

## **Cryptosporidium species detected in calves and cattle in Dagoretti, Nairobi, Kenya**

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### **Abstract**

A total of 1,734 cattle faecal samples from 296 dairy-keeping households were collected from urban settings in Nairobi, Kenya. Modified Ziehl–Neelsen staining method and an immunofluorescence assay were used to identify those samples with *Cryptosporidium* oocyst infection. Oocysts from positive faecal samples were isolated by Sheather's sucrose flotation method and picked from the concentrate using cover slips. Genomic DNA was extracted from 124 of the faecal samples that were positive for *Cryptosporidium* and was used as template for nested PCR of the 18S rRNA gene. Twentyfive samples (20 %) were PCR-positive for *Cryptosporidium*, and 24 of the PCR products were successfully cloned and sequenced. Sequence and phylogenetic analysis identified 17 samples (68 %) as *Cryptosporidium* parvum-like, four samples (16 %) as *Cryptosporidium* ryanae, three samples (12 %) as *Cryptosporidium* andersoni and one sample (4 %) as *Cryptosporidium* hominis. To the best of our knowledge, this is the first genotyping study to report *C. parvum*-like, *C. andersoni* and *Cryptosporidium* infections in calves and cattle may be potential zoonotic reservoirs of the parasite that infects humans. and *C. hominis* in cattle from Kenya. The results of this study show *Cryptosporidium* infections in calves and cattle may be potential zoonotic reservoirs of the parasite that infects humans.