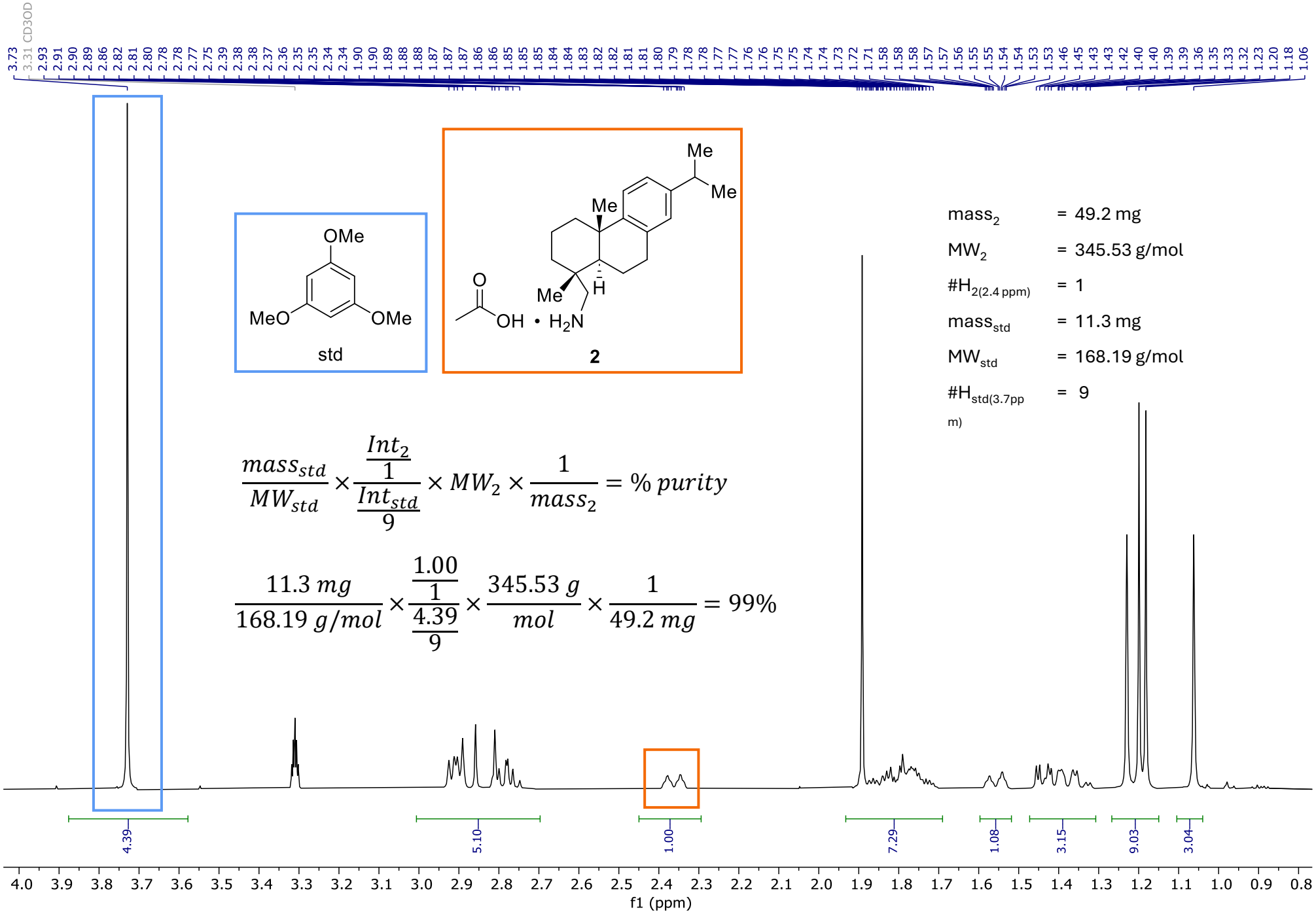

$mass_2$ = 49.2 mg

MW_2 = 345.53 g/mol

$\#H_{2(2.4\ ppm)}$ = 1

$mass_{std}$ = 11.3 mg

MW_{std} = 168.19 g/mol

$\#H_{std(3.7ppm)}$ = 9

$$\frac{mass_{std}}{MW_{std}} \times \frac{\frac{Int_2}{1}}{\frac{Int_{std}}{9}} \times MW_2 \times \frac{1}{mass_2} = \%\ purity$$

$$\frac{11.3\ mg}{168.19\ g/mol} \times \frac{\frac{1.00}{1}}{\frac{4.39}{9}} \times \frac{345.53\ g}{mol} \times \frac{1}{49.2\ mg} = 99\%$$