

— 7.26 CDCl3

Integrated area of sample (I_x) = 3.88
Integrated area of standard (I_{cal}) = 3.00
Number of sample nuclei (N_x) = 4
Number of standard nuclei (N_{cal}) = 3
Molecular weight of sample (M_x) = 274.4760
Molecular weight of standard (M_{cal}) = 137.1380
Mass of internal standard (W_{cal}) = 16.8 mg
Mass of sample (W_x) = 32.6 mg
Purity of standard (P_{cal}) = 99.5 %

$$P_x = \frac{I_x}{I_{cal}} \times \frac{N_{cal}}{N_x} \times \frac{M_x}{M_{cal}} \times \frac{W_{cal}}{W_x} \times P_{cal}$$

$$P_x = \frac{3.88}{3.00} \times \frac{3}{4} \times \frac{274.4760}{137.1380} \times \frac{16.8}{32.6} \times 99.5 = 99.5\%$$

