

Cryptosporidium parvum (*C. parvum*) are waterborne pathogens, which are released into the environment through infected human or animal feces. Their ability to survive outside their host organisms in harsh environmental conditions presents one of the most challenging tasks in research for understanding their fate and transport in natural environments. Our objectives were to evaluate the changes in pH on stability during sorption of *C. parvum* by nanoparticles. In this study, we measure sorption of *C. parvum* oocysts by Copper (II) Oxide (CuO) nanoparticles and the zeta potential of oocysts and CuO nanoparticles in water. Our results indicate that within the pH range of 6 to 11, oocysts have negatively charged surfaces. The point of zero charge of CuO nanoparticles used in this study was achieved near pH of 8.2. The findings suggest that oocysts will attach to CuO in water over the range of pH values measured for batch experiments. X-ray diffraction shows the CuO samples as pure tenorite (CuO) and elemental Copper in the Cu⁰ sample with small amounts of Zn⁰.