Answer on Question #49899 – Chemistry - Inorganic Chemistry

7.004×10^{26} molecules of $CHCl_3$

Solution:

$$v = \frac{m}{M_r}$$

$$v = \frac{N}{N_a}$$

$M_r(CHCl_3)=119.38$ g/mol

$N_a=6.022\times10^{23}$ mol^{-1}

$$\frac{m}{M_r} = \frac{N}{N_a}$$

$$m = \frac{N \times M_r}{N_a} = \frac{7.004 \times 10^{26} \times 119.38}{6.022 \times 10^{23}} = 1.38 \times 10^5\ g = 138\ kg$$

Annswer:

138 kg