

## Classification of Enzymes by IUB System,

Enzymes are classified by complex system, suggested by commission on enzymes of International Union of Biochemistry (IUB). Based on their action they are divided into 6 major classes. Each enzyme is assigned a 4 Digit code number.

### EC-1 Oxido-Reductases:

Enzymes in this class are involved in Oxidation-Reduction reactions. The enzymes under this category usually have *dehydrogenase* in their name others include *oxidases, hydroperoxidases, oxygenases, hydroxylase, and reductases*

Example: Alcohol Dehydrogenase.

### EC-2 Transferases:

Enzymes that catalyze transfer of Functional groups are called as Transferases. They usually have 'trans' or 'transferase' in thier name, others include kinases, phosphorylase etc

Example: Phosphorylases

### EC-3 Hydrolases:

These are enzymes that bring about hydrolysis of various compounds. They are digestive enzymes like trypsin, usually have the name of the substance they hydrolyse.

Example: Lipase- lipid hydrolysis, pepsin-  
peptide hydrolysis, urease- urea,

#### EC-4 Lyases:

Enzymes specialized in addition or removal  
of water.

Example: Aldolase, decarboxylases,  
fumarase

#### EC-5 Isomerases:

Enzymes involved in all isomerization  
reactions.

Example: Phosphotriose Isomerase.

#### EC-6 Ligases:

Enzymes catalyzing synthetic reactions  
where two molecules are joined together  
and ATP are used.

Example: Succinate thiokinase, synthetases,  
carboxylases, DNA ligase