

I- INTRODUCTION

Guar belongs to Leguminosae family (Cyamoposis tetragonoloba L. Taub.), is also known as (Cyamoposis psaralioides DC.). It was originally grown in India since ancient times for food and feed. At present, it is grown in Pakistan, India, U.S.A., Australia, Brazil and South Africa (Khater, 1977).

Guar is considered as one of the important sources of mucilage, its potential lies in the gum of its seeds endosperm, this gum named guaran gum. Sandford and Baird (1983) reported that the total world production of guar gum amounted to 60,000 metric tonnes (1970) and it reached to 90,000 tonnes (1980) i.e. it increased by about 50% over the 1970 to 1980. This increase was chiefly due to the wide range of functional characteristics exhibited by this polysaccharide.

Khater (1977) have mentioned that guar gum has 5-8 times the thickening power of starch. It is used as a filter aid in the mining industry, textile industry, pharmaceuticals, as a thickener in cosmetics, hand lotions cream and a strengthening agent in paper. It is also used to thicken and stabilize some kinds of salads and ice-cream. The same author added that the cake after removing the gum is also rich in protein, both seeds and cake

contain a balance of amino acids that complements the amino acid deficiencies in corn protein, wheat protein and rice protein. Also, bread has been enriched with 8% guar protein in experiments without adversely affecting flavour.

Guar seed contained about 34% protein, 23% gum while guar seed meal contained 44-55% proteins (Misra et al., 1984).

In 1950, it was introduced in Egypt for the first time by Ahmed (1956), it was planted in medicinal plant garden, Faculty of Pharmacy, Cairo University. Nowadays several attempts of planting guar were carried out and proved its successfulness in Egypt in recent cultivated lands.

The aim of the present investigation is to study the polysaccharides content of guar gum in a trial to obtain a picture of the structure of this polymer beside the technological characteristics of this substance.