Obesity is a highly risk factor for a series of chronic diseases, which leads consumers to seek light food. Therefore, to become more competitive, food companies have been creating new products in order to meet the needs of this niche market. This study’s main goal was to develop a light cupcake based on total fats making use of chia gel, which, besides replacing margarine, would also contribute to the product’s nutritional value, because it is rich in protein, fiber and also in omega-3 and omega-6 fatty acids. As fat replacer the chia gel should maintain the functional characteristics and preserve the taste, texture and color of the cake as compared to the traditional formula. So far, some cupcake formulations developed in order to replace margarine by chia gel on the reason of 50%, 75% and 100%. Physical-chemical analysis has proved the possibilities of preparing a light cupcake, replacing margarine by chia gel by up to 100%, since reduction of lipid content in comparison to the standard product was over 25%, and more than 3g difference in 100g of solid, in compliance to current laws. On the sensorial test, 93% of the tasters ranked the product between “quite like it” and “like it very much”, in regards to texture, appearance, taste and overall impression.

**Key-words:** Cupcake, Chia, Fat replacer, Light.