

S1 Table. Sampling of four slaughterhouses in Quebec, Canada, for the isolation of *Listeria monocytogenes*.

Operation areas and specific sites, machines and materials	Number of samples per visit, per slaughterhouse^a	In regular contact with animal carcasses and meat	Category^b	Subjected to in-site cleaning and sanitation (with QAC)
Lairage				
Concrete slab of the Main entrance to the slaughterhouse (5 surfaces X 1 m ² each, with the same lab wipe)	1	No	Environment	NA
Pen for sick animals (1 pen; 5 samples; 1 m ² each)	5	No	Environment	NA
Pens for normal animals (9 pens; 5 samples per pen; 1 m ² each)	45	No	Environment	NA
Hallway floor (5 surfaces X 1 m ² each, with the same lab wipe)	1	No	Environment	NA
Hallway wall (5 surfaces X 1 m ² each, with the same lab wipe)	1	No	Environment	NA
Slaughtering and bleeding and dehairing				
Floor (1 m ²)	6	No	Environment	NA
Wall (3 surfaces X 1 m ² each, with the same lab wipe)	2	No	Environment	NA
Ceiling (3 surfaces X 1 m ² each, with the same lab wipe)	1	No	Environment	NA
Bleeding equipment (knife and sharpener)	1	Yes	Material	NA
Tables (3 tables X 1 m ² each with the same lab wipe)	3	Yes	Material	NA
Scalding tank (5 surfaces X 1 m ² each with the same lab wipe)	1	Yes	Machine	NA

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Dehairing machine (5 surfaces X 1 m ² each with the same lab wipe)	2	Yes	Machine	NA
Brushing machine (5 surfaces X 1 m ² each with the same lab wipe)	2	Yes	Machine	NA
Evisceration				
Floor (1 m ²)	6	No	Environment	High
Wall (3 surfaces 1 m ² each, with the same lab wipe)	2	No	Environment	High
Ceiling (3 surfaces, 1 m ² each, with the same lab wipe)	1	No	Environment	Low
Clipping machine	1	SC	Machine	Low
Sternal splitter	1	SC	Machine	Low
Visceral container	3	SC	Material	Low
Back splitter	1	SC	Machine	Low
Degreasing knife	1	SC	Machine	Low
Knives	1	SC	Material	Low
Gloves	1	SC	Material	Low
Sharpener	1	SC	Material	Low
Apron	1	SC	Material	Low
Hooks (10 hooks with the same lab wipe)	3	SC	Material	Low
Chilling and hanging				
Door (1 m ²)	2	No	Environment	High
Floor (1 m ²)	3	No	Environment	High
Wall (1 m ²)	3	No	Environment	High
Cutting and deboning				
Floor (1 m ²)	5	No	Environment	High

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Wall (3 surfaces X 1 m ² each, with the same lab wipe)	2	No	Environment	High
Ceiling (3 surfaces X 1m ² each, with the same lab wipe)	1	No	Environment	Low
Post	2	No	Environment	High
Fan	2	No	Environment	Low
Door (1 m ²)	2	No	Environment	High
Conveyor belt 1 (top and bottom sides)	6	SC	Environment	High
Conveyor belt 2 (top and bottom sides)	6	SC	Environment	High
Conveyor belt 3 (top and bottom sides)	6	SC	Environment	High
Conveyor belt 4 (top and bottom sides)	6	SC	Environment	High
Conveyor belt 5 (top and bottom sides)	6	SC	Environment	High
Saws	1	SC	Machine	Low
Knives (3 knives per sample; total 9 knives: 3 samples)	3	SC	Material	Low
Sharpeners (3 sharpeners per sample; total 9 sharpeners: 3 samples)	3	SC	Material	Low
Shelves (3 surfaces X 1m ² each, with the same lab wipe)	3	SC	Material	Low

QAC: Quaternary ammonium compounds

NA: Not applicable: QAC were not used in these operation areas

High: surfaces which are more exposed to QAC

Low: surfaces which are weakly exposed to QAC

^a Number of samples collected during one visit, per slaughterhouse. Each slaughterhouse was visited four times.

^b Specific sampled sites, machines and materials were grouped into three categories (environment, material or machine) for statistical analyses.