

Answer on Question #49561 – Chemistry – Other

Question:

Explain why the composition of an element is fixed.

Answer:

Every samples of a given substance has the same properties because the substance has a fixed, uniform composition. An element has a fixed composition because it contains only one type of atom, which all has the same number of protons - i.e. the same atomic number. Adding or removing protons from the nucleus of an atom creates a different element. For example, an atom of krypton contains 36 protons. If an atom doesn't have 36 protons, it can't be an atom of krypton. Removing one proton from an atom of krypton creates an atom of bromine.