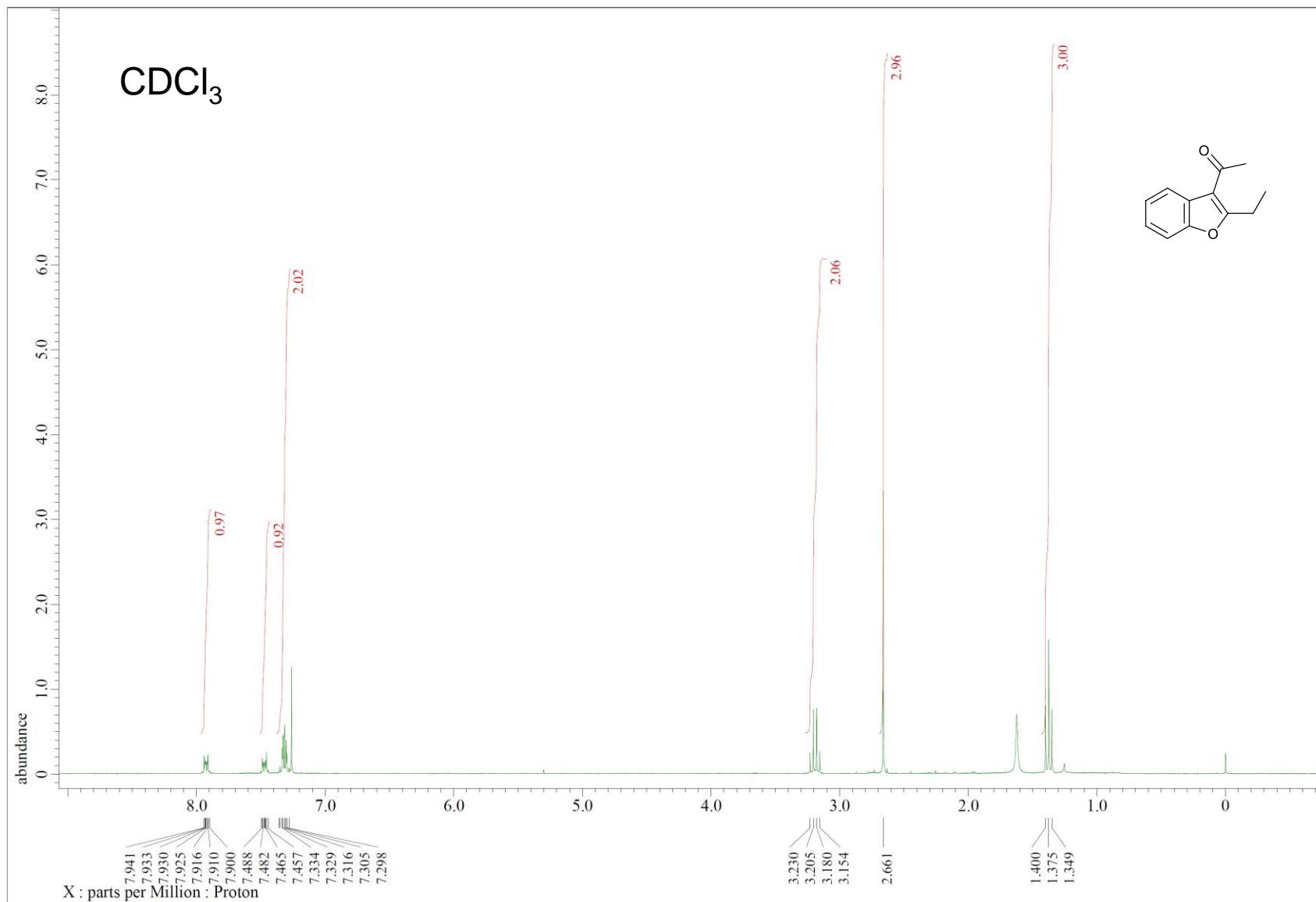


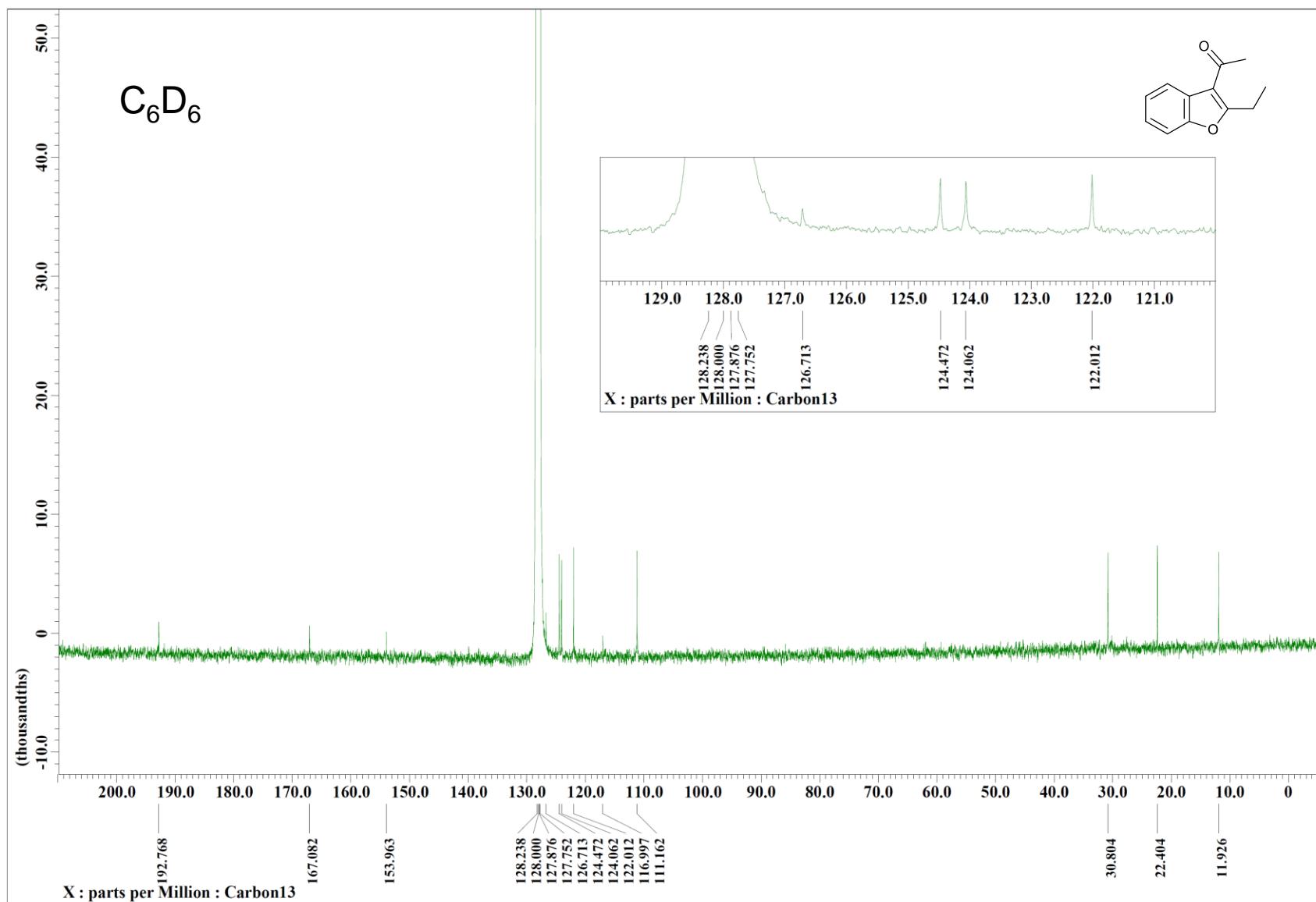
2u

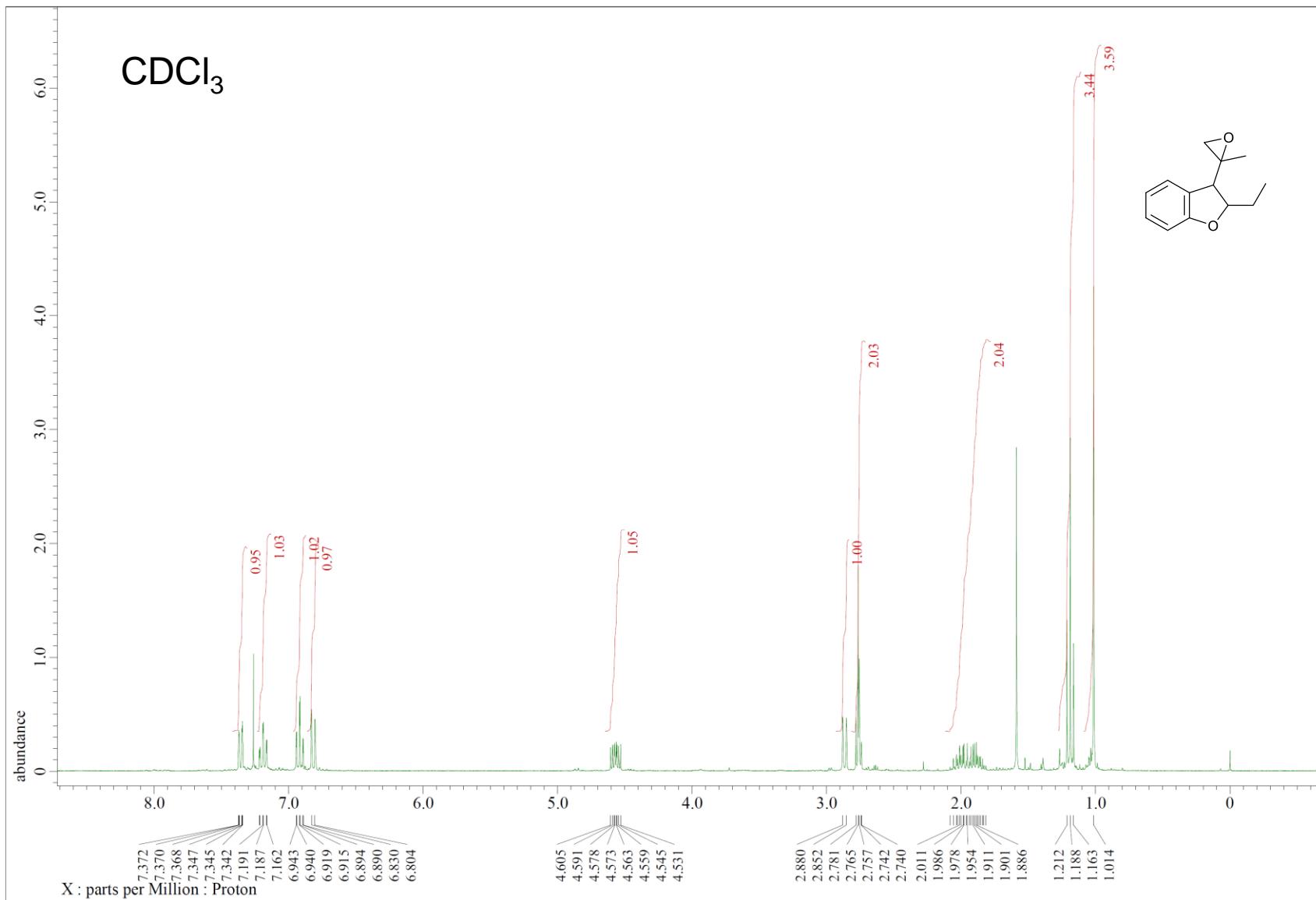


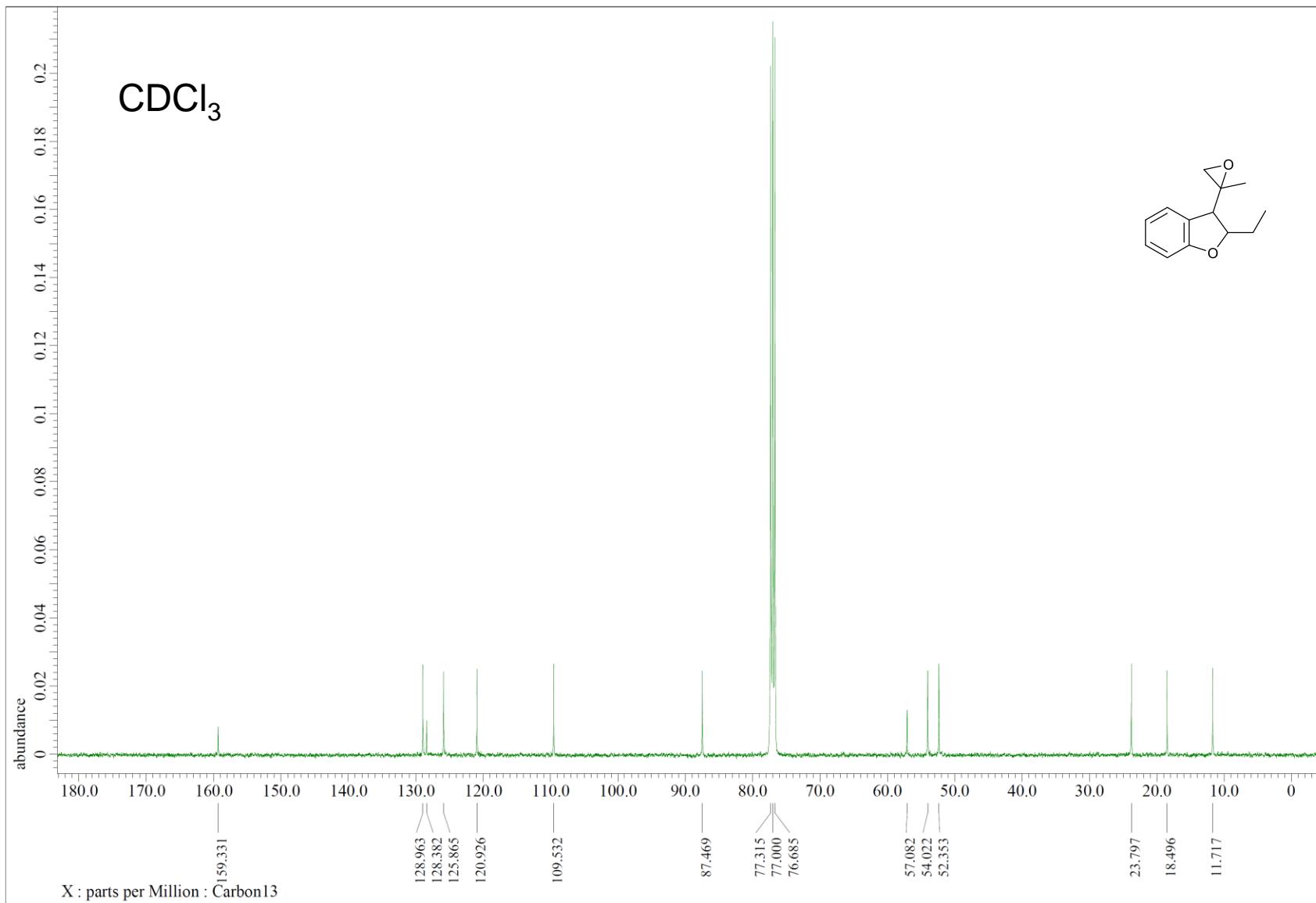
2u

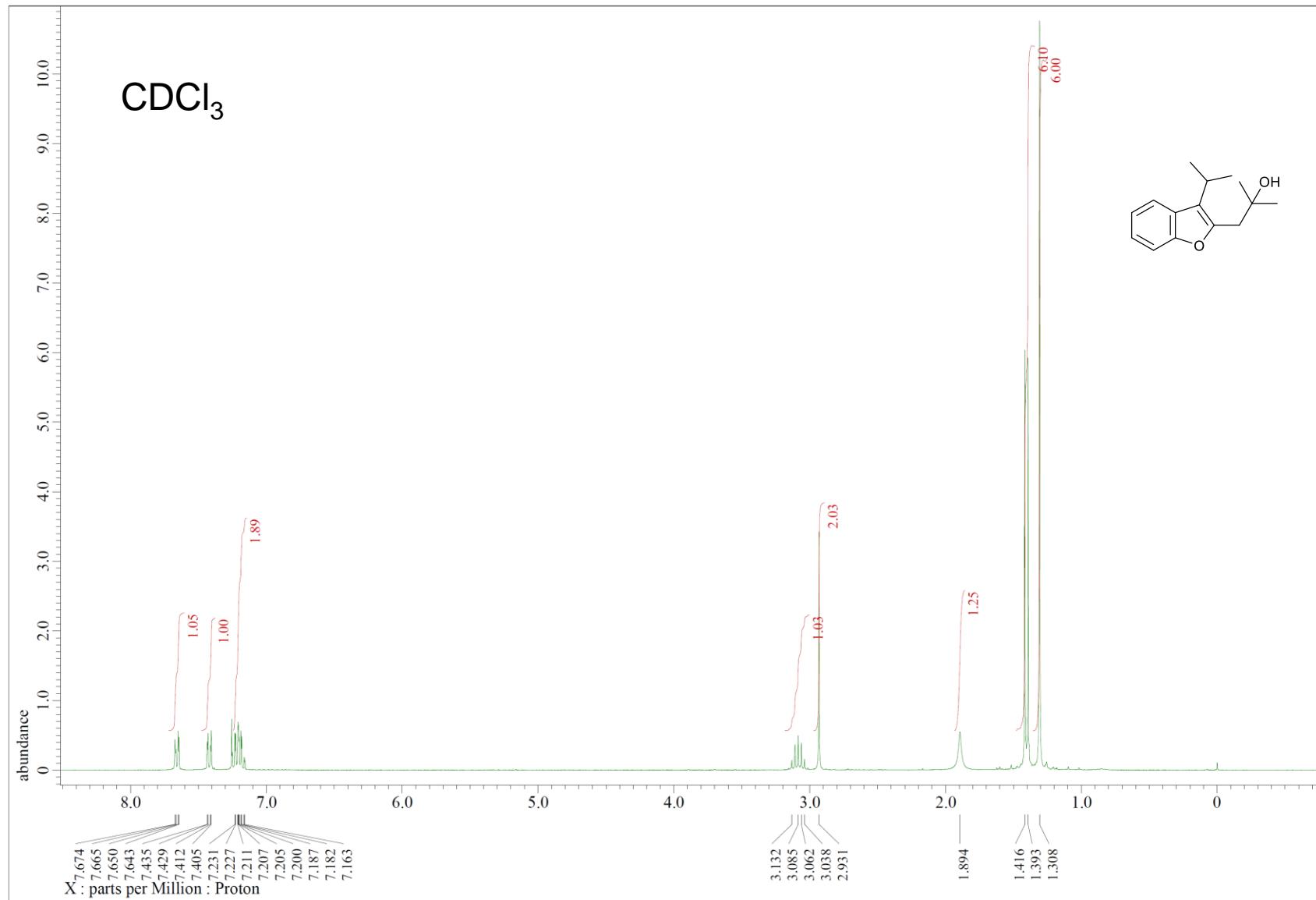




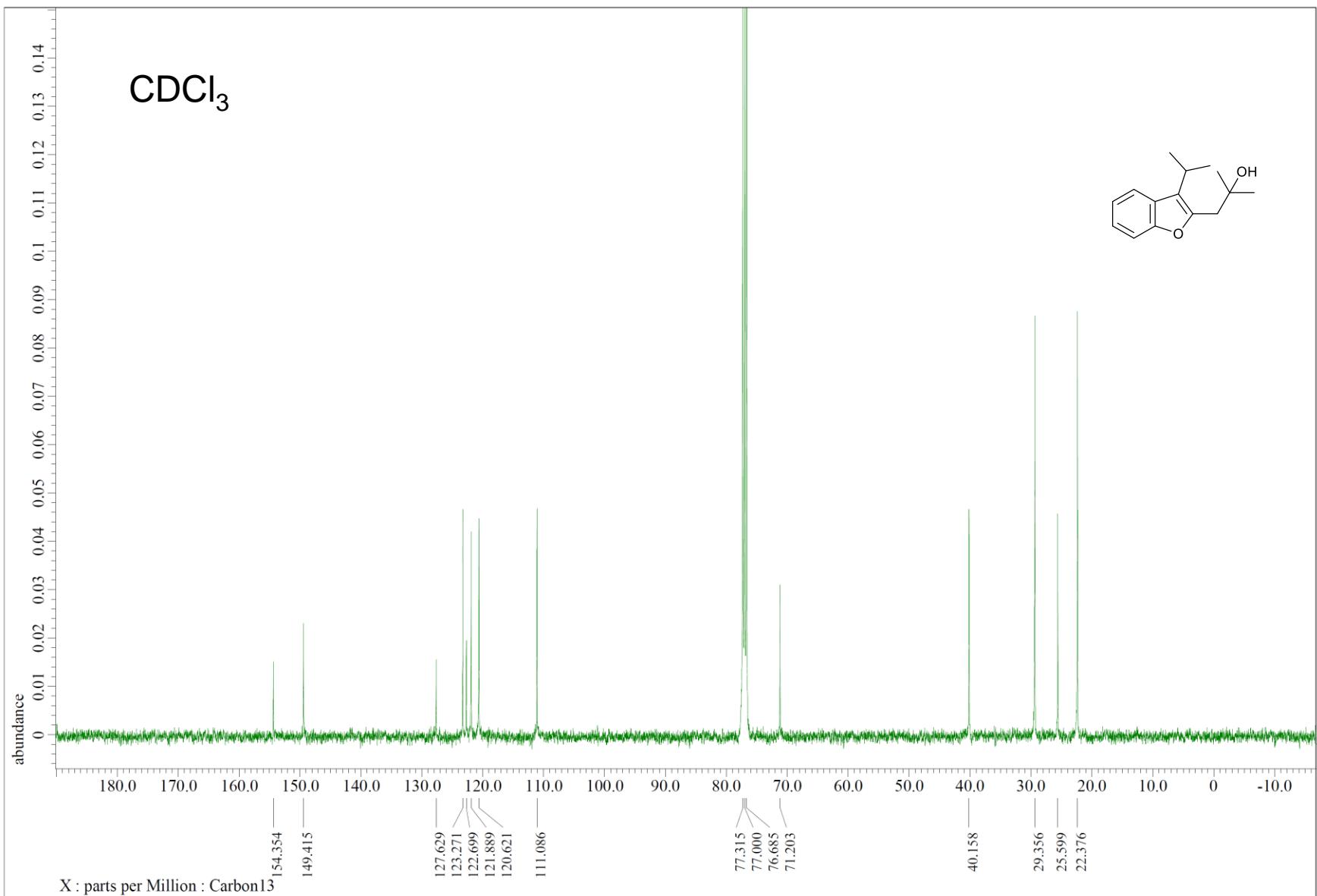




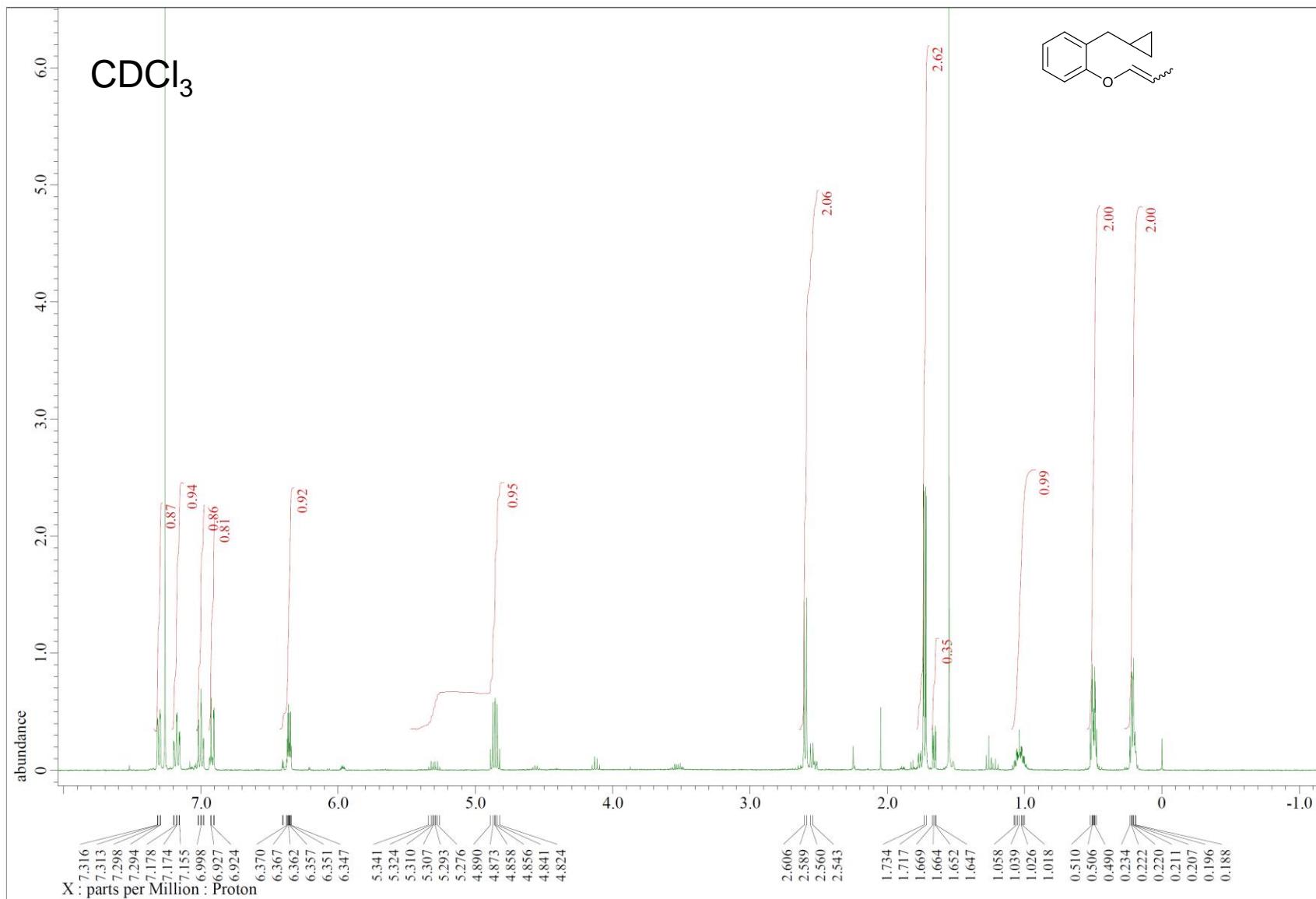




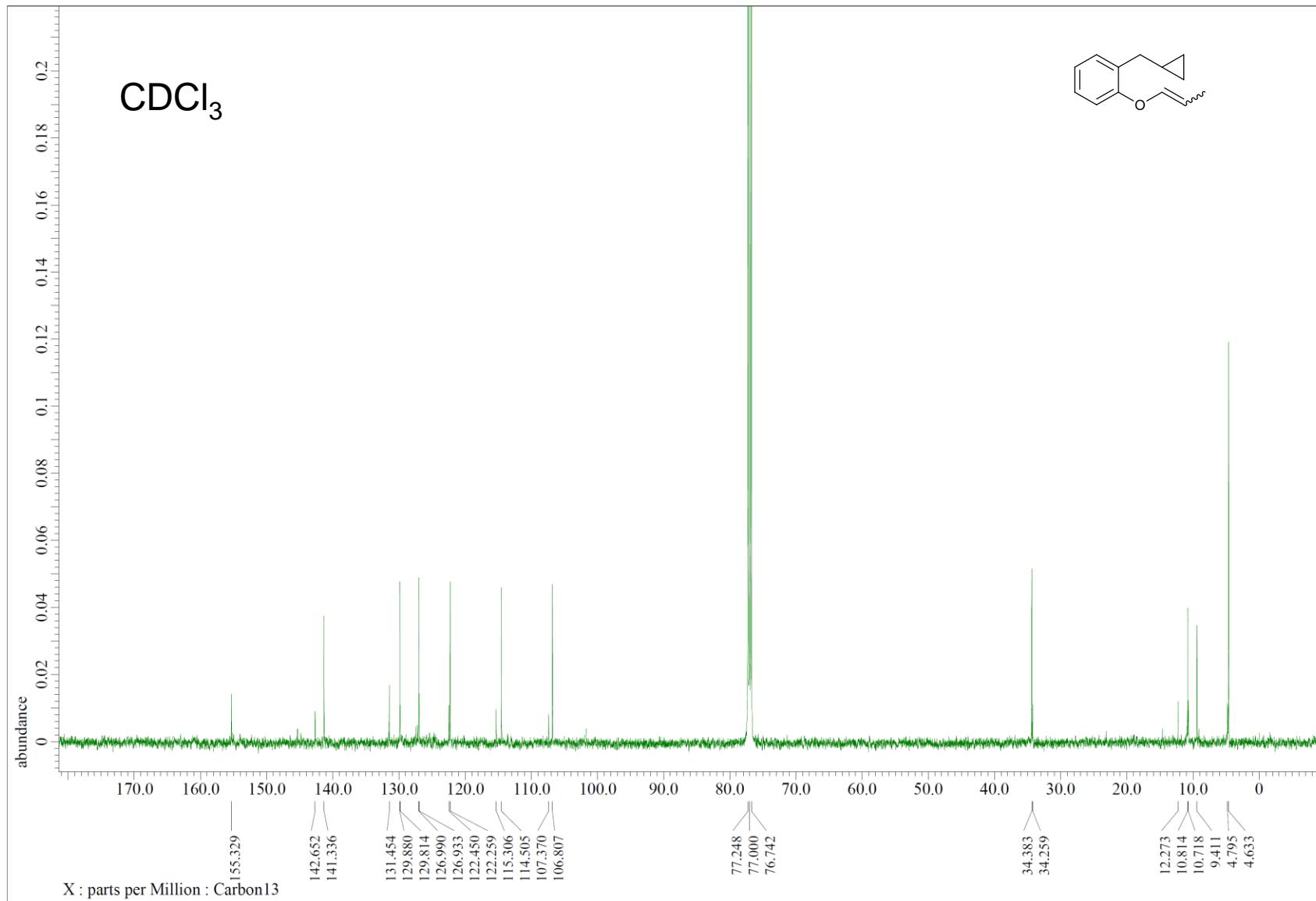
S2-103



# 1a (*E*:*Z* = 1:4)

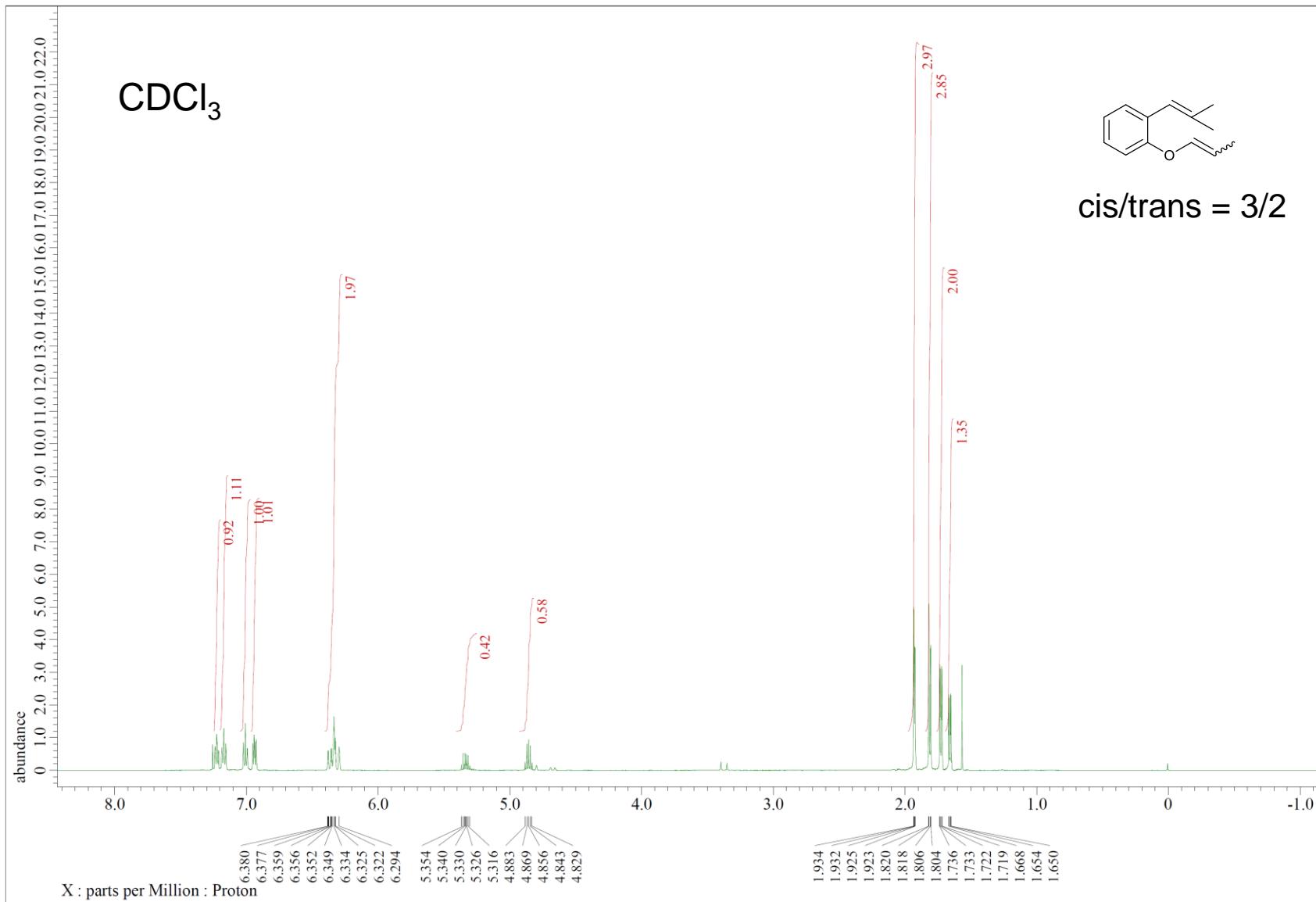


# 1a (*E*:*Z* = 1:4)

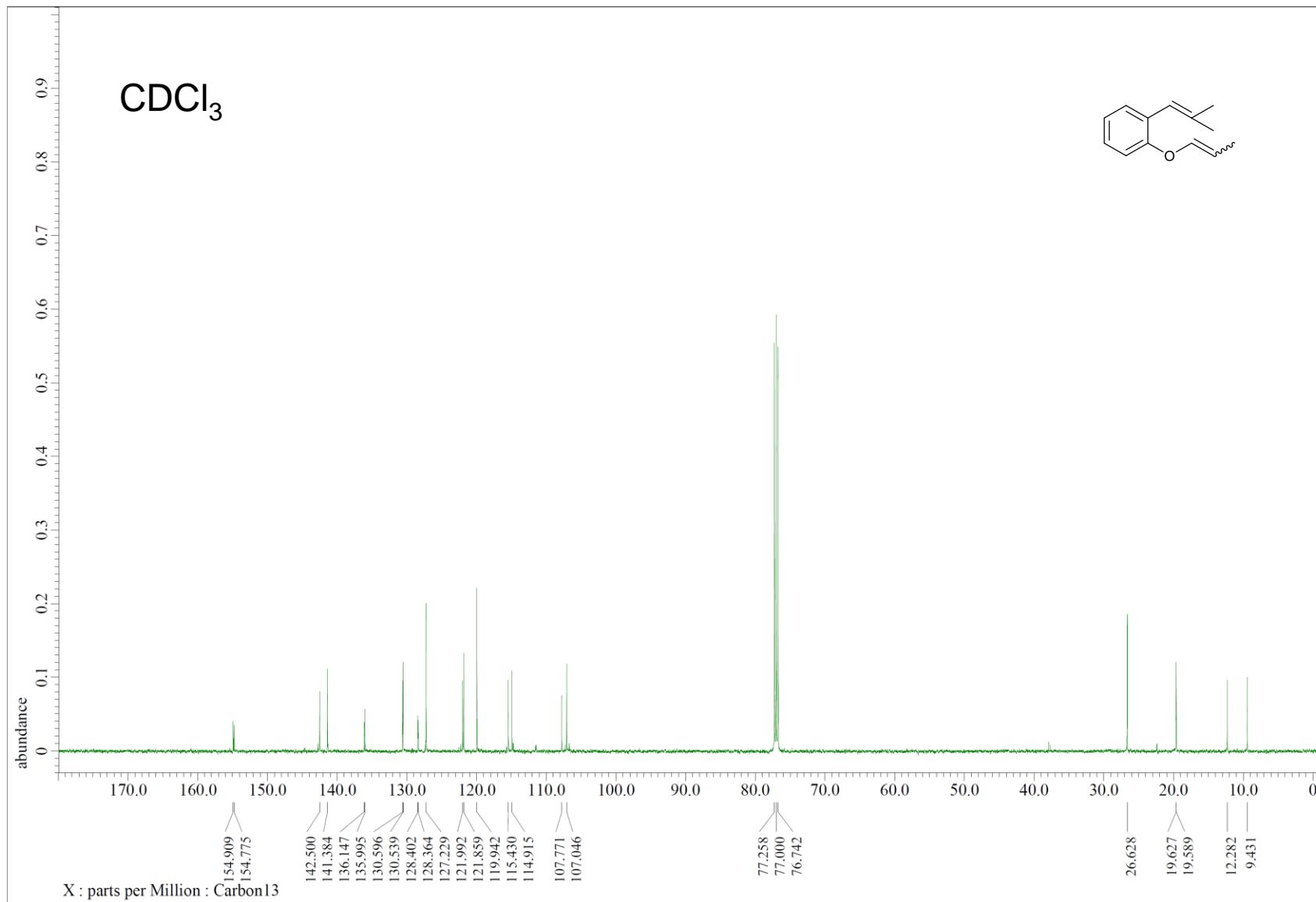


S2-106

### 3a (E:Z = 3:2)

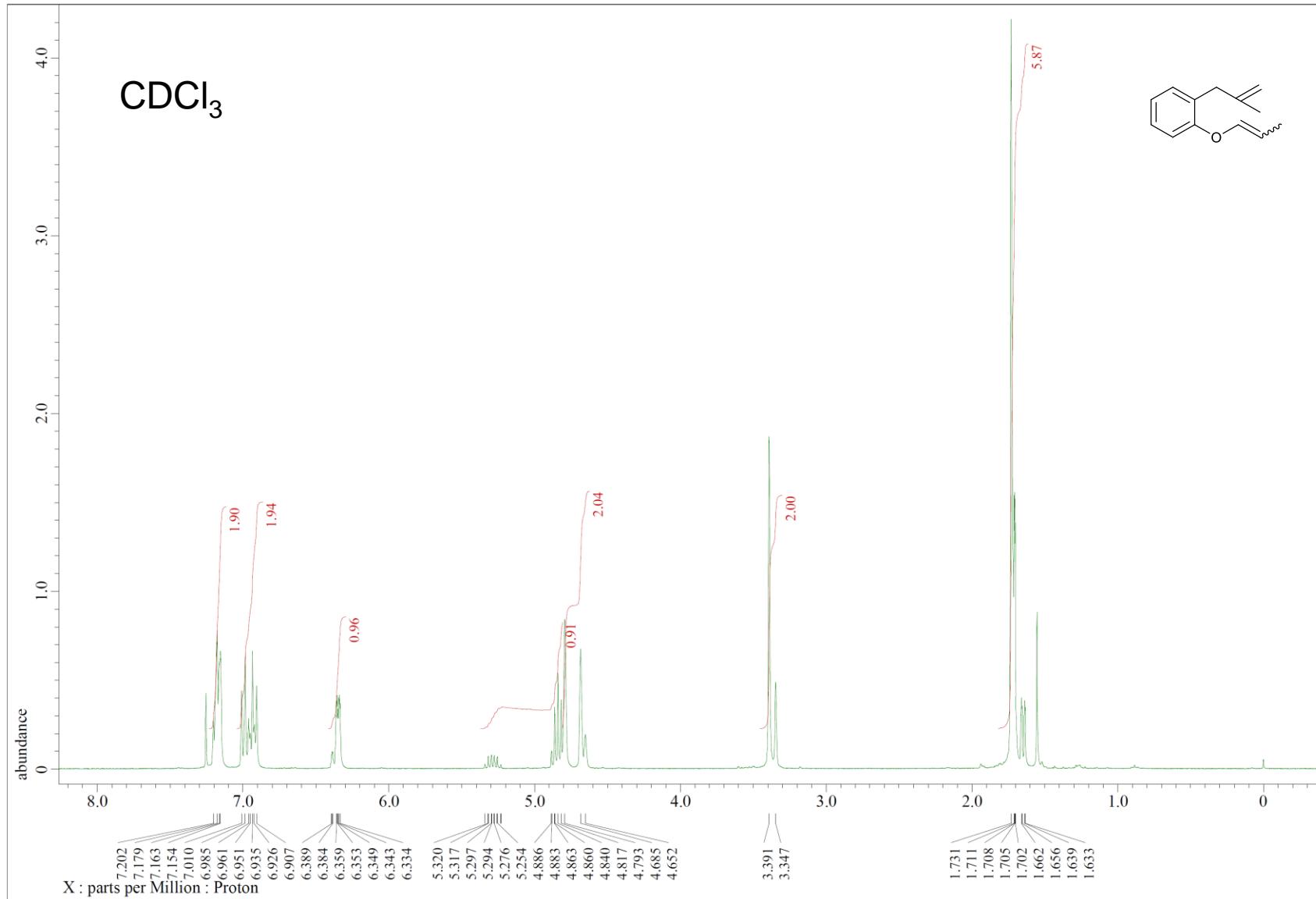


### 3a (E:Z = 3:2)



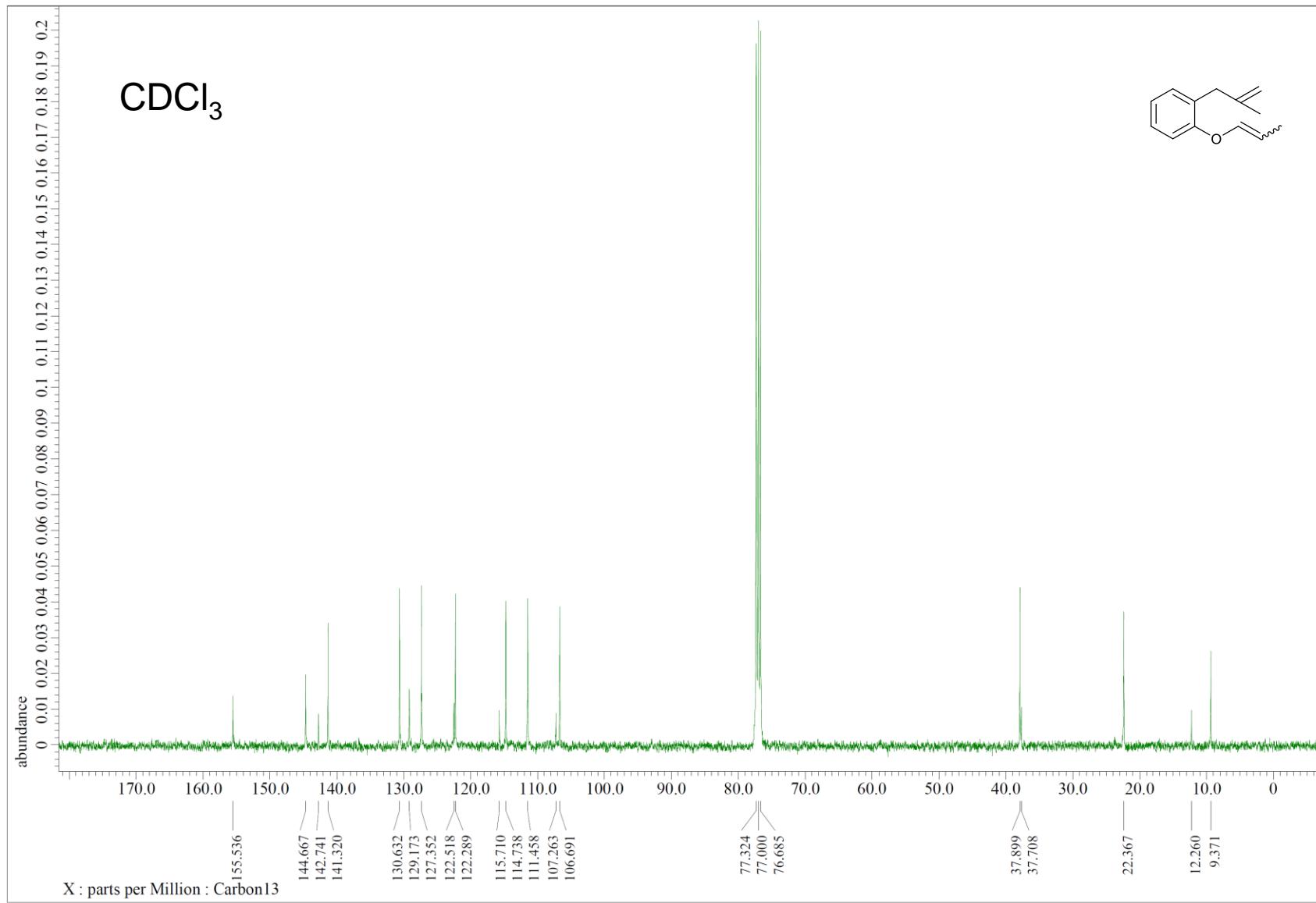
S2-108

# 3a' (E:Z = 4:1)



S2-109

# 3a' (E:Z = 4:1)



S2-110