

Rapid, sensitive and cost effective method for isolation of viral DNA from faecal samples of dogs

Savi., Minakshi* and Prasad, G.

Department of Animal Biotechnology,
College of Veterinary Sciences, CCS Haryana Agricultural University, Hisar 125004
* Corresponding author email: minakshi.abt@gmail.com

Abstract

A simple method for viral DNA extraction using chelex resin was developed. The method used was eco-friendly and cost effective compared to other methods such as phenol chloroform method which use health hazardous organic reagents. Further, a polymerase chain reaction (PCR) based detection of canine parvovirus (CPV) using primers from conserved region of VP2 gene was developed. To increase the sensitivity and specificity of reaction, nested PCR was designed. PCR reaction was optimized to amplify 747bp product of VP2 gene. The assay can be completed in few hours and doesn't need hazardous chemicals. Thus, the sample preparation using chelating resin along with nested PCR seems to be a sensitive, specific and practical method for the detection of CPV in diarrhoeal faecal samples.

Keywords: Chelating resin, CPV, Nested PCR, Virus, Sensitivity, Faecal sample.