

Speciation of *Cryptosporidium* oocysts isolated from goats by Polymerase Chain Reaction (PCR)

Cryptosporidium parvum is an enteric protozoan parasite responsible for diarrhoea in children, neonates of animals and immunodeficient hosts. In Sri Lanka, *Cryptosporidium* oocysts have been demonstrated in the faeces of diarrhoeic children. Recently, we reported the presence of *Cryptosporidium* oocysts in the faeces of goats from the dry, intermediate and wet zones. In the present study these oocysts have been speciated using Polymerase Chain Reaction (PCR).

A total of thirty *Cryptosporidium* positive faecal sample from the three zones (10 from each zone) were used in this study. Smears stained with modified Ziehl Neelsen were subjected to micrometry where the size of 10 oocysts in each slide was ascertained. The average size of the oocysts was 5.0 x 4.5 μ m.

PCR identified 15 samples (dry zone-8; intermediate zone -7) as *Cryptosporidium parvum*. None of the samples from the wet zone were positive on PCR. A negative result in the wet zone may be due to occurrence of other species of *Cryptosporidium*, which cannot be differentiated by microscopy and micrometry.

The presence of an overwhelming number of isolates (75%; 15/20) of *C.parvum* in the dry and intermediate zones indicates the wide occurrence of the zoonotic species of the organism among goats and that the goat is a potential animal reservoir for human infection. Future investigations are needed to identify the genotype of *C.parvum* in humans as type 1 circulates only in humans whereas type 2 infects both animals and

humans. Such studies will give more information regarding the exact source for the *Cryptosporidium* infection in susceptible humans.