Real Time PCR Quantification and Differentiation of both Challenge and Vaccinal Mycoplasma gallisepticums trains Used in Vaccine Quality Control.

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ABSTRACT
Mycoplasma gallisepticum is an economically important pathogen of poultry worldwide, causing chronic respiratory disease in chickens and turkeys. Vaccination of poultry with Mycoplasma gallisepticum live vaccines is an approach to reduce susceptibility to infection and to prevent economic losses. The goal of this study was to develop an alternative method for evaluation of live and killed vaccine using quantitative differential real time PCR (rt-PCR) assay. Real time PCR assay was implemented for titration and identification of three types of Mycoplasma gallisepticum (F, ts-11 and field strain). Three groups of chicks were vaccinated by using F- strain, ts-11 and killed vaccine and the forth group was considered control. Challenge test was applied by using Mycoplasma gallisepticum field strain (10^8 CFU) at three weeks post vaccination. Antibody ELISA titers against Mycoplasma gallisepticum were 319, 259 and 1009 for F, t-11 and killed vaccine respectively at 3 weeks post vaccination. The protection rates were 81.5%, 74%, and 66.6% for F- strain, ts-11 and killed vaccine respectively that was determined by air sac lesion scour. Using quantitative differential rt-PCR for necropsied birds at 5 days post challenge 7 days post challenge and 14 days post challenge demonstrated that the F-strain vaccine had ability to prevent shedding of field strain at 14 days post challenge mean while the ts-11 and killed vaccine decreased shedding of field strain from 10^8.1 and 10^8.6 to 10^5.1 and 10^5.8 CFU respectively at 14 days post challenge. In this study, rt-PCR had ability to identify and quantify of two types of vaccines (F and ts-11) and field strain.

**Keywords:** Mycoplasma, rt-PCR, Vaccine, Poultry
have a stronger antibacterial effect than tetracycline. So, after the complementary studies, some of the essential oils, had the highest antibacterial properties. The maximum inhibition zone in diameter against inhibitory effect of these essential oils. Also, tetracycline was used as a control group. Among Habibi H, Ghahtan N and Morammazi S. plants against Carum copticum Escherichia coli potential harmful threat to human health has led to a need to find safe alternatives for the control of these bacteria. To this end, the use of herbal remedies in poultry has been suggested.

In this study, we have investigated the effect of essential oils extracted from five different herbal [Full text]

Cold stress

ABSTRACT

Effect of Cold Stress and Various Suitable Remedies on Performance of Broiler Chicken. Performance, Vitamin E to 78 birds. These early cold conditioned birds were kept separate until distributed into birds reared under cold stress (T3) showed significant (p< 0.05) reduction in ascites related mortality (10.25%). Cold conditioning (20°C to 80°C) at third and fourth day of age for 3-4 hours was provided temperature conditions (T1 and T5). Highest ascites related mortality (23.07%) was observed in treatment group T5 (early cold conditioning group reared under normal temperature conditions). T1 (control group reared under normal conditions) followed by T1 (control group reared under normal conditions). At the end of the J. World Poult. Res., 8 (3): 59-65. week of their age for all treatment groups except first and fifth treatment groups. The broiler individually weighed, distributed into 7 treatment groups of 3 replicates with 13 chicks in each treatment groups. There was no mortality reported in treatment groups kept under normal period. Highest feed consumption (p< 0.05) was observed in broiler chickens reared under cold [Full text]

Lithium concentration in surface and underground water, in some instances is higher than the standard level in places where lithium-rich brines and minerals occur, and in places where blood samples collected for chemical analyses and the chickens were then euthanized and end, blood samples collected for chemical analyses and the chickens were then euthanized and examined for ascites. The birds were kept in separate cages in an incubator for determination of the most common pathological conditions) followed by T1 (control group reared under normal conditions). At the end of the mortality (10.25%). Cold conditioning (20°C to 80°C) at third and fourth day of age for 3-4 hours was provided temperature conditions (T1 and T5). Highest ascites related mortality (23.07%) was observed in treatment group T5 (early cold conditioning group reared under normal temperature conditions). T1 (control group reared under normal conditions) followed by T1 (control group reared under normal conditions). At the end of the J. World Poult. Res., 8 (3): 59-65. week of their age for all treatment groups except first and fifth treatment groups. The broiler individually weighed, distributed into 7 treatment groups of 3 replicates with 13 chicks in each treatment groups. There was no mortality reported in treatment groups kept under normal period. Highest feed consumption (p< 0.05) was observed in broiler chickens reared under cold [Full text]

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