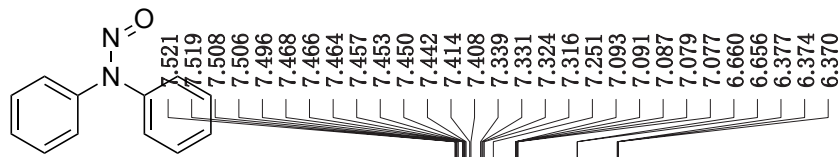
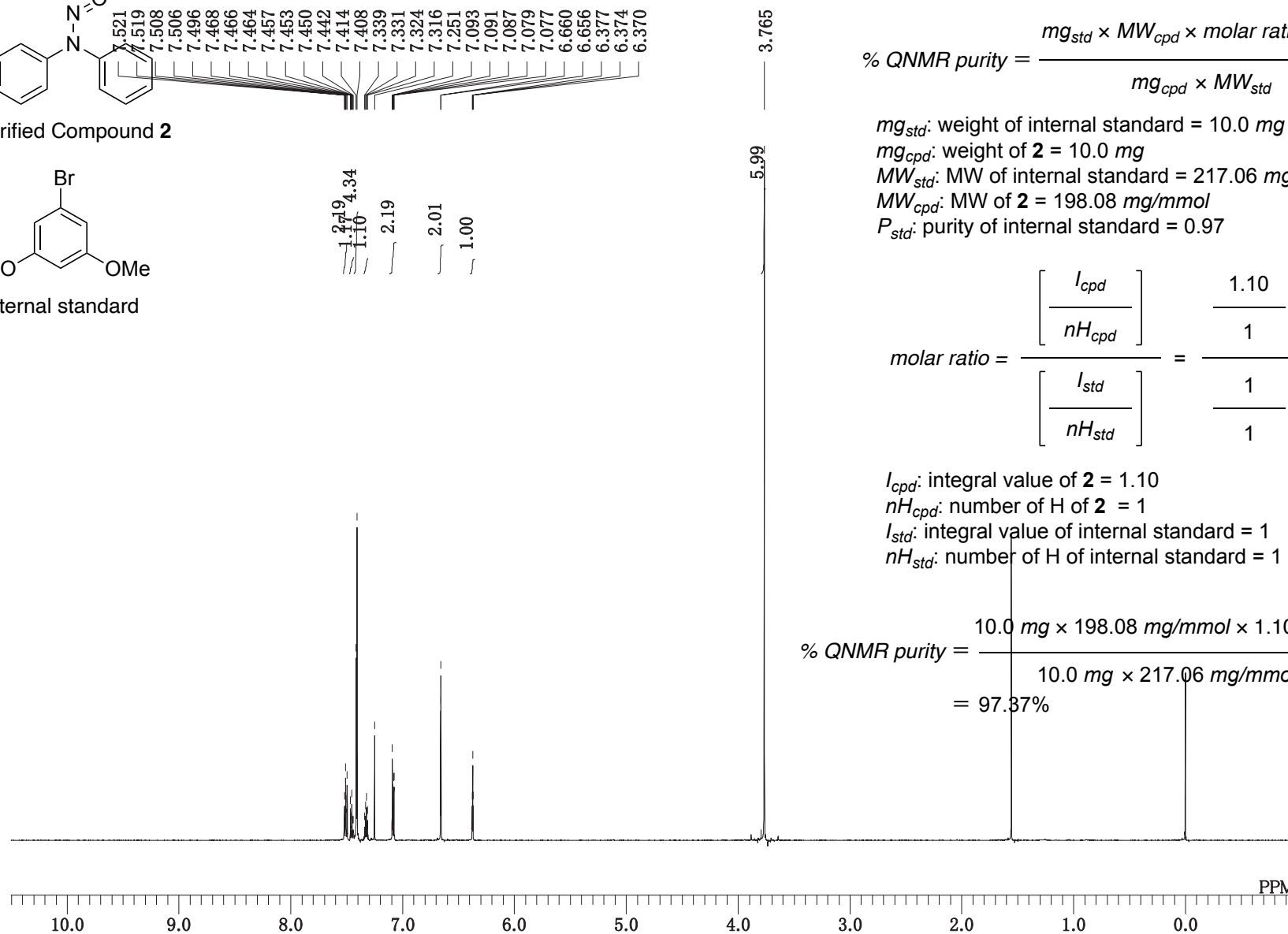
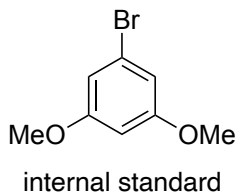


<sup>1</sup>H-NMR (600 Mz, CDCl<sub>3</sub>)



Purified Compound **2**



$$\% \text{QNMR purity} = \frac{mg_{std} \times MW_{cpd} \times \text{molar ratio} \times P_{std}}{mg_{cpd} \times MW_{std}} \times 100$$

$mg_{std}$ : weight of internal standard = 10.0 mg  
 $mg_{cpd}$ : weight of **2** = 10.0 mg  
 $MW_{std}$ : MW of internal standard = 217.06 mg/mmol  
 $MW_{cpd}$ : MW of **2** = 198.08 mg/mmol  
 $P_{std}$ : purity of internal standard = 0.97

$$\text{molar ratio} = \frac{\left[ \frac{I_{cpd}}{nH_{cpd}} \right]}{\left[ \frac{I_{std}}{nH_{std}} \right]} = \frac{\frac{1.10}{1}}{\frac{1}{1}} = 1.10$$

$I_{cpd}$ : integral value of **2** = 1.10  
 $nH_{cpd}$ : number of H of **2** = 1  
 $I_{std}$ : integral value of internal standard = 1  
 $nH_{std}$ : number of H of internal standard = 1

$$\begin{aligned} \% \text{QNMR purity} &= \frac{10.0 \text{ mg} \times 198.08 \text{ mg/mmol} \times 1.10 \times 0.97}{10.0 \text{ mg} \times 217.06 \text{ mg/mmol}} \times 100 \\ &= 97.37\% \end{aligned}$$