



## Molecular diagnosis of *Eimeria* species affecting naturally infected *Gallus gallus*

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**ABSTRACT.** We used PCR to test various protocols and define a technique for DNA extraction directly from chicken-shed stool samples for the identification of *Eimeria* species that parasitize birds. It was possible to extract and amplify DNA of seven *Eimeria* species from field stool samples, using both protocols tested; extractions made with phenol/chloroform protocols gave the best results. The primers were specific and sensitive, allowing amplification of samples containing as few as 20 oocysts, both in individual and in a multiplex PCR. Individualized PCR with the phenol/chloroform DNA extraction protocol detected a larger number of *Eimeria* species. Molecular diagnosis was found to be practical and precise, and can be used for monitoring and epidemiological studies of *Eimeria*.

**Key words:** Eimeriosis; Multiplex PCR; Broilers