

Abstract Template

Abstract Title: Justification of the strains choice for the development of a inactivated polyvalent vaccine against chicken salmonellosis

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Abstract

According to the report of the European Food Safety Authority (EFSA) on food toxicoinfection, salmonella and campylobacteriosis are the most common. In Ukraine, salmonella is most often caused by two serovars of salmonella - *S. enteritidis* and *S. typhimurium*, the specific gravity of which is 94.2% to the total amount of isolated salmonella isolates from humans, animals and birds. Relatively often, salmonellosis is caused by *S. gallinarum* and *S. pulorum*.

Therefore, the control of salmonellosis epizootic processes by immunization of breeding flocks of chickens is crucial for prevention of food toxicoinfections of salmonella origin.

To develop the vaccine against chicken salmonellosis, were selected salmonella strains, that often cause food toxicoinfection, which are *S. enteritidis*, and *S. typhimurium*. Also comprehensive studies indicate an increase in the role of *S. gallinarum* - *pulorum* as an etiological factor of salmonellosis.

Developed by BIOTESTLAB Ltd., vaccine POLIMUN SALMO containing antigens of inactivated with formaldehyde and concentrated cultures of the abovementioned strains of salmonella with the concentration $\geq 10^8$ CFU/dose.

Table 1.

Summary of data on the immunity of chickens immunized with POLIMUN SALMO

Organs	Bacteriological examination of organs in chickens, slaughtered in 72 hours after inoculation with challenge strains of salmonella							
	Group №1		Group №2		Group №3		Control (not vaccinated)	
	XLD	SB	XLD	SB	XLD	SB	XLD	SB
Liver	n/g	n/g	n/g	n/g	n/g	n/g	<i>Salmonella</i> Growth	<i>Salmonella</i> Growth
Spleen	n/g	n/g	n/g	n/g	n/g	n/g	<i>Salmonella</i> Growth	<i>Salmonella</i> Growth
Kidney	n/g	n/g	n/g	n/g	n/g	n/g	<i>Salmonella</i> Growth	<i>Salmonella</i> Growth
Fecal masses	n/g	BECG	BECG	BECG	n/g	BECG	<i>Salmonella</i> Growth	<i>Salmonella</i> Growth

Note: n/g-no growth

BECG-bacteria of the E. coli genus



It has been experimentally established that POLIMUN SALMO vaccine with selected composition stimulates formation of agglutinins in titers of at least 1: 512 and provides protection against infection of the internal organs of immunized birds, inoculated challenge strains.

Keywords— *polyvalent vaccine, salmonellosis, immunity, epizootic processes.*

Professional Biography

Sen O.M. has education of doctor of veterinary medicine. Holds the position of head of the bacterial and autogenic vaccines sector of the department of development of immunobiological drugs in BIOTESTLAB Ltd. Sen O.M. published 6 articles in professional journals.

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