

**PLASMID CONTENT OF *E. COLI* AND *SALMONELLA*
ISOLATED FROM FOODS IN KIRSEHIR**

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Plasmids are extrachromosomal DNA molecules that have bacteria gain different phenotypic characteristics such as virulence properties and antimicrobial resistance. Plasmid content is also very important, since plasmids play a role in horizontal gene transfer and spreading antimicrobial resistance. On the other hand, plasmid profiling is used for strain discrimination of bacteria. The objective of this study was to investigate the plasmid profiles of *E. coli* and *Salmonella* strains previously isolated from foods in Kirsehir province of Turkey. Plasmid isolation was performed according to Kado & Liu (1981), using 3 ml of an overnight culture incubated at 37°C in Nutrient broth. The isolated plasmids were separated using 0.8% agarose gels in Tris-borate-EDTA buffer. Gels were imaged under UV light by ethidium bromide staining and molecular weights of plasmids were calculated. Out of 52 *E. coli* isolates, 41 were found to carry at least one plasmid. The plasmid molecular weights of *E. coli* strains were approximately between 38 kb to 238 kb. Among *E. coli* strains more than 10 different plasmid profiles were found. Out of 16 *Salmonella* isolates, 15 were detected to carry one or two plasmids. The high molecular weight plasmid was approximately 206 kb. In conclusion, almost all *E. coli* and *Salmonella* strains in our culture collection were carrying at least one plasmid. The high molecular weight of these plasmids may be the indicator of having antimicrobial resistance or virulence genes. Thus, the high incidence of plasmid content of these strains was found to be a potential health hazard and need to be further investigated.

Keywords: Plasmid profiling, *Salmonella*, *E. coli*

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