

¹H Q-NMR of 1-bromo-2-methyl-3-nitrobenzene (2) with diethylmalonate as internal standard

¹H (500 MHz, CDCl₃)

Full scale (Run 1)

$$\text{Molar ratio} = \frac{\frac{I(\text{cpd})}{nH(\text{cpd})}}{\frac{I(\text{std})}{nH(\text{std})}} = \frac{\frac{0.382}{1}}{\frac{4.00}{4}} = 0.382$$

$$\text{wt}\% = \frac{\text{mg}(\text{std}) \times \text{MW}(\text{cpd}) \times \text{molar ratio} \times P(\text{std})}{\text{mg}(\text{cpd}) \times \text{MW}(\text{std})} \times 100$$

$$\text{wt}\% = \frac{26.8 \times 216.0 \times 0.382 \times 1.00}{14.0 \times 160.2} \times 100 = 98.6\%$$

