SUMMARY

Prunus necrotic ringspot virus (PNRSV, Genus Ilarvirus, Family Bromoviridae) was isolated from stone fruit trees showing virus-like symptoms grown in Jordan. Identification of this virus was based on host range, properties in crude sap, transmissibility, and serological tests. PNRSV-J has a limited range of experimental hosts. The dilution end-point of infectivity was 10^{-2}, the thermal inactivation point was 57° C, and purified virus had an in vitro longevity of 16 h at 25° C. PNRSV-J was detected by double antibody sandwich-enzyme linked immunosorbent assay (DAS-ELISA). PNRSV-J was purified from cucumber leaves harvested 6-8 days after inoculation. The modified purification method gave an adequate virus yield for antibody production. Antiserum produced by immunizing a rabbit had a titer of 1024 in direct antigen coating (DAC)-ELISA, with high specificity to PNRSV. An immunocapture-reverse transcription-polymerase chain reaction (IC-RT-PCR) protocol was useful for the detection of PNRSV in herbaceous and woody plant tissues. Nuclectide sequence and phylogenetic analysis of RT-PCR products derived from RNA3 of PNRSV-J confirmed its identity as an isolate of PNRSV and revealed that it is a member of Group I (PV32) isolates.

Key words: ELISA, host range, IC-RT-PCR, PNRSV, purification.