Evaluating food safety management performance in a food service establishment according a microbiological assessment scheme.

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Abstract

Poor performing food safety management systems (FSMS) and an attendant increase of food safety risks in professional kitchens may impact on a significant number of (sensitive) consumers. Therefore, the microbiological performance of a FSMS in an institutional catering setting (ICS) was measured, using a Microbiological Assessment Scheme (MAS) vertical through the production process from raw materials to final product. MAS supports in deciding on where and how to take a sample, at what frequency, how to conduct microbial analyses, how to interpret results and judge the outcome in perspective of the FSMS. Three different production processes were evaluated: a high risk sandwich (containing raw meat preparation); a medium risk hot meal (starting from undercooked raw materials) and a low risk hot meal (in pack regeneration). Total aerobic count exceeded guidelines on gloves of food handlers and on food contact surfaces. Spoilage indicators, hygiene indicators and relevant pathogens (like \textit{L. monocytogenes}, \textit{Salmonella} spp.), were in accordance with criteria and/ or guidelines. Based on the obtained microbial safety level profiles over the three visits during one year, it can be concluded that the FSMS in the ICS is functioning well. The current FSMS can only be improved on the control activities cleaning and disinfection of food contacts materials and personal hygiene to reduce the contamination of total viable count. The MAS allows to get insight in the microbial contamination and the variability of a production process and is enabling to identify weaker points in a FSMS.