SANITARY QUALITY OF FRESH FRUITS: STANDARDIZATION OF A METHOD FOR THE MONITORING AND DETECTION OF HELMINTH EGGS IN ORGANIC STRAWBERRIES

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Parasitic diseases acquired by the ingestion of fresh fruits are frequently neglected. Strawberry is the most consumed berry in Brazil, and it is often consumed raw or with inadequate sanitation methods that may fail to remove parasites. The main goal of the present study was to develop a methodology for the detection of helminth eggs in strawberries, for further evaluation of this fruit sold in open markets in Curitiba, PR. For this, artificial contamination assays were performed with two known doses of *Toxocara canis* eggs (33 and 103) and *Ascaris suum* eggs (71 and 139). To estimate the sensitivity recovery rate, 6 protocols per model / dose were analyzed in triplicate, with 72 experiments in total. The contaminated strawberries were subjected to two washing procedures (manual agitation and brushing), and different variables were analyzed: dissociation solution (Glycine 1M, Alconox® 0.1%, or Tween® 20 0.1%) and solution temperature (room temperature or heated at 37 °C). All protocols included a common step of sedimentation of the liquid from the two washing procedures separately, followed by centrifugation and microscopic examination of the entire pellets obtained. After standardization, a total of 70 units (± 940 g) of organic strawberries were obtained and divided into 16 pools for analysis. The results showed that regardless of the solution, the best recovery rates was attained when heated solutions were used. The Protocol 3 (heated Alconox® solution) yielded the best recovery rates for both types of eggs, being elected to search for helminths contamination at commercialization stage, where 6,25% of pool harbored *Ascaris* sp., eggs. This standardization may contribute to the sanitary surveillance sector, since there is no ISO for the detection of helminth eggs in berries. The assessment of contamination at the marketing stage further strengthens the standardized method highlighting the potential risk of acquiring parasites through the ingestion of this fruit.

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