

## Assessment of inhalation exposure to Amitraz among pesticide sprayers in Zangiabad, Iran

### ABSTRACT

Orchard operations involve heavy use of pesticides to control pests and the potential for exposure of sprayers is high. When high pressure equipments for pesticide application are used, the potential for respiratory exposure is increased. The aim of this study was to assess the amitraz residue level in the individual breathing zone of the sprayers. Individual air samples of 70 amitraz sprayers have been collected using modified fitted with impinger acetonitrile as liquid sorbent. A sample size of 480 liters of air was collected in each case. The mean concentration of amitraz and its metabolite in the breathing area during the application were 11.51 and 1.35  $\mu\text{g}/\text{m}^3$ , respectively.

**Keyword:** Occupationally exposure; Amitraz; Orchard Operation; Pistachio; Iran