Task:

Cl has 2 isotopes atomic mass units34.97and36.97and relative abundance of the isotope is 0.755 and 0.245 find average atomic mass of chlorine

Solution:

The average atomic mass of chlorine is

$AW_{average} = x_1 \cdot AW_1 + x_2 \cdot AW_2$

x1 – the fraction of the first isotope
x2 – the fraction of the second isotope
AW1 – atomic weight of the first isotope
AW2 – atomic weight of the second isotope

$AW_{average} = 0.755 \cdot 34.97 + 0.245 \cdot 36.97 = 35.46$ g/mol

Answer: $AW_{average} = 35.46$ g/mol