

### SNS COLLEGE OF TECHNOLOGY

# (An Autonomous Institution) Coimbatore – 35



## DEPARTMENT OF BIOMEDICAL ENGINEERING

### Classification of Lipids

**Simple lipids:** Esters of fatty acids with various alcohols.

- 1. Fats: Esters of fatty acids with glycerol. Oils are fats in the liquid state.
- 2. Waxes: Esters of fatty acids with higher molecular weight monohydric alcohols

<u>Complex (or) Compund Lipids:</u> Esters of fatty acids containing groups in addition to an alcohol and a fatty acid.

- Phospholipids: Lipids containing, in addition to <u>fatty acids and an alcohol, a phosphoric acid residue</u>. They frequently have nitrogen-containing bases and other substituents, eg, in glycerophospholipids the alcohol is glycerol and in sphingophospholipids the alcohol is sphingosine.
- 2. Glycolipids: These lipids contain a fatty acid, carbohydrate and nitrogenous base.
- 3. Lipoprotein: Macromolecular complexes of lipids with proteins.
- 4. Other complex lipids: Lipids such as sulfolipids and amino lipids. Lipoproteins may also be placed in this category

### **Derived lipids:**

These include fatty acids, glycerol, steroids, other alcohols, fatty aldehydes, and ketone bodies, hydrocarbons, lipid soluble vitamins, and hormones. Because they are uncharged, acylglycerols (glycerides), cholesterol, and cholesteryl esters are termed neutral lipids.

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