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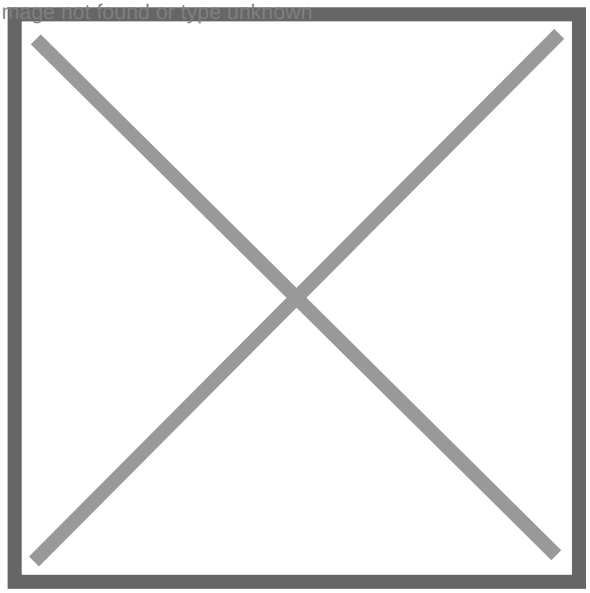
**Product Name :**

Orbital Model of Sp3 Hybridization

**Product Code :**

SCI-293/115

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## Description :

**Orbital Model of Sp3 Hybridization** (Product Code: SCI-293/115) is a 3D chemistry teaching model used to show how one s and three p orbitals merge into four equivalent sp3 hybrid orbitals pointing to the corners of a tetrahedron. Developed for teachers and students of organic,inorganic and stereochemistry, it includes a number of atomic elements for making different kindsof molecules. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

### Key Details

| Parameter | Detail |
|---|---|
| Topic | sp3 hybridization (tetrahedral arrangement) |
| Intended users | Teachers and students learning organic, inorganic andstereochemistry |
| Teaching benefit | Three-dimensional view of structural formulae that are hard to explain on a two-dimensional blackboard |
| Kit contents | A number of atomic elements for making different kinds of molecules |
| Product code | SCI-293/115 |
| Manufacturer | Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM |
| Country of origin | India (made in Ambala, Haryana) |

### What Is the Sp3 Hybridization Model Used For?

Methane is the classic example: its carbon uses four sp3 hybrids, each overlapping with a hydrogen orbital, and the result is a tetrahedron rather than the flat cross students tend to draw. The model makes this geometry obvious and then extends naturally to ammonia and water, where lone pairs occupy some of the hybrid orbitals and change the observed shape.

In stereochemistry the tetrahedral carbon is the starting point for chirality. Build a carbon with four different groups from the kit's atomic elements, build its mirror image, and let students try to superimpose the two. The same models help explain free rotation around single bonds in ethane, a useful contrast with the sp2 double bond.

### OEM Manufacturer

Jain Scientific Equipments Private Limited, operating under the ScienceLab name, is the OEM (original equipment manufacturer) of the Orbital Model of Sp3 Hybridization. The model is produced at the company's own licensed factory at Saha, Ambala, Haryana, India, so colleges, schools, dealers and importers order straight from its maker. Queries about contents or additional sets are answered by the manufacturing company itself. Read the ScienceLab company profile.

### Related Laboratory Equipment

Other models that support lessons on molecular shape and stereochemistry: