Question #60480, Chemistry / General chemistry

Find the mass in grams of 3.5 x 10^23 molecules of $KMnO_4$

Solution

n $(KMnO_4)$ = N/N$_a$ = $3.5*10^{23}$ / $6.02*10^{23}$ = 0.58 (mol)

M $(KMnO_4)$ = 39 + 55 + 4*16 = 158 (g/mol)

m$(KMnO_4)$ = 0.58*158 = 91.64 (g)

Answer

m$(KMnO_4)$ = 91.64 g