

Answer on Question #67978, Chemistry, General Chemistry

How many atoms are in 2.4 moles of sulfur?

Solution:

Number of atoms we can calculate, using proportion:

$n(S) = \frac{N}{N_A}$, where n is number of moles; N – number of particles (atoms); N_A is Avogadro's number.

So, number of atoms equals:

$$N = n(S) \cdot N_A = 2.4 \cdot 6.022 \cdot 10^{23} = 14.45 \cdot 10^{23} \text{ (atoms)}$$

Answer: $N = 14.45 \cdot 10^{23}$ atoms.