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FECAL SEDIMENT SPREADING, ADHESION AND AURAMINE STAINING OF *Schistosoma mansoni* EGGS ON MICROSCOPE SLIDES PRODUCED BY HELMINTEX METHOD

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It is crucial to develop more sensitive methods for the detection of *Schistosoma mansoni* eggs in feces, considering the global impact of schistosomiasis. Thus, the elimination of this disease as a public health problem depends on advancements in diagnosis. In Helmintex, a highly sensitive diagnostic method for schistosomiasis, three different methodologies were implemented for improvement, aiming to evaluate the impact of sample distribution on glass slides (1), the persistence of egg adhesion and Auramine(Au-O) staining over sample aging (2), and to characterize fecal sediments through granulometry (3). In methodology (1), slides prepared with 30 µL of feces, 90 µL of 0.9% saline solution, and 90 µL of 5% Tween 20 were categorized as "good" or "poor" spreading based on the level of particle aggregation on the slide. Methodology (2), using the same solutions with the addition of eggs, had its material analyzed under light and fluorescence microscopy at different time intervals. Methodology (3) involved slides with 30 µL of feces, 90 µL of 0.9% saline solution, and 70 µL of 5% Tween 20, which were subsequently analyzed using ImageJ and categorized by the quantity and size of granules. It was concluded that slides with good spreading exhibited larger areas, indicating a more effective sample distribution, while poor spreading showed smaller areas, reflecting greater sediment aggregation, emphasizing the importance of homogeneous distribution for better visualization. Additionally, it was observed that approximately 68.7% of eggs remained in their positions after storage, with stable fluorescent staining for up to 90 days. Finally, a higher quantity of granules was found in smaller size categories, with significant differences between the mean values of the categories, indicating variation in the distribution of particles retained by sieves. The sum of these efforts ensures better microscopic visualization of the eggs, consequently aiding in a faster and safer diagnosis.

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