



## Application of Single-Radial Immuno-diffusion test for evaluation of uropathogenic *Escherichia coli* sonicated immunogen in chick embryos

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### Abstract

**This study intended** to evaluate the effect of whole cell sonicated uropathogenic *Escherichia coli* antigen (WSC.

Ag) against the challenged of the infectious dose 50 (ID50) in chicken embryos. Twenty chicken embryos / one day age were divided into 2 equal groups. The first group was inoculated with 0.1 ml of WSC, Ag, the second group (control) was injected with 0.1 ml phosphate buffer saline (PBS). Blood samples were collected at 2 and 4 weeks after inoculations. Single Radial Immuno-Diffusion assay (SRID) was used to test the significance of the effects of treatments. Fifty groups of eggs (10 eggs per group) were used to determine the infectious dose 50 (ID50). All chicken embryos of the treated and control groups were challenged with 3ID50 ( $2 \times 10^6$ ) of virulent uropathogenic *Escherichia coli*. The SRIT showed significant increase in antibody titers in the experimental group compared with the control group. The post challenge with ID50 of *E. coli* revealed that all chicken embryos in control group suffered from severe clinical signs of colibacillosis. In conclusion, this study indicated the ability of WSC. Ag to protect chick embryo against the challenged of the infectious dose 50 (ID50).

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