

ABSTRACT

QUINONES USED AS BIOMARKERS FOR EXPOSURE TO AIR POLLUTION

It is widely believed that particulate matter (PM) present in ambient air is responsible for a variety of health effects. The presence of quinones in ambient air has been suggested as a possible cause for the detrimental effects on human health. Because of the high levels of pollution, it is important to determine the level of exposure and the corresponding health effects of quinones. Limited research has been performed using biomarkers but despite their complexity, they show great promise for measuring personal exposure. In this study, animals were exposed to quinones through injection or ingestion for varying periods of time. Quinones were successfully detected in animal urine with general increases in quinone concentration with exposure. Five quinones were detected in the urine of human subjects.

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