

ABSTRACT

The objective of the research was the estimation of widely used pesticides Imidacloprid and Acetamiprid residues in various agricultural food crops including vegetables, Fruits and their leaves. Thirty six samples were collected from Lahore and its surrounding areas. TLC and HPLC-DAD techniques were used for analysis. Various samples of agricultural crops that were sprayed with Imidacloprid and Acetamiprid were collected from different areas of Pakistan. Solutions of commercial Imidacloprid (Confidor 70%) and Acetamiprid (20%) were used for spray and also for preparation of their standards. The solutions of 0.5 – 128ppm of Imidacloprid and 1 – 64ppm of Acetamiprid were prepared for their calibration curves. The R^2 values of standards' curves for both Imidacloprid and Acetamiprid were 0.9997 and 0.9976 respectively. After TLC and HPLC analysis, the residues of Imidacloprid and Acetamiprid were in the range of 0.024 – 1.777mg/Kg and 0.224 – 1.917mg/Kg respectively. According to FAO/WHO the acceptable daily intake of Imidacloprid and Acetamiprid are 0.06 and 0.07mg/Kg of b. w. d⁻¹. So values of residues of Imidacloprid and Acetamiprid show that these are within safe limits on intake of 200g day⁻¹ of the food crops analyzed in this study.