BIONANOMATERIALS FOR PLANT PROTECTION

Areas of Application

The bionanomaterials can be used in agriculture and organic farming to ensure plants resistance at the early stages of their development, o control the number of harmful phytophagous insects, and to enhance plant resistance to biotic and abiotic stress factors

Specification

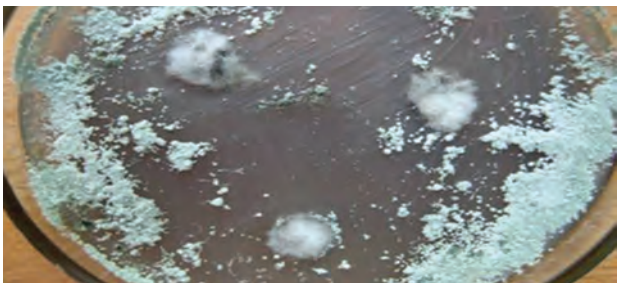
The fungicidal composition of the materials based on the *Penicillium roseopurpureum* strain and analtcinite nanoscale particles is characterized by a wide range of prolonged activity. The bionanomaterial dosage is 50 l/ha, depending on the biological characteristics of plants and climatic conditions

Advantages

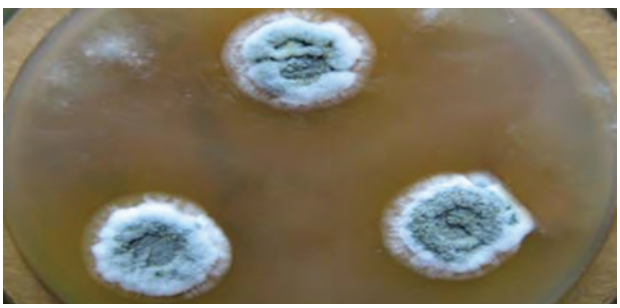
The bionanomaterial has no matches in the world. The number of fungicides used in crop growing increases, mainly because of developing pathogens resistance to their compounds. The use of bionanomaterials will ensure obtaining high quality products and preventing contamination of agrobiocenosis soils with toxic compounds. The process flowchart of manufacturing line for production of bionanomaterials has been designed. The bionanomaterials based on *P. roseopurpureum* strain that is a Curvularin producer and analtcinite are promising in terms of their use both in agriculture and in medicine

Stage of Development. Suggestions for Commercialization

IRL6, TRL5
Mix prepared upon request



Growth inhibition. *Alternaria alternate Trichoderma hamatum*



Growth inhibition. *Botrydis cinerea Penicillium rubrum* Stoll. 33P-39.0 mm

Growth inhibition. *Fusarium colmorum Aspergillus niger.* 33P-21 mm

Growth inhibition. *Aspergillus clavatus Pennicillium implicatun*

IPR Protection

IPR3

Contact Information

Jamal B. Rakhmetov, M.M. Gryshko National Botanical Garden of the NAS of Ukraine;
+38 044 285 01 20, e-mail: jamal_r@bigmir.net