

The smell of hot sizzling food reaches you several meters away but to get the smell of cold food, you have to go close. Explain?

Answer:- This is because when the particles of food rise its temperature. That rise in temperature make the Particles flow in the air in the form of gas and hence we smell even we are far whereas a cold food have a very low temperature and hence doesn't allow the particle to flow.

Physical classification of Matter :-

There are five types of matter -

1. Solid
2. Liquid
3. Gas
4. Plasma
5. B.E.C (Bose-Einstein Condensate)

1. Solid :-

- (i) A solid possesses a fixed volume and a definite shape, distinct boundaries and a definite shape.
- (ii) Solids generally do not exhibit diffusion due to smaller interparticle spaces.
- (iii) For example table, chair, glass etc.

2. Liquid :-

- (i) The matter in liquid state possesses a definite mass, definite volume, but not definite shape. For example milk, water, oil, petrol etc.
- (ii) It can undergo diffusion.
- (iii) The intermolecular force of attraction is weaker than solid.

3. Gas :-

- (i) It doesn't have neither definite volume nor definite volume but it has definite mass.
- (ii) Gases are highly compressible.
- (iii) For example Air it is mixture of all gases present in our surroundings.

4. Plasma :-

- (i) It is the mixture of free electrons and ions.
- (ii) **Important-** Plasma occurs in the stars. Including the stars, the temperature is so high that the atoms break up. Some of the electrons break away from the atoms converting the rest of the atoms into electrically charged particles called ions.

5. Bose-Einstein Condensate (B.E.C) :

An Indian scientist "Satyendra Nath Bose" did some calculations for the fifth state of matter. On the basis of these calculations, Albert Einstein predicted the existence of a new state of matter called Bose-Einstein condensate. This was discovered by three scientist Cornell, Ketterle and Wieman of USA by cooling a gas of extremely low density (about one hundred thousand the

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