Extraction of Myxospores from Sediment Utilizing a Soil Texture Centrifuge Technique and Sodium Hexmtaphosphate

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Myxobolus cerebralis (causative agent of whirling disease) is the most intensively studied member of the phylum Myxozoa. Although there is much information about the

development of myxosporean spores, little is known about the movement of spores in water and their interactions with sediment. Varying quantities of sediment and stained myxospores were combined with aqueous sodium hexametaphosphate ([NaPO3]6). We were able to extract technique myxospores from all the sediment and myxospore samples using a toil texture centrifuge technique to separate all of the particles by density. The mean percent myxospore recovery declined as the quantity of sediment added to each sample increased. These results support previous research indicating that even small quantities of sediment in a sample can negatively affect myxospore extraction. The soil texture centrifuge technique used with aqueous [NaPO3] effectively isolated M. cerebralis myxospores from water samples with no sediment. This technique could be used to assess whirling disease infection levels in water samples without sediment.