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NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY (NUST)

*Department of
Applied Biology
&
Biochemistry*

**Project Title:
Improving quality of Bread at INNSCORE Africa Limited**

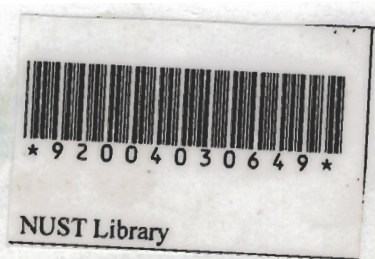
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A project submitted in partial fulfillment of the requirements of the Bachelor of Science (honors) Degree in Biochemistry

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ABSTRACT

Raw materials analysis was carried out on flour, yeast and premix fat. The sampling was done at Innscor Africa Limited and the quality attributes that were monitored were, moisture content, gelatinization, filth, infestation, sift and water absorption. For yeast the yeast activity was investigated. Organoleptic tests were carried out on the fat used in the premix and it was found that the fat was not rancid. For the flour samples, sample 1 was used as the control and comparative tests were carried out on the other two samples whose analytical was not known and one flour sample in particular was producing a very poor loaf (sample 3). The moisture content in all samples was in control. The moisture content was 13, 12 and 14 respectively. It was found that α -amylase activities in all 3 samples were in control as indicated by the falling number results. The falling number was 263, 269 and 308 respectively. For gluten measurements and quality, for sample 1 and 2 the gluten quality was very good and the amount of gluten present in the dough was sufficient to produce very good dough with a very good viscoelastic network. The amount of gluten in both samples was 31% and 32% respectively. However for sample 3 the amount of gluten in the flour was very low. It was 12% wet gluten. The filth and infestation test in all three samples were negative. The percentage sifts for all three samples were 1.5, 1.4 and 3.0% respectively. Gross contamination was detected in sample 3. The yeast activity was more or less the same irregardless of flour quality. The water quality was assessed with respect to water quality. The results indicated that the water quality does affect yeast activity. Borehole water affects the yeast activity negatively. Generally, it was observed that sample 3 was of poor grade and for this flour