# DIFFERENCES IN THE DETECTION OF *Cryptosporidium* AND *Cystoisospora* OOCYSTS BY DIFFERENT LABORATORY METHODS

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Despite the availability of many parasitological methods for detection of *Cryptosporidium* and *Isospora* (*Cystoisospora*) *belli* in fecal samples, there are uncertainties about the accuracy of these techniques in laboratory practice. In this study, 27 formalin-fixed positive stool samples for *Cryptosporidium* and 15 for *I. belli* were analyzed by two concentration methods, sedimentation by centrifugation (SC) and formalin-ethyl acetate (FE), and by three tintorial techniques, modified Ziehl-Neelsen (ZN), Safranin (SF) and Auramine (AR). No significant differences were observed on *Cryptosporidium* identification between concentration methods, while a significantly higher number of *I. belli* oocysts ($p<0.0001$) was detected in fecal smears concentrated by the SC than by FE method. Fecal samples processed by FE produced a median oocyst loss to the fatty ring of 34.8% for *Cryptosporidium* and 45.4% for *I. belli*. However, FE concentration provided 63% of *Cryptosporidium* and 100% of *I. belli* slides classified as superior for microscopic examination. Regarding the efficiency of staining methods, a more significant detection of *Cryptosporidium* oocysts was observed in fecal smears stained by ZN ($p<0.01$) or AR ($p<0.05$) than with SF method. Regular to high quality slides for microscopic examination were mostly observed in fecal smears stained with AR or ZN for *Cryptosporidium* and with SF or ZN for *I. belli*. This study suggests a great variability in oocyst power detection by routine parasitological methods and that the most frequent intestinal coccidians in humans have specific requirements for concentration and staining.

Key-words: *Cryptosporidium*; *Isospora*; oocysts identification; laboratory methods.

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