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EFFICACY OF AN AEROSOL-RESISTANT PEPSIN POWDER IN LABORATORIES TESTING FOR THE PRESENCE OF TRICHINELLA LARVAE IN MEAT

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Introduction: Trichinellosis is an important worldwide foodborne zoonosis. The gold standard Trichinella test for meat intended for human consumption is the artificial digestion method. Handling and dispensing of conventional pepsin powder present significant safety risks for analysts. The use of pepsin powder that is resistant to aerosolization should alleviate these safety concerns.

Methods: The aim of this study was to evaluate the efficacy of an aerosol-resistant pepsin powder in the artificial digestion method according to EU directive 1735/2015 and ISO/IEC 17043:2010. Proficiency samples of pork diaphragm containing low numbers of viable Trichinella spiralis larvae were tested independently in two laboratories.

Results: The results revealed that aerosol-resistant pepsin was simple and convenient to use, and showed good solubility and high larval recovery that exceeded the requirements of the EU Directive.

Conclusions: The efficacy of the aerosol-resistant pepsin was very good; it is safe for analysts, and could be of use with confidence in laboratories performing official Trichinella control testing.

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