

Goal 2.01

Organic Compounds

Organic Compounds contain C (carbon), H (hydrogen), and O (oxygen)

There are 4 main types of organic compounds:
Lipids,
Carbohydrates,
Proteins, and
Nucleic Acids

Periodic Table of the Elements

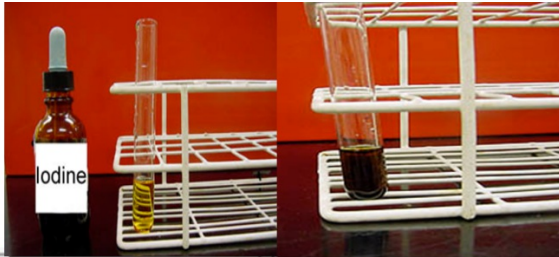
1	IA	H	IIA																	0	He
2		Li	Be																		Ne
3		Na	Mg	IIIB	IVB	VB	VIB	VII B	VII							IB	IB			Ar	
4		K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		
5		Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		
6		Cs	Ba	*La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn		
7		Fr	Ra	+Ac	Rf	Ha	106	107	108	109	110										

* Lanthanide Series

58	59	60	61	62	63	64	65	66	67	68	69	70	71
Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu

+ Actinide Series

90	91	92	93	94	95	96	97	98	99	100	101	102	103
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr



Carbohydrates

Elements Present: **CHO**

Functions: **short term energy**

Examples: **candy bar, fries, chips, soda**

Subunits: **simple sugars = monosaccharide**

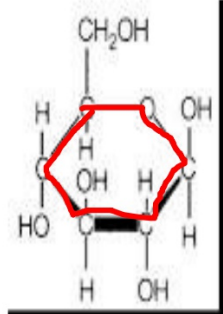
Test for Starch: **iodine** Results: **purple/black**

Test for Sugar: **Benedict's** Results: **orange/brown**

Carbohydrate that makes up plants = **CELLULOSE**

1 Sugar = **monosaccharide** Many Sugars = **polysaccharide**

Draw





Lipids

Draw

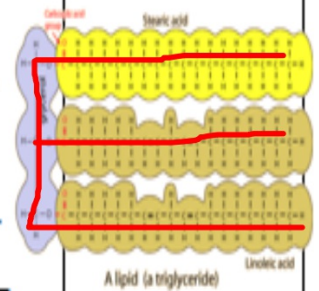
Elements Present: CHO

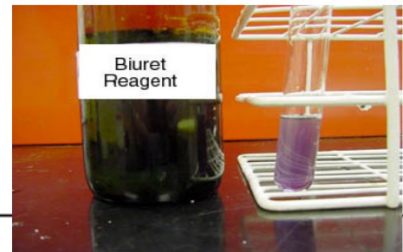
Functions: long term energy; insulation; cells

Examples: oil, grease, fats; phospholipids

Subunits: glycerol and fatty acid chains

Test for Identification: brown bag test





Proteins

Elements Present: **CHON**

Functions: **chemical reactions, build tissues**

Examples: **enzymes, antibodies, insulin**

Subunits: **amino acids**

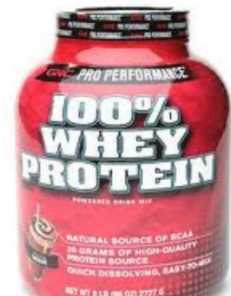
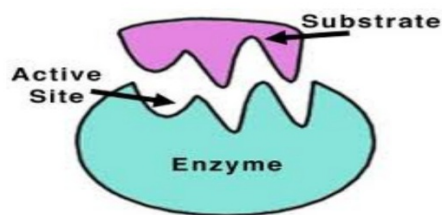
Test for Identification: **Biuret's - turns lavender**

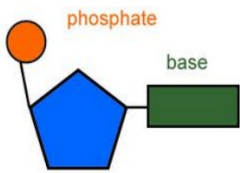
Amino Acids are connected by **peptide** bonds.

Polypeptide means **many amino acids/proteins**.

EOC Hint Polypeptide is just a fancy name for protein.

Enzymes are proteins that act as **catalysts**.





deoxyribose sugar

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Nucleic Acids

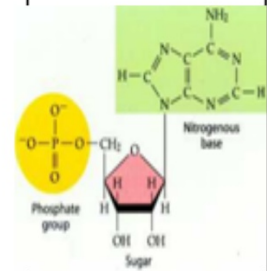
Draw

Elements Present: CHONP

Functions: genetic material

Examples: DNA and RNA

Subunits: nucleotide



DNA contains deoxyribose sugar and the 4 nitrogen bases A, T, C, G

RNA contains ribose sugar and the 4 nitrogen bases A, U, C, G

