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Book of ABSTRACTS

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protease was extrapolated from Double reciprocal plot. The studies show that protease production by B. megaterium was higher using mango seed kernel as carbon source than in glucose. The production was optimal using Mango seed kernel at concentration of 1.5g, pH 5 after 5 days of incubation. The characterization of protease produced by B. megaterium grown on mango seed kernel has optimal activity at pH 4, temperature of 60°C and at 1 % casein concentration with high Vmax and low Km. It can be concluded that mango seed kernel can be used to replace the costly glucose in microbial enzyme production particularly protease.

Keywords: Protease, Mango seed kernel, Glucose, *Bacillus megaterium,* Casein

BZH 010

MICROBIOLOGICAL QUALITY ASSESSMENT OF RAW SALAD VEGETABLE SOLD IN MINNA METROPOLIS, NIGERIA

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ABSTRACT

A total of twenty five (25) raw salad vegetables were collected and the microbial assessment was investigated using pour plate method. The analysis was carried out on carrots, cucumber, cabbage, lettuce and tomatoes. The results obtained from this present study revealed that the total heterotrophic viable bacterial counts, coliform counts and fungal counts for all the salad vegetables ranged from 1.4 x 10^6 to 6.2 x 10^6cfu/g,1.1 x 10^6 -3.3 x 10^6cfu/g and 2.1 x 10^3-4.5 x 10^5cfu/g respectively. The data obtained from the microbiological assessment were subjected to One Way Analysis of Variance (ANOVA) which showed that there was significant difference ($p<0.05$) in the microbial load of the raw salad vegetables from each samples. The microbial isolates were identified as *E. coli, Staphylococcus aureus, Bacillus subtilis, Klebsiella* sp., *Pseudomonas* sp., *Aspergillus niger, Mucor* sp., *Penicillium* sp., *Aspergillus flavus* and *Fusarium* sp. *Staphylococcus aureus and Aspergillus niger.* were found predominant. This suggests that salad vegetables in the present study are of public health concern and

harbours microorganisms that could be hazardous to human health. Hence consumers should maintain the highest possible level of hygiene during the process of preparation.
Keywords: Microorganisms; Quality assessment; Raw salad vegetables

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BZH 011

MOLECULAR IDENTIFICATION AND MORPHOMETRIC CHARACTERIZATION OF HATCHERY BRED *Clarias batrachus* Lin, *Clarias gariepinus Bur* AND THEIR HYBRIDS

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ABSTRACT

Artificial hybridization of Asian catfish (*Clarias batrachus)* and African catfish (*Clarias gariepinus)* was carried out to study the performance of their progenies in indoor rearing system. Confirmation of successful hybridization was done using morphometric traits and molecular markers specific for mitochondrial (cytochrome b) of *C. batrachus*. At fertilization till embryonic shield stage, hybrids of C. *gariepinus*♀ X *C. batrachus* ♂ had 89% survival and 85% hatchability for the treatment. However, the hybrids between *C. gariepinus* ♂ X *C. batrachus* ♀ showed 98.2% survival at fertilization and 95% hatchability. All the hatchlings from *C. gariepinus* ♀ X *C. batrachus* ♂ had various types of deformities which probably led to their death within few hours of hatching. The highest total weight and body length was recorded in hybrid of C. *batrachus* ♀ X *C. gariepinus* ♂ when compared with the pure breed progenies. Analysis of the mitochondrial cytochrome b gave confirmation of hybridization between C. *batrachus* ♀ X *C. gariepinus* ♂. This is the first known report where mitochondrial (cytochrome b) marker was used to confirm hybridization between C. *batrachus* and *C. gariepinus* using Clcy *forward primer*:TCCCTATTATTACTATGCCTTA;Clcy reverse primer: CAGGCTGCTAGTGGGTTTAAAA).
Keywords: Hybridization; Cytochrome b; *Clarias gariepinus; C. batrachus*