

PROTEINS

ON THE BASIS OF SHAPE AND SIZE

FIBROUS PROTEINS	GLOBULAR PROTEINS
<ol style="list-style-type: none"> 1. α-keratin 2. Collagen 	<ol style="list-style-type: none"> 1. Myoglobin 2. Haemoglobin 3. Ribonuclease

ON THE BASIS OF SOLUBILITY AND PHYSICAL PROPERTIES

1. Simple Proteins
2. Conjugated Proteins
3. Derived proteins

SIMPLE PROTEINS

PROTAMINES <ol style="list-style-type: none"> 1. Salmine 2. Sardinine 3. Cyprinine 	HISTONES <ol style="list-style-type: none"> 1. Nucleohistones 2. Globin of haemoglobin 	ALBUMINS <ol style="list-style-type: none"> 1. Legumelin in legumes 2. Leucosin in cereals 3. Ovalbumin in egg 4. Lactalbumin in milk
GLOBULINS <ol style="list-style-type: none"> 1. Ovoglobulin in egg 2. Lactoglobulin in milk 3. Legumin from legumes 	GLIADINS (PROLAMINES) <ol style="list-style-type: none"> 1. Gliadin of wheat 2. Hordein of barley 	GLUTELINS <ol style="list-style-type: none"> 1. Oryzenin of rice 2. Glutelin of wheat
SCLEROPROTEINS (ALBUMINOIDS) <ol style="list-style-type: none"> 1. Keratins 2. Collagen 3. Elastin 		

CONJUGATED PROTEINS

NUCLEOPROTEINS <ol style="list-style-type: none"> 1. Nucleohistone 2. Nucleoprotamine 	MUCOPROTEINS (MUCOIDS) <ol style="list-style-type: none"> 1. FSH 2. LH 3. HCG 	GLYCOPROTEINS <ol style="list-style-type: none"> 1. Mucins 2. Immunoglobulins 3. Complements
METALLOPROTEINS <ol style="list-style-type: none"> 1. Ferritin 2. Carbonic anhydrase 3. Ceruloplasmin 	PHOSPHOPROTEINS <ol style="list-style-type: none"> 1. Casein 2. Ovovitellin 	LIPOPROTEINS

CHROMOPROTEINS

1. Hemoglobin
2. Cytochromes
3. Catalase
4. Peroxidase
5. Flavoprotein
6. Visual purple

DERIVED PROTEINS**1. PRIMARY DERIVED PROTEINS**

PROTEANS	METAPROTEINS	COAGULATED PROTEINS
<ol style="list-style-type: none">1. Predominantly formed from certain globulins	<ol style="list-style-type: none">1. Acid metaproteins2. Alkali metaproteins	<ol style="list-style-type: none">1. Cooked meat2. Cooked egg albumin3. Alcohol precipitated proteins

2. SECONDARY DERIVED PROTEINS

PROTEOSES OR ALBUMOSES	PEPTONES	PEPTIDES
<ol style="list-style-type: none">1. Hydrolytic products of proteins	<ol style="list-style-type: none">1. Protein products obtained by enzymatic digestion	<ol style="list-style-type: none">1. Dipeptides2. Tripeptides

CHARACTERISTICS OF PROTEINS

PROTEINS	SOLUBILITY	COMPOSITION	ISO ELECTRIC pH	COAGULATION
Protamines	Soluble in water, dilute acids and alkalis and dilute ammonia	Rich in arginine. Do not contain cysteine, tryptophan and tyrosine	7.4	Non-coagulable by heat
Histones	Soluble in water, dilute acids and salt solutions. Insoluble in ammonia	Rich in arginine and histidine (Although Globin rich in histidine and lysine)	Alkaline	Do not readily coagulate on heating
Albumins	Soluble in water and dilute salt solution.	Deficient in glycine	4.7	Coagulate by heat
Globulins	Insoluble in water. Soluble in dilute neutral salt solution			Heat coagulable
Gliadins (Prolamines)	Alcohol soluble plant proteins Insoluble in water or neutral salt solutions Dissolve in 50 – 80% ethanol.	Rich in proline. Poor in lysine		
Glutelins	Insoluble in water or neutral salt solutions Soluble in dilute acids or alkalis	Rich in glutamic acid		Coagulate by heat
Scleroproteins or Albuminoids	Low solubility	-Hard keratin yield histidine, lysine and arginine in ratio 1:4:2 - α Keratin (human hair) have high content of cysteine - β Keratin rich in glycine and alanine - elastins rich in non polar amino acids		