

Like carbohydrates, fats are found almost in every living cell. Like carbohydrates, fats also consists of C, H and O but the O_2 proportion is low.

Fats are esters of high molecular wt containing fatty acids and glycerol. Glycerol is a trihydric alcohol and therefore, one, two or all the three hydroxyl groups (OH) can react with fatty acids forming mono, di or triglycerides respectively. In triglycerides, 3 mols of fatty acids attached to a glycerol may be similar as in tripalmitin.

A fatty acid may be saturated or unsaturated :

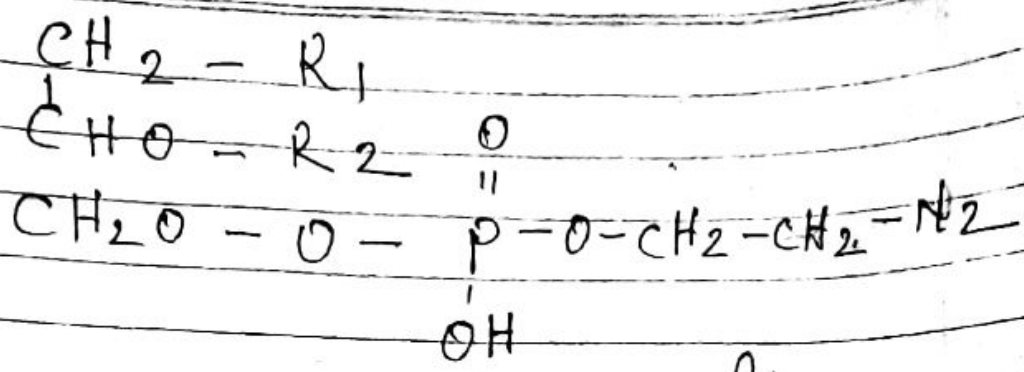
(A) Saturated fatty acids.

Acetic acid — CH_3COOH

Butyric acid — C_3H_7COOH .

Palmitic acid — $C_{15}H_{31}COOH$

Stearic acid — $C_{17}H_{31}COOH$



α - cepalin.

According to Blou (1943) the lipids may be following 3 types :-

(A) simple lipids —
Esters of fatty acid with various alcohols —

(i) Fat esters of fatty acids with glycerol that are solid at room temp.

(ii) oil esters of fatty acids with glycerol that are liquid at room temp.

(iii) Waxes esters of fatty acids with alcohol other than glycerol.

(B) Compound lipids

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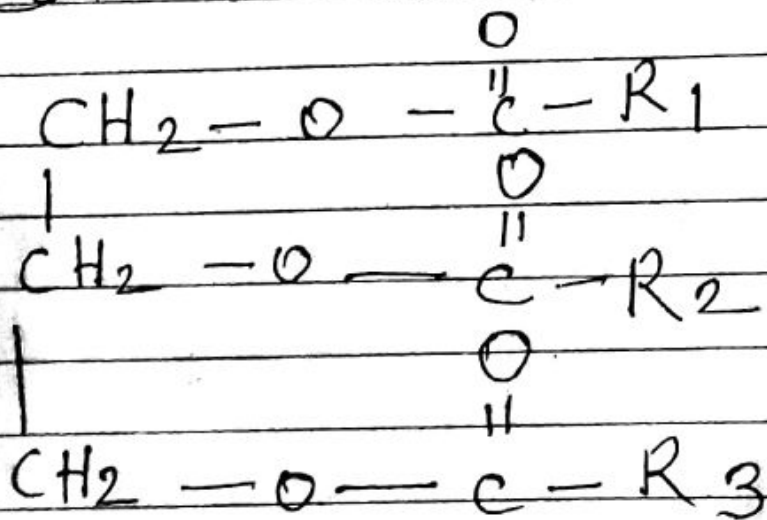
(i) Phospholipids — Substituted fats
Containing phosphoric acid with N.

(ii) Glycolipids — Compound of
fatty acids with a carbohydrate
containing N too.

(c) Derived lipids —
certain substances compound by
hydrolysis.

A fatty acid component of
a fat always contains an even
number of carbon atoms.

The general formula of fat
can be written as follows —



(Here R-C is
derived from
fatty acid)