EVALUATION OF SOME LEONARDITE SOURCES IN TURKEY FOR BIOLOGIC HUMIC PRODUCTION VIA BIOTECHNOLOGICAL METHOD FOR ORGANIC FARMING USAGE

Nowadays, the developing countries become follower of the developing countries have accepted the strategies based on obtaining economic and optimum products via efficient using of agricultural technology. In these strategies the main target is to increase the production amount and due to these strategies, the sustainability of biodiversity and natural balance aren't taken an account and usage of chemical inputs without control cause a lot of problems in short and long terms. In the study leonardite samples were taken from different leonardite deposites and the quality of ores were determined and from these ores of Adana-Tufanbeyli, Turkey was selected due to best properties and Bioleaching method was applied to obtain biotechnologically produced humic acid and to determine the leaching ratio California method was used as standart method. To optimize the best conditions for maximum and economic bioleaching several leonardite ore and microorganism solution rates ''%20, 30, 40, 50, 60, 70'' , several media pHs ''6.5, 7.0, 7.5, 8.0, 8.5'', different efficiency durations ''1, 2, 3, 4, 5, 6 and 7 days'', different temperature conditions ''10, 20,30, 45, 50 °C'' were tested. As a result of the study the most efficient pH 8.5, fermentation degree at 45 oC, 40/60% ore/ bioleaching solution and 4 days incubation duration were determined.The stabilized product were tested in field conditions at the 0, 30, 60, 90 and 120 lt/ha dosages in tomato in Bursa-Karacabey, Turkey. The divided parcels randomized to 2 sources as standart and biologic humic acid, 5 application dosages and 3 repeats and for each plant 30 repeats were done. As a result of the study, the most appropriate dosages in biologic humic acid were determined for tomato was 83 L/ha and compared with standart humic acid the yield increases were determined as 24.5%. Due to this increases in yield and the determined macro and micro element, organic and amino acid, hormone, hydrogen peroxyde and antioxydant enzyme contents, this product has a good potential to use in organic farming as fertilizer.