

## Comparision of Polymerase Chain Reaction and Agar Gel Immunodiffusion test in Detection of Marek's Disease Virus

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### Abstract

A study was undertaken to identify Marek's disease virus (MDV) antigen by PCR and AGID and to test the significance of PCR and AGID by McNemar's test in detection of MDV antigen in outbreak in layer flocks. A total of twelve different MD outbreak flocks with varying flock size were selected in this study. Feather follicles were collected from 10 apparently healthy birds, 10 clinically affected birds and 10 dead birds separately in each outbreak. All the samples were subjected to PCR and AGID. In PCR, 42 (35.00%), 68 (56.67%) and 106 (88.33%) samples were positive to MDV in apparently healthy birds, clinically affected birds and dead birds respectively and in AGID 28 (23.33%), 56 (46.67%) and 98 (81.67%) samples were positive to MDV in apparently healthy birds, clinically affected birds and dead birds respectively. In testing the significance of PCR and AGID in detecting MDV, significant difference existed between the two tests in feather tips of apparently healthy birds ( $P < 0.05$ ), whereas there was no significant difference between PCR and AGID in detection of MDV in feather tips of clinically affected and dead birds ( $P > 0.05$ ). Hence, PCR can be used to screen MDV in apparently healthy birds and AGID can be used to screen MDV in clinically affected and dead birds keeping feasibility and economic consideration.

**Keywords:** Marek's disease, Herpesvirus of turkey, Polymerase chain reaction, Agar gel immunodiffusion test