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## The effects of different light sources on the microbial flora of ground beef

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In this study, the effects of illumination of different light sources on the microbiological properties of ground beef were investigated. Ground beef samples were held at a standard distance of 30 cm from different light sources generally used in deli markets, for 4 days at 4°C. Incandescent, metal halide, fluorescent, UV-C and UV-B lamps were used for illumination and one sample was subjected to no light as a control in this research. As its well known, total mesophilic aerobic bacteria and total psychrophile aerobic bacteria counts are frequently used to determine the quality, storage and processing conditions and food safety. Total mesophilic aerobic and total psychrophilic aerobic counts of ground beef exposed to six different light sources were obtained during storage time per day. Reduction in moisture and water activity values were detected throughout storage consistently. While metal halide and incandescent lights increased total mesophilic aerobic count, total psychrophile counts diminished under these light sources. Ultraviolet lamps decreased the total mesophilic and psychrophilic aerobic bacteria counts as expected. It's apparent from this study the effectiveness of varying light sources on some of the microbial properties on ground beef. Hence, further studies are needed to determine the various effects of different illuminating sources on prolonging shelf life and reducing food waste.

### Biography

Hasan Ibrahim Kozan has completed his Master in Meat Science and Technology at the age of 25 years from Selcuk University and started PhD in the same field at Selcuk University. He was the editor of the 3rd Traditional Foods Symposium Book and published 20 papers in various journals. He has been working as Research Assistant at the Selcuk University since 2010. He has been Director of Seljuk Academic Research and Thought Centre since 2012 and Corporate Director of Konya Chamber of Food Engineers for 2 years.

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