BIOLOGICAL PROPERTIES OF BACTERIA *BREVIBACILLUS CENTROSPORUS* - PHENOL DESTRUCTORS

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Phenolic compounds are toxic environmental pollutants, the presence of which adversely affects human health. To solve this problem, we propose to use the microbiological method [1, 2]. For the study was selected biochemically active strain of bacteria F-14, isolated from the wastewater production of pharmaceuticals. An assessment of the pathogenicity of the F-14 bacterial strain in vitro (on the model of transplantable human cell lines -Hep2 and RD and animals - L20B) and in vivo (on laboratory mice) showed that it does not possess virulent and toxigenic properties. In terms of morphological, cultural, physiological and biochemical traits, determined using classical bacteriological methods and the ARI 50 CHB Medium test system, the isolate belongs to the species *Brevibacillus centrosporus.* The experimentally established efficiency of purification of water from phenol (200 mg/l) by the strain of *Brevibacillus centrosporus* F-14 allows us to recommend using it as a destructor of phenolic pollutants.

Table 1

Destruction of phenol by free cells of strains *Brevibacillus centrosporus* F-14

The effectiveness of water purification from phenol	Exposure time, day					
	2	3	6	8	10	13
Concentration of phenol after purification, mg/l	200.0	164.0	112.0	66.0	28.0	7.2
Degree of degradation of phenol, %	0.0	18.0	44.0	67.0	86.0	96.4

List of references:

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