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EXTRACTION OF LECITHIN FROM EGG YOLK AND ITS CHARACTERIZATION

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ABSTRACT

The aim of the present study was to extract lecithin from egg yolk by precipitating it with acetone followed by centrifugation to separate supernatant liquid from the precipitate and then evaporate solvent with the help of lyophilizer. Egg lecithin was standardized by TLC analysis and FTIR spectroscopy. Egg lecithin was successfully isolated in a very economical way from egg yolk and all the parameters were evaluated and found within the specified limit. FTIR and chromatographic analysis shows the presence of ester linkage, alkane and hydroxyl group.

KEYWORDS

Egg lecithin. Isolation and Standardization.

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INTRODUCTION

Lecithin (derived from Greek word "lekithos", meaning "egg yolk"). This term indicates any group of yellow-brownish fatty substances which consist of choline, glycerol fatty acid, and phospholipids. It is used for smoothing food textures, emulsifying agent, and repelling sticking materials. It is actually a blanket for a series of compound^{1,2}.

French chemist Theodore Gobley was first to isolate lecithin in 1845³ in which he described lecithin as a substance which allows oil and water to mix. It is used for treating liver ailments, nerve diseases, and high levels of cholesterol in the blood, as well as in the food processing industry.

Lecithin⁴ has numerous applications in the food processing industry but it also plays a significant role in the encapsulation process of liposomes. The