

## عنوان مقاله:

Reduction of Pathogens from Mixture of Cow Manure, Domestic Waste and Wastewater Treatment Plant Sludge by Vermicomposting Process

## محل انتشار:

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## خلاصه مقاله:

**Introduction:** The present study aimed to investigate the microbial quality of the produced vermicomposts and compare them with the existing standards. **Materials and Methods:** This experimental study was conducted as a pilotscale one in the laboratory school. Some perishable domestic wastewater mixed in a reactor, including food waste, vegetables and fruits, cow manure and sludge from wastewater treatment plant. Tests to determine the microbial quality of the product were carried out at an early stage during the process of production and on the final product. These tests included determining the probable number of fecal coliform bacteria and parasite eggs. **Results:** According to the results, a significant decrease was observed in the number of fecal coliforms in sludge manure and domestic waste, as the number of fecal coliforms reduced from 5000000 (MPN / g) in the raw sample to 1500 (MPN / g), eight weeks after the outset. Moreover, according to the obtained results, the mixture of manure, sludge, and domestic waste had some parasite eggs (20 number /gr) in the raw samples. This amount was fully removed by the process of vermicomposting during the third week. **Conclusion:** Findings revealed that the earthworms have a high capability to reduce the pathogens without increasing in temperature, however, in order to standardize the number of coliforms (compost class A), the vermicomposting of the mixture of cow manure, domestic waste, and sludge of wastewater treatment plant is not appropriate

## کلمات کلیدی:

Vermi Compost, Pathogen Reduction, Parasite Egg

## لینک ثابت مقاله در پایگاه سیویلیکا:

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