ABSTRACT

Dot immunoblot assay (DIA) and reverse transcriptase–polymerase chain reaction (RT-PCR) were performed to detect foot and mouth disease virus (FMDV) in field samples. FMDV is identified by DIA as a dark blue colored dot using a procedure based on the principle of enzyme linked immunosorbent assay and 4-chloro-1-nahphtol as a substrate. All T.E and 5 of nasal swaps tested positive by DIA. RNA extracted from tongue epithelium (T.E) and nasal swap samples were amplified using RT-PCR and two specific primers to 1D gene of FMDV serotype O1. The two primers were designed to amplify DNA fragment about 300 bp in length. All T.E and 6 of nasal swaps demonstrated fragments of about 300 bp in length. The five positive nasal swaps with DIA also tested positive by RT-PCR. DIA and RT-PCR were observed to be rapid, specific, inexpensive and sensitive techniques for detection of FMD virus.

Keywords: FMD virus T.E – Nasal swap - Cattle- Sheep - DIA - RT- PCR.