INFLUENCE OF CULTIVATION CONDITIONS ON ANTIMICROBIAL PROPERTIES OF _Nocardia vaccinii_ IMV B-7405 SURFACTANTS

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The aim of the work was investigation of antimicrobial effect of *Nocardia vaccinii* IMV B-7405 surfactants, synthesized in various culture conditions, against phytopathogenic bacteria of genera *Pseudomonas*, *Xanthomonas*, and *Pectobacterium*. The antimicrobial properties of surfactant were determined in suspension culture by Koch method and also by index of the minimum inhibitory concentration. Surfactants were extracted from supernatant of cultural liquid using mixture of chloroform and methanol (2:1). It has been established that antimicrobial properties of surfactants depend on the nature of the carbon source in the medium (refined vegetable oil, as well as waste oil after frying potatoes and meat, glycerol), the duration of the cultivation (5 and 7 days), the degree of purification of the surfactants (the supernatant of cultural liquid, purified surfactants solution) and the test culture type. The highest antimicrobial activity was exhibited by purified surfactants solutions synthesized by microorganisms on the waste oil after potato frying (decreased survival of pathogenic bacteria by 50–95%), and surfactants formed within 7 days of strain B-7405 IMV cultivation on all test substrates (minimum inhibitory concentration 7–40 µg/mL, which is several times lower than the surfactant, synthesized for 5 days).

These data are promising for the development of ecologically friendly biopreparations for the regulation of the number of phytopathogenic bacteria.

**Key words:** *Nocardia vaccinii* IMV B-7405, surfactants.

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