

RESIDUES OF PENICILLIN ANTIBIOTIC IN LAYER AND STABILITY OF RESIDUES AFTER COOKING

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Abstract

Imported old layer birds (100) sold for human consumption in open markets in Abeokuta, Lagos and Ibadan metropolis of Ogun, Lagos and Oyo states of Nigeria were analyzed for the presence of penicillin antibiotic using microbiological assay technique. The chickens were analyzed as raw samples and positive ones were subjected to cooking (boiling and frying) and further assayed for penicillin residues. The assay was done on antibiotic medium 1 agar with *Bacillus stearothermophilus* var. *calidolactis* (NRRL 1172). Results showed that 22.0% of the sampled birds showed evidence of penicillin residues deposition, with concentrations of between 0.0706mg and 0.1122mg. There was significant reduction ($P < 0.05$) in the concentration of the residues following boiling of meat samples, the residue levels ranging from 0.0150mg to 0.0451mg. There was however no evidence of residues of the penicillin antibiotic after frying of the meat samples. It can thus be said that boiling and frying procedures of cooking of old layers favour degradation of residues of penicillin antibiotic present therein. Nonetheless, residues of penicillin antibiotic in meat are contaminants, which may be injurious to the health of the consumers even at minute amounts. Monitoring of animal products for such is thus important. Since it may be difficult to effect quality control on smuggled goods, it will be useful for NAFDAC to visit the sale points of these chickens.

Keywords: Residues, penicillin, layers, cooking