Carbon Monoxide Exposure during Cooking in Households: A Case of Dar es Salaam City, Tanzania

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Abstract:

Exposure to CO (carbon monoxide) during cooking in households using LPG (liquefied petroleum gas), natural gas and charcoal as fuels has been conducted. The study aimed at assessing the indoor air quality in order to address potential hazards associated with CO. Carbon monoxide concentrations and flame temperature were measured at an interval of 1 min for 1 h using CO and thermometer data loggers respectively. While the CO concentration from LPG and natural gas were found below 26 ppm for 1 h, as recommended by WHO (World Health Organization) standards, the average CO concentration from charcoal exceeded the standard limit. In addition closing the kitchen door during cooking increased the CO concentration from 26-295 ppm to 92-597 ppm. According to WHO, the observed CO concentrations from charcoal stove highlights questionable life support atmosphere. It can therefore be suggested that switching to LPG or natural gas from charcoal will reduce CO exposure to persons during cooking. Key words: Air quality, CO poisoning, indoor pollution, pollution.