Cheatography

Chemistry 1 Cheat Sheet

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The Classification of Matter

Matter has many forms

Matter – anything that has mass and volume.

Mass is a measure of the quantity of an object. (g, kg,)

Volume is a measure of space taken up (mL, L)

Matter can be found as a solid, liquid or gas. (or even a combination of these)

Changes of State

There are 3 states of matter	Solid,- Liquid, gas

Melting – Change from a solid to a liquid

Evaporation - Change from a liquid to a gas

Condensation - Change from a gas to a liquid

Freezing - Change from a liquid to a solid

Sublimation - Change from a solid to a gas

Deposition - Change from a gas to a solid

The temperature at which a solid turns into a liquid is called the melting point. (water is 0°C) The reverse process, freezing, occurs at the freezing point.

THE PARTICLE THEORY OF MATTER

MATTER – anything that has mass and takes up space, but is NOT energy

Matter is made up of tiny particles that have empty spaces between them

Different substances are made up of different kinds of particles

Particles are in constant random motion

The particles move faster as temperature increases

Particles are attracted to each other

SOLIDS, LIQUIDS, & GASES

GASES: Particles are so far apart, their forces of attraction have little effect on their behavior

LIQUIDS: Forces of attraction are weaker than those of solids, and are able to flow past each other

SOLIDS: Forces of attraction are strong enough to hold the particles close together in a rigid shape

Pure Substances

A pure substance is made up of only one kind of matter

unique set of properties	colour, hardness, boiling point, and melting point.

A pure substance is either an element (gold) or a compound (sugar).

Element

A pure substance that cannot be broken down into any simpler substance by chemical means.

Each element has its own name and symbol. Example: Gold (Au)

Compound

A pure substance that is made from two or more elements that are combined together chemically.

Example, water (H_2O) is a compound containing the elements hydrogen and oxygen.

Mixtures

What is are mixtures?	A mixture is a combination of pure substances.	Each substance remains in its original, pure form, although each is not always easy to see distinctly once the mixture is made.	Contains more than one type of particle	Mixtures can be solids, liquids, or gases

Mixtures (cont)

Mixtures can be:	Heterogeneous (a mixture in which the different parts are visible) - also known as Mechanical Mixtures or Suspensions	Eg. Cereal or Salad Dressing

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Mixtures (cont)

Mechanical Mixture (heterogeneous mixture)	Different substances that make up the mixture are visible (heterogeneous = different	
Suspension	A cloudy mixture in which tiny particles of one substance are held within another.	Can be separated out when the mixture is poured through filter paper.

Mixtures (cont)

Solution (heterogeneous mixture)	Different substances that make it up are not individually visible	One substance is dissolved in another

A suspension is also a heterogeneous mixture.

The prefix “homo-” means same, and all parts of a homogeneous mixture look the same.

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