

TENDER HEART HIGH SCHOOL, SEC-33B, CHD

CLASS- VII

SUBJECT- CHEMISTRY

CHAPTER- 3

TEACHER: ANAMIKA

Good morning to all the students!

Students this lesson is for class-VII for the subject of chemistry, Topic:- 'Pure substances' which is covered in chapter-3 'Physical and chemical changes' starting on page no-27 of your text-book titled - 'Concise Chemistry' by 'Selina Publication' and is being submitted to you

All students may now please open page no-27 of your notebook in front of you.

If all students are ready then let us start with this chapter. All students may now please listen carefully.

We can see so many different substances in nature around us. These substances differ from each other in properties and composition. We can classify these substances as pure and impure.

Pure Substances:-

Substances like water, sugar, gold, common (P.T.O.)

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Salt etc. have same composition throughout and they have fixed properties. For example in water, it looks same everywhere and has fixed boiling point of 100°C and melting point of 0°C . These substances are pure substances. Elements and compounds are pure substances.

Impure Substances:-

Take some muddy water in glass tumbler and observe. The composition is not same or uniform everywhere. The properties of sand and water are different and they are not present in a fixed proportion. It is a mixture and is an impure substance. The mixtures can be homogenous or heterogenous.

MIXTURE

<u>Homogenous</u> (looks same everywhere)	<u>Heterogenous</u> (Components are visible and can be identified.)
Air (contains many gases)	Sand + water
Tap water (water + dissolved salts)	Oil + water
Sugar + water	Sand and stones

(P.T.O.)

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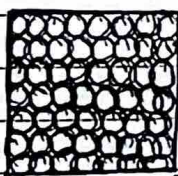
ELEMENTS

If you take a piece of iron and break it into smaller particles, you will receive iron only. The property of even the simplest particle will be same as iron. Iron is a element. Thus element is a substance which cannot be further converted into any other substance by any physical or chemical process.

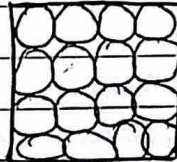
Gold, silver, carbon, sulphur, aluminium, copper, iron, oxygen, hydrogen are examples of elements.

Elements are made up of - ATOMS

Atoms are very tiny particles which cannot be seen through naked eyes. All the atoms of one element are similar but they are different from atoms of different element.



→ All the atoms are similar but they are different from iron atoms.



Aluminium sheet

Iron sheet

118 Elements are known out of which 92 are natural and 26 elements were created artificially. Elements can be solids, liquids or gases.

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ELEMENT

Solid

Iron, copper,
carbon, gold

Liquid

Mercury,
Bromine

Gases

Oxygen, hydrogen,
chlorine, nitrogen

Now, I will ask three a very short Questions from you. You will get a three minutes break to write the answers.

The Questions are:-

Ques 1:- Give two example of Pure substance.

Ans 1:- Impure mixture is known as:-

Ques 2:- Out of 118 elements, how many elements are natural?

I hope you all have written the answers by now. Let us check the answers now.

Ans 1:- Gold, common salt

Ans 2:- Heterogeneous mixture.

Ans 3:- 92 elements.

Students, now I am ending the lesson for today by giving 'Instructions'.

Instructions:-

You all are required to read the lesson again & revise all the topics which we have cover today.