

ANAEROBIC BACTERIA IN VACUUM PACKED MEAT PRODUCTS

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A total of 75 samples of vacuum packed sliced beef, sausage (ready - to - cook) and luncheon (ready - to - eat) meat products were examined for presence of anaerobic bacteria. The mean values of the total anaerobic bacterial counts were 1.8×10^4 , 4.2×10^4 and 2.7×10^3 /gm vacuum packed sliced beef, sausage and luncheon samples, respectively. Lactobacillus, Brochothrix, and Clostridium were the most isolated genera. The isolated Lactobacillus species were Lactobacillus casei, lactobacillus plantarum and lactobacillus brevis. Brochothrix thermosphactum could be isolated. The isolated Clostridium species were Clostridium perfringens, types A, D and A & D, Clostridium butyricum, Clostridium sporogens, Clostridium bifermentans, and Clostridium sordelli. The public health significance and the deleterious spoilage effect of the isolated organisms were discussed.

INTRODUCTION

Vacuum packaging is a process in which, usually, primal cuts of meats are placed in a gas impermeable film of plastic (polythene, nylon / polythene) laminate bags at 0-2°C and a pH 5.5 - 5.8. The air is sucked out and the film is tightly applied to the meat surface (*Gracey, 1986*). Vacuum packaging provides an extension of shelf life and has other commercial advantage, so that the product can be made more attractive and be handled more easily. Vacuum - packed meat products may exposed to contamination through various ways starting from slaughtering of the food animals till processing of meat products and post processing contamination. *Genigeoris (1986)* found that meat products were the predominant cause of *Clostridium perfringens* food poisoning. Inside a vacuum - package, the residual oxygen was consumed sooner or later by bacterial & tissue respiration and was replaced by CO₂ that