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Seperation Conditions of Phospholipid from Ducks Egg Yolk

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Duck egg phspholipid were prepared by fractionating duck egg yolk powder with alcohol, and optimal conditions were determined to improve production yield and phosphatidylcholine (PC) enrichment. Under the optimal conditions of extraction time, solvent volume, ethanol concentration and extraction temperature on yield, PC content. PC, phophatidyethanolamine (PE) and sphingomyeline(SM) contents were analysed by HPLC method. Optimal extraction conditions were 40min, 10:1 solvent/egg yolk ratio powder and egg yoik oil produced had 57.31% PC along with 13.67% PE content. Result from chemical analysis of lecithin were also demonstrated. Alcohol ectraction with those conditions were useful to produce high-PC containing duck egg phspholipid. Fatty acid composition of lecithin obtained from duck egg yolk contents were predominate of oleic acid, palmitic acid, linoleic acid in order.

Duck egg oil were purified with alcohol · acetone dual solvent system to improve production yield and enrichment phosphatidylcholine (PC). Effects of alcohol · acetone dual purification on production yield and phosphatidylcholine (PC), phophatidyethanolamine (PE) and phospholidlpid (PL) contents were determined, PC and PE contents were analysis by HPLC method, Duck egg yolk oil prepared with alcohol · acetone dual system had yield of 13.04% with 78.63% PC content after 3 times purification.