

ABSTRACT

Fats and oils obtained from plant and animal sources are very important nutrients for human nutrition since they provide energy, essential fatty acids and some vitamins. In addition, dietary lipids have an important role in human nutrition for optimum growth and development and to maintain health. Triacylglycerols (TAGs) are the main molecules to fats and oils that give lipids to their characteristic properties. Structured lipids (SLs) are TAGs obtained by changing the fatty acid position or fatty acid profile in the glycerol molecule by chemical or enzymatic methods to impart specific functional or nutritional properties. Today, changing the fatty acid composition of lipids, improving their properties and nutritional values, and the production of structured lipids developed for new applications are frequently studied lipid topics. "Structured lipids", also called "new generation oils", can be produced by chemical or enzymatic interesterification methods. SLs are specifically designed to provide TAGs with enhanced functional properties and/or health and nutritional purposes to meet the growing need for healthier foods and to prevent obesity, cancer and cardiovascular diseases. Scientific studies have shown that structured oils designed in accordance with specific patient needs show positive results in the treatment of various diseases and are suitable for use in the medical field. In this study, the production techniques of structured lipids synthesized for use in medical applications, their effects on various diseases and studies in the literature are discussed.

Key Words: Structured lipids, enzymatic synthesis, low-calorie fats