

Find the Average Atomic Mass - Example: Magnesium

Written by Pearlita

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How to find the average atomic mass of an element. You need to know the mass of each isotope and the percent (%) abundance of each as well. Multiply each mass by its corresponding percentage, and add these products together.

Answer:

Each percentage here is called the **isotopic abundance** of that particular isotope.

The **average atomic mass** (mass on the periodic table) is a weighted average of all isotopes.

**Average Atomic Mass = (% of isotope 1)(mass of isotope 1)
+ (% of isotope 2)(mass of isotope 2) + ...**

In this case, the average atomic mass of magnesium is

$(0.7870)(23.985 \text{ amu}) + (0.1013)(24.985 \text{ amu}) + (0.1117)(25.983 \text{ amu})$
= 24.309 amu

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