

Exercise 1.3

Musical instruments like trumpets and trombones are made from an alloy called brass. Brass is composed of copper and zinc atoms and appears homogeneous under an optical microscope. The approximate composition of most brass objects is a 2:1 ratio of copper to zinc atoms, but the exact ratio varies somewhat from one piece of brass to another. (a) Would you classify brass as an element, a compound, a homogeneous mixture, or a heterogeneous mixture? (b) Would it be correct to say that brass is a solution? [Section 1.2]



Solution

Because the copper and zinc atoms remain separate, this is a mixture. And since the trumpet appears homogeneous even under a microscope, it's classified as a homogeneous mixture. Solutions are homogeneous mixtures, so it would be correct to say that brass is a solution.