Indoor and personal carbon monoxide exposure risk assessment in sample of apartment buildings in Santiago, Chile

Martínez, P. A.

Caba, F. M.

Alvarado, S. A.

Cáceres, D. D.

Indoor carbon monoxide (CO) exposure is considered around the world as one of the most important causes of poisoning with fatal outcomes. This study determined indoor CO levels and personal CO exposure and related risk factors during human activities in 96 apartments in a community of Santiago, Chile during the period from September to December of 2003. Indoor levels and personal exposure were determined using fixed, personal and single-breath CO monitors, respectively. Exposure risk factors and time-activities patterns were evaluated through an ad hoc exposure assessment questionnaire. Regression models were fitted to evaluate the effects of these risks factors on the personal CO levels. The median indoor CO level was 1ppm; interquartile range (IQR): (0-1). The median personal CO level was 1ppm; IQR: (0-7); CO exhaled was 3.0ppm; IQR: (1-33). The number of cigarettes smoked and the levels of indoor environmental CO were significant predictors of the concentration of CO exhaled. This s