

Ten trace elements in the inhalable particles (PM<sub>10</sub>) at Panzhihua, a Southwestern China mining city, were studied for characteristics and human health risks of particulate toxic metal(loid)s at two industrial sites and one urban residential site during April 2014 through January 2015. Average concentrations of PM<sub>10</sub> at three sites were 127.2, 172.0 and 187.5  $\mu\text{g m}^{-3}$ , respectively, which all greatly exceeded the national ambient air quality standard (70.0  $\mu\text{g m}^{-3}$  annual average). Zn, Pb, Cu, and Mn were the most abundant trace elements among the studied metals in PM<sub>10</sub>. Particulate metal(loid)s' pollution was very serious, in which As, Cd, Ni, Co, Cu, and Mn in PM<sub>10</sub> greatly exceeded their respective thresholds. Results of a health risk assessment indicated that Cr posed a major carcinogenic health risk to both children and adults, whereas Mn had a non-carcinogenic risk. Other toxic metals were within the safe levels.

