DYNAMICS OF *CAMPYLOBACTER JEJUNI* COUNTS IN RAW POULTRY MEET DEPENDING ON PACKAGING ATMOSPHERE.

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INTRODUCTION: *Campylobacter* spp. is the most common food borne enteritis cause in European Union. *Campylobacter* are mainly transmitted to human by consuming raw or undercooked poultry meet. *Campylobacter jejuni* is the main cause of human campylobacteriosis and is often found in raw poultry meat. Previous research shows that different atmospheric conditions contribute to different levels of *Campylobacter jejuni* isolated from raw chicken carcasses.

MATERIALS AND METHODS: Fresh chicken leg samples (n=26) were artificially contaminated with *Campylobacter jejuni* in log 3 level (ml) of physiological saline solution. Two samples were examined with ISO 10272-2: 2006 for initial colony count per gram of product. After artificial contamination chicken meat samples were packed into modified atmosphere (MAP – CO_2 = 43,8%, O_2 = 0,2%, N_2=57%), into vacuum and into air atmosphere separate packages. The number of samples for each different packaging was eight (n=8). All samples were stored in refrigerator temperatures from +2^{o}C till +4^{o}C. For each sample after every 48 hours of storage the *Campylobacter* colony counts were registrated in accordance of ISO 10272-2: 2006 and ISO 10272-1:2006 methods. The duration of storage experiment was 192 hours (eight days).

RESULTS: The data obtained from present research showed that the most rapid decrease in *Campylobacter* counts was during the first 48 hours of storage in air packed samples from initial 23,1*10^4 CFU/g till 2,6*10^4 CFU/g, in vacuum till 9,2*10^4 CFU/g and in MAP till 16,8*10^4 CFU/g. In eighth day *Campylobacter* numbers in air atmosphere decreased till 0,7*10^4 CFU/g in vacuum till 5*10^4 CFU/g, in MAP till 6,5*10^4 CFU/g.

CONCLUSIONS: The best packaging atmosphere for fresh chicken meat is air atmosphere packaging and the most inappropriate is MAP packaging. There is need for additional studies to determine the best atmosphere modifications for reducing *Campylobacter* in raw chicken meat.