

## Answer on Question #62097 - Chemistry – General Chemistry

### Question:

Gallium exists naturally as gallium-69 (mass=68.93u; isotopic abundance=60.1%) and gallium-71 (mass=70.92u). What is the isotopic abundance of gallium-71? What is the average atomic mass of gallium?

### Answer:

Isotopic abundance of  $^{71}\text{Ga}$ :

$$I(^{71}\text{Ga}) = 100\% - I(^{69}\text{Ga}) = 100\% - 60.1\% = 39.9\%$$

Atomic mass:

$$A(\text{Ga}) = \frac{A(^{69}\text{Ga}) \cdot I(^{69}\text{Ga}) + A(^{71}\text{Ga}) \cdot I(^{71}\text{Ga})}{100\%} = \frac{68.93u \cdot 60.1\% + 70.92u \cdot 39.9\%}{100\%} = 69.72u$$