

## Contamination of meat stored in home refrigerators in Qena (Egypt)

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Eighty samples were collected from different parts of home-refrigerators and meat stored herein, in the province of Qena, Egypt. Quantitative and qualitative estimations of moulds were carried out by conventional methods and the identified *Aspergillus* spp. were confirmed by the RAPD-PCR technique in the Institute of Applied Microbiology (IAM), University of Agricultural Sciences, Vienna, Austria. The obtained results revealed that the highest mould count was  $3.9 \times 10^4$  CFU/cm<sup>2</sup> in the chest of the refrigerators, followed by  $3.2 \times 10^4$ ,  $2.6 \times 10^3$  and  $2.5 \times 10^3$  CFU/cm<sup>2</sup> in samples of air and freezer of refrigerators and stored meat, respectively. Eleven mould genera could be identified, the most common of which were *Aspergillus*, *Penicillium* and *Cladosporium*. The counts and relative frequencies for these genera were 31 (25.4 %), 17 (13.9 %) and 16 (13.1 %), respectively. Five *Aspergillus* species were identified; mainly *A. flavus* 13 (42.0 %), *A. niger* 5 (16.1 %) and *A. nidulans* 5 (16.1 %). The isolated *Aspergillus* species were subjected to further identification by random amplified polymorphic DNA (RAPD) by using type strains from IAM. RAPD-analysis indicated that the *Aspergillus* strains isolated during this study were completely identical with the corresponding type strains from IAM. Public health hazard and significance of mould contamination in home-refrigerators, as well as hygienic measures and recommendations are fully discussed to prevent or minimise such contamination.

Key words: microscopic fungi, stored meat, refrigerators, *Aspergillus*, RAPD-PCR.