

4th International Conference and Exhibition on

Food Processing & Technology

August 10-12, 2015 London, UK

Incidence of *Listeria spp.* and *Listeria monocytogenes* in broilers at abattoir in Algeria

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Prevalence of *Listeria* contamination in three industrial poultry abattoir was investigated by sampling carcasses at the end of processing after packaging and chilling for 24 hours. A total of 212 carcasses were collected: 52 from the abattoir A and 80 from both abattoir B and C. 46.7% of samples presented *Listeria*: *Listeria monocytogenes* (8.9%), *Listeria innocua* (32.5%), *Listeria grayi* (4.7%) and *Listeria welshimeri* (0.5%). *Listeria innocua* was the most common identified species: 8.8% in abattoir A, 33.7% in both abattoirs B and C. *Listeria monocytogenes* was isolated from 11.5%, 5% and 11.2% of samples from respectively abattoir A, B and C. 1.9%, 8.75% and 2.5% were the prevalence of *Listeria grayi* in abattoir A, B and C. *Listeria welshimeri* was isolated only in abattoir C from 1.2% of samples. *Listeria monocytogenes* sero groups were II a ((1/2a or 3a), II b (1/2b, 3b or 3c) and VI b (4b, 4d or 4e), IIa was common to all abattoirs, II b and VI b were reported only in abattoir C. The serotypes (1/2a, 1/2b and 4b) cause the vast majority of clinical cases. Serotype 1/2a is the most frequently isolated from food, serotype 4b causes the majority of human epidemics. The study demonstrated the high prevalence of *Listeria spp.* and specifically *Listeria monocytogenes* in raw broiler, this high incidence is a problem that should be considered due to the risk of cross-contamination to other foodstuffs in the consumer's kitchen and the possibility of the microorganism surviving in undercooked product.

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Flow behavior evaluation and mechanical spectrum of mayonnaise with oregano essential oil

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Mayonnaise is a food product vulnerable to lipid oxidation requiring the addition of antioxidant in its formulation. Synthetic antioxidants are used such as Butyl-hydroxy-toluene (BHT). Nowadays, there is a tendency for preferential use of natural antioxidants such as oregano essential oil (OEO). The objectives of this work were to evaluate the flow behavior and the mechanical spectrum of a commercial product and three mayonnaise formulations prepared at a laboratory level: No antioxidant added (MB), BHT (MBHT) and OEO (MOEO) added in order to compare the rheology due to the replacement of BHT by OEO in the formulation. They were formulated and kept under refrigeration (4° C) until analysis. A Rotational Rheometer (AP/MCR-302) was used for the tests at a stationary condition. Flow behavior curves for all samples were observed at oscillatory condition, were evaluated parameters such as storage modulus (G') and loss modulus (G''). Preliminary results showed Bingham behavior as expected with τ_0 value varying between 140 to 170 Pa. The beginning values for apparent viscosity of MB, MBHT and MOEO samples were 170; 160 and 140 Pa.s and the final values 2, 0; 0, 5 and 0, 4 Pa.s respectively. The mechanical spectra showed for the three mayonnaise formulations G' always higher than G'' until 10% strain. It could be observed for commercial and MB samples a crossover around 20 and 15 Hz respectively. It was observed that the addition of BHT and OEO similarly modified the rheological behavior of the MB sample when used the same concentrations of the two antioxidants.

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