TITLE: CELL PHONES AS A SOURCE OF CONTAMINATION IN THE FOOD PRODUCTION PROCESS

AUTHORS: FERREITA, L. R.; MORESCO, T. R.; GADEA, M. G.; FONTANA, L.B.; AMARAL, J.

INSTITUTION: UNIVERSIDADE FEDERAL DE SANTA MARIA, PALMEIRA DAS MISSÕES, RS (AVENIDA INDEPENDÊNCIA, 3751, CEP 98300-000, PALMEIRA DAS MISSÕES - RS, BRASIL)

ABSTRACT:

The cell phone is in constant contact with people and the environment, however, there is negligence of personal hygiene (in particular, hands) before and after usage of the cell phone, allowing the screen to become a source of contamination filled with pathogens. In this regard, this work will show the quantity of micro-organisms present on the cell phones of students from an agricultural school in the state of Rio Grande do Sul, which is occurs in different sectors. Until now there have been 18 electronic devices provided from the students of cow farming and slaughter. The collections were performed with a steril swab and placed in tubes containing steril peptone water. At the end of the collection, the samples were brought to the microbiology lab of the university, "Universidade Federal de Santa Maria – Palmeira das Missões," and processed for three hours after the initial collection. The study searched for micro-organism indicators of environmental and manipulation contamination, through the counting of mesophills, Gram positive and Gram negative bacteria, performed from the plating of samples in the plate count agar (PCA), blood agar, and agar MacConkey – duplicated. The partial results are shown by the number colony-forming unit per cm² of the cell (CFU/cm² of the area). In the dairy farming sector, the amount of mesophiles varied from 1111,1 to 9,17 CFU/cm², Gram positives varied from 1111,1 to 15,0 CFU/cm², and Gram negatives from 0,0 to 39,44 CFU/cm². Already in the slaughter sector, the amount of mesophiles varied from 0,0 to 366,81 CFU/cm², Gram positive bacteria showed a variation from 237,5 to 4,17 CFU/cm², and the cells not represented considered Gram-negative. The sanity of the workers and the sanitation of the devices should be of number one importance, no matter the location, and therefore will prevent cross-contamination. Lacking the presence of other studies in this area, it was not possible to compare the results gathered. This alone justifies the necessity of studies, principally to locate the origin of contamination, identify the micro-organisms generally found and traced back to our foods or ill animals. However, to minimize the risk of cross-transmission between the installation, cell, and body, it is recommended to always clean your phone and your hands to avoid the chance of contaminants spreading and to ensure an effective biosecurity for whomever will use it.

Keywords: bacteria, cross-transmission, manipulation, mesophiles, pathogens

Development Agency: FIPE – Fundo de Incentivo à Pesquisa