

## CHAPTER OVERVIEW

### 1: Lipids

Lipid is a loosely defined term for substances of biological origin that are soluble in nonpolar solvents. It comprises a group of naturally occurring molecules that include fats, waxes, sterols, fat-soluble vitamins (such as vitamins A, D, E, and K), monoglycerides, diglycerides, triglycerides, phospholipids, and others. The main biological functions of lipids include storing energy, signaling, and acting as structural components of cell membranes. Lipids have applications in the cosmetic and food industries as well as in nanotechnology. Lipids may be broadly defined as *hydrophobic* or *amphiphilic* small molecules; the amphiphilic nature of some lipids allows them to form structures such as vesicles, multilamellar/unilamellar liposomes, or membranes in an aqueous environment.

[1.1: Charged Lipids](#)

[1.2: Lipid Headgroup Types](#)

[1.3: Lipid Tails and Saturation](#)

[1.4: Glycolipids](#)

[1.5: Sphingolipids](#)

[1.6: Sterols and Sterol Induced Phases](#)

[1.7: Lipids in Non-Aqueous Environments](#)

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