Indoor Air Quality in the Metro System in North Taiwan
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ABSTRACT
Indoor air pollution is an increasing health concern, especially in enclosed environments such as underground subway stations because of increased global usage by urban populations. This study measured the indoor air quality of underground platforms at 10 metro stations of the Taipei Rapid Transit system (TRTS) in Taiwan, including humidity, temperature, carbon monoxide (CO), carbon dioxide (CO2), formaldehyde (HCHO), total volatile organic compounds (TVOCs), ozone (O3), airborne particulate matter (PM10 and PM2.5), bacteria and fungi. Results showed that the CO2, CO and HCHO levels met the stipulated standards as regulated by Taiwan's Indoor Air Quality Management Act (TIAQMA). However, elevated PM10 and PM2.5 levels were measured at most stations. TVOCs and bacterial concentrations at some stations measured in summer were higher than the regulated standards stipulated by Taiwan's Environmental Protection Administration. Further studies should be conducted to reduce particulate matters, TVOCs and bacteria in the air of subway stations.

Keywords: indoor air; subway; transit; particulate matter; metro

REFERENCES