

Complex Ions

Chemistry

Ligands, coordination number and shape.

Coordination number determines shape.

Coordination	Shape	Example
6	Octahedral	$[\text{Cu}(\text{H}_2\text{O})_6]^{2+}$
4	Tetrahedral	$[\text{CuCl}_4]^{2-}$
4	Square planar	$[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$
2	Linear	$[\text{Ag}(\text{NH}_3)_2]^+$

Bidentate ligands like ethanedioate occupy two coordination sites.
EDTA is hexadentate and occupies all six.