Environmental monitoring of a meat products manufacturing facility to detection of harborage sites for *Listeria monocytogenes*

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Contamination with *Listeria monocytogenes* is particulary problematic in foods ready to eat such as dry fermented meats due to this pathogen can grow under refrigeration temperatures and under high salt concentrations. When *Listeria monocytogenes* is introduced in the facilities can persist in harborage points that, usually, are not adequately addressed during the cleaning and sanitation process, leading to cross-contamination of final products. In this sense, this study aimed to evaluate the level of contamination of different clean surfaces present in two areas of a dry-cured meat processing facility by means of the counts of mesophilic bacteria and the presence of *Listeria* spp. and *Listeria monocytogenes*. The purpose was to verify the effectiveness of cleaning and desinfecting process, identify hotspots of contamination and the risk of cross-contamination between zones and areas. The two areas sampled were: an area in which raw materials are handled (sausage production room) and an area where final meat products are handled (slicing and packaging room). In each area was selected 14 different points which included four zones: Zone 1, in direct contact with food; Zone 2, not in direct contact with food but close to food; Zone 3, remote to food or food contact surfaces inside food processing area; and Zone 4, not in direct contact with food, outside food processing area. All surfaces were evaluated through implementing an sensor-based sampling system. Sensors were collected from the surfaces once a week along one month up to a total of 112 samples (56 samples per area). The results indicated that counts of mesophilic bacteria varied according to the zone. The samples evaluated in the zones 3 and 4 had higher mean counts than those counts found in the zones 1 and 2 in both areas as it was expected. Regarding *Listeria* spp. and *Listeria monocytogenes*, the result obtained in the 80% of samples analized was "not detected" and in around of 18% of samples the result was detected but non culturable. Also, data indicated that *Listeria* spp. and *Listeria monocytogenes* both remained at some sites in both areas even after cleaning which could imply risk of cross-contamination.