XANTHAN GUM USING IN THE MAYONNAISE TECHNOLOGY PRODUCING

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Mayonnaise is an "oil in water" emulsion consisting of 50–85% edible oil, 5–10% egg yolk, vinegar, salt and seasonings . The emulsion is stabilized by egg yolk phospholipids. Products with a lower oil content (<50%) may contain thickening agents such as starch, pectin, traganth, agar-agar, alginate, carboxymethylcellulose, milk proteins or gelatin.

Mayonnaise technology is wide field for xanthan gum using. Its stability at low pH, salt tolerance, high viscosity at low shear and pseudoplastic rheology make it an ideal thickener and stabiliser for products. For example, dressings formulated with xanthan gum have excellent long-term stability and a relatively constant viscosity over a wide temperature range. Due to the pseudoplastic rheology imparted by the xanthan gum they pour easily but cling well to the salad. Using level is typically between 0.2 and 0.4% of xanthan, depending on the oil content. Generaliy, as the oil content of the dressing increases, less xanthan gum is required for stabilisation.

Low levels of xanthan gum provide high viscosity in sauces and gravies at both acid and neutral pH. Viscosity is also stabie to temperature changes and is maintained under a variety of long-term storage conditions. Although xanthan gum provides stabie, high viscosity over a range of temperatures, this viscosity is temporanly reduced at retort temperatures, ensuring good thermal penetration in retorted foods. At the same time the ability of xanthan gum to recover its viscosity upon cooling, provides good re-suspension of particulates ensunng a uniform, high quality product. In retort pouch products, xanthan gum improves filling and reduces splashing and fouling of the cntical heat-seal area of the pouch. Xanthan gum can be used to partially replace starch in this application to improve heat stability and give a cleaner, less pasty mouthfeel. Typically xanthan is used at a concentration of 0.2±0.4 %.

KEY WORDS: viscosity, synergy, galactomannan, stabllity, rheology