

## عنوان مقاله:

Carcinogenic Polycyclic Aromatic Hydrocarbons in Vegetables Marketed in Mashhad: Levels, Dietary intakes, and Health Risk

## محل انتشار:

فصلنامه تغذیه، روزه داری و سلامت، دوره 9، شماره 4 (سال: 1400)

تعداد صفحات اصل مقاله: 7

## نویسنده:

Seyedeh Belin Tavakoly Sany - Department of Health Education and Health Promotion, Faculty of Health, Mashhad  
.University of Medical Sciences, Mashhad, Iran

## خلاصه مقاله:

Vegetables and fruit cultivation is a main food source for human population. However, different types of pollutants contaminate vegetables products like polycyclic aromatic hydrocarbons (PAHs). Human exposure to PAHs via potential food sources is not well investigated. Therefore, this study aimed to determine PAHs concentrations, dietary intakes, and health risks through the consumption of vegetables collected from urban areas in Mashhad, Iran. Chemical analysis was conducted on 75 vegetable samples were collected from markets in Mashhad including three root and leafy vegetables. The human health risk assessment (HHRA) model was used to measure the dietary intake and lifetime health risk of PAHs through the consumption of vegetables. The concentrations of total PAHs were ranged from  $0.564 \pm 0.162$  to  $2.211 \pm 0.834 \mu\text{g kg}^{-1}$  in all vegetables. The level of health risks of PAHs was below the acceptable risk level ( $HI < 1$ ) for adults, while the health risk for children was higher than the acceptable risk level in some vegetable samples. Among the carcinogenic PAH congeners, BaA, Chr, and DbA were predominant for adult and children populations. Overall, the total health risk of PAHs for both groups was borderline or higher than the acceptable level of US EPA risk, suggesting the possibility of health risk for the adults and children to the PAHs via vegetable ingestion. Therefore, appropriate control measures and intervention programs need to be used to protect the health of the residents in this study area.

## کلمات کلیدی:

Organic pollutants, Food safety, Public health, pollution, PAH

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1425219>

