INVESTIGATION OF HERBICIDE GROUP DRUG RESIDUES USED IN AGRICULTURAL FIELD IN SOIL AND OLIGOCHAETA CLASS EARTHWORMS

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In our study, residues of 2,4 D, KIlosulfuron and Propanil herbicides, that are widely used in agricultural areas in and around Istanbul, were analysed in soil and earthworms, which are described in ecotoxicological studies as indicator organisms, using the HPLC method. In the field investigations, a wheat field in the I.U. Veterinary Faculty Farm was treated with the 2,4 D herbicide at a dose of 200 cc/da at the beginning of March of 2000. Following this application, soil samples were collected at 1-week intervals in order to determine degradation time of herbicide in the soil. It was seen that the half-life of the herbicide was 21 days and that by the end of the 4th week, the herbicide dropped beneath the detection limit (50 ppb). Subsequent field samples were collected in the form of soil and earthworm from the villages of Hadümköy, Böyükçekmece Karaagac, Böyükçekmece Tepecik, Catalca and Catalca Incelgiz. Two different were used for soil and earthworms. With the modification of these two selected methods, detection of both herbicides together was achieved. It was observed that both herbicides accumulated in earthworms.