Answer on Question#39578 - Chemistry - Other

Question:

How many nitrogen atoms are there in 2.954 g of ammonia?

Solution

$M(NH_3) = 17$ g/mol

$n(NH_3) = 2.954/17 = 0.174$ mol

$N = N_A \cdot n$, $N_A = 6{,}02 \cdot 10^{23}$ mol^{-1}

$N = (6{,}02 \cdot 10^{23}$ 1/mol$) \cdot 0{,}174$ mol $= 1.05 \cdot 10^{23}$

Answer: $N = 1.05 \cdot 10^{23}$