

Calculating moles of an element...

Calculating moles

A sample of calcium has a mass of 30g. How many moles of calcium are present.

1. Look up the relative atomic mass of calcium on the periodic table.
2. A_r of calcium = 40
3. Substitute the values into the equation: number of moles = mass \div A_r
4. Number of moles = $30 \div 40 = 0.75$ moles

Practice question #1

A sample of aluminium has a mass of 54g. Calculate the number of moles of aluminium.

1. Look up the relative atomic mass of aluminium on the periodic table.
2. A_r of aluminium = 27
3. Substitute the values into the equation: number of moles = mass \div A_r
4. Number of moles = $54 \div 27 = 2$ moles of aluminium

Practice question #2

The mass of iron contained in the blood of an average human is 6g. Calculate the number of moles of iron present in the blood.

1. Look up the relative atomic mass of iron on the periodic table.
2. A_r of iron = 56
3. Substitute the values into the equation:

$$\text{number of moles} = \text{mass} \div A_r$$

4. Number of moles = $6 \div 56 = 0.11$ moles of iron

