



Federation of European
Microbiological Societies

FEMS Online Conference on Microbiology

28 – 31 October 2020

ELECTRONIC ABSTRACT BOOK

in association with
the Serbian Society
of Microbiology





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INVESTIGATION OF INHIBITORY EFFECT OF MOLYBDENUM AND COBALT IN THE ISOLATED MICROORGANISM CONSORTIA WHICH IS USED IN BIOREMEDIATION

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Contamination of soil, groundwater, sediment, surface water and air, hazardous waste such as oil and by-products arising during processing of oil, pose a major problem the world faces today.

Catalysts used in the desulphurisation process oil can be a source of pollution with heavy metals and are therefore tested their chemical properties, as well as their impact on the growth of microbial consortium in the process of bioremediation, which is isolated from the waste of fuel oil from the PUC "Belgrade power plants" and waste motor oil. We examined five different catalysts that are derived from the Oil Refinery Pancevo, a metal that is focused attention as Mo (molybdenum) and Co (cobalt).

The efficiency of bacterial cells in concentrating metal has enabled their high ratio of surface area to volume and high charge density on the cell surface. Entire bacterial cell is negatively charged due to the presence of different anions. Therefore, the bacterial cell walls have a strong affinity for metal cations. Intact bacterial cells, regardless of whether they are alive or dead, as their products are also very effective in accumulating metals.

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