M (C_2H_5OH) =A_r(C)*2+ A_r(H)*5+ A_r(O)*1+ A_r(H)*1 = 12*2+1*5+16*1+1*1=46 g/mole

How many moles of ethanol (CH_3CH_2OH) are contained in 15.0 grams of ethanol:

n = m/M=15g/46 g/mole=0.326 moles

$N_{molecules}$ - How many molecules of ethanol (CH_3CH_2OH) are contained in 15.0 grams of ethanol:

$N_{molecules} = N_A*n = 0.326 \text{ moles}*6.022*10^{23} \text{ moles}^{-1} = 1.96*10^{23}$

$N_A = 6.022*10^{23} \text{ moles}^{-1}$, Avogadro's number or Avogadro constant