

108. DETECTION OF *CRYPTOSPORIDIUM SP.* IN STOOL, FAECES AND DRINKING WATER SAMPLES IN AUSTRIA

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Objectives: As several cases of cryptosporidiosis have appeared in AIDS patients but none in immunocompetent persons, and *Cryptosporidium parvum* has been detected in drinking water samples and in faeces of exotic pet animals during the last years in Austria, the spreading of Cryptosporidia and the main infection routes in Central Europe are still under discussion. This study was designed to prove the need of a development of reliable and efficient techniques for the detection of Cryptosporidia in different kinds of samples and for the differentiation of *Cryptosporidium* species.

Methods: *Cryptosporidium* sp., other water-borne organisms, and potentially pathogenic fungi were searched for in experimentally contaminated water samples (n=40), drinking water samples (n=130), faeces of reptiles (n=400) and stool samples (n=6) by modified Ziehl-Neelsen staining, immunofluorescence technique, and two types of PCR before and after separation by immunomagnetobeads.

Results: Testing native samples does not lead to reliable results due to the inability to distinguish between algae (*Oocystis* sp.), some fungi, and Cryptosporidia in conventional staining techniques and to the appearance of false positive results even in gene amplification reactions. Applying separation and concentration techniques, however, results in a more specific outcome with a loss of sensitivity with regard to the detection of different *Cryptosporidium* species.

Conclusions: Standard detection methods for Cryptosporidia are mostly unsuitable in epidemiological studies. The results of this study impel the development of improved and selective DNA isolation techniques and simple species recognizing gene amplification techniques.