Integrated area of sample (Ix) = 1.55
Integrated area of standard (Ical) = 3.00
Number of Sample nuclei (Nx) = 1
Number of standard nuclei (Ncal) = 3
The molecular weight of the sample (Mx) = 302.40
The molecular weight of the standard (Mcal) = 137.14
Mass of internal standard (Wcal) = 0.0145 g
Mass of sample (Wx) = 0.0505 g
Purity of standard (Pcal) = 99.5%

Purity of sample $Px = \frac{Ix}{Ical} \times \frac{Ncal}{Nx} \times \frac{Mx}{Mcal} \times \frac{W\,cal}{Wx} \times Pcal$

Purity of sample $Px = \frac{1.56}{3.00} \times \frac{3}{1} \times \frac{302.40}{137.14} \times \frac{0.0145}{0.0505} \times 99.5$

$= 98\%$