

Amino acids

Acidic- Glu, Asp
Basic- Lys, Arg, His
Aromatic- Tyr, Trp, Phe

Saturated fatty acids

Palmitic acid (16 C)
Stearic acid (18 C)

Unsaturated fatty acids

Oleic acid (18:1)
Linoleic acid (18:2)
 α -Linolenic acid (18:3)
Arachidonic acid (20:4)

Phospholipids

Diglycerides and phosphate group attached to third hydroxyl of glycerol.

Lecithin (Phosphatidylcholine)
Cephalin

Proteins

Heteropolymer of 20 amino acids, linked by peptide bonds

Essential-9, nonessential-11

Nitrogenous base

Purine base- Adenine,
Guanine

Pyrimidine base- Thymine
(DNA), Cytosine, Uracil
(RNA)

Nucleosides

Nitrogenous base + sugar

Ribose sugar in RNA

Deoxyribose sugar in DNA

Examples: Adenosine,
guanosine, thymidine,
cytidine, uridine

Nucleotides

Nitrogenous base + sugar
+ phosphate

Adenylic acid, cytidylic
acid, etc.

DNA and RNA

Nucleotides linked
with 3'-5'
phosphodiester
linkage

The most abundant protein

RuBisCO- Ribulose bisphosphate Carboxylase-Oxygenase

The most abundant protein in animals

Collagen

Starch

Polymer of glucose linked by α -1,4-glycosidic bond
Amylose and amylopectin

Glycogen

Highly branched
glucose polymer

Cellulose

Linear polymer of
glucose linked by
 β -1,4-glycosidic bonds.

Inulin

Polymer of fructose

Chitin

Polymer of N-acetylglucosamine

Ribozyme

Catalytic RNA

Competitive inhibitor

Inhibitor binds to enzyme due to structural similarity with the substrate

E.g. Malonate inhibits succinic dehydrogenase. Here substrate is succinate.

Hydrolases

Facilitate hydrolysis of bonds such as glycosidic, peptide, ester, ether, etc.

E.g. amylase, lipase, nuclease, protease

Cofactors

Non-protein part required for enzyme activity

Apoenzyme- Protein part of the enzyme

Prosthetic group

Tightly bound to apoenzyme

E.g. haem group present in catalase, peroxidase

Coenzymes

Bind to apoenzyme transiently

E.g. NAD, NADP

Metal ions as a cofactor

Zn in carboxypeptidase