NEW MULTIPLEX PCR FOR DETECTION OF *Salmonella* spp. AND DIFFERENTIATION OF SEROVARs *Typhimurium* AND *Enteritidis* IN CHICKEN MEAT

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*Salmonella enterica* subspecies *enterica* serovar Enteritidis and Typhimurium are important causes of foodborne illness. Several polymerase chain reaction (PCR) assays to detect individually or simultaneously the serovars Enteritidis and Typhimurium in foods have been already developed, however, the majority of assays employs the *fliC* gene as a target for detection of serovar Typhimurium. The specificity of that gene is questionable, as it has also been described for *S. Kentucky*. The aim of this study was to develop a new multiplex PCR assay (mPCR) for the simultaneous detection and differentiation of *Salmonella* spp., *S. Enteritidis* and *S. Typhimurium* in chicken meat. The gene STM4492, that was used to differentiate *S. Typhimurium*, has never been used in multiplex assay for differentiation of those serovars. The mPCR assays showed high specificity and differentiated *S. Typhimurium* from 22 *Salmonella* serovars tested, including *S. Kentucky*. The pairs of oligonucleotides Styinva-JHO-2 (*gene InvA*) and ENT (*sdf* gene) used in the assay, respectively, for detection of *Salmonella* spp. and *S. Enteritidis* were also specific. The assay sensitivity was 100% and specificity 94.8%. The mPCR detected 1 to 10 CFU / mL of *S. Enteritidis* and *S. Typhimurium* after 24 hours of non-selective enrichment and DNA extraction with TZ lysis solution and boiling, without purification. The developed mPCR assay was adequate and showed satisfactory sensitivity for detection of *Salmonella* spp. and differentiation of serovars Typhimurium and Enteritidis in chicken meat and it could be used as a screening tool for a rapid laboratory analysis.