



# 9<sup>e</sup> Symposium du CRIPA

25-26 mai 2016

Communication orale

## Association between bacterial foodborne pathogens and risk assessment model outputs for food establishments in Quebec, Canada

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A cross sectional study was conducted to estimate the association between presence of foodborne and load of indicator microorganisms with the overall score and scores of selected control points from the MAPAQ inspection model. A convenient sample of 26 ready to eat (RTE) food establishments were selected in Quebec. Sponge swabs of 3 food contact and 2 non-food contact 900 cm<sup>2</sup> surfaces were sampled per establishment. RTi PCR detected 1 *Salmonella* (0.76%) and 23 *L. monocytogenes* (17.7 %). Mean Log 10 of *E. coli* and TAC were 1.16 and 5.30 in meat RTE and 0.95 and 5.30 non-meat RTE establishments, respectively. Scores of ambient temperature and hand washing facility showed relationship with the presence of *L. monocytogenes* ( $P= 0.03$ ), *E. coli* ( $P=0.02$ ) and TAC ( $P= 0.01$ ), respectively, but only in meat RTE establishments. The overall score wasn't significantly associated with microbial results. For sound decision making, inspection model output should incorporate microbial analysis.