

**ATTENUATION OF *Eimeria tenella* WITH IMMERSION VARIOUS
CONCENTRATION OF FORMALDEHYDE IN INDUCING
PROTECTIVE IMMUNITY AFTER CHALLENGE TEST BY
FEATURING MACROSCOPIC AND MICROSCOPIC CAECUM**

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ABSTRACT

The purpose of this study was to determine whether the attenuation of the pathogenicity *Eimeria tenella* (*E. tenella*) with immersion various concentrations of formaldehyde can induce protective immunity and to determine the concentration of formaldehyde that is most effective in inducing protective immunity for attenuation of *E. tenella* in featuring cecal macroscopic and microscopic (lesion score). Twenty-five chickens at three weeks old were divided randomly into five groups. Challenge test did after the first infection. The first infection was inoculated *Eimeria tenella* by divided the first group (P0) is chicken group was inoculated with 0% formaldehyde soaked *E. tenella* at 1×10^4 doses as control, the 2nd, 3rd and 4th groups (P1; P2, P3 and P4) were inoculated 0.15%, 0.3%, 0.6% and 1.2% of formaldehyde soaked *E. tenella* at the same doses, respectively. On challenge test performed two weeks after the first infection by inoculated 15×10^3 infective oocysts of *E. tenella*. The results showed that the attenuation of *E. tenella* with immersion various concentrations of formaldehyde can induce protective immunity by featuring cecal macroscopic and microscopic (lesion score). The most effective concentration of formaldehyde in inducing protective immunity of the attenuation pathogenicity *E. tenella* was 1.2%.

Keywords : attenuation, *E. tenella*, formaldehyde, protective immunity