THE PREVALENCE OF *SALMONELLA* IN MEATS IN LATVIA IN 2015

SALMONELLA SASTOPAMĪBA GAĻĀ LATVIJĀ 2015. GADĀ

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ANOTĀCIJA. Darba mērķis bija (i) noteikt *Salmonella* sastopamību gaļā un gaļas izstrādājumos Latvijā un (ii) noteikt izolēto *Salmonella* kultūru antimikrobiālo jutību. Kopā 3048 paraugi, ieskaitot svaigas gaļas (n=522), maltās gaļas (n=411), liemeņu paraugus (n=948), kā arī gaļas izstrādājumu paraugu (n=1167) tika noņemti kautuvēs un tirdzniecības vietās 2015. gadā. Paraugu testēšanai tika izmantots ISO 6579:2002 standarts. Antimikrobiālā jutība tika noteikta saskaņā ar EUCAST prasībām. Svaiga gala (1,72%) un liemeņu (0,95%) paraugi tika kontaminēti ar *Salmonella* visbiežāk. Svaiga cūkgaļa (7,14%) bija visvairāk kontaminēta salīdzinājumā ar citiem no tirdzniecības vietām noņemtajiem paraugiem, bet cāļu liemeņi (7.81%) bija visbiežāk kontaminēti no kautuvju paraugiem. Visi gaļas izstrādājumi un gatavi lietošanai produkti bija *Salmonella*-negatīvi. Visbiežāk identificētie serotipi bija *S.* Typhimurium (36%), *S.* Derby (32%) un *S.* Enteritidis (12%). Konstatēti arī citi *Salmonella* serotipi kā *S.* Braederup, *S.* Give, *S.* Stanley, *S.* Wirchow un nespecifisks O:9,12. *S.* Typhimurium uzrādīja rezistenci visbiežāk un tika identificēta rezistence pret ampicilīnu (28%), hloramfenikolu (13%), gentamicīnu (13%), nalidiksīnskābi (63%), ciprofloksacīnu (63%), tetraciklīnu (25%) un sulfametoksazolu (50%). D. Berby uzrādīja antimikrobiālo rezistenci visretāk un rezistence pret tetraciklīnu (25%) un sulfametoksazolu (25%) tika atklāta. Pētījuma rezultāti norāda, ka *Salmonella* izplatība gaļa Latvijā joprojām ir aktuāla problēma.

KEYWORDS: *Salmonella*, pork, poultry, antimicrobial resistance, Latvia

INTRODUCTION. Salmonella is a food-borne pathogen responsible about human salmonellosis cases. Meat and the products thereof were frequently found to be contaminated with *Salmonella* spp. in the previous studies. The aims of the present study was (i) to detect the prevalence of *Salmonella* in meat and products thereof in Latvia and (ii) to detect the antimicrobial resistance of the *Salmonella* isolates.
MATERIALS AND METHODS. Altogether, an amount of 3048 samples, including raw meat (n=522), minced meats (n=411), carcass samples (n=948) and meat preparations (n=1167) were collected from slaughterhouses and retail outlets in 2015. Samples were tested according to ISO 6579:2002. The antimicrobial resistance of *Salmonella* was detected in line with the EUCAST requirements.
RESULTS. A total of 1.72% of raw meat and 0.95% of carcass samples were contaminated with *Salmonella* most frequently. Raw pork (7.14%) was the mostly found to be contaminated among the retail meats while the chicken carcasses (7.81%) were the most frequently contaminated among the slaughterhouse samples. All meat preparations and RTE meat samples were *Salmonella* – negative. The most common serovars were *S.* Typhimurium (36%), *S.* Derby (32%) and *S.* Enteriditis (12%). Other identified serovars included *S.*

Braederup, *S*. Give, *S*. Stanley, *S*. Wirchow and non-specified O:9,12. *S*. Typhimurium exhibited the antimicrobial resistance more frequently with resistance to ampicillin (38%), chloramphenicol (13%), gentamicin (13%), nalidixic acid (63%), ciprofloxacin (63%), tetracycline (25%) and sulfamethoxazole (50%). *S*. Derby showed the resistance less frequently and the resistance to tetracycline (25%) and sulfamethoxazole (25%) was identified.

CONCLUSIONS. The results of the present study showed that the prevalence of *Salmonella* in meats still representing the public health concerns in Latvia.