Molecular Identification of *Cryptosporidium* sp. in Water Monitor Lizards (*Varanus salvator*) Collected in Surabaya

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ABSTRACT

Cryptosporidium sp. is the causing agent of cryptosporidiosis, which affects the gastrointestinal tract of reptiles such as the water monitor lizard (*Varanus salvator*) and is zoonotic. This research aims to discover and identify *Cryptosporidium* sp. in water monitors collected from around Surabaya. The method of this research is done by collection of faecal sample from monitor lizards that exhibits clinical signs of cryptosporidiosis. Tests that were undertaken include microscopic examination with Ziehl-Nielsen staining and molecular examination with the Polymerase Chain Reaction (PCR) method which is then further analysed by comparing the genetics of *Cryptosporidium* sp. found with the sequence in the NCBI database. The results of microscopic examination with Ziehl-Nielsen staining yields *Cryptosporidium* sp. oocysts which have and average diameter of 7,54 µm and circumference of 27,04 µm, while the molecular examination with PCR yields a positive confirmed result and a sequence result on 18S rRNA pCR product of *Cryptosporidium* sp. possesses an amplicon length of 144 bp. Identification of results based on NCBI-BLAST database shows sequences identical to uncultured eukaryotes partial 18S rRNA gene, uncultured eukaryotes clone EC12 small subunit ribosomal RNA gene and *Cryptosporidium* sp. NEV10 small subunit ribosomal RNA gene.

Keywords: *Cryptosporidium* sp., Polymerase Chain Reaction, *Varanus salvator*, Ziehl-Nielsen Staining