

TITLE: OCCURRENCE OF *SALMONELLA* SPP. AND *LISTERIA MONOCYTOGENES* ON THE SURFACE OF MANGOES, VARIETY TOMMY ATKINS

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ABSTRACT:

Foodborne diseases outbreak related to fruits have been reported worldwide, especially those related to *Salmonella* spp. and *Listeria monocytogenes*. Cross-contamination of fruit surfaces may result in increased risks to consumers. This study investigated the occurrence of *Salmonella* spp. and *Listeria monocytogenes* on the surface of mangoes, variety Tommy Atkins. Mangos obtained from a different supermarkets in São Paulo city, Brazil (n = 180) were evaluated using the surface swab technique. Moist sterile swabs were applied vigorously throughout the mango surface, transferred to tubes containing 0.1% peptone water and vortexed for one minute. Aliquots were transferred to tubes containing primary enrichment broths [BPW for *Salmonella* spp. (37 ° C / 18h) and Half Fraser Broth for *Listeria monocytogenes* (30 ° C / 24h)]. For the detection of *Salmonella* spp., aliquots of the pre-enriched samples were transferred to tubes containing selective enrichment broths (RVS Broth - RVS (41.5 ° C / 24h) and MKTTn (37 ° C / 24h) and spread on surface of XLD Agar (37 ° C / 24h) and Hektoen Agar HE (37 ° C / 24h). Typical and atypical colonies were submitted to biochemical confirmation tests (TSI test, LIA test, Serum-agglutination test, API 20E identification kit). Two mango samples (1.1%) presented positive results for *Salmonella* spp., which were confirmed by PCR. For the detection of *Listeria monocytogenes*, aliquots of the pre-enriched samples were transferred to tubes containing Fraser broth (37 ° C / 48h). The HF and Fraser broths were spread on the surface of ALOA Agar (37 ° C / 48h) and Oxford agar (37 ° C / 48h). Typical and atypical colonies were selected and spread on TSA-YE Agar (37 ° C / 18-24h). The plates were observed under transmitted oblique illumination (Henry's technique), and the colonies that presented typical bluish aspect were subjected to biochemical confirmation tests (catalase production, Gram stain, motility, β-hemolysis check and sugar fermentation). Three samples presented presumptive results for *Listeria* spp., but *L. monocytogenes* was not detected. These results reinforce the importance of good hygiene practices when handling fruits to avoid foodborne diseases.

Keywords: *Salmonella* spp., *Listeria monocytogenes*, mangoes, salmonellosis, listeriosis

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