Hydrocolloids are widely used in the food industry because they modify the rheology and texture of aqueous systems. Hydrocolloids affect the stabilization of emulsions, suspensions, and foams, and modify starch gelatinization. In the baking industry hydrocolloids are of increasing importance as bread making improvers. They improve dough-handling properties, improve the quality of fresh bread, and extend the shelf life of stored bread. Hydrocolloids, such as carboxymethylcellulose (CMC) and guar gum, have proven their benefit in the formulation of gluten-free breads. Sodium alginate, k-carrageenan, xanthan gum, and hydroxypropylmethylcellulose (HPMC) improve wheat dough stability during proofing. Addition of xanthan gum in frozen dough has the ability to increase the dough’s stability during freeze-thaw cycles. CMC and hydroxypropylmethylcellulose (HPMC) have a combined effect with enzymes and emulsifiers on the textural properties of both dough and fresh bread, for example, high volume and retarding of staling. Hydrocolloids must be used in small quantities (< 1% on a flour basis) and are expected to increase water retention and loaf volume and decrease firmness and starch retrogradation. (De Leyn, 2006)

In cake making, wheat flour, eggs, sugar and fat are the major ingredients. Among different ingredients used in cake making, eggs are the most costly ingredients and significant source of cholesterol. The use of vegetable proteins for partial or total substitution of eggs in cake formulations appears, therefore, to be an interesting objective, and especially so for the people with specific dietary needs or restrictions (vegans, vegetarians, high cholesterol people, etc.). The almost unique foaming, emulsifying, and heat coagulation properties of egg proteins confer them a very important functional role in the definition of cake characteristics, namely volume and texture. This makes it extremely difficult to replace eggs successfully by a different source of proteins, even by the use of several types of additives, such as hydrocolloids, in cakes, (Arozarena et al., 2001) and Ashwini et al., (2009).

Arozarena et al., (2001) analyzed the possibility of total substitution of egg proteins in small ratio yellow cakes with use of optimum leavening agent, emulsifiers, and xanthan gum levels by using response surface methodology (RSM). Ashwini et al., (2009) investigated effect of hydrocolloids like gum Arabic, guar gum, xanthan gum, carrageenan gum, and hydroxypropylmethylcellulose (HPMC) in combination with emulsifiers such as glycerol mono stearate (GMS) and sodium stearoyl-2-lactylate (SSL) on the rheological, microstructural and quality characteristics of eggless cake. Because all emulsifiers in local market are imported from abroad, and major of emulsifiers are synthesized, so one of objectives of this work is using some natural additives (Treated fenugreek flour and gum Arabic) and could be produced in Egypt as fenugreek or imported from Arabic country like Sudan as gum Arabic.