Aleutian mink disease virus (AMDV) is a severe progressive disease causing multiple different clinical syndromes in mink. In Denmark, the disease is notifiable and under official control. The control programme, based on serological screening, has confined successfully AMDV to the northern part of Denmark. However, re-infections and new introductions of virus into farms require a confirmatory virological test to verify the positive test results of single animals and ultimately to investigate disease transmission. A one step PCR amplifying a 374-base fragment of the NS1 gene of AMDV was compared to the counter-current immune electrophoresis (CIE) routinely used in the serological screening programme. Mink organs (n = 299) obtained from 55 recently infected farms and 8 non-infected farms from 2008 to 2010 were tested by PCR, and the results were found to have a high correlation with the serological status of the mink. The relative diagnostic sensitivity of the PCR was 94.7%, and the relative diagnostic specificity was 97.9% when read in parallel with the CIE. PCR positive samples were sequenced and phylogenetic analysis revealed high similarity within the analysed AMDV strains and to AMDV strains described previously.