

Liquid Crystal -> This is the state of matter that exists between the liquid and solid crystal state of matter. -> This shows the properties of both solid and crystal. -> These can flow like liquid but its molecules may be oriented like solids. -> The liquid-crystalline state is also known as mesomorphic state and the liquid crystals are known as mesomorphs.

Properties of matter

->Positional Order-

When most of the molecules shows translation symmetry.

It means when we break the matter, it shows similar properties in both the parts.

->Orientation order

Property of molecules to be align in long order.

Different states of matter ~ crystal phase -> Positional order and orientation order. ~ Liquid crystal phase -> varying positional order and orientational order.

Essentials conditions for LC ~A carboxylic group should be present. ~Absence of bulky groups. ~Presence of unsaturated groups. ~ Molecules are anisotropic. ~Molecule should have rigidity at the centre but flexible at the end.