

Title: PROCEDURE FOR OBTAINING THE PROTEOGLYCAN PREPARATION AND ITS TESTING IN THE ZOOTECHNICAL FIELD

Patent/project number: a20220059 from 29.12.2022

Author/s: Efremova Nadejda; Chiselita Natalia; Beşliu Alina; Chiselita Oleg; Tofan Elena; Rudic Valeriu.

Institution: The Institute of Microbiology and Biotechnology of Technical University of Moldova

Category: G

Description: The invention relates to the elaboration of a new process for obtaining of proteoglycan preparation with high content of sulfated polysaccharides from the remaining from the production of bio remedy BioR biomass of *Arthrospira platensis*. Using biomass of cyanobacteria *Arthrospira platensis* as the source of proteoglycans which possess anti-inflammatory, antiviral activities for the application in zootechny and other fields.

The process according to the invention consists in the following steps: the dried at the temperature of $+50\pm 5^{\circ}\text{C}$ remaining biomass *Arthrospira platensis* was subjected to grinding, then it was mixed with 96% ethyl alcohol in a volume of 1:10, the obtained suspension was placed in a water bath at a temperature of $+45^{\circ}\text{C}$, for 30 minutes, centrifugation at 3500 rpm., the biomass was mixed with distilled water at a ratio of 1:3 v/v and placed under 50 W ultrasound for 5 minutes and heated at a temperature of $+45^{\circ}\text{C}$ for 30 minutes or subjected to autoclaving at a temperature of $+115^{\circ}\text{C}$ (0.5 atm.) for 30 minutes, centrifugation at 3500 rpm. and add EDTA to the final proteoglycan preparation. Technical result consists in obtaining the preparation with $661\pm 2.30 - 733\pm 1.55$ mg/L sulfated polysaccharides.

The results were obtained in the framework of project 20.80009.5107.16. "New biologically active microbial preparations for increasing the reproductive and productive potential of animals of zootechnical interest", financed by NARD.

State of development: The preparation is used in the research laboratories of the Scientific and Practical Institute of Biotechnology in Animal Husbandry and Veterinary Medicine. The preparation is tested at the enterprises for swine and sheep production.

Contact: Oleg Chiselita email: oleg.chiselita@imb.utm.md

Presentation link: <https://imb.utm.md/>