

## **EFFECT OF ADDING CHITOSAN GUM ON SENSORY, REHOLOGICAL AND STORAGE PROPERTIES OF LOAF BREAD.**

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### **ABSTRACT**

Effect addition of three different Molecular weight of chitosan gel prepared from shrimp shell on dough reology , sensory and shelf life properties of loaf were studied. Three treatments A, B and C were prepared from wheat flour with replacement 1% of chitosan gel (A=1155, B=720, C=6.984) kilodalton and compared with control . Chitosan did not effect the gluten index of A, B and C treatments compared to control were (96, 96, 97, 96) % respectively. There was no significant decrease in wet gluten while significant decrease in dry gluten for all treatments compared to control. The Farinograph test showed no significant increase in stability time of A, B, and C treatments compared with control were (4, 3.5, 3.5, 2.6)min respectively .The result showed significant differences in specific volume of loaf A, B, C compared to control which were (2.215, 2.224, 3.01, 3.433) cm<sup>3</sup>/g respectively. The sensory evaluation showed significant differences at 0.01 between A,B,C treatments and control . Storage of loaf bread containing chitosan at different temperature showed high staling rate compared to control represented by a decrease in water absorption rate for all treatments compared to control. After storage for 18 days at room temperature A and C treatments preserved loaf from mold and yeast growth compared to control, and kept their texture, odor and taste which reflect the role of chitosan as antimicrobial preservative without any reverse effects on dough reology properties and sensory characteristics of loaf bread.