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REDUCTION OF CONTAMIANT FUNGI FROM SEMI-PROCESSED READY TO EAT FOODS (RTES)

Pervin Basaran[1], Meral Selcuk[1], Meltem Ozcan[1], Lütfi Öksüz[2]

1 Food Enginering Dept Suleyman Demirel University
[2] Physics Dept Suleyman Demirel University Isparta Turkey

E-mail: pervinbasaran72@hotmail.com

Direct or indirect applications of plasma to bio-materials or plasma bio related applications has gained significant interest recently. Sterilization of medical equipment or environment, decontamination of surfaces, plasma deposition for bio-sensor applications, antibacterial coating or direct skin or cell treatment for beauty or cancer treatment are examples of plasma bio related applications. A low pressure cold plasma system was built for fungal sterilization on cereals and oily seeds surfaces of processed and semi-processed ready to eat foods using the N_2, Air gasses and SF6 gases. Two pathogenic fungi, *Aspergillus* spp. and *Penicillum* spp. were artificially contaminated on food items. The plasma treatment time was varied between 30 sec to 20 minutes. The plasma treatment reduced the fungal attachment to seeds below 1% depending on the initial contamination level, while preserving germination, and organoleptic quality of the food materials. A significant reduction of 4-log for both fungal species was achieved within a 15 min of SF6 plasma treatment.

Key words: Plasma bio related application**,** fungal sterilization, *Aspergillus*, *Penicillum*,