Lecithin Encyclopedia Article

Lecithin

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Contents

Lecithin Encyclopedia Article.....1

Contents.....2

Lecithin.....3

Lecithin

Lecithin is a phospholipid which consists of glycerol, two fatty acids, a phosphate group and choline, $HOCH_2CH_2N(CH_3)_3^+$.

Lecithin was first found in eggs in 1846, so its name was coined from the Greek word for egg yolk, *lekithos*. Though lecithin is its common name, chemists refer to it as phosphatidylcholine. It is a yellow-brown fatty substance. In contrast to fats, which function as fuel molecules, lecithin serves a structural role in cell membranes. It is found in all cells. Without lecithin and other membrane phospholipids, cells would be unable to maintain their structure and probably would dissolve back into their surroundings. Lecithin is apparently vital for life in mammals, because no hereditary diseases in its biosynthesis are known. (A genetic defect involving a vital substance is lethal to the organism and therefore cannot be passed on.) The lecithin we purchase in a store is actually a mixture of lecithin and other phospholipids as well as fatty (soy bean) oil. The fatty acid components in lecithin can vary, depending on the number of carbon atoms they contain and whether they are saturated or unsaturated. The nature of the fatty acid components in a lecithin molecule greatly influence its role. For example, a lecithin molecule in which both fatty acids are saturated aids oxygen uptake in the lungs. Another "species" of lecithin, which contains two unsaturated fatty acids is involved in the transport of cholesterol in the blood.