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**ENTEROTOXIGENICITY AND SOME PROPERTIES  
OF *STAPHYLOCOCCUS AUREUS* STRAINS  
ISOLATED FROM CHICKENS**

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The present studies were performed to know the incidence, the enterotoxin types, and some properties of enterotoxigenic strains of *Staphylococcus aureus* in chickens.

Four hundred and one strains isolated from diseased chickens affected with dermatitis, septicemia, arthritis, osteopsathyrosis etc., and 204 strains from apparently healthy chickens were tested.

The results obtained are as follows:

1) Sixteen out of 605 strains were found to produce staphylococcal enterotoxins. This enterotoxin-positive rate was 2.6%. Among 16 strains, 7 strains produced enterotoxin type C; 6 strains, type D; each 1 strain, type A, A and C, or B and C. None produced type E enterotoxin.

2) Among 16 enterotoxigenic strains, 8 strains were isolated from the diseased chickens affected with dermatitis, and 6 out of 8 strains produced type D, and each 1 strain, type A, or B and C. The rest of the 8 strains were isolated from healthy chickens, and 7 out of 8 strains produced type C, and 1 strain, type A and C.

3) All enterotoxigenic strains were positive in the fermentation of lactose and galactose, the egg-yolk factor, and the Voges-Proskauer reaction. In addition, the positive rates of lipase production and the growth at 45°C of enterotoxigenic strains were higher than those of the nonenterotoxigenic strains.

4) In 16 enterotoxigenic and 589 nonenterotoxigenic strains, the typable strains were 68.8% and 3.7% at 1×RTD of N.C.T.C. phages, and 93.8% and 39.6% at 1,000×RTD, respectively. The differences in the typability of both groups are statistically significant ( $P < 0.01$ ). Most of the enterotoxigenic strains belonged to phage group III at 1×RTD.

From the above-mentioned results, it was proved that the incidence of enterotoxigenic *Staphylococcus aureus* strains in chickens was considerably low, and that the biochemical characteristics and the susceptibility to N.C.T.C. phages were different between the enterotoxigenic and nonenterotoxigenic strains.