**Abstract**

**Super corn fiber gum and its enhanced properties**

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Corn fiber gum (CFG) is an alkaline extract of corn fiber (a low value by-product of the corn wet and/or dry milling process). CFG in the solid state (milled powder form) was subjected to a maturation treatment by heating under atmospheric pressure at 110oC for 5 (GFG5) and 24 hours (GFG24) to make a super CFG. The treatment greatly affected the solubility of the material. The aggregation of the proteinaceous component was also increased with heating time. The control and matured CFG (super CFG) samples were also characterized by gel permeation chromatography coupled on line to multi angle laser light, refractive index and UV detectors. The weight average molecular values for control, CFG5 and CFG24 were 4.2, 5.8 and 5.7 x 105 g/mol respectively with corresponding Rg values of 29, 44 and 41 nm. High pressure homogenization treatment of the control aqueous solution did not show significant changes while the matured samples were dis-aggregated. The emulsification performance and stability of matured samples were significantly enhanced compared to the control. The enhancement is due to a 300% increase in the proportion of the adsorbed fraction onto the oil water interface.