scabs and the small crusts, but sometimes with the purulent separations in the mice' control group. Thus, the «Ajuga Genevensis L.» herb dry extract is being possessed of the wound – healing and the bactericidal action, and it is, quite practically, safe for the human person.

Table 3

The «Ajuga Genevensis L.» herb dry extract wound – healing activity study results, M ± m, p

Observations days	Control	Calendula ointment	«Ajuga» ointment
1	4,44 ± 0,52	4,58 ± 0,41	4,63 ± 0,26
3	3,87 ± 0,54	3,53 ± 0,45	2,89 ± 0,05
5	3,08 ± 0,29	2,71 ± 0,31	2,09 ± 0,20^{x}
7	2,49 ± 0,26	2,17 ± 0,23	1,51 ± 0,16 $^{\#\,x}$
11	1,83 ± 0,18	1,34 ± 0,18 ^{x}	0,81 ± 0,13 $^{\#\,x}$
14	1,26 ± 0,16	0,69 ± 0,12 ^{x}	0,29 ± 0,04 $^{\#\,x}$
16	0,92 ± 0,12	0,24 ± 0,06 ^{x}	0 ± 0
18	0,51 ± 0,09	0 ± 0	
20	0,28 ± 0,03		
22	0 ± 0		

The notes:
x – the changes are reliable and the authentic, concerning the control, $p \leq 0,05$;
– the changes are reliable and the authentic, concerning the calendula ointment, $p \leq 0,05$.

In conclusion, it is necessary to be mentioned, that the «Ajuga Genevensis L.» herb phytochemical composition study is quite the perspective direction, in the search of the BAS natural raw material sources for the creation the medical herbal remedies and the therapeutic herbal agents on their basis.

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THE «BRASSICA NAPUS L. SCHROT» CHEMICAL COMPOSITION AND THE BIOLOGICAL ACTIVITY RESEARCH

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The polysaccharides and the amino acids quantitative content in the rapeseed oil production and its industrial wastes has already been defined. The «Brassica Napus L. Schrot» acute toxicity, the wound – healing, the antimicrobial and the antibacterial action have already been fixed up.

At present, the great and the enormous interest is presented the vegetable and the plant wastes utilization challenge, which are being left in the large numbers and in the large quantities at the medicinal plant and the medicinal vegetative raw materials, the agricultural and the farming production processing in the wood and the timber working, the timber and the forest, and the food industries. So, the constantly accumulating plant and the medicinal vegetative raw materials are being created the great ecological challenge, though, quite often, they are the different and the various biologically active substances (BAS) main sources, and they are quite may be used, as the raw materials for the new medicinal products, the drugs, the pharmaceuticals, the medications, and the biologically active additives (BAA) and the biologically active food supplements (BAFS) receiving and their further production.

The «Brassica Napus L.» is one from the most perspective oil – bearing crops and the oil – yielding cultures in the world – wide plant and the vegetable oils production. The «Brassica Napus L.» seeds' world – wide production – is about 43 mln. tons, that is being made up 12–14% from the main oil – bearing crops and the oil – yielding cultures total volume. So, the «Brassica Napus L.» is being assigned the significant role, not only how the main source of the edible plant and the vegetable oil, but and, as the raw materials for a number of the technical products getting, in particular, for the methyl and the ethyl ethers production of the rapeseed (e.g. «Brassica Napus L.») oil fatty acids (or the bio fuel).

So, the numbers and the quantities wastes are being made up many hundreds of the tons, just after the «Brassica Napus L.» raw materials processing.

The «Brassica Napus L.» raw materials wastes are usually being contained the different and the various biologically active substances (BAS) rich complex, however they often are being simply burned out, or they are being destroyed by the quite another way.

Thus, the «Brassica Napus L.» is being contained the 30–37 % crude protein, from the 10,5 % up to 15,5 % cellular tissue, and it is widely – used in the birds feeding [1]. The «Brassica Napus L.» arabino – xylem and the pectin indices are made up, correspondingly, 130 and 156, that is effected on the protein assimilability, which is reached up to 72 %.

So, the erucic acid (e.g. up to 54 % in the fat) and the glucosinolates (e.g. up to 4 %) presence in it is by the limiting factor in the «Brassica Napus L.» usage and in the processing its different and the various products. The glucosinolates themselves are not presented any the toxic hazard. Thus, they are the very and the readily soluble glycosites in the water. They are completely left in the oilcake or in the «Schrot», at the pressing or at the oil extraction from the «Brassica Napus L.». However, the glucosinolates are being degraded with the isothiocyonates, the thyocianates, goytrina and the other substances' release, which are quite able to be bound the iodine and to be inhibited the thyroid gland function, under the myrosinase enzyme action, having contained in the plants or in some animals' gastrointestinal tract microorganisms. So, it is necessary to be steamed thoroughly during 10–20 min., for the complete «Schrot» myrosinase enzyme destruction.

Thus, our research purpose is the «Brassica Napus L. Schrot» chemical composition study, for the further processing its product usage, as the antimicrobial, the antibacterial, and the wound – healing remedy.

So, «Schrot» has been received just after the rapeseed (e.g. «Brassica Napus L.») oil pressing. The polysaccharides and the amino acids are the «Schrot» biologically active substances main groups, that is why we have already studied the amino acids and polysaccharides quantitative content. It has already been fixed up by the extraction with the hexane, that the «Schrot» is contained the 4 % oil.

The crushed, the chopped, and the powered raw materials have exhaustively been extracted in the Soxhlet's extraction apparatus by the acetone – chloroform mixture, in the 1:1 ratio, for the lipophilic substances, the pigments, the low – molecular compounds and the polyphenolic substances' part, having prevented the polysaccharides' extraction, release, at the preliminary stage. Thus, the received «Schrot» has already been dried out in the air, and the polysaccharides' discharge by the fractions was carried out by the N.K. Kochetkov and M. Sinnera method, which was based on the step – by – step precipitation just from the polysaccharides' different and the various fractions extraction and on their gravimetric definition. Then, the obtained results have been given in the Table 1.

Table 1

The «Brassica Napus L. Schrot» polysaccharides' qualitative and the quantitative composition

Fractions	The fractions' content, %	The obtained fractions external view	The components monosaccharides, Rf
ВРПС	2,8 ± 0,02 ε = 0,35 %	The crystalline brown – greyishly powder, without any smell, sweetish taste, slightly soluble in the water	galactose (0,22) xylose (0,34)
ПВ	2,4 ± 0,03 ε = 1,5 %	The crystalline brown – greyishly powder, without any smell, sour – sweet taste, soluble in the water	glucose (0,29) glucuronic acid (0,59)
Hz A	2,8 ± 0,08 ε = 2,05 %	The grey powder, with the characteristic smell, sweetish taste, slightly soluble in the water	xylose (0,34)
Hz Б	0,8 ±0,004 ε = 3,12 %	The dark – brown powder, without any smell, sweetish taste, slightly soluble in the water	arabinose (0,35) xylose (0,34)
Total:	8,8 %		

So, the amino – acid composition has been defined at the amino – acid analyzer. Preliminary, the defatted raw materials have been subjected to the hydrolysis, as well as the amino – acids quantitatively have been defined by the internal standard method in the hydrolyzate. Thus, the obtained results have been given in the Table 2.

The «Brassica Napus L.» protein is being rich of the glutamine, the lysine, the leucine, and the alanine, however the nutrients and the nutritional supports digestibility just from the«Brassica Napus L.» is quite lower, than from the other forages and the feeds. So, the rapeseed oil cake and the «Brassica Napus L.» are not inferior to the sunflower ones (e.g. 11,4 and 10,6 MJ of the exchange energy) by their energy value (e.g. 11,3 and MJ of the exchange energy).

The glucosinolates presence is the main obstacle of the «Schrot» direct usage, as the forage and the feed for the animals. So, the «Brassica Napus L.» degreased raw materials water extraction has already been chosen, in order to be prevented their toxic action. Then, the dried extract has already been received, on the basis of the water extraction.

Table 2

The «Brassica Napus L. Schrot» amino – acid composition

The Amino acids	Thecontent in the «Schrot»		The Amino acids	Thecontent in the «Schrot»	
	%	g./l.		%	g./l.
ASP	0,68	6,81	IZO	0,26	2,64
TRE	0,63	6,31	LEI	1,05	10,51
SUL	0,67	6,69	TIR	0,53	5,27
GLU	2,09	20,85	FALA	0,67	6,65
GLY	0,73	7,29	GIS	0,68	6,81
ALA	1,10	11,03	LIZ	1,01	10,08
VAL	0,41	4,12	ARG	0,97	9,73
MET	0,17	1,70			
The Amino acids sum:	11,65				116,51

So, the dried extract 20% – th aqueous solution antimicrobial and the antibacterial activity has been defined by the «wells» method. This kind of the method is based on the tested substances diffusion just from the «wells» into the nutrient agar, having sowed and seeded by the quite different test – cultures and the various test – crops.

In the end, the carried out researches have already been exposed the «Brassica Napus L.» dried extract antimicrobial and the antibacterial activity to all the quite different test – cultures and the various test – crops.

With respect to the overwhelming majority of the utilized quite different test – cultures and the various test – crops: the «Enterobacteria» (e.g. «Escherichia Coli», «Proteus Vulgaris», «Salmonella Gallinarum»); the «Bacilli» (e.g. « Bacillus Subtilis L2», «Bac. Anthracoides-96», «Bac. Anthracoides-1»); the «Staphylococci (S.) Aureus Type», «S. Epidermidis Wood-46») – the action has been bactericidal (e.g. in the 80% cases). Further, with respect to the both «staphylococci» different test – cultures and the various test – crops (e.g. («Staphylococcus Aureus 209», «Staphylococcus Aureus» (by Makarov) has been exposed the bacteriostatic action (e.g. 20% of all the cases).

So, the «Brassica Napus L. Schrot» dried extract acute toxicity study has been shown, that the 13,850,0 mg/kg dose is not quite resulted in the mice' death. This is allowed to be related the extract to the IV toxicity class substances, that is it practically quite safe for the human person [2, 3].

The «Brassica Napus L. Schrot» dried extract wound – healing activity has been studied at the rats on the linear wounds model, which have been created under the chloral hydrate anesthesia (e.g. 300 mg/kg) [4]. So, daily, traumatic surface and the wounded area have been medically treated by the «Brassica Napus L.» dried extract 20%-th ointment (e.g. the basis – is the vaseline). The rats' group had been served by the special control, at which the wounds' healing was passed without any medical treatment. So, the specific animals have been the comparison group, by which the «Symphytum» ointment was applied on the wound, under the same and the similar conditions (e.g. Doctor Theiss, Germany).

Thus, the wounded area deceleration and the traumatic surface criterion for the assessing have been by the wound – healing action assessment criterion. Then, the measurements' statistic results have been presented in the Table 3.

Table 3

The «Brassica Napus L. Schrot» ointment influence upon the rats' skin regeneration rate, $M \pm m$, p

Observations days	Control	«Symphytum» ointment	«Brassica Napus L. Schrot» ointment
1	3,89 ± 0,52	3,78 ± 0,54	4,21 ± 0,33
4	3,18 ± 0,42	2,79 ± 0,41	2,06 ± 0,19 x
6	2,36 ± 0,36	1,97 ± 0,33	1,48 ± 0,12 x
8	1,82 ± 0,24	1,54 ± 0,26	1,09 ± 0,16 x
11	1,27 ± 0,29	0,86 ± 0,21	0,49 ± 0,06 x
14	1,03 ± 0,21	0,34 ± 0,13 x	0,19 ± 0,02 x
16	0,71 ± 0,14	0,18 ± 0,06 x	0 ± 0
18	0,46 ± 0,12	0 ± 0	
20	0,27 ± 0,04		
22	0 ± 0		

The note: x – the changes are reliable and the authentic, concerning the control, $p \leq 0,05$.

So, the linear wounds area and the traumatic surface at the ointment application from the «Brassica Napus L. Schrot» have been borne the reliable and the authentic character, in comparison with the control. The «Symphytum» ointment reliably and authentically has been accelerated the regeneration, only from the fourteenth research day. So, the «Brassica Napus L.» action reliably and authentically has not been differed from the «Symphytum» ointment effect, in the comparison aspect. In the control test and the experiment, the complete wounds – healing has been on the twenty – second research day, against the background of the «Symphytum» ointment – on the eighteenth day, at the «Brassica Napus L.» ointment application – on the sixteenth day. Thus, they have registered, that the animals' wounds have been dried and without any suppuration at the «Brassica Napus L.» ointment application, throughout the whole test and the experiment.

So, the «Brassica Napus L.» has been accelerated the skin regeneration process for the 27%, in comparison with the control and for 11%, with respect to the comparison preparation – the «Symphytum» ointment.

Thus, the «Brassica Napus L. Schrot» is being contained the quite valuable biologically active substances: the 8,8% polysaccharides, and the 11,65% amino acids. So, the «Schrot» dried extract is being possessed the antibacterial, the antimicrobial and the wound – healing actions, it is being related to the safe substances, that it is allowed to be predestined on the «Brassica Napus L. Schrot» further research prospects and the subsequent fruitful perspectives.

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THE CHANGE IN THE LEVEL OF TRIGLYCERIDES IN BLOOD SERUM OF PIGS IN ONTOGENESIS

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Free radical processes play a big role during adaptation with stress reactions involved as its initial stage. Stress condition in animals can develop in connection with certain periods of ontogenesis («physiological stress»). Regarding individual development of animals, their birth and early postnatal periods are stress situations conjugated with basic changes of oxygenic regime of their organism. This is followed by the change in running of free radical reactions, lipids peroxidation.

Atmospheric oxygen is used as electrons acceptor in vital processes of an organism, herewith, oxygen metabolites forming. The free radical oxidation is a regular metabolic process, free radicals, when in minor quantities, are referred to signal molecules. When hyper-produced, radical-superoxide becomes an initial step of a multi-stage process (metabolic cascade) that results in oxidative stress under which oxygen metabolites become high toxic for biological systems. They cause lipids peroxidation, have a damaging effect at tissue and cell level.

Investigations were carried out at Closed Joint Stock «Landrace» in Novosibirsk region. Landrace pigs were the objects of investigations. The animals were selected and grouped by the principle of analogues with regard to origin, breed, productivity, age and live weight. The pigs were kept following the technology for complexes and farms. The blood to examine was taken from aural vein. The content of triglycerides was determined in the blood serum of pigs aged 1, 2, 3, 4, 5 months. The data obtained were processed statistically with the package of applied software Statistica 6 and Excel. The experiment identified the highest concentration of triglycerides in the blood serum of pigs aged 1 month (45,16%, $p < 0,001$). This testifies to lipolysis running in Landrace pigs in early periods of ontogenesis.

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THE CONTENT OF FREE FATTY ACIDS IN BLOOD SERUM OF PIGS IN DIFFERENT PERIODS OF POSTNATAL DEVELOPMENT

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Continuous or extremely intensive stress causes the activation of "primary toxins". Active forms of oxygen are referred to those. Increased intensity of free radicals oxidation gives rise to the formation of multiple free radicals causing peroxidation of lipids and development of oxidative stress. Activated oxygenic metabolites (superoxide radical, hydrogen peroxide, etc.) have a damaging effect at tissue and cell level.

Lipids are a major source of energy for a newborn. Lipolysis activation results in a considerably increased concentration of free fatty acids. They are substrates for lipids peroxide oxidation and determine its intensity.