

## Differential metabolic stability of 4 $\alpha$ ,25- and 4 $\beta$ ,25-dihydroxyvitamin D<sub>3</sub> and identification of their metabolites

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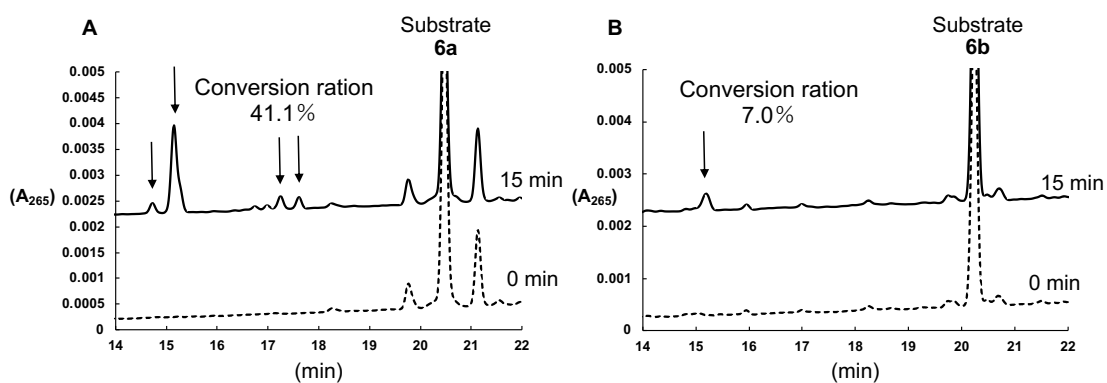
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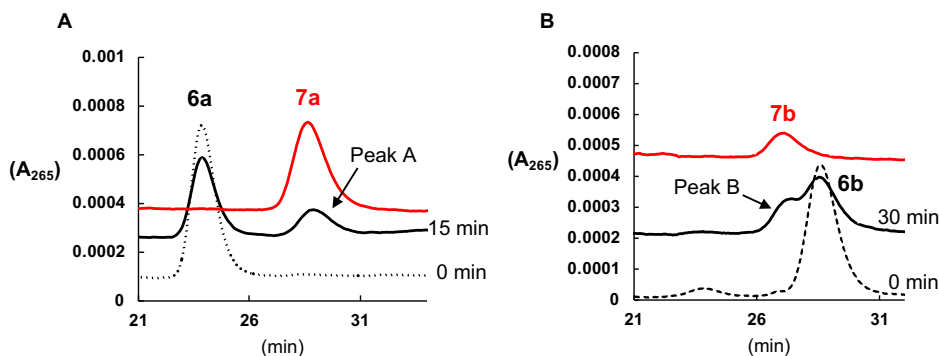
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1. HPLC profiles of metabolism of **6a** and **6b** by CYP24A1



**Figure S1. A)** HPLC profiles of metabolites of **6a** at 0 min (dotted line) and 15 min (solid line) after incubation with CYP24A1. The peaks marked with arrows indicate metabolites. **B)** HPLC profiles of metabolites of **6b** at 0 min (dotted line) and 15 min (solid line) after incubation with CYP24A1. The peaks marked with arrows indicate metabolites.

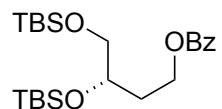
## 2. HPLC profiles of metabolism of **6a** and **6b** by CYP24A1 with chiral column



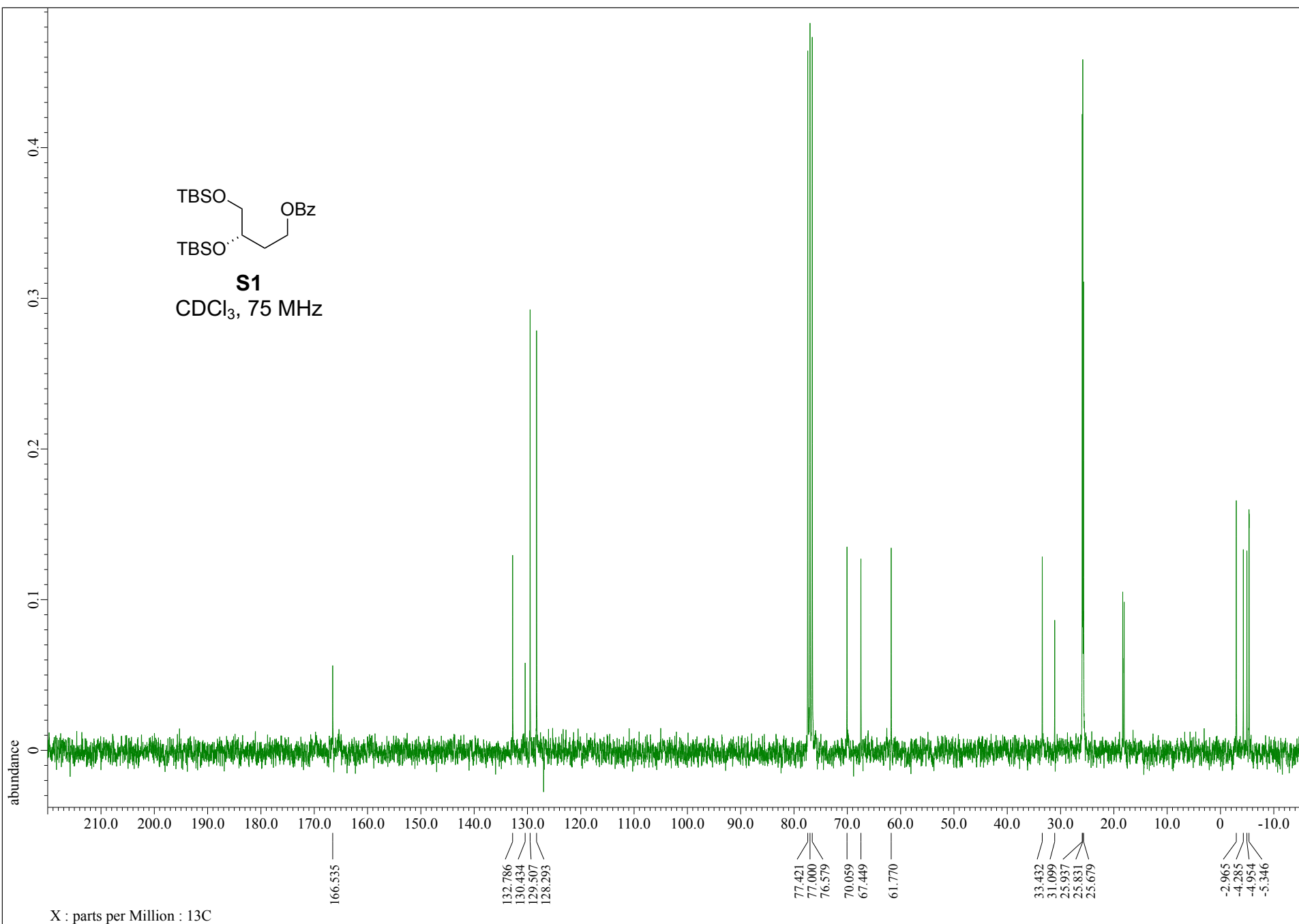
**Figure S2. A)** HPLC profiles of **7a** (red line), and metabolites of **6a** after incubation with CYP24A1 for 0 min (dotted line) and 15 min (solid line). Peak A marked with an arrow indicates a major metabolite. **B)** HPLC profiles of **7b** (red line), and metabolites of **6b** after incubation with CYP24A1 for 0 min (dotted line) and 30 min (solid line) after incubation with CYP24A1. Peak B marked with an arrow indicates a major metabolite. HPLC was performed under the following conditions: column, SUMICHIRAL OA-7000 (Sumika Chemical Analysis Service ,Ltd., Tokyo, Japan); UV detection, 265 nm; flow-rate, 0.7 mL/min; mobile phase,  $\text{CH}_3\text{CN}:\text{H}_2\text{O} = 88:12$  (isocratic).

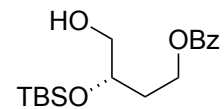






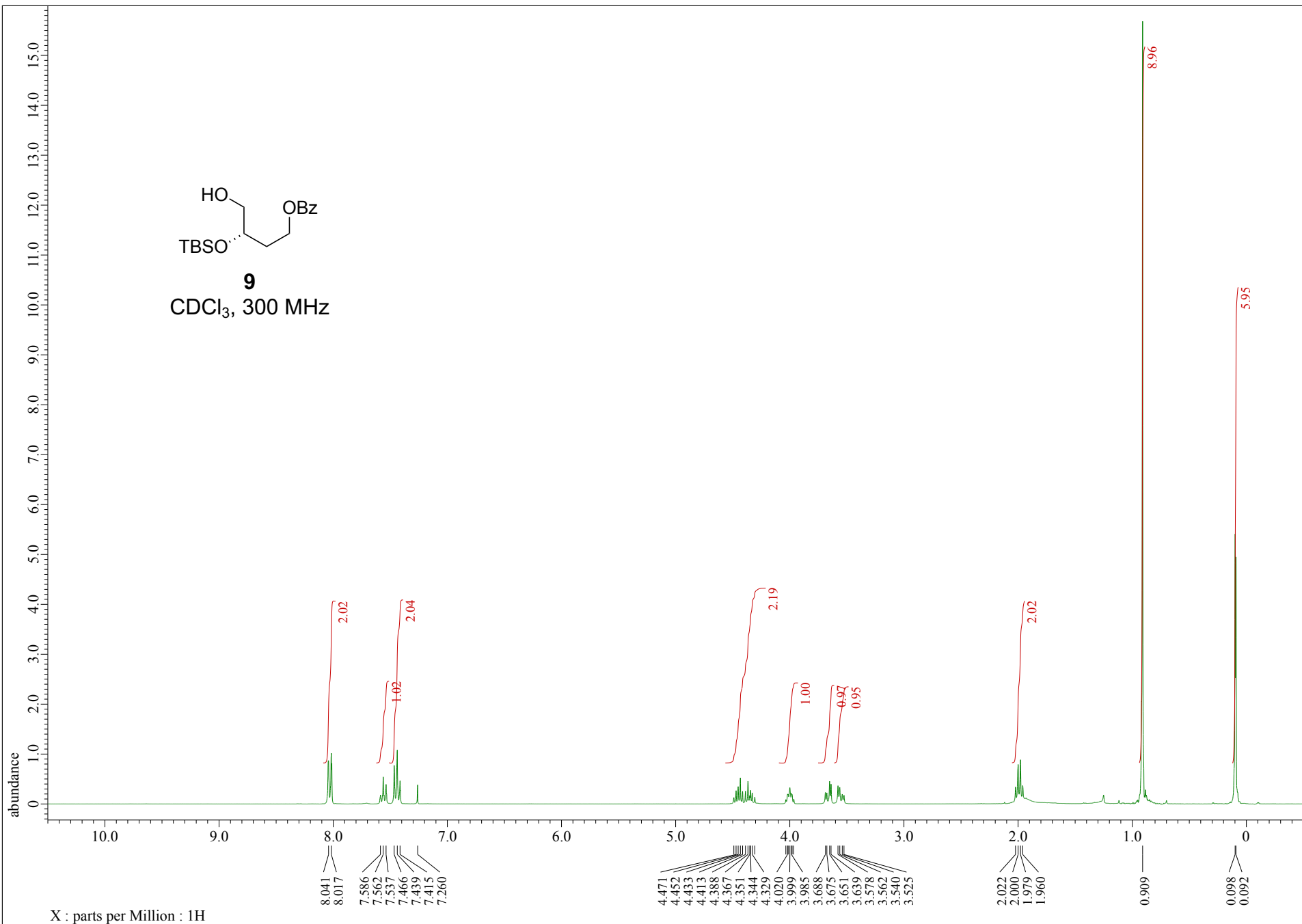
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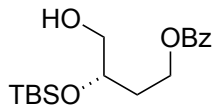




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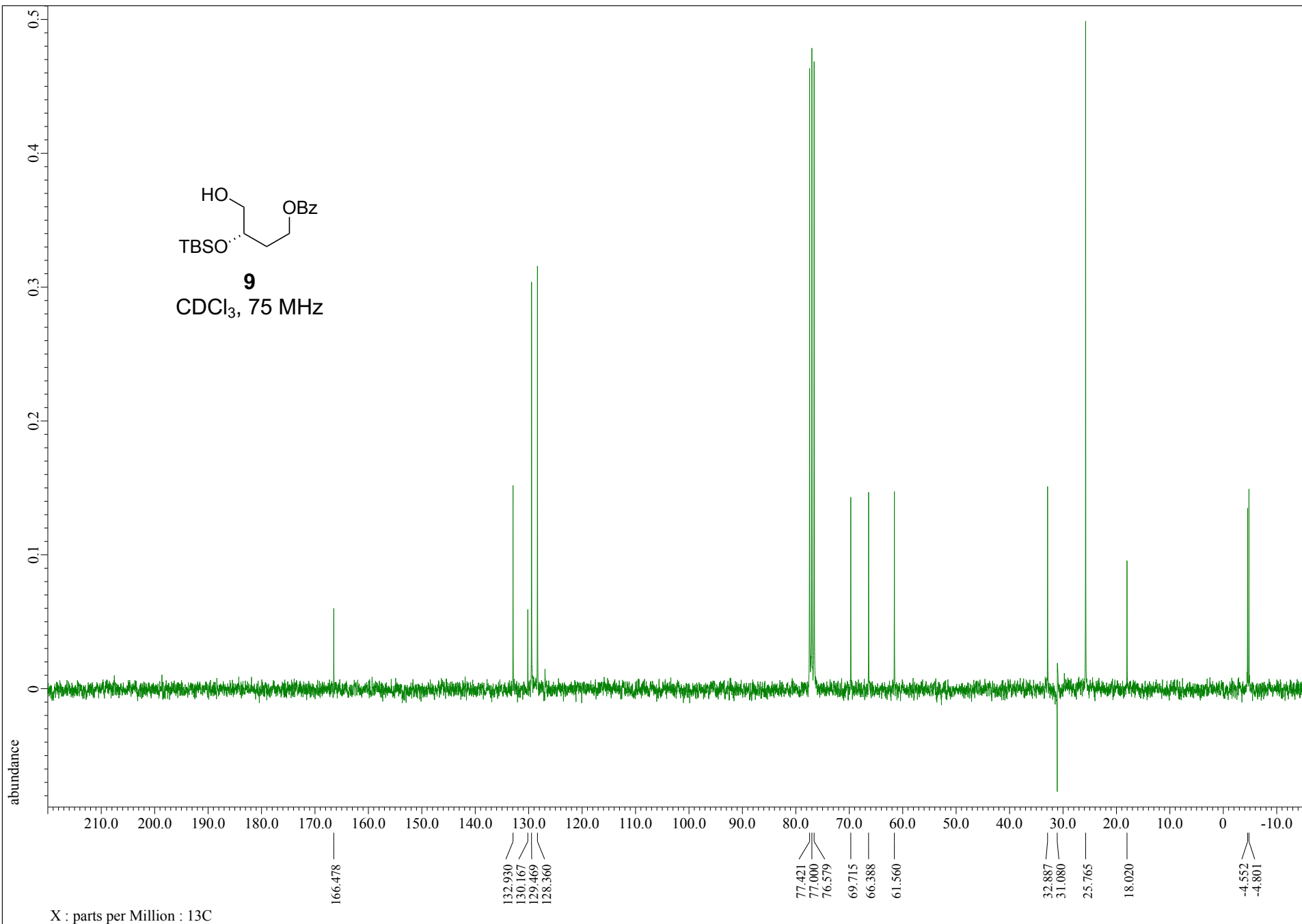
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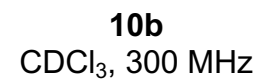


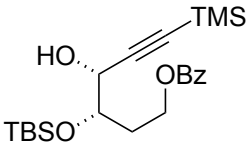


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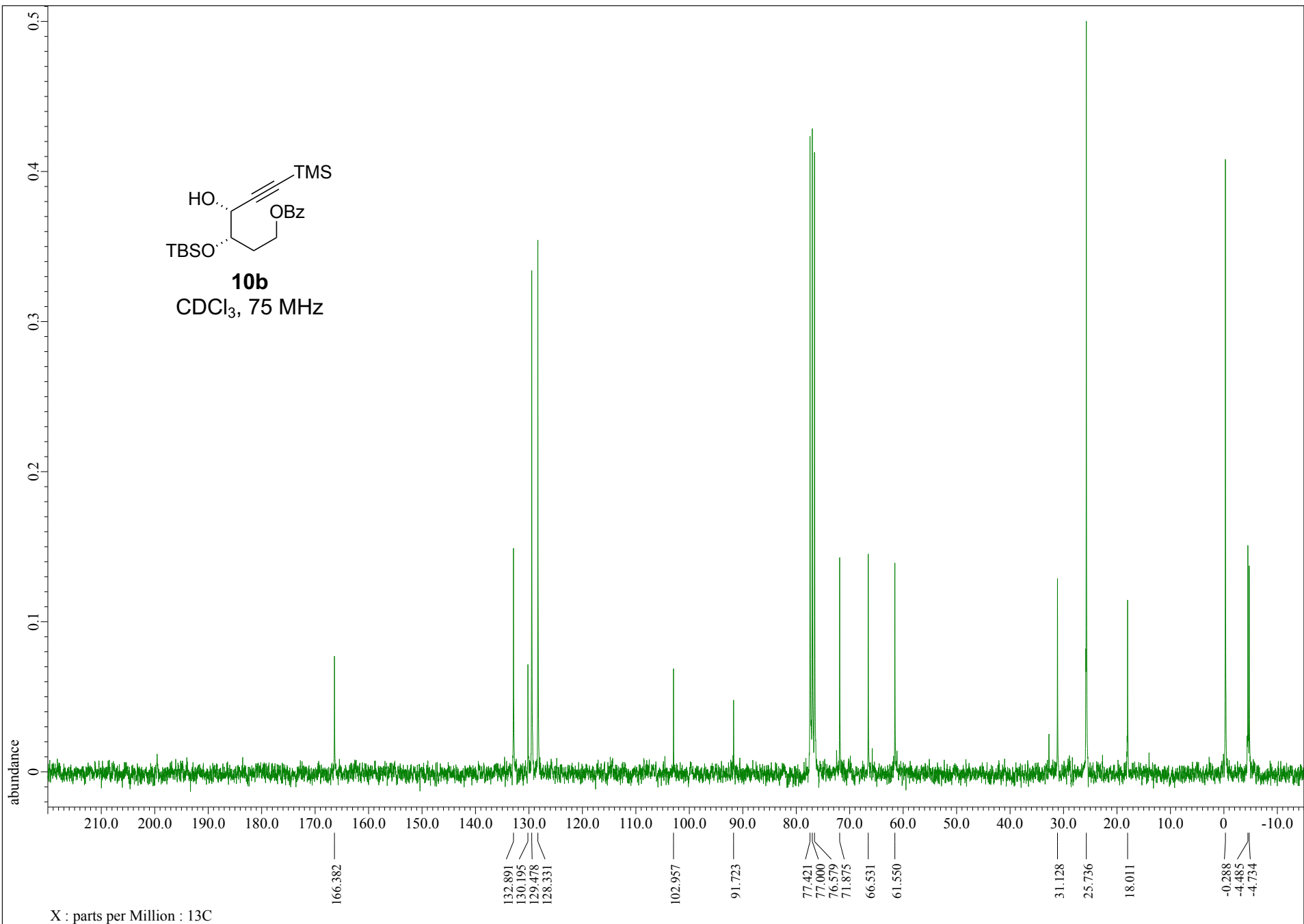
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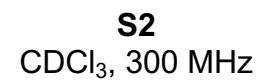


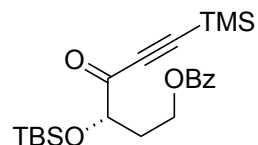




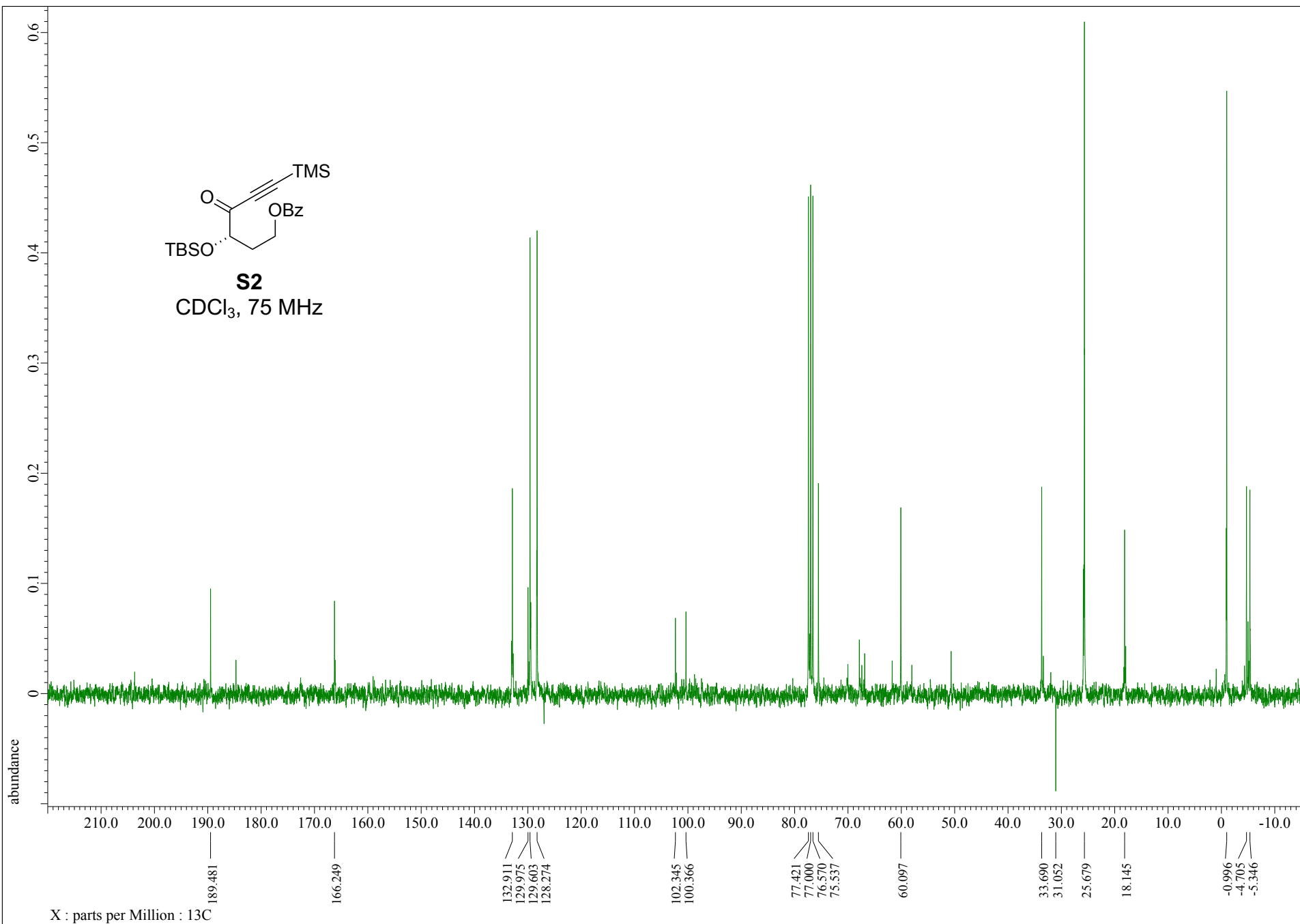
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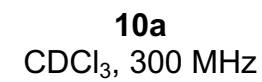




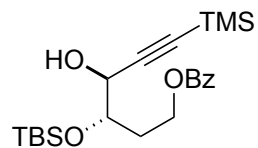


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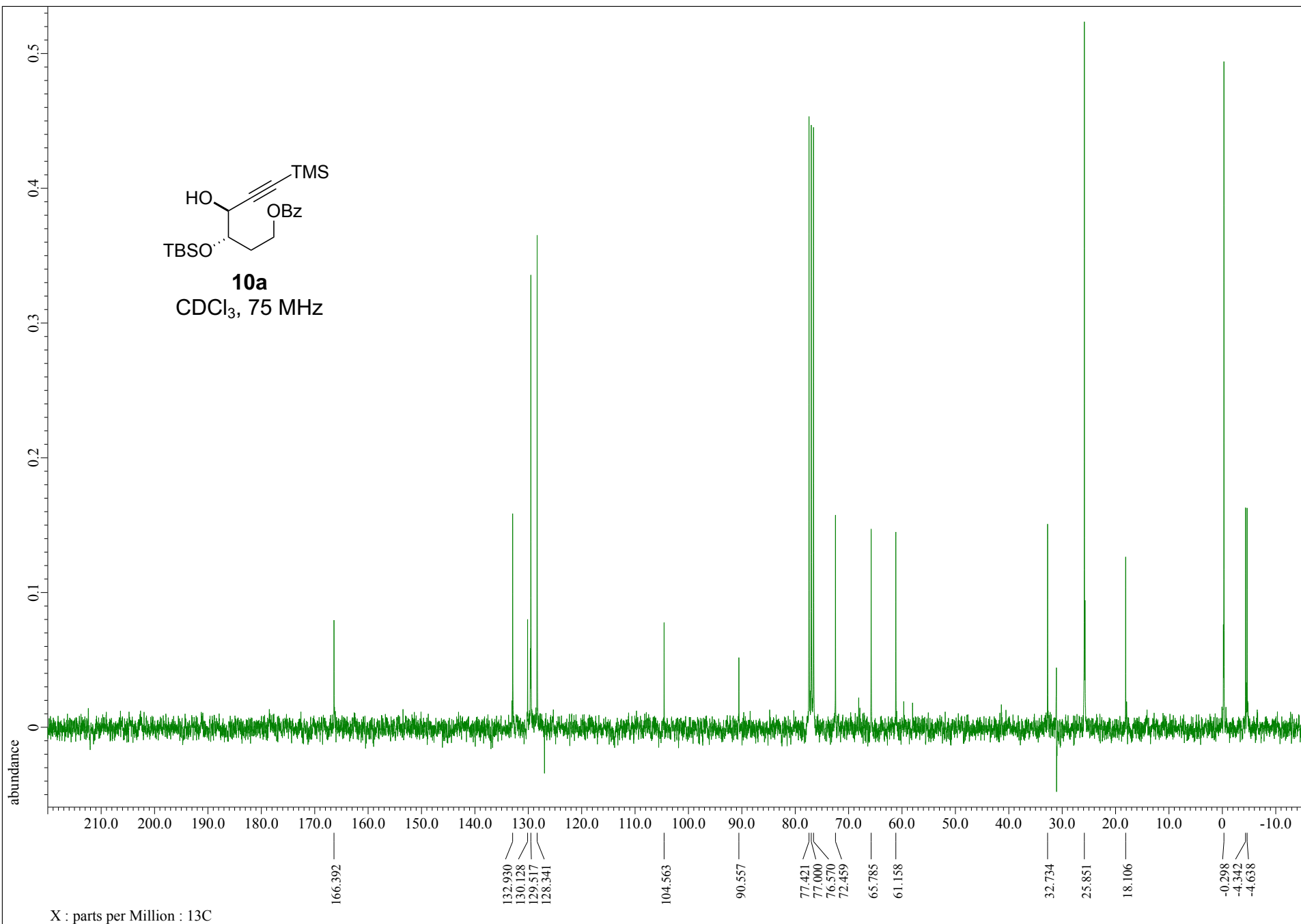


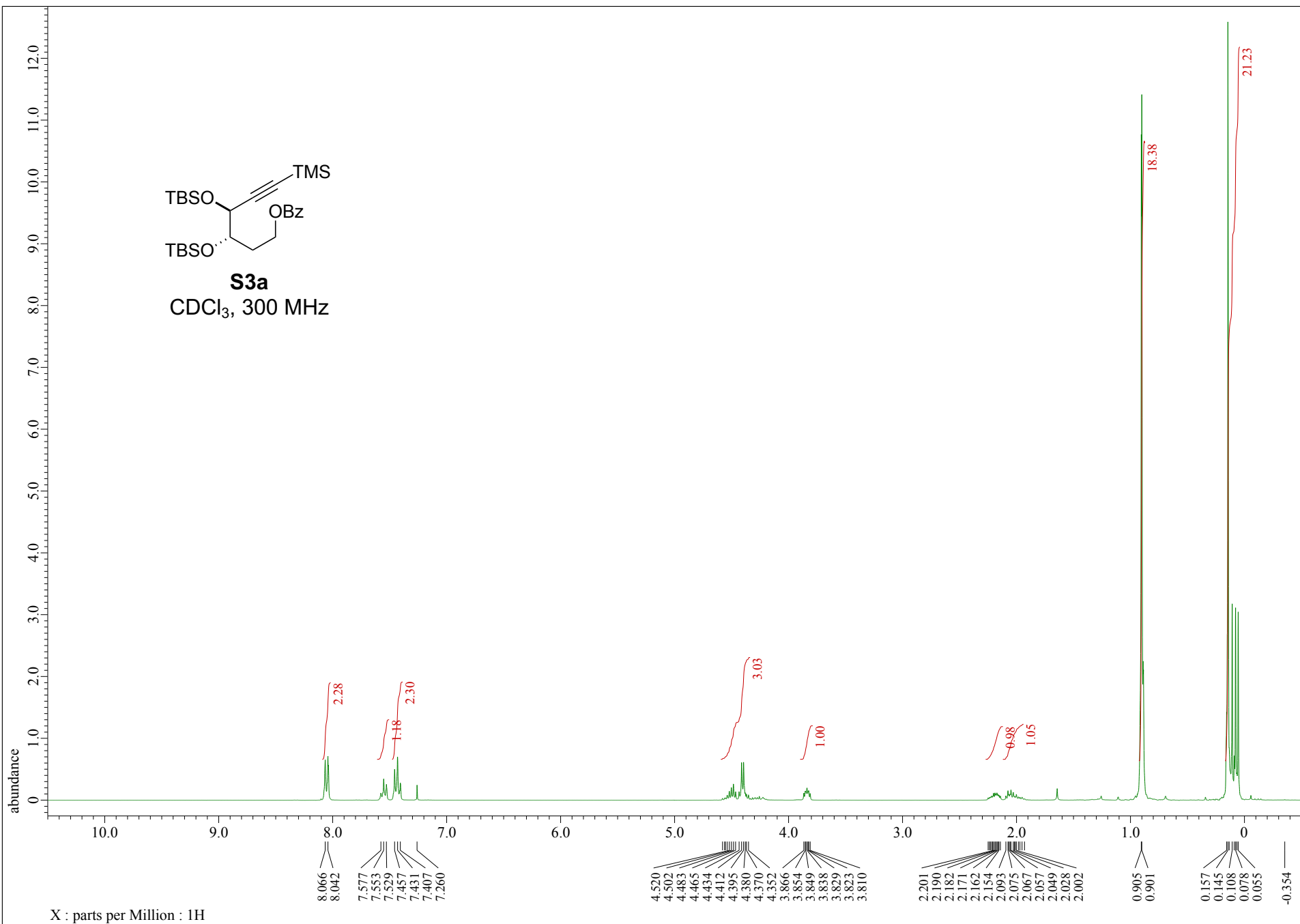


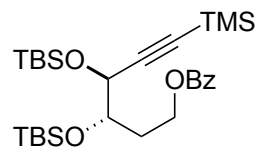




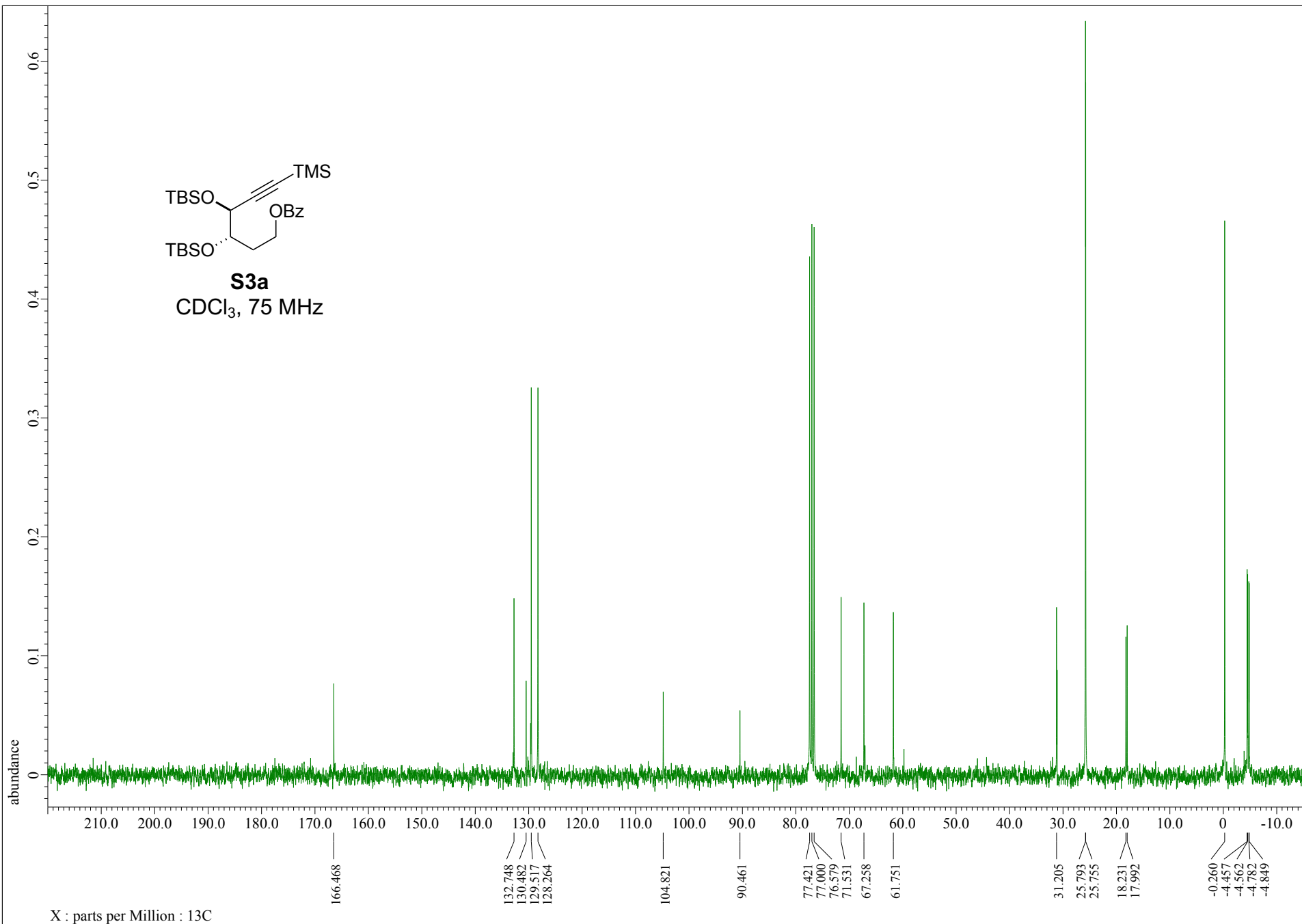
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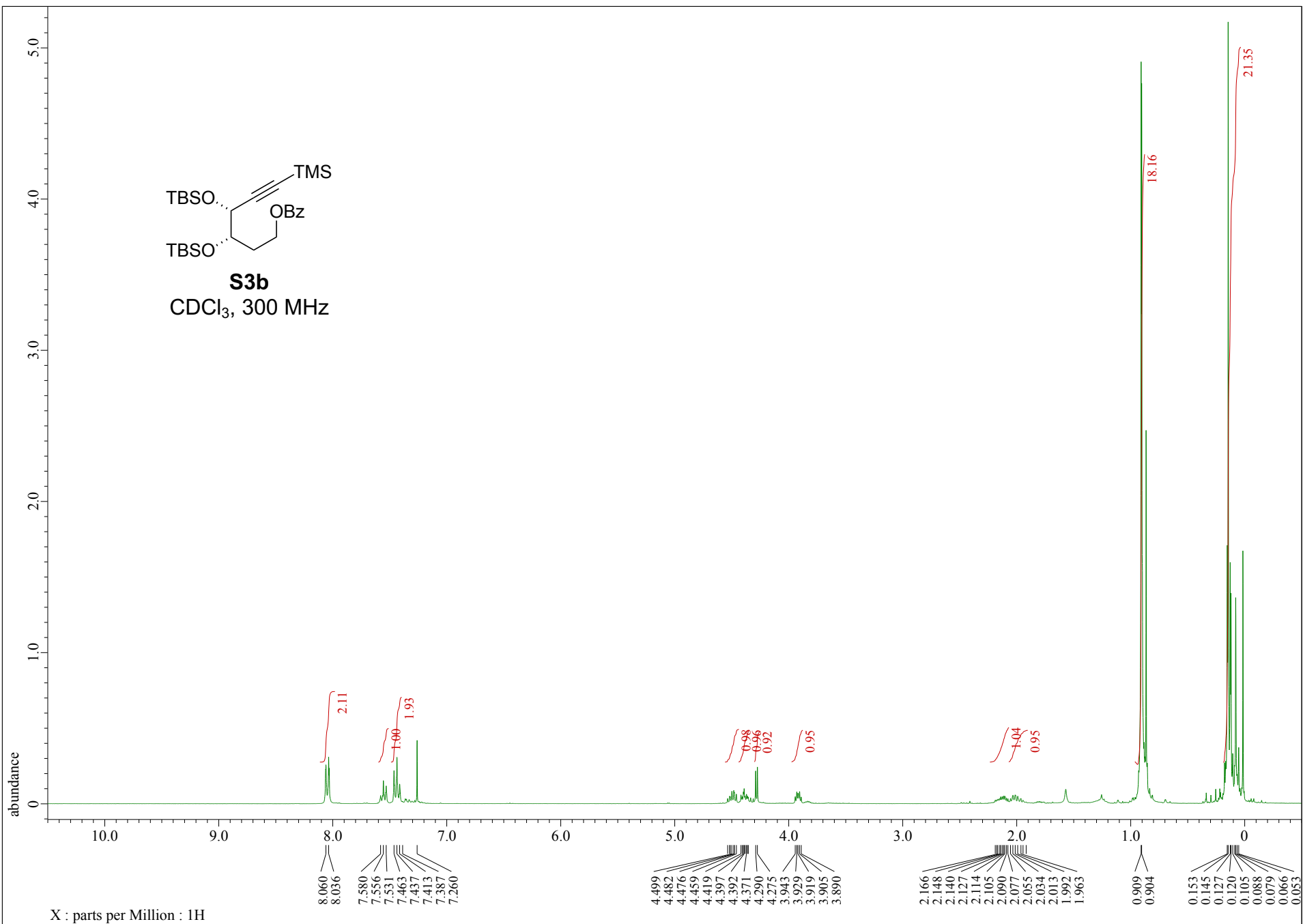


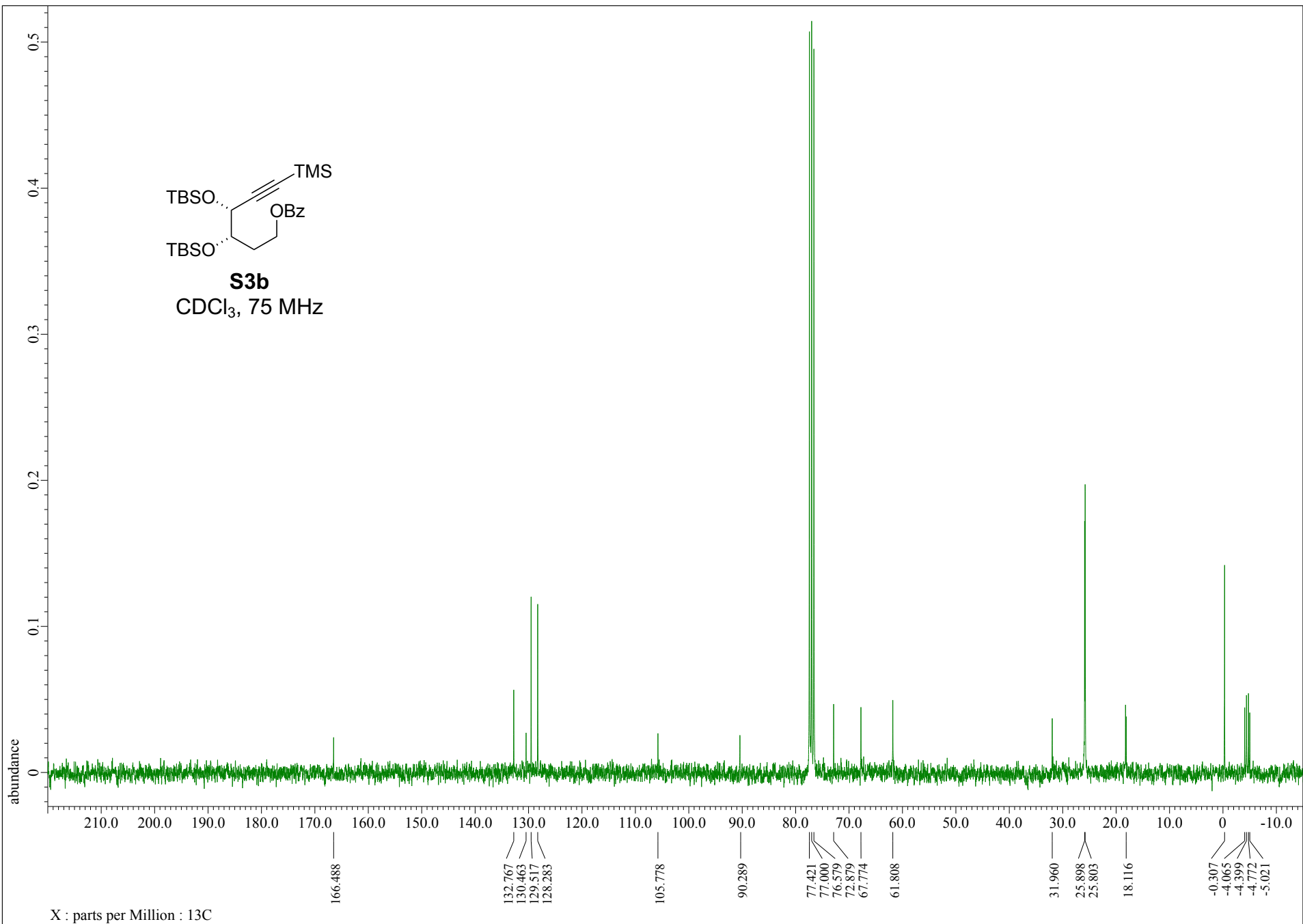
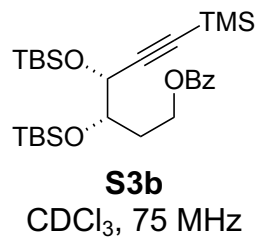


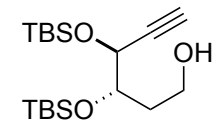


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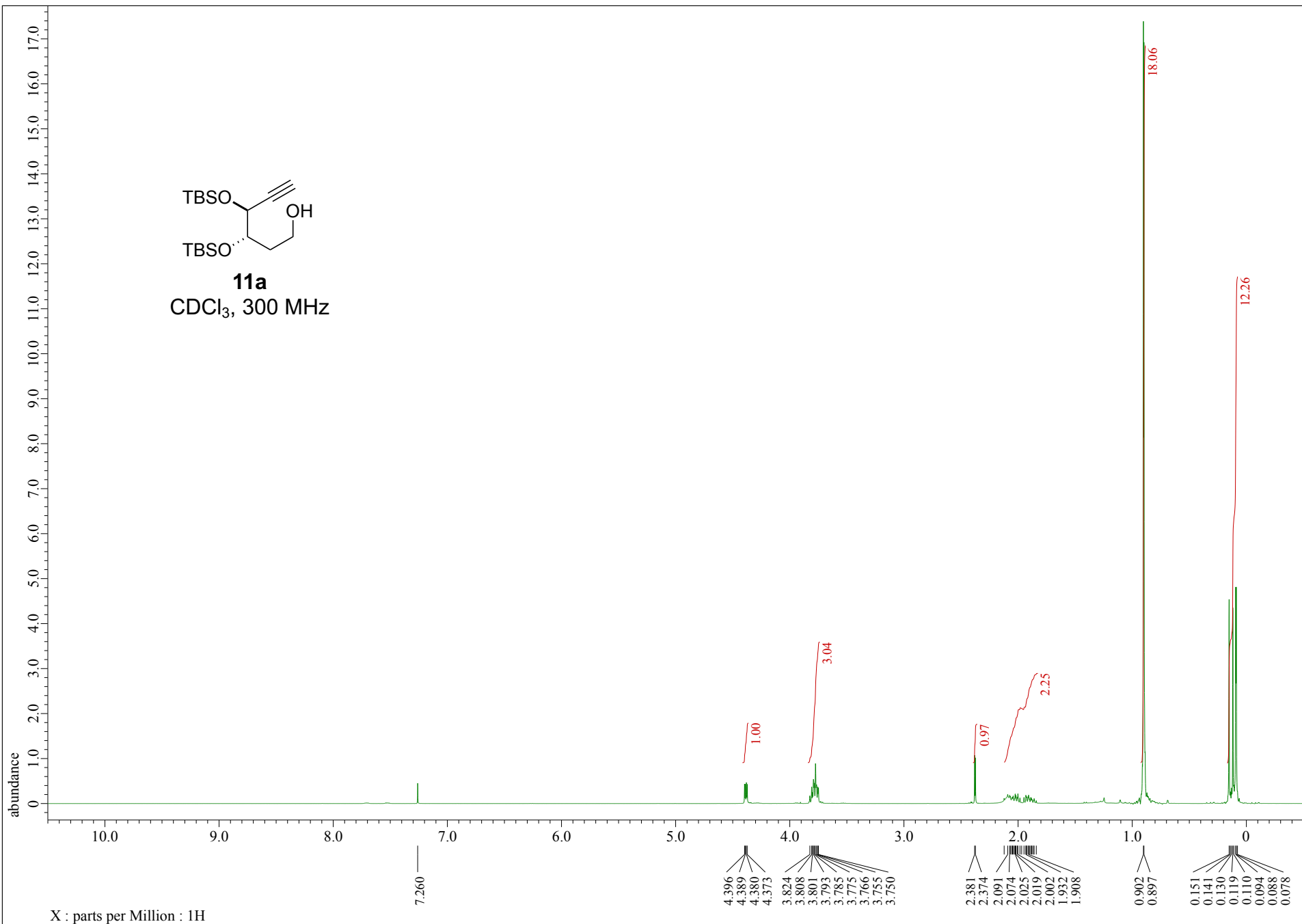


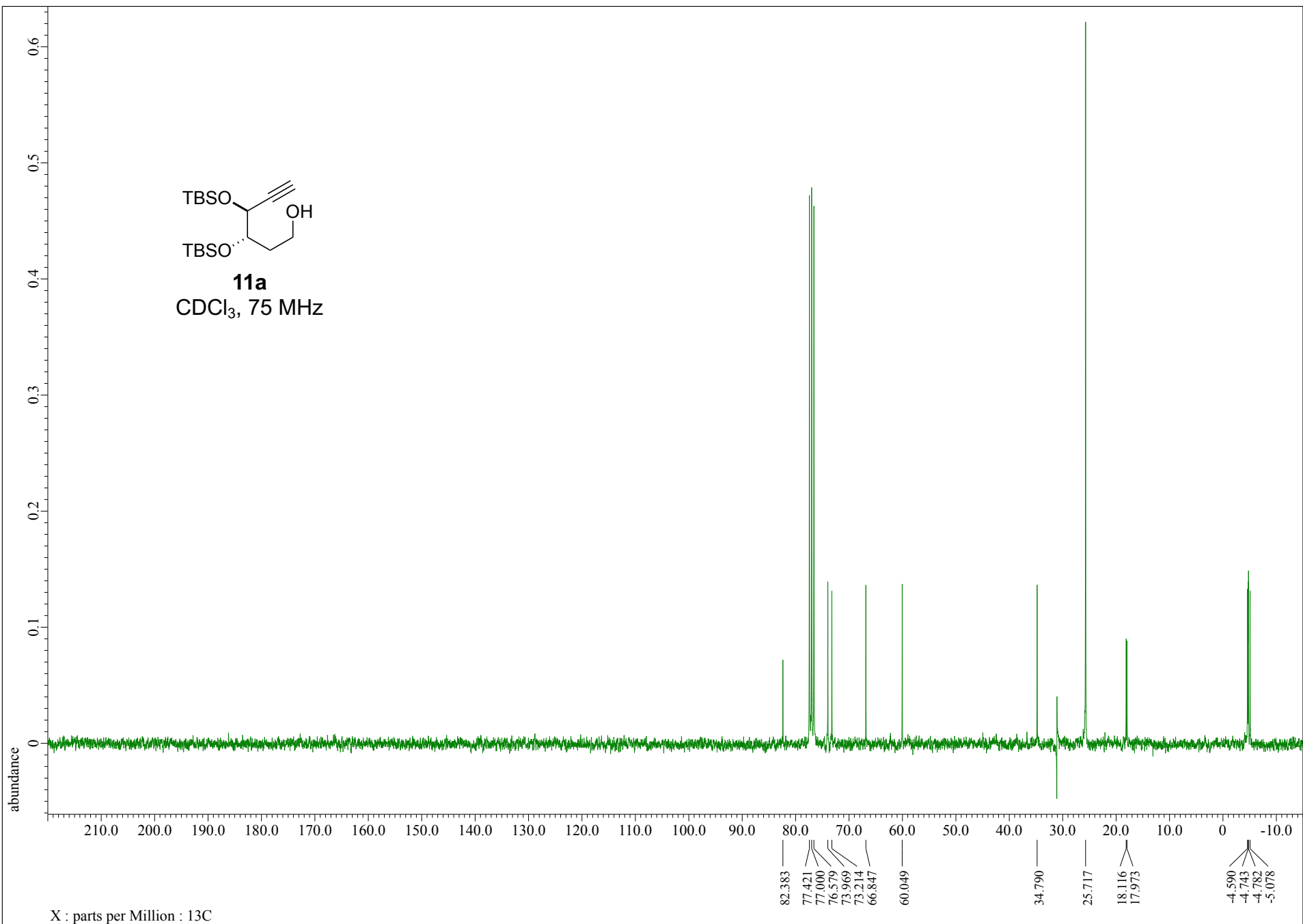
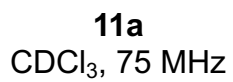


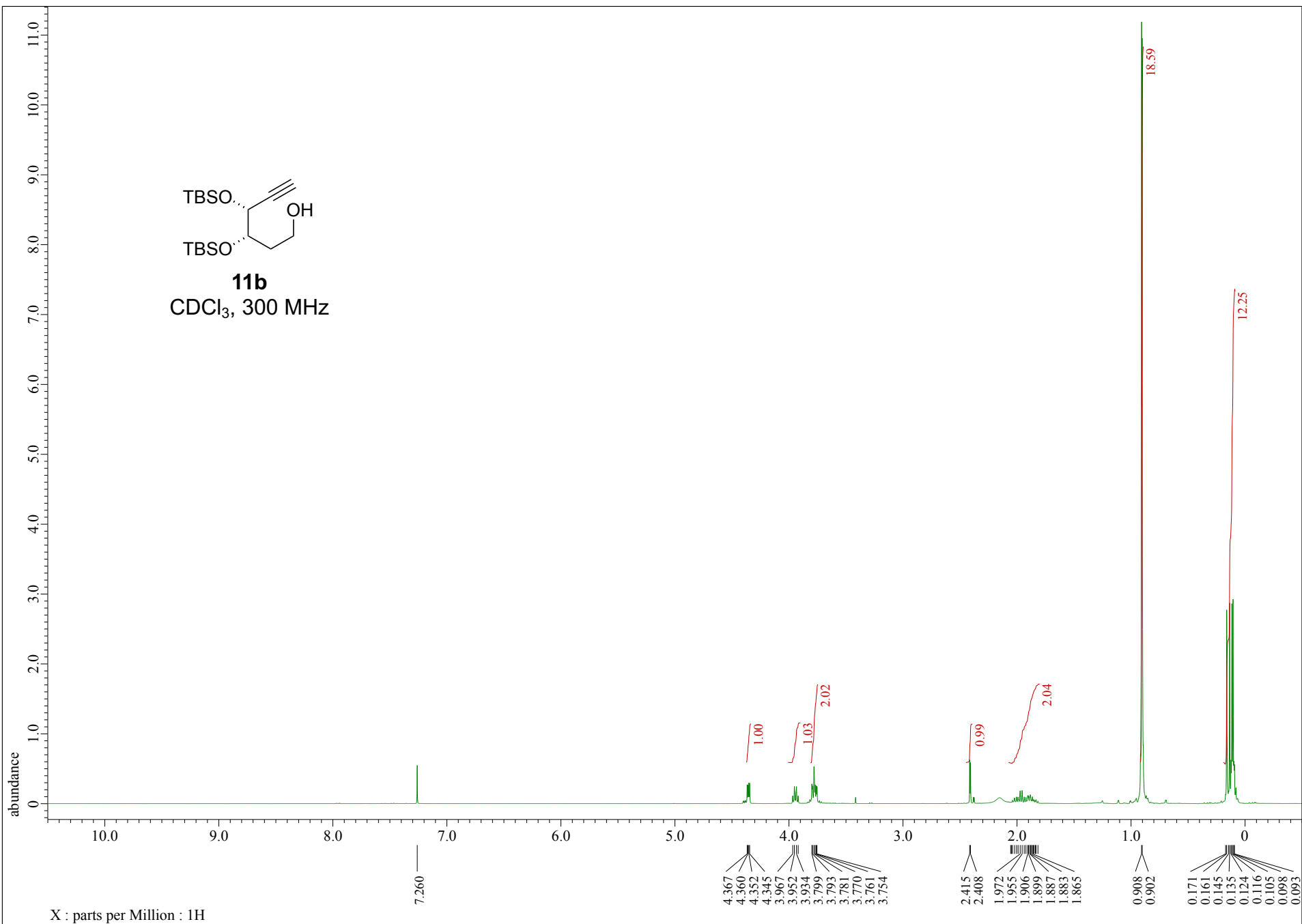




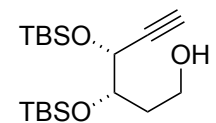
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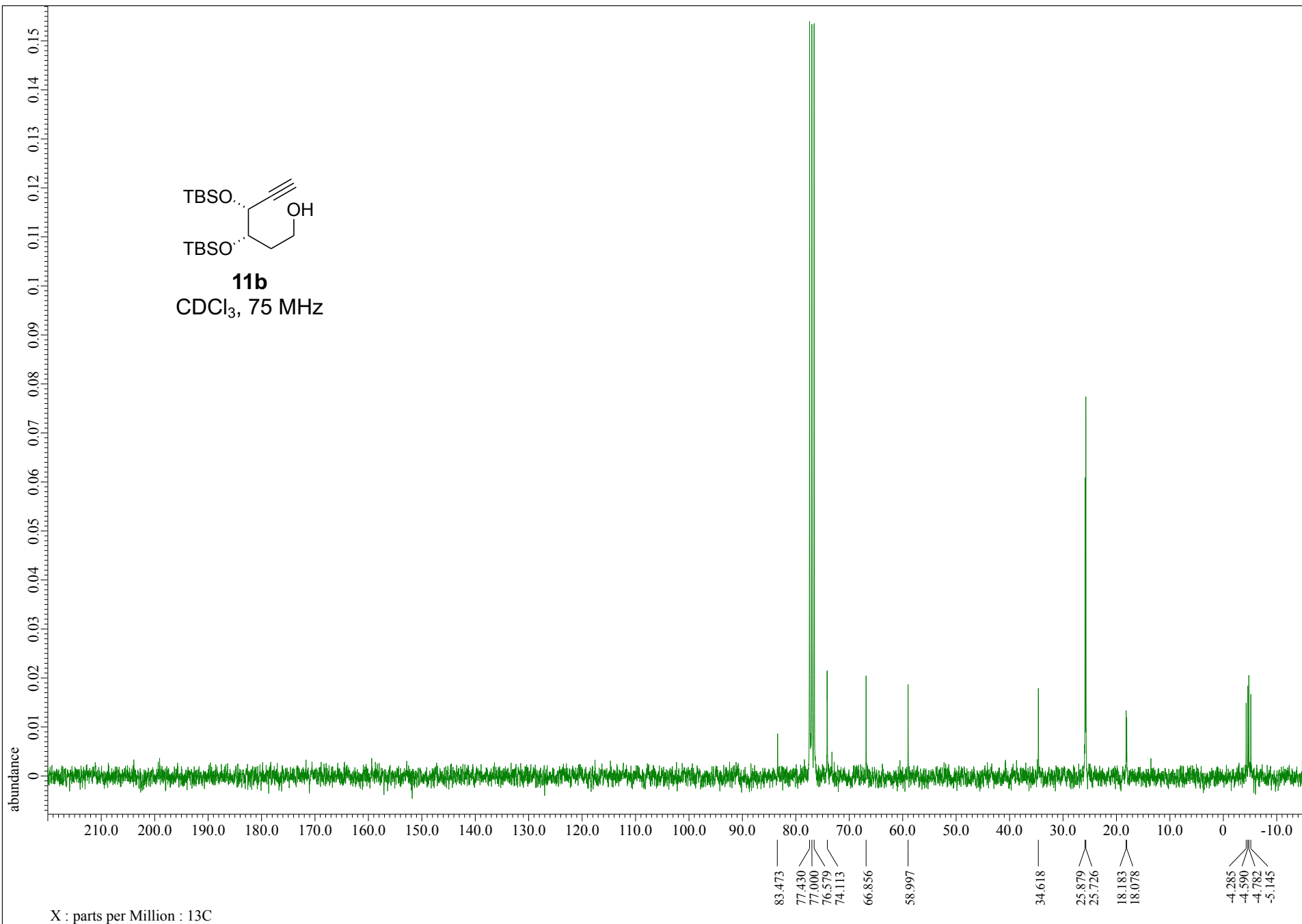


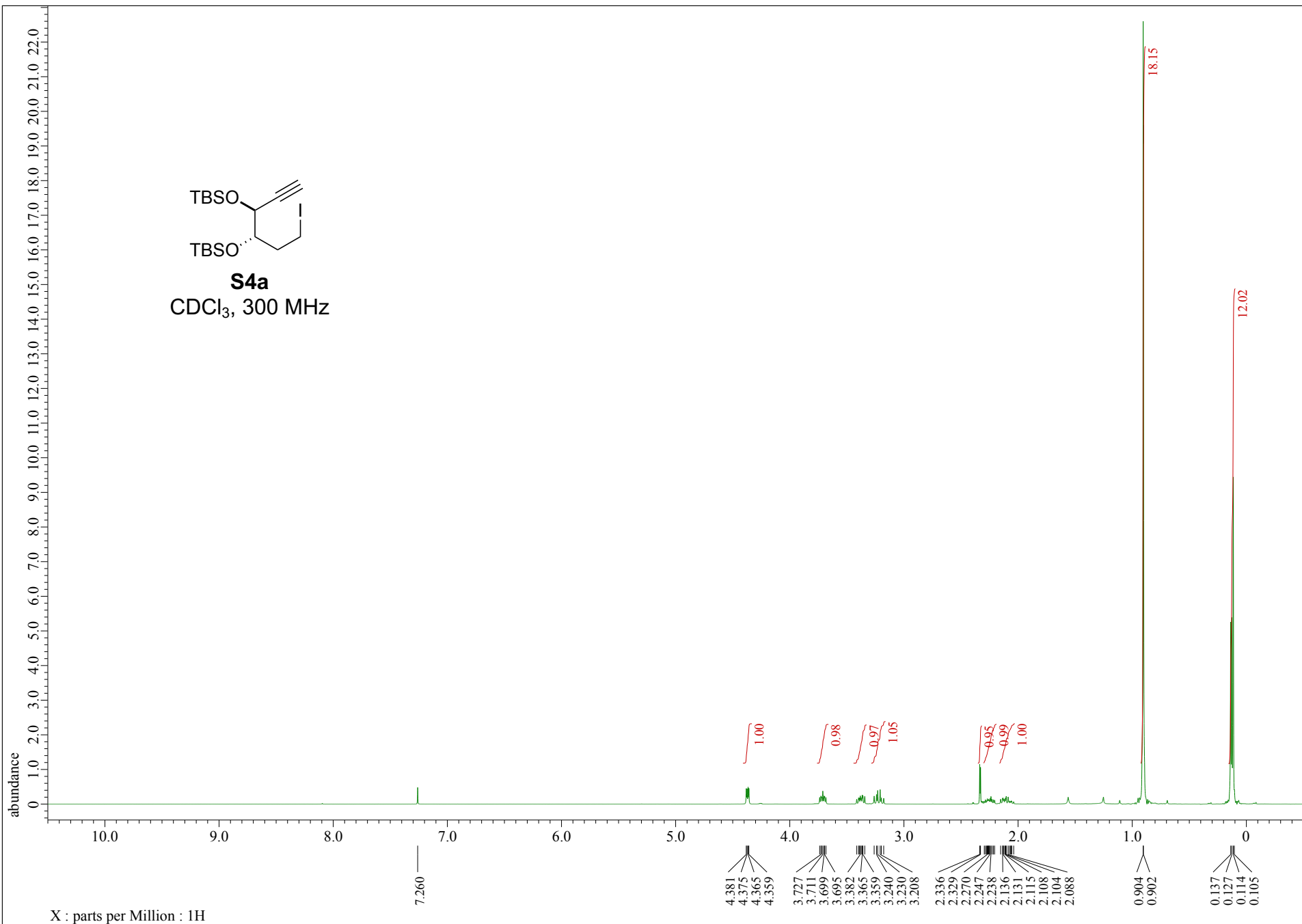
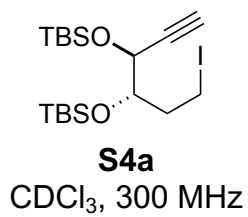


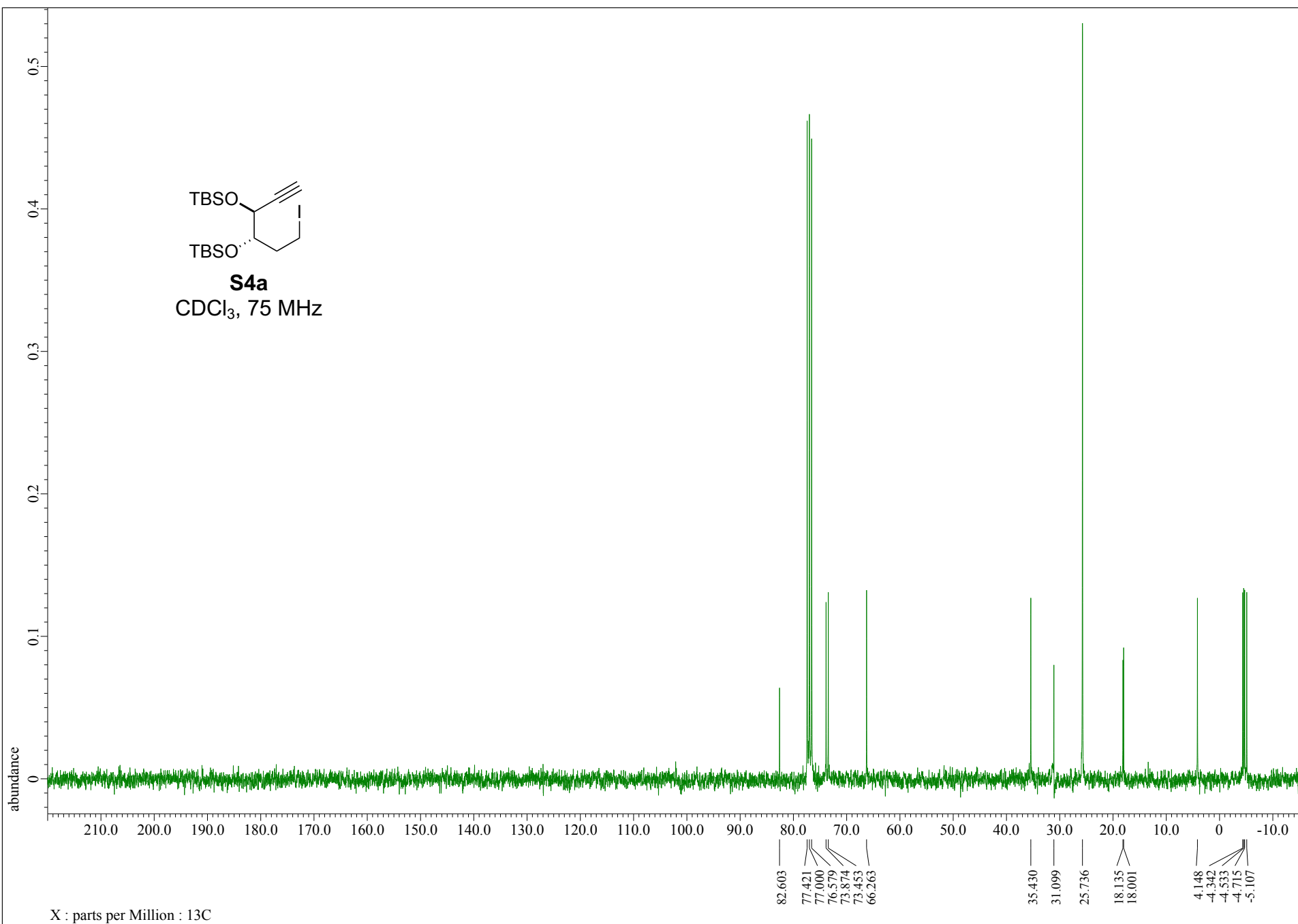
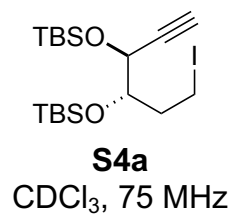


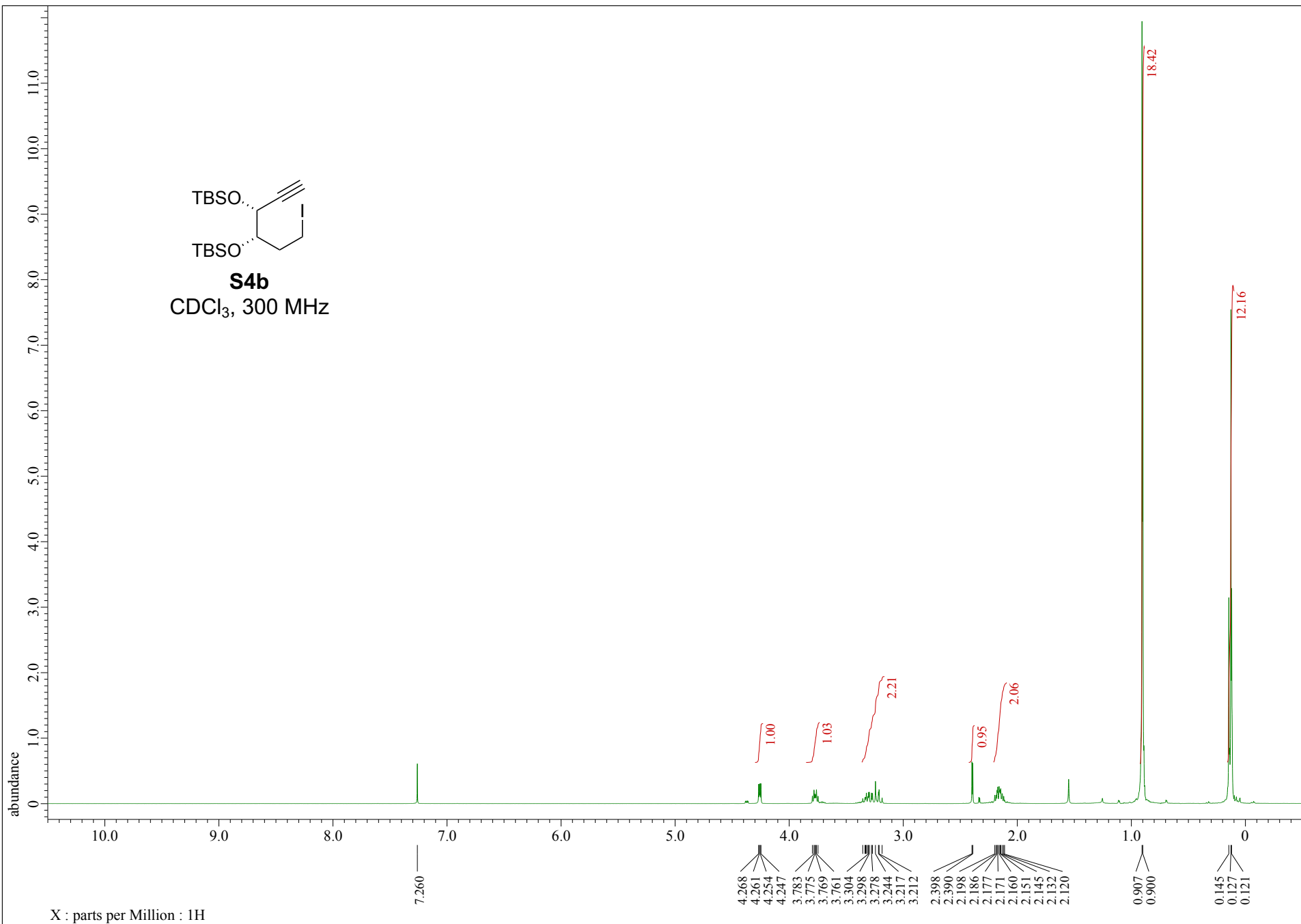
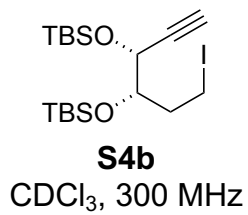


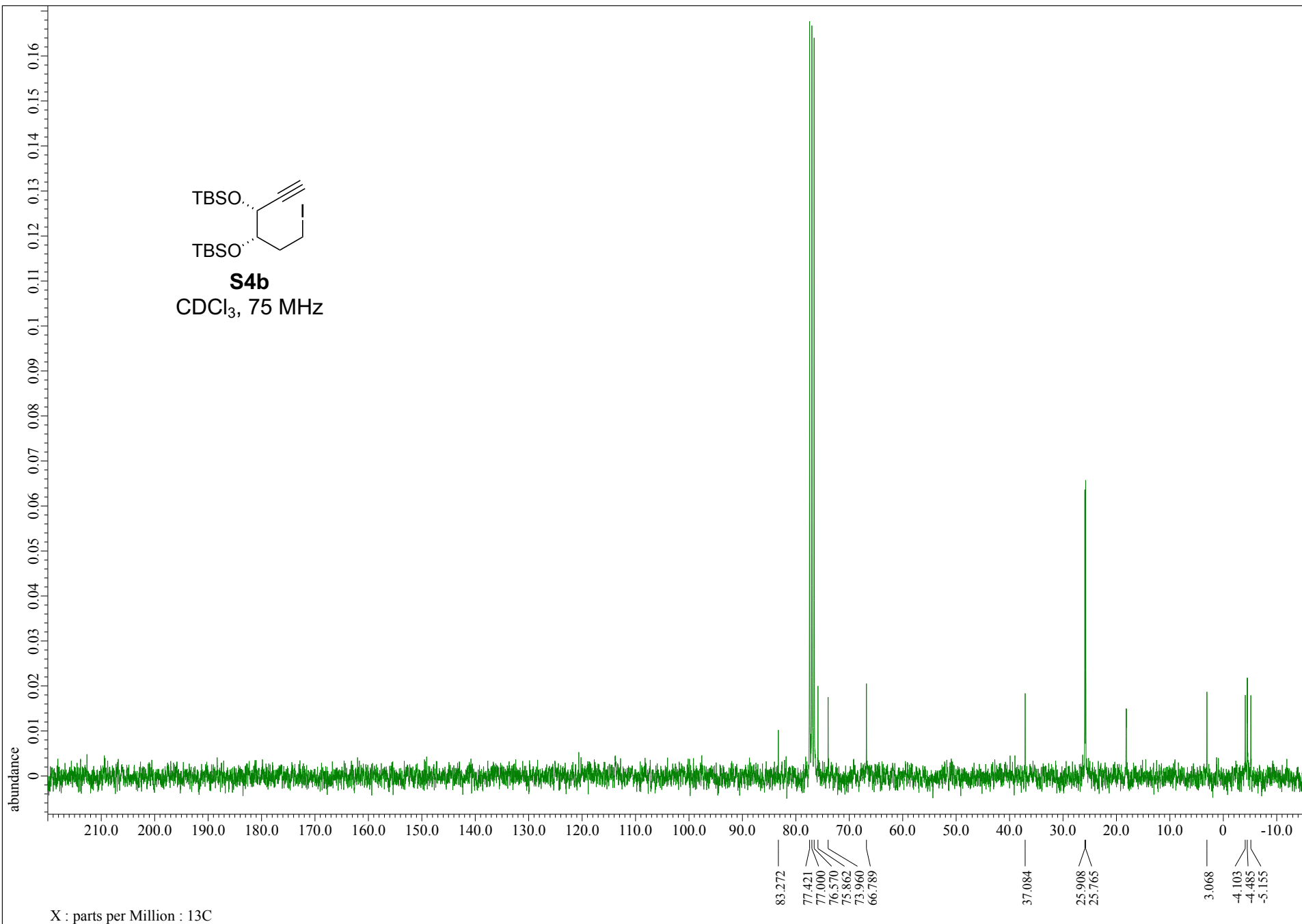
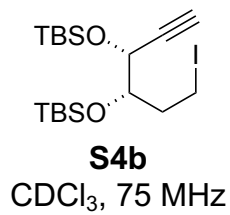
**11b**  
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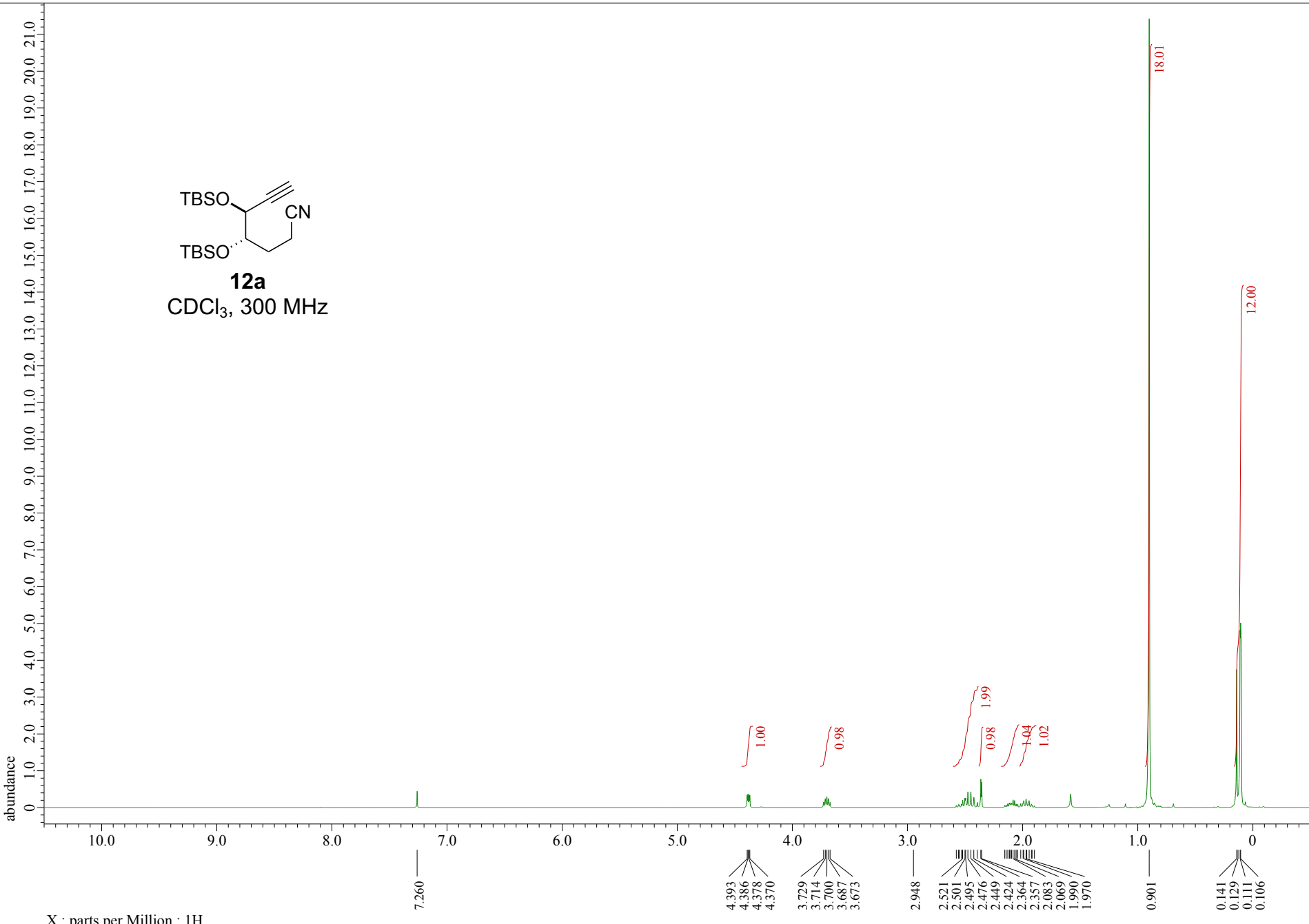
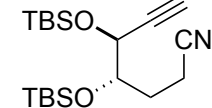


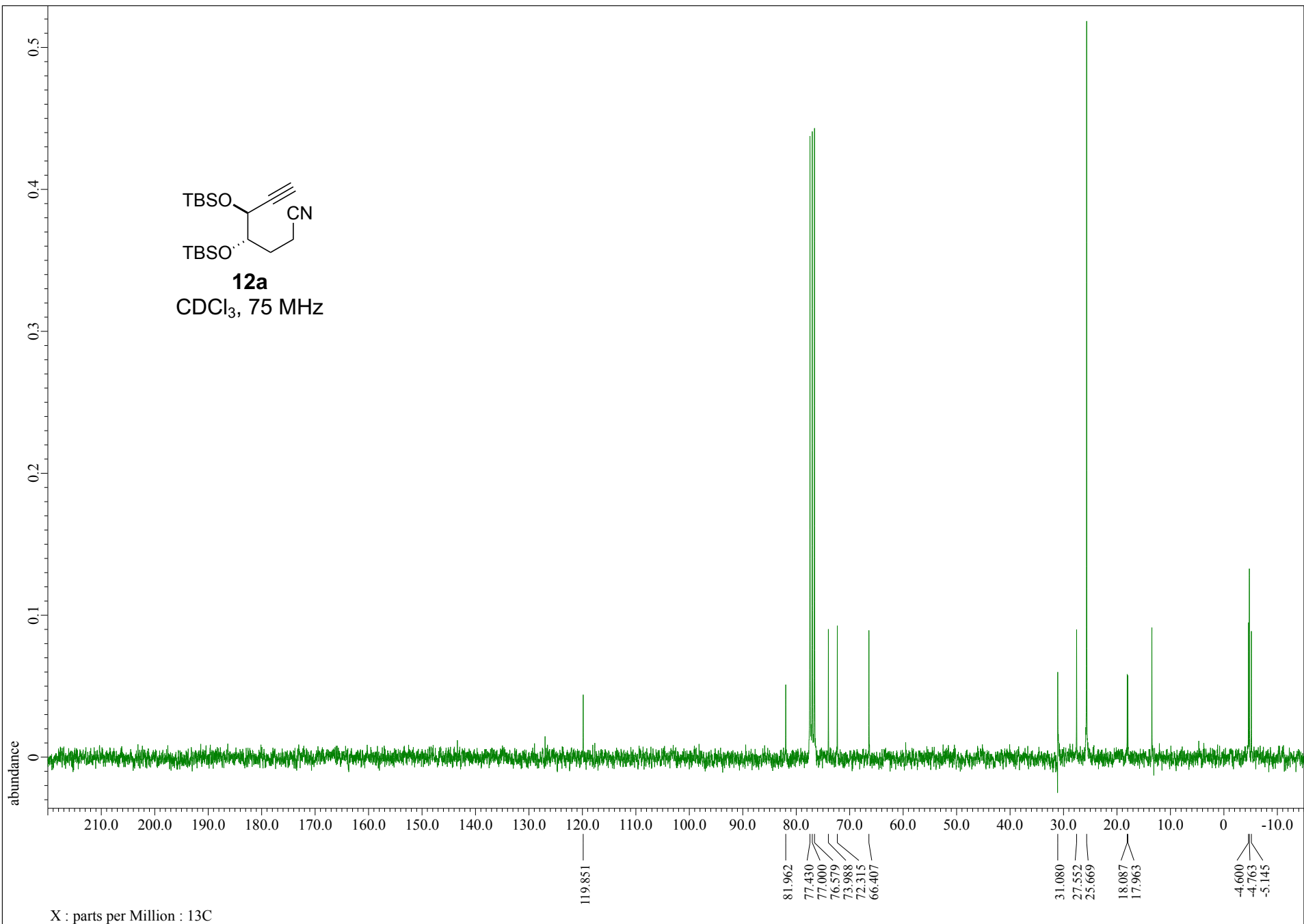
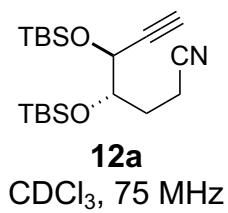


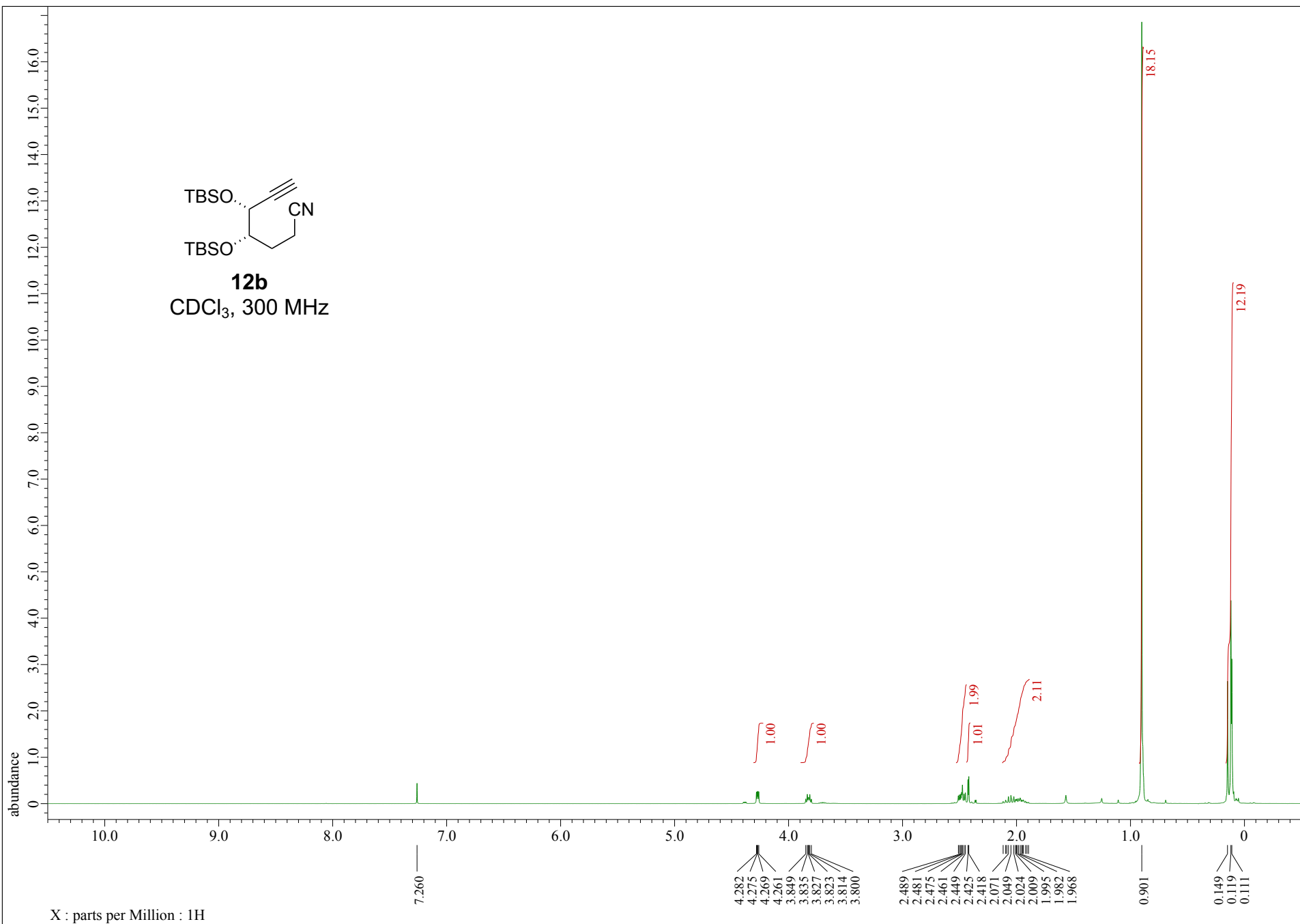




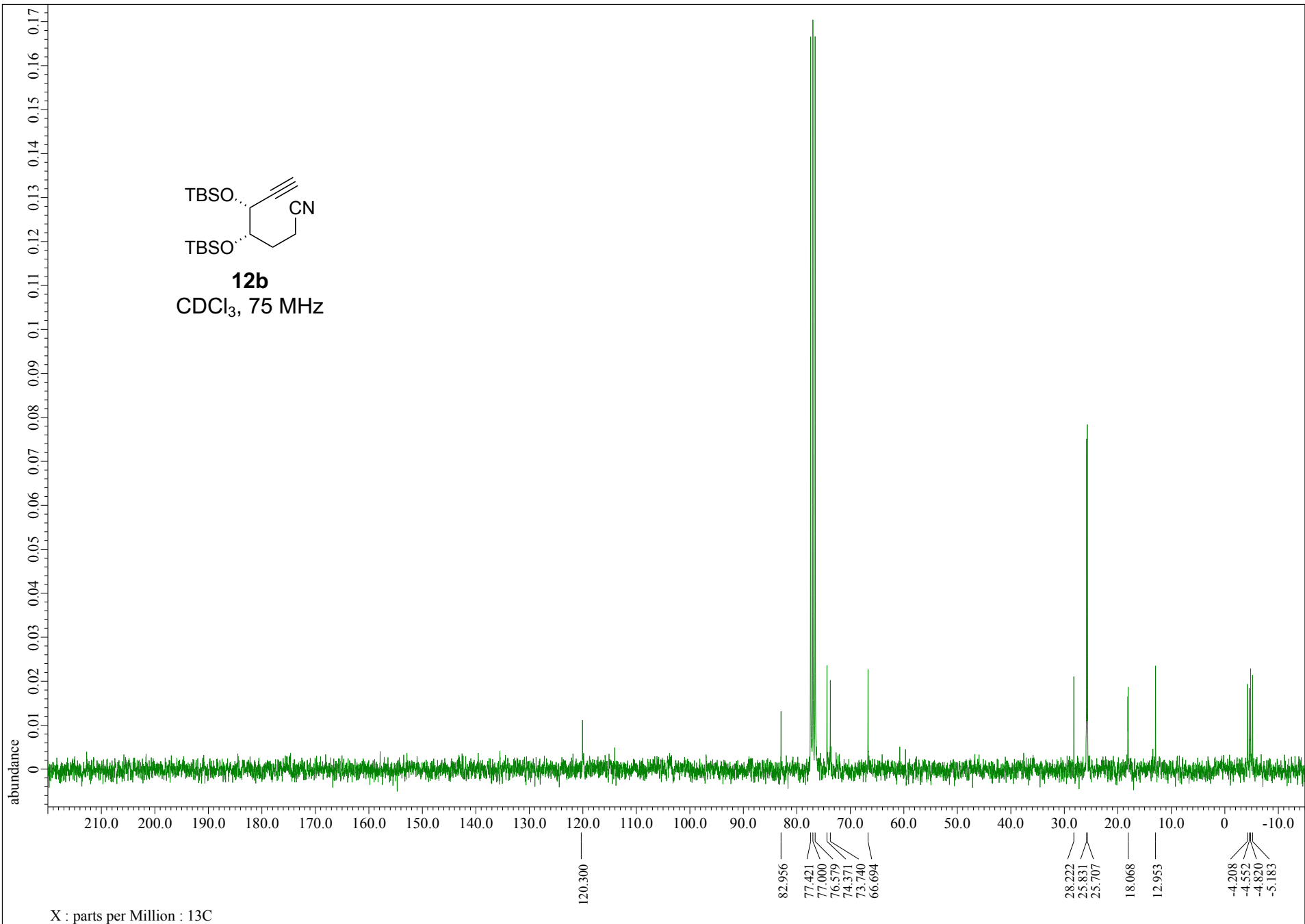
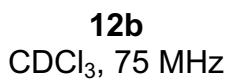


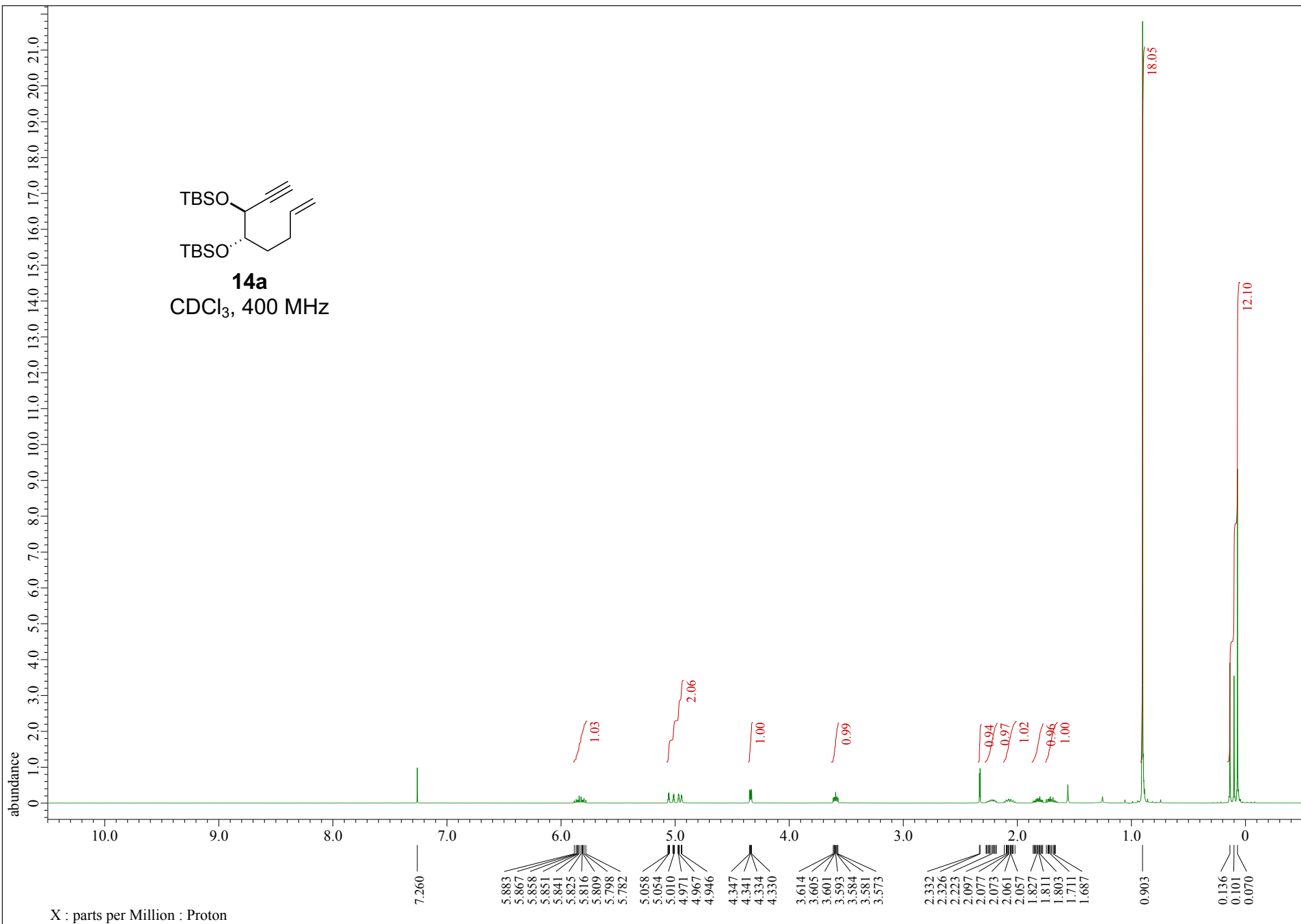


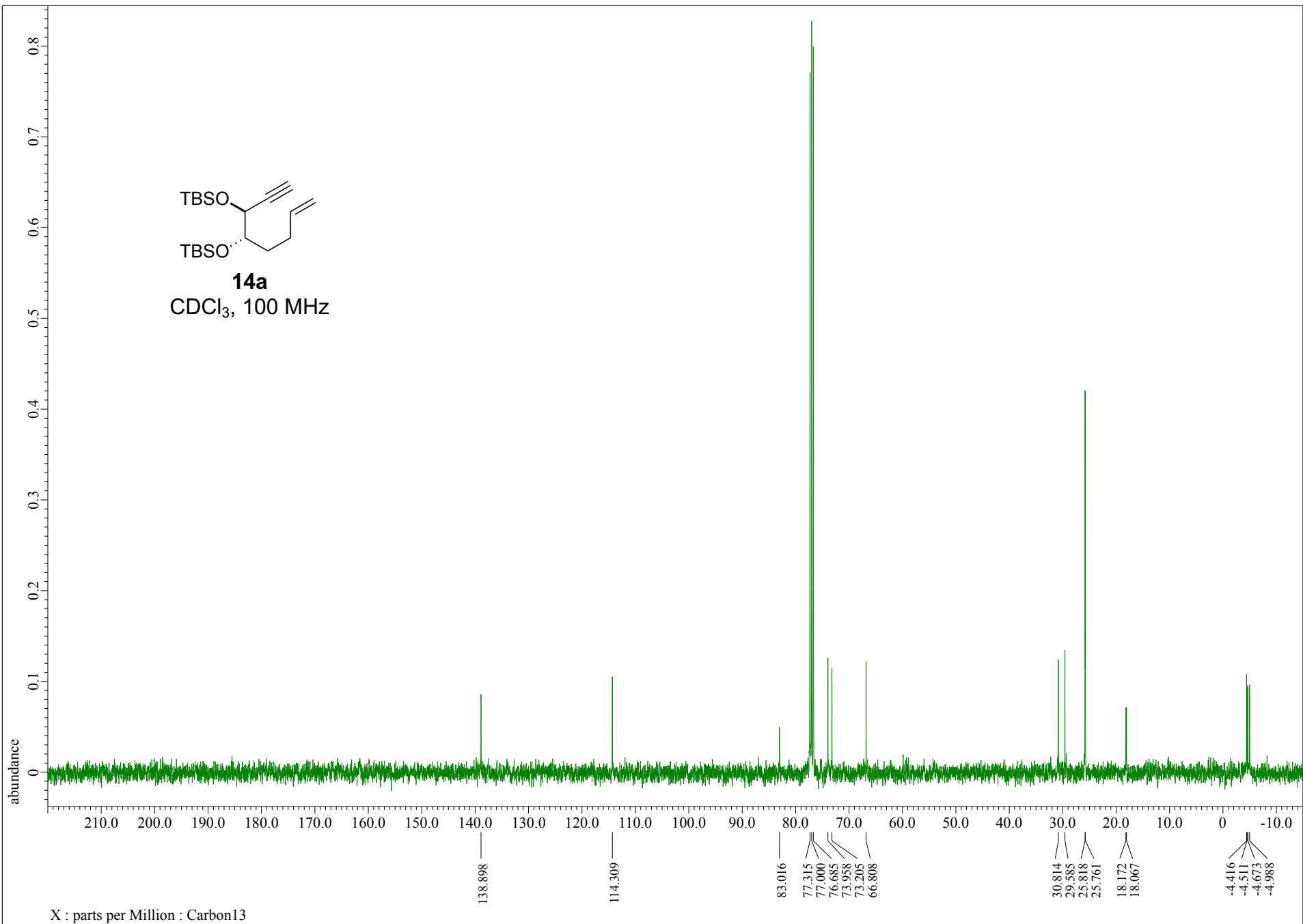
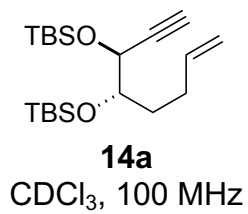


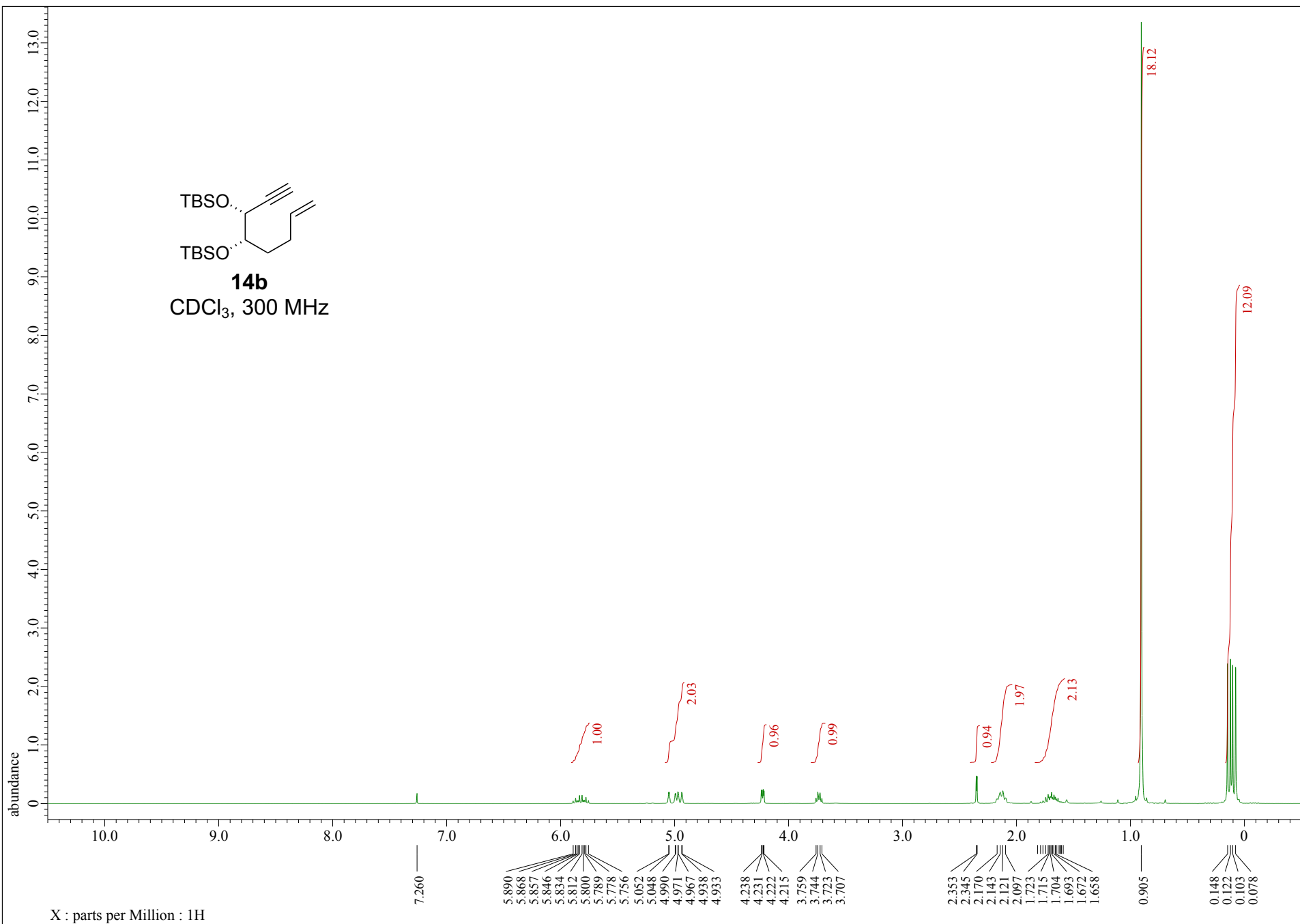


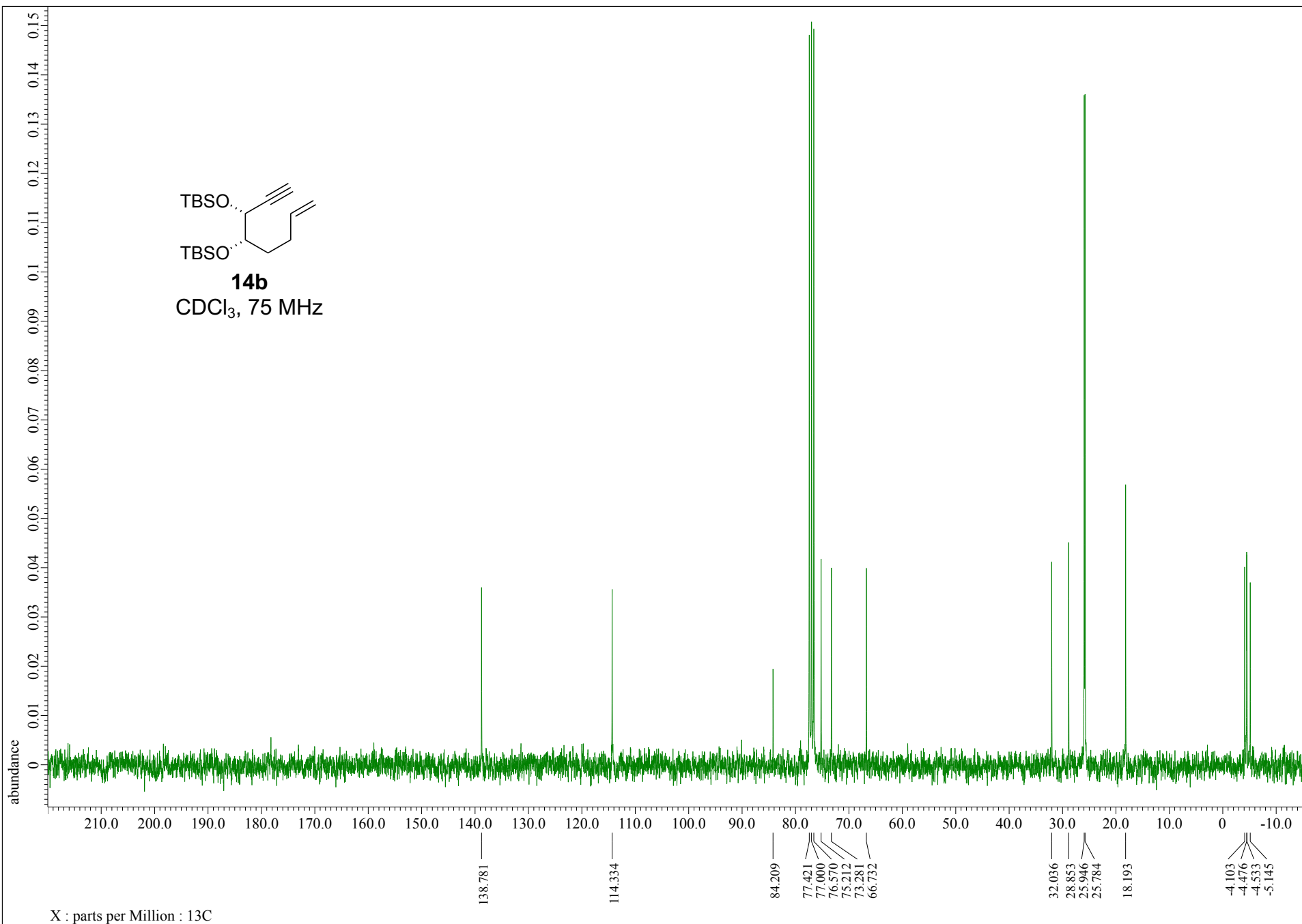


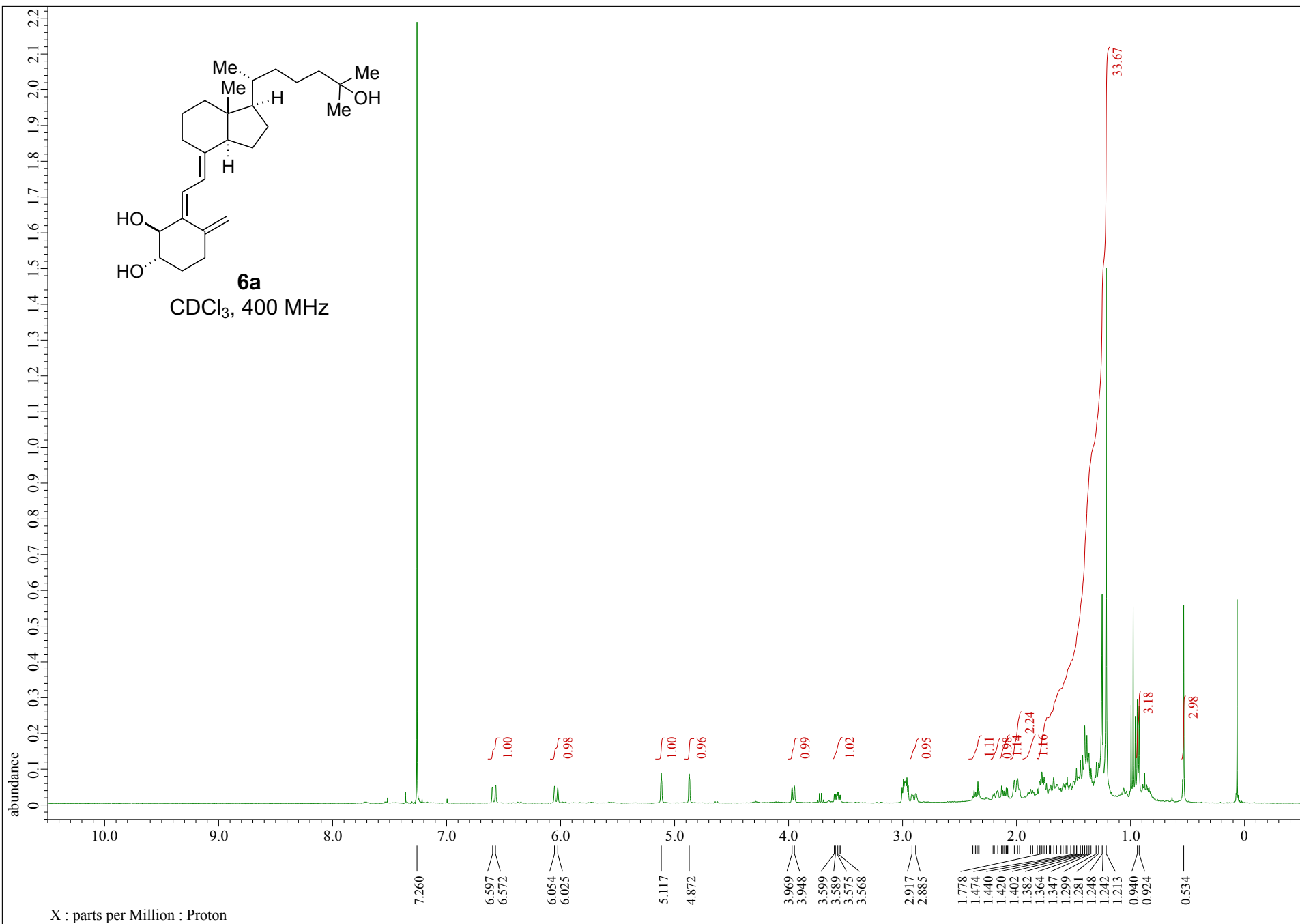


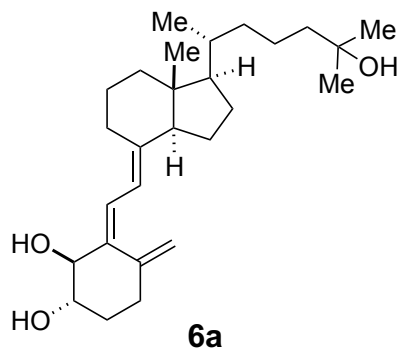




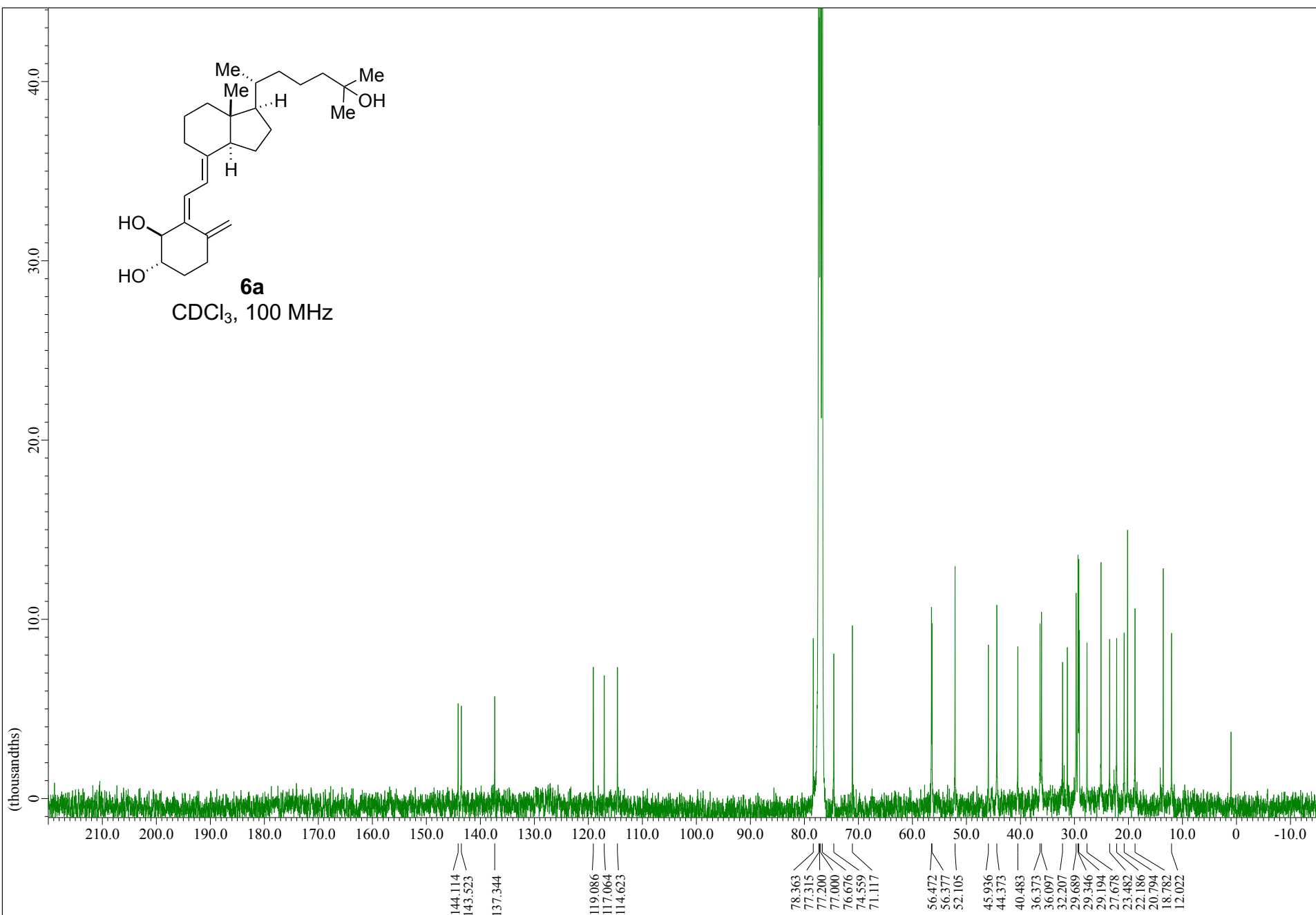




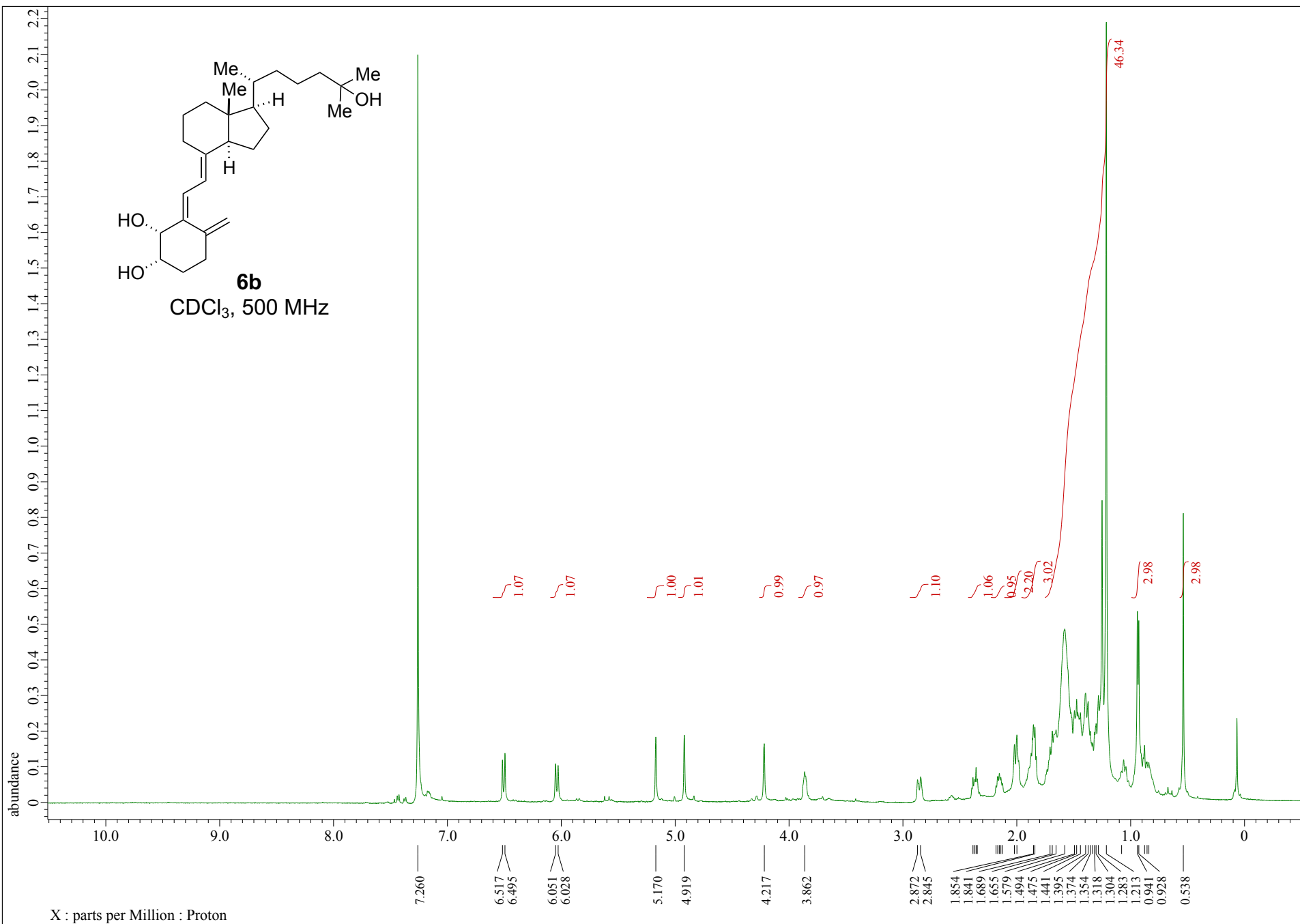




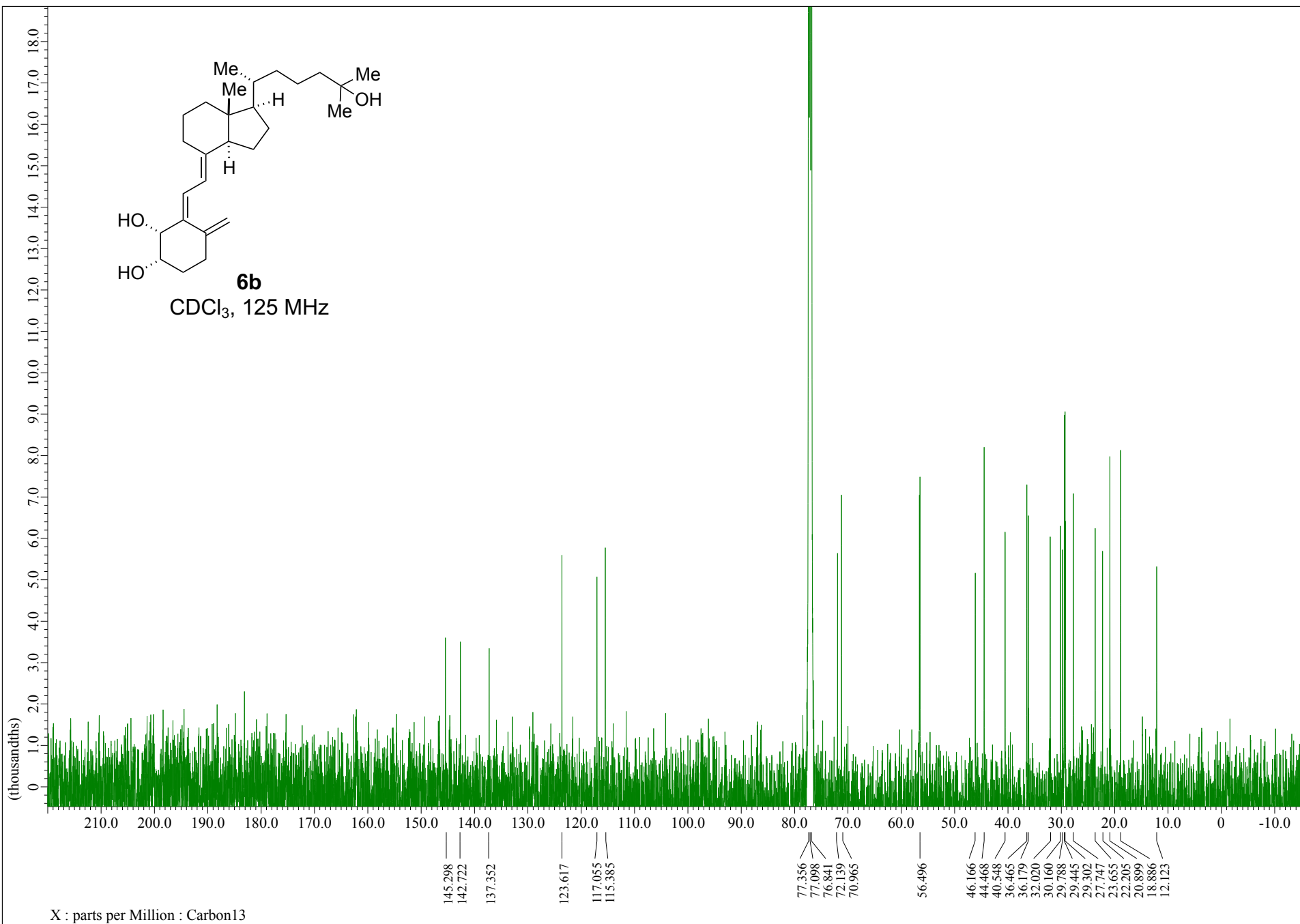
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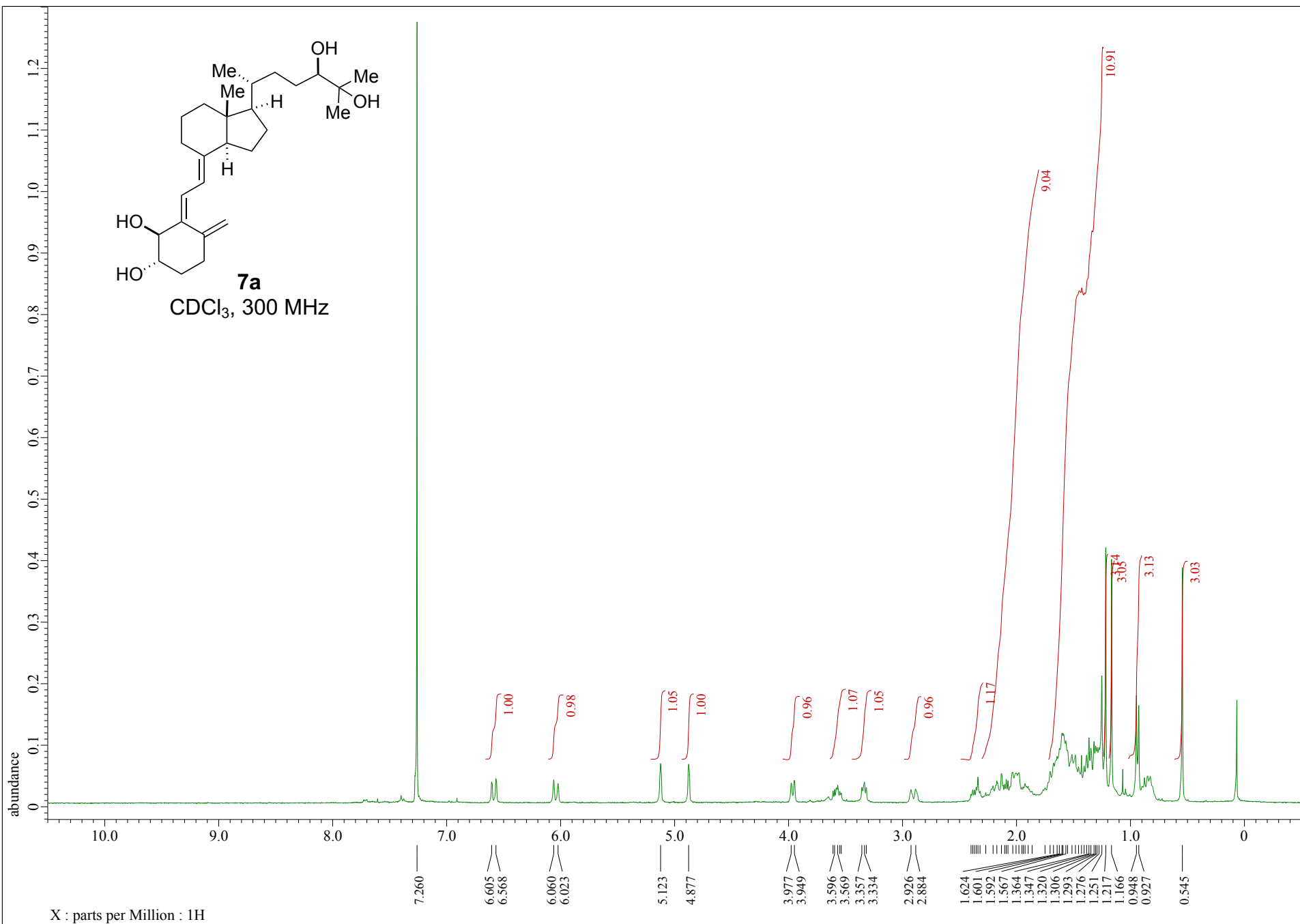


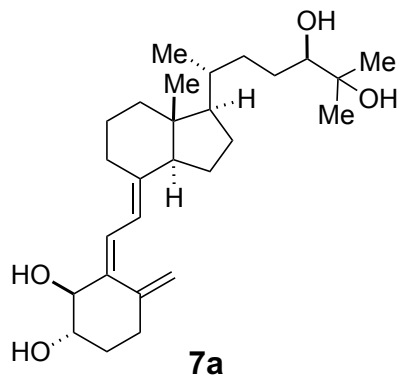
X : parts per Million : Carbon13











**7a**  
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