

Characteristics of Compounds and Mixtures

A **compound** is a substance containing two or more **elements** joined together by **chemical bonds**.

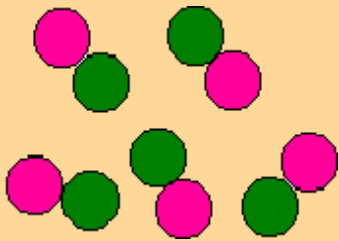
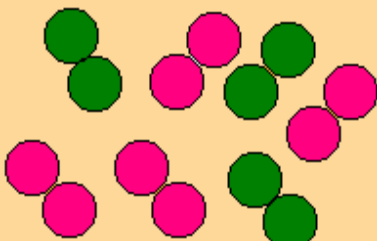
A **mixture** is a substance containing two or more substances (**elements or compounds**) mixed together without chemical bonds.

	Single Compound	Mixture
Composition		
Melting and boiling points		
Properties		
Separation		
Arrangement of atoms		
	A compound of two elements	A mixture of two elements

Characteristics of Compounds and Mixtures

A **compound** is a substance containing two or more **elements** joined together by **chemical bonds**.

A **mixture** is a substance containing two or more substances (**elements or compounds**) mixed together without chemical bonds.

	Single Compound	Mixture
Composition	Has fixed composition by mass.	Has variable composition by mass.
Melting and boiling points	Has fixed melting and boiling points.	Has variable melting and boiling points (melt and boil over a range of temperature).
Properties	Has its own physical and chemical properties which are different from its elements.	Does not usually have its own properties; it has the same properties as its components.
Separation	Cannot be separated into two or more other substances by physical means; a chemical reaction is needed to separate the elements.	Can be easily separated into its components by physical means (such as distillation) without a chemical reaction.
Arrangement of atoms	 <p>A compound of two elements</p>	 <p>A mixture of two elements</p>